Systemair Fans

Product catalogue



systemair

Disclose the secret of fresh air!



Systemair has been taking care of Indoor Air Quality (IAQ) as an essential resource since 1974. Today Systemair is one of the leading ventilation companies worldwide. A success story, which started in Skinnskatteberg, Sweden with the invention of the inline duct fan. This invention revolutionised the ventilation world. Since then the company has continuously advanced and now offers a comprehensive range of products for all ventilation requirements. The experts at Systemair have the required knowledge and understanding in finding solutions when considering the ventilation of shopping centres, domestic ventilation of a family home to the complex ventilation of tunnels and metro stations. With more than 2800 employees, and in excess of 60 subsidiaries in 41 countries, we remain globally available to our customers.

With this catalogue which features fans and accessories, we give you as our customer a general overview of what Systemair can offer within this range.

For further information about all the other Systemair products you can contact your local Systemair company or visit our on-line catalogue on

Quality

Systemair has been certified according to ISO 9001, ISO 14001 and ATEX. Our R&D centre remains one of the most modern facilities in Europe. We test in compliance with the international standards EN, ISO and AMCA.

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Systemair

The straight way

The straight way was our first production idea and led to the circular duct fan. Today it represents our ambition to simplify the life of our customers. Stocked products are delivered in Europe within 24 hours from local warehouses and within 72 hours from distribution centres. High product quality, correct technical data and fast deliveries are always our main focus.

Systemair

Systemair was established in Sweden in 1974 and is today the parent company in an international group with 60 subsidiaries and approximately 2800 employees. The Group's head office and largest production plant is located in Skinnskatteberg, Sweden with some 400 employees and a floor area of 50 000 m^2.

Production

We are proud of our production units. The aim has been to have both effective production of bulk products and, at the same time, an efficient and flexible approach to producing small volumes. This has steered our choice of machinery and how we plan our production, with focus on the working environment. Our premises are light and pleasant and we invest in tools that facilitate work and provide our employees with a safe and efficient workplace.

Technical data

Our development centre in Skinnskatteberg is one of the most modern in Europe for airflow, acoustic, efficiency and low velocity measurements on air terminal devices, etc. All measurements are performed in compliance with applicable standards as set out in AMCA and ISO.

Quality and environment

Systemair is certified according to ISO 9001 and ISO 14001. Our quality system allows us to continuously improve our products and our customer service. Certification means that we have undertaken to minimise our environmental impact. We always take the environment into consideration when choosing sub-suppliers, materials, production methods, etc. An important factor is that we continuously work to reduce our energy consumption and reduce waste. Through increased recovery and heightened awareness we have been able to reduce our waste by 90%. Quality and environment management systems are under continuous development. These are audited twice a year by the certification body BVQI (Bureau Veritas Quality International).

Detailed product information can be found on our website,

Dal, Eidsvoll – Norway

In Eidsvoll, Norway we manufacture air handling units for the Norwegian market. The Norwegian warehouse for fans is also located here.

Bouctouche – Canada

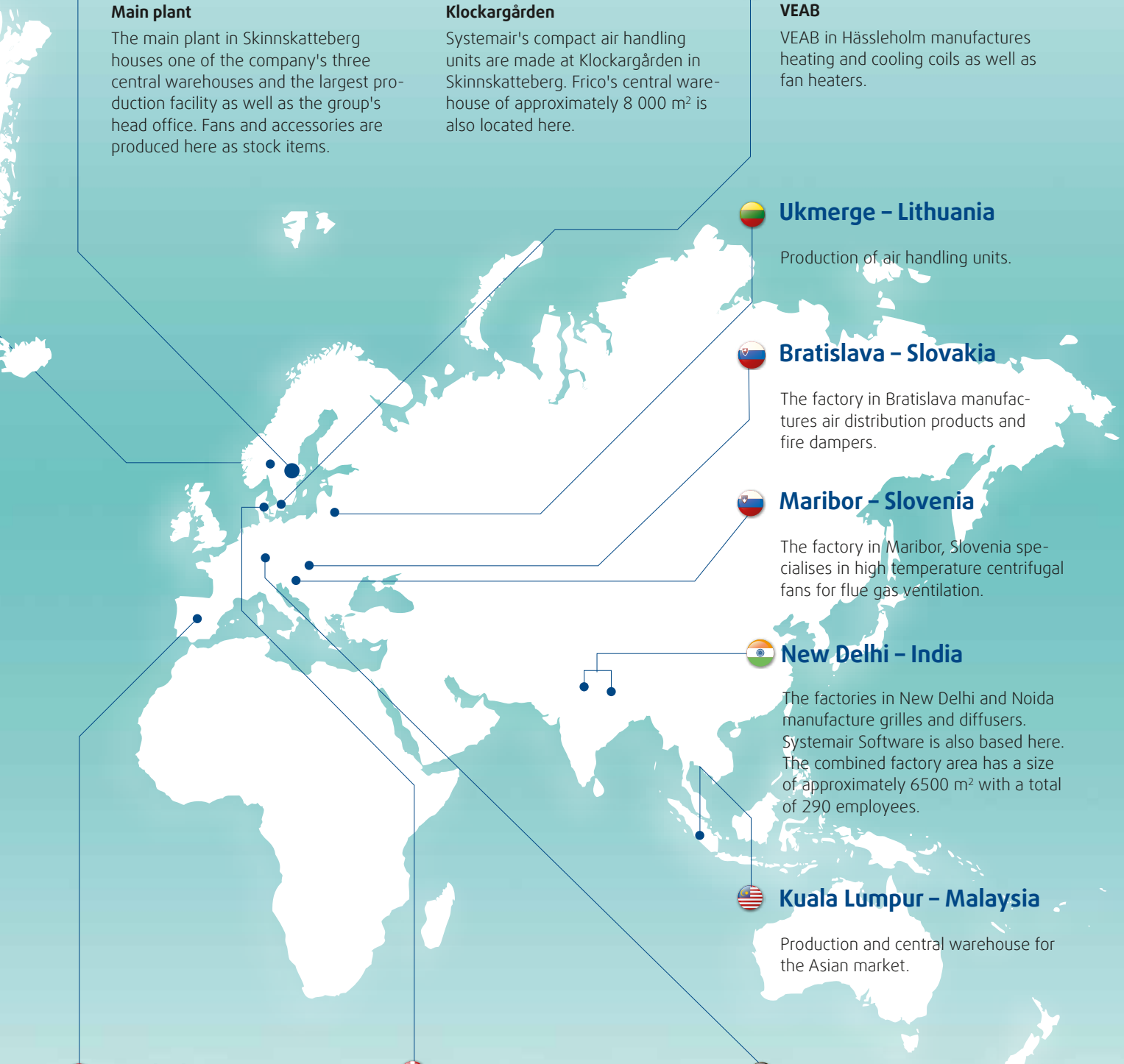
In Bouctouche, Canada we primarily produce ventilation products for the North American market.

Kansas City – USA

In Kansas City we produce ventilation products for the North American market.



Production in Skinnskatteberg is virtually fully automated with modern machinery featuring advanced computer support. Also located here is the company's most advanced test facility for measuring.



Skinnskatteberg – Sweden

Main plant

The main plant in Skinnskatteberg houses one of the company's three central warehouses and the largest production facility as well as the group's head office. Fans and accessories are produced here as stock items.

Klockargården

Systemair's compact air handling units are made at Klockargården in Skinnskatteberg. Frico's central warehouse of approximately 8 000 m² is also located here.

Hässleholm - Sweden

VEAB

VEAB in Hässleholm manufactures heating and cooling coils as well as fan heaters.

Ukmerge – Lithuania

Production of air handling units.

Bratislava – Slovakia

The factory in Bratislava manufactures air distribution products and fire dampers.

Maribor – Slovenia

The factory in Maribor, Slovenia specialises in high temperature centrifugal fans for flue gas ventilation.

New Delhi – India

The factories in New Delhi and Noida manufacture grilles and diffusers. Systemair Software is also based here. The combined factory area has a size of approximately 6500 m² with a total of 290 employees.

Kuala Lumpur – Malaysia

Production and central warehouse for the Asian market.

Madrid – Spain

The factory in Madrid, Spain produces air handling units mainly for the southern European, Asian, and African market.

Hasselager – Denmark

The factory in Hasselager, Denmark manufactures large air handling units to Eurovent standards.

Windischbuch – Germany

In Windischbuch, Germany a broad assortment of fans are manufactured, of which the majority are stock items. One of Systemair's central warehouses is located here.

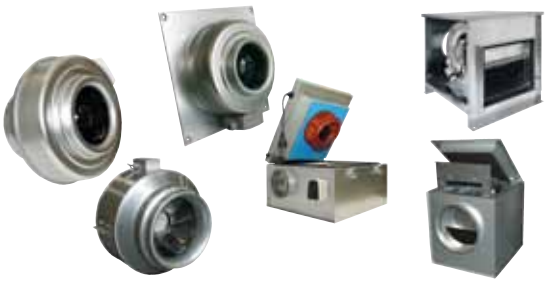
Fans – Overview

Systemair has a wide range of fans for use in various applications from small office premises to larger industrial applications. Common to all items in the range is that components have been developed to satisfy stringent demands for low energy consumption. The fans have all undergone extensive testing, both in the laboratory and out in the field, in order to comply with current and future demands for low energy consumption.
All products are also manufactured to comply with environmental requirements.

Circular duct fans up to 2.3 m³/s

Systemair offers different variants of circular duct fans. For systems with higher pressure losses we are offering the ranges K and RVK. The KV range can be installed directly on the wall. For higher air volumes we are offering the KD range with mixed flow impellers.

Technical data 18-63



Rectangular and square duct fans up to 4.8 m³/s

Systemair rectangular and square duct fans have been developed for use in compact exhaust and supply air systems. This range is available in a wide performance spectrum.

Technical data 66-121



Roof fans up to 15.2 m³/s

Systemair roof fans have been developed for use in effective exhaust air systems. Roof fans with circular or square connection and available for vertical discharge and for horizontal discharge.

Technical data 124-165



Axial fans up to 70 m³/s

Systemair axial fans have been developed for installation in effective supply and exhaust air systems. Axial fans for use in low and for medium/high pressure systems. For industrial buildings Systemair offers a wide area of axial fans to suit most building ventilation applications.

Technical data 168-189



Jet fans

Systemair jet fans for Car Park Ventilation, axial or centrifugal solutions, certified in accordance with EN 12101-3. Complete solutions including control systems and CFD.

Technical data 194-196





Explosion proof fans up to 12.36 m³/s

Systemair explosion proof fans have been developed to be used in effective supply and exhaust air systems allocated to category 2 (zone 1) and category 3 (zone 2) in explosion hazardous areas.

Technical data 202-235



Smoke extract fans up to 70 m³/s

Systemair offers different types of smoke and heat extract fans: Centrifugal roof and box fans, centrifugal wall/duct fans and axial fans. All fans are approved for dual purpose ventilation, i.e. for normal daily ventilation and for emergency ventilation in case of a fire.

Technical data. 238-272



Fans for aggressive media up to 2.11 m³/s

These sturdy plastic fans have been developed especially for applications where dirty or aggressive gases can contaminate the exhaust air. Typical applications are laboratories in medical or pharmaceutical institutions and in the food and chemical industry.

Technical data. 276-285



Centrifugal fans up to 3 m³/s

Centrifugal fans for various applications, impellers with forward and backward curved blades. Also available with motors outside the airstream and EC motors.

Technical data. 288-310



Domestic fans up to 0.19 m³/s

Domestic fans for the ventilation of bathrooms, toilets, storage rooms, for installation on walls, in ceilings, in ducts and in windows.

Technical data. 314-317

Other products from Systemair

Systemair has an extensive range of ventilation products: fans including smoke extract, tunnel and car park fans, explosion proof fans, air handling units from large central units to small residential units with energy recovery, air distribution products and fire dampers.
These products are installed in a variety of locations, including homes, offices, healthcare premises, shops, industrial buildings, tunnels, parking garages, training facilities, sports centres etc.



AIR HANDLING UNITS

Systemair produces a wide range of air handling units.

Compact air handling units

Compact supply air handling unit with heating battery and filter for use in petrol stations, schools, stores, offices and smaller premises. The units are compact in dimensions and are easy to install.
Air flow: 20-1400 l/s



False ceiling units

Compact and easy to maintain air handling unit with heat recovery and control system. Mounted in a false ceiling or in the attic.
Air flow: 20-1500 l/s



Horizontal units

A broad range of horizontal air handling units with or without heat recovery. Useable everywhere from minor premises to schools, stores and larger offices.
Air flow: 20-1500 l/s



Vertical units

A broad range of vertical air handling units with or without heat recovery. Useable everywhere from minor premises to schools, stores and larger offices.
Air flow: 20-1500 l/s



RESIDENTIAL VENTILATION

Complete energy-efficient air handling units with heat recovery and built-in control systems. Designed to be mounted over the cooker, on walls or horizontally in attics.

Residential units

For homes with living areas of 60-320 m^2.



Cooker hoods

Ideal for capturing odours even at low airflows.



Catalogues for other products

We have seperate catalogues for Air Handling Units and Air Distribution Products as well as leaflets and brochures for our entire product range. Contact us for printed versions or download

FIRE AND SMOKE DAMPERS

Systemair produces fans, dampers and control equipment for dual use, i.e. for normal operation and certified for use during normal operation and in the event of a fire.

Fire & smoke dampers

Dampers that reduce the spread of smoke and fire.



AIR DISTRIBUTION PRODUCTS

Systemair's range also includes a wide selection of air distribution products suitable for a variety of applications and requirements. Development and manufacture take place in modern factories in Slovakia, Sweden and India.

Supply, extract & transfer devices

For mounting in ceilings or walls.



Nozzle diffusers

Optimum flexibility and comfort in air distribution for rooms



Supply & extract air valves

For mounting in ceilings and walls.



Volume control

Dampers, plenum boxes, VAV/CAV and duct accessories.



A good indoor climate is vital

We often take natural resources such as fresh air for granted. We must however remain frugal with this essential resource and mindful of maintaining a responsible balance between the designing of good ventilation systems and considering energy consumption and well thought out material usage and production methods. Systemair has recognized this need and has developed the "Green Ventilation" registered trade mark for labelling these products.

Heat recovery

In areas with a relatively low average annual temperature, ventilation systems employ effective heat recovery that returns energy from extract air to the supply air. A good rotating heat exchanger can recover up to 90% of the energy present.

Energy-efficient fans

Today, there is a new generation of fan motors that contribute to a dramatic reduction in energy consumption, as much as 50% in some cases. The new EC motors are better suited to speed control functions, which is where considerable energy savings can be made. Further benefits are of quieter operation as well as extended product life.

Pressure

The design of the duct system and the unit has an impact on required system pressure. There are often tens, sometimes hundreds, of Pascals to be saved here.

Cool recovery

In warmer parts of the world, energy savings may be possible by drawing cool night-time supply air into premises, thus cooling the building structure.

Quality-certified products

How can you choose the right solution and product when there are so many alternatives? Nowadays, most major suppliers are ISO-certified and have CE-marked products, but is that enough? At Systemair we are going one step further and working hard to ensure that our products maintain a high standard and are approved by various bodies. For units, this may mean Eurovent certification or other local certification for the country in question. To achieve this, you need resources and expertise. Within the Group, you will find, among other things, one of Europe's most modern development centres, which is AMCA-certified.

Systemair "sileo" ranges: The new generation of Systemair products with high efficiency and at the same time drastically reduced sound levels. A new impeller generation, introduced in our roof fans DVS/DHS and our axial fans AW/AR. Read more in our online-catalogue.

One of Europe's most modern development centres



A room that is so quiet that the only thing you'll hear is your heartbeat.

The development centre in Skinnskatteberg, recently accredited by AMCA, signifies an investment of EUR 700,000 and is fitted with measurement and testing equipment, making it one of the most modern facilities of its kind in Europe.

The quiet room is one of the test stations or a "reverberation chamber", producing a background sound of less than 10 dBA. When measuring supply air terminals, a green laser is used to show how the air is expelled from wall-mounted or ceiling-mounted devices.

There is also a climate chamber that cools the air to -20°C, which means we can use it all year round to develop our recovery units. In addition to the test centre in Skinnskatteberg, there are also test facilities in Germany and Denmark where we can measure air volumes of more than 400 000 m^3/h.

Selection tools

We have developed this overview to make it easier for you to get an idea of which product best suits your specific needs. More detailed analysis or planning usually requires additional information, which is where the following tools come in.

Product catalogue and specification data

More detailed technical information, sufficient to carry out complete planning, is available in separate catalogues and specification data. These describe all incorporated functions, available accessories, and additional technical data.





Online catalogue and computer software

For those who prefer to work online, it is possible to select and dimension most products (except DV and NB) using Systemair's online catalogue.

In addition to complete product information, there is also a selection function that suggests alternative products to suit actual needs. For certain products, such as Topvex, medium pressure axial fans, air handling units DV and NB, there is computer software that you can download and install locally.



Personal support

Systemair aims to have local expertise close to the customer.

You can find up-to-date information and contact details for each country on our website

New motor efficiency classification IE2

With the aim to reduce world-wide energy consumption, the International Electrotechnical Commission (IEC) has developed and published a new standard, IEC 60034-30:2008. This new worldwide standard defines efficiency classes of low voltage three phase motors for 50/60Hz supply with motor powers between 0,75 and 375 kW.

In the EEA (European Economic Area) this standard was the base for the guideline 2009/640/EU, which defines minimum efficiencies for motors being sold, installed and operated in this area. Since 16.6.2011 the minimum efficiency class for those motors is IE2. Those motors combine the benefits of a higher efficiency with a longer lifetime. This guideline has had an influence on the Systemair product range. All three phase IEC motors, used for example in Multibox MUB, roof fans DVN, axial fans AXC and other Systemair products, covered by the EU guideline have been replaced by high efficiency IE2 motors.

IE2 motors cannot be speed controlled by voltage, i.e. voltage transformers.

Systemair is offering a newly developed range of frequency inverters, FRQ, to fill this gap, offering a real plug and play solution – no need for time consuming configuration at site, and when choosing the FRQ-S models, no need to install expensive shielded cable.

Another excellent alternative to IE2 high efficiency motors are Systemair fans with EC-motors, offering up to 50% energy saving. All EC fans are fully speed controllable by a simple 0-10V signal.



Product features and applications



Fans suitable for continous operation with 100°C, 120°C, 200°C medium temperature



Explosion proof fans certified in accordance with ATEX 94-9 EC



Smoke extract fans certified in accordance with EN 12101-3



Workshops/Industries



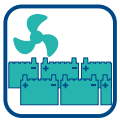
Warehouses/Storage facilitiies



Car parks



Laboratories



Battery rooms



Kitchens/Bakeries

The challenge

Energy-saving

Everyone's talking about climate protection, and calling for immediate action. But what needs to be done? The challenge has to be faced by individuals as well as by organisations. If companies are to take their corporate social responsibility seriously, and consumers are to adopt LOHAS (Lifestyle of Health and Sustainability), the focus will most definitely be on sustainable materials and efficiency. Avoiding the use of energy is one thing, but the true answer in this context is to use it more efficiently. Then it will be possible to maintain the function, comfort and convenience that are part of a modern lifestyle.
Systemair, the ventilation company, offers you an opportunity to play an active part in this process. It has developed a simple, effective answer that creates a win-win situation; in other words you, your customer and the environment all benefit.

More than just hot air!

- In Europe alone, ventilation fans consume about 197 000 GWh.
- This puts them among the largest electricity users overall.
- Even a 12-15% improvment in efficiency could reduce CO_2 emissions by 19 million tons.

In other words, companies could cut annual operating costs by as much as 2.6 billion Euros by optimising the motor systems. And since the use of fans will increase in the years to come, there is an obvious need for innovative solutions in the motor area.

Advantages and benefits

Straightforward – modern – economical

Convenient
Easy to install.

Demand-oriented
Adjustment of fan performance by steplessly speed control; excellent control features.

Maintenance-free
Guaranteed reliable operation and long-term value retention with a minimum of routine upkeep.

Flexible
100% control technology for all control values.

Makes efficient use of energy
The proportion of energy used effectively is far higher than with an AC motor.

Space-saving
The control electronics are fully integrated and not visible.

Low noise
The reduction of noise emission is immediately evident.

Energy-saving
EC-motors consume an average of 30% less energy than standard alternating current motors. In some applications, the saving can be 50% or more.

Flexible
Suitable for use in 50 Hz and 60 Hz mains systems all over the world, so that fewer versions are needed.

A reliable investment
Long operating life and advanced technology with no unnecessary use of scarce natural resources.

Payback-optimised
Reduced energy consumption through high efficiency guarantees a drop in operating costs.



Energy efficient ventilation

Energy efficient ventilation is about designing the system in a smart way, using fans that have high efficiency and adjusting the ventilation rate to the actual need while keeping a good indoor air quality.

Systemair's new EC-Vent greatly simplifies demand-controlled change of ventilation. EC-Vent is an intelligent controller that provides an effective and very efficient means of using variable speed ventilation solutions with the help of multiple sensor input that will offer a trickle and boost control and/or a proportional control. By controlling high efficiency, EC-driven exhaust and/or supply fans as well as other components of a ventilation system it promotes new levels of comfort and energy use in a wide variety of environments.

EC-Vent offers a solution that provides:

- Lower energy usage then traditional systems.
- A ventilation rate that matches the requirements – every time.
- Reduced operating costs.
- Ease of installation.
- Lower sound.
- Longer lifetime.

The philosophy of EC-Vent is to provide a variable degree of ventilation that may be required to handle variable occupancy levels. EC-Vent responds to the exact ventilation requirements of a room at any time with the help of several sensor inputs; providing a ventilation rate that perfectly matches the required level of ventilation and therefore using as little energy as possible to achieve the desired indoor air quality.

EC-Vent comprises a control unit located near the fan plus a remote room unit.

- Control unit and room unit ready for different sensors e.g. CO_2, temp, humidity, pressure etc.
- Room unit has built in humidity and temperature sensors.
- Possibility to program a week schedule.
- Built in transformer with 24V feed to sensors, dampers etc.
- User friendly menu.

In combination with energy efficient EC-driven fans, EC-Vent offers an intelligent yet easy-to-install climate solution for new buildings as well as retrofit projects.

K EC 18



KVKE EC. 56



MUB EC 94



TFSK/TFSR EC 124

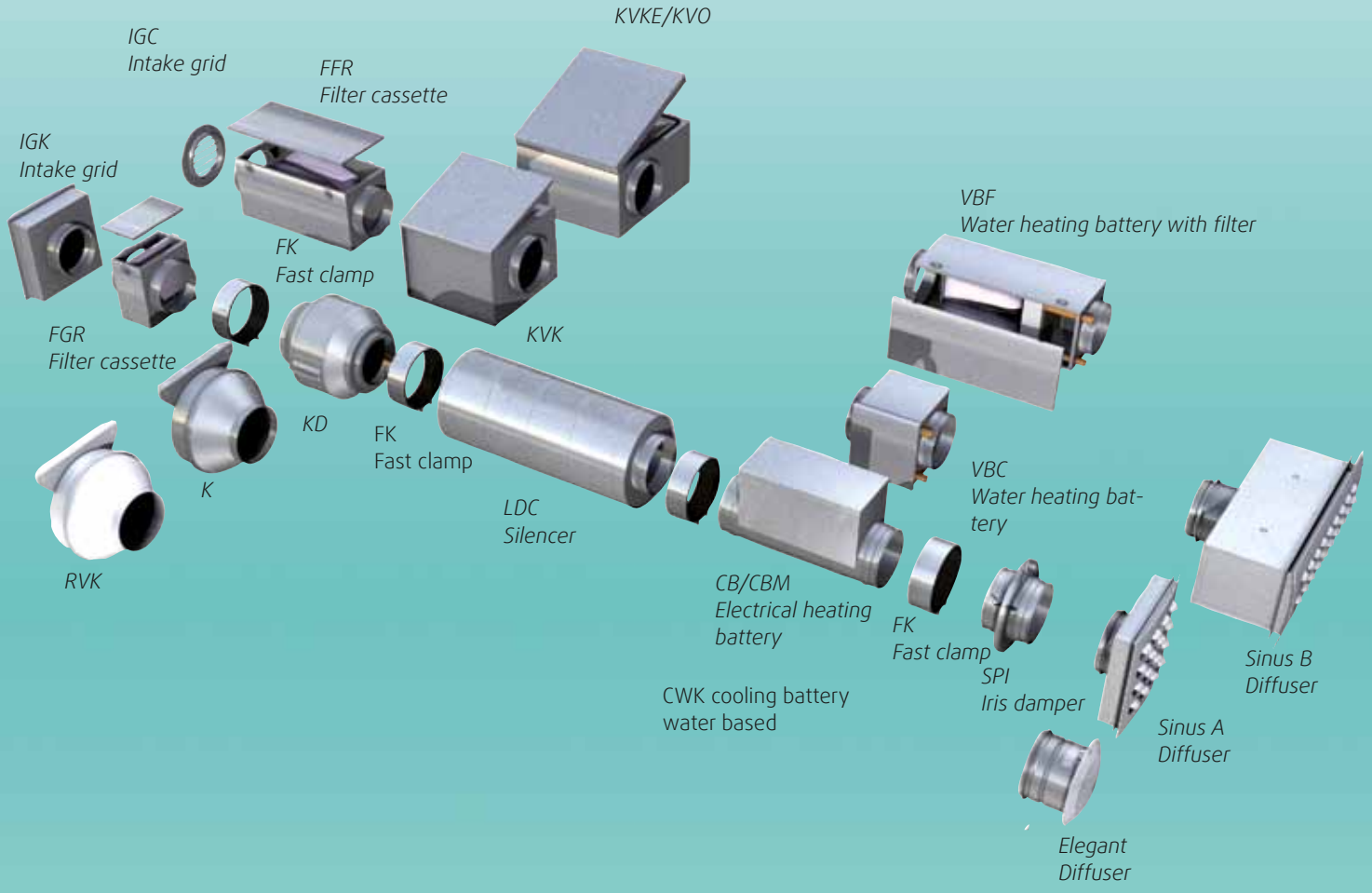


DVC/DVCI 132



KBR/KBT EC 300





General

Systemair circular duct fans have been developed for use in compact exhaust and supply air systems. The Systemair circular duct fan was the first in-line duct fan available on the market in this design. The availability of a comprehensive range of accessories, including heating and cooling coils, filters, silencers and more, offers solutions for complete systems for almost all applications. Our experience over the past 35 years and continuous research and development of new products and technologies has resulted in the Systemair circular duct fan system being a market leader. Our motto "the straight way" is revealed in the straight routing of the air in a ducted system.

Systemair range

Systemair offers different variants of circular duct fans. For systems with higher pressure losses we are offering the ranges K and RVK. The KV range can be installed directly on the wall. For higher air volumes we are offering the KD range with mixed flow impellers. When a low noise level is required, we are offering the ranges KVK, KVKE and KVO, all with sound absorbent insulation.

Motors

Systemair circular duct fans are all equipped with external rotor motors, speed controllable by voltage. All motors are equipped with thermal contacts (TK) for effective thermal motor protection. The TK is internally wired in the ranges K, KV, RVK and KVKE. Manual re-setting of the TK is in accordance with EN 60335-2-80. The KD, KVK and KVO ranges are partly equipped with internally wired TK, partly with TK with extended leads. The TK leads have to be connected to an external motor protection device. (See Electrical Accessories)

NB! Failure to connect the TK provided will result in all warranties being null and void.

K EC 18
Circular metal duct fans with EC-motors: up to 0.48 m³/s, backward curved impeller, 1 phase.



K/KV 22
Circular metal duct fans: up to 0.45 m³/s, backward curved impeller, 1 phase.



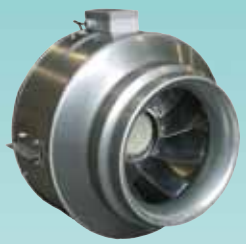
RVK 28
Circular duct fan in plastic: up to 0.47 m³/s, backward curved impellers, 1 phase.



KVO 34
Box fans: up to 0.8 m³/s. With backward curved impeller, 1 phase.



KD 38
Circular mixflow duct fans: up to 2.3 m³/s, mixflow impeller, 1 and 3 phase.



KVK 46
Insulated box fans: up to 1.49 m³/s, forward curved impeller, 1 phase.



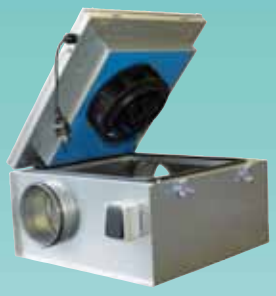
KVK DUO 52
Insulated twin box fans: up to 1.49 m³/s, forward curved impeller, 1 phase.



KVKE EC. 56
Insulated box fans with Ec-motors: up to 0.52 m³/s. With backward curved impeller, 1 phase.



KVKE 60
Insulated box fans: up to 0.6 m³/s. With backward curved impeller, 1 phase.



Circular duct fans



K EC

- EC-motors, high level of efficiency
- 100% speed controllable
- Integrated motor protection
- Supplied with mounting bracket

EC technology is intelligent technology; using integral electronic control which eliminates the slip losses in the motor and ensures that the motor always runs at optimal load and guarantees that the proportion of energy utilised effectively is many times higher and that the energy usage is considerably lower compared to AC motors.

Another special feature of EC fans is their energy-saving potential not only at full load, but especially at part-load. When operating at part-load, the energy used is much lower than with an asynchronous motor of equivalent output.

Reduced energy usage guarantees a drop in operating costs.

The K EC series is designed for installation in ducts. All the K fans have minimum 25 mm long spigot connections. The fans have backward-curved blades and external rotor motors (EC). The FK mounting clamp facilitates easy installation and removal, and prevents the transfer of vibration to the duct. The fans are delivered with a pre-wired potentiometer (0-10V) which allows you to easily set the desired working point.

Motor protection is integrated in the electronics of the motor. The casing is manufactured from galvanised sheet steel with the seams folded to give the fan a close to air tight casing. Outdoor mounting and wet room applications are possible due to the fans air tight casing.

By using an EC fan you eliminate the need for an electrical protection unit and speed controller. This should be considered when doing a cost comparison with a standard AC fan model. It also simplifies the process when commissioning.

ELECTRICAL ACCESSORIES



MTP 10
p. 341



EC-Vent
p. 329-330

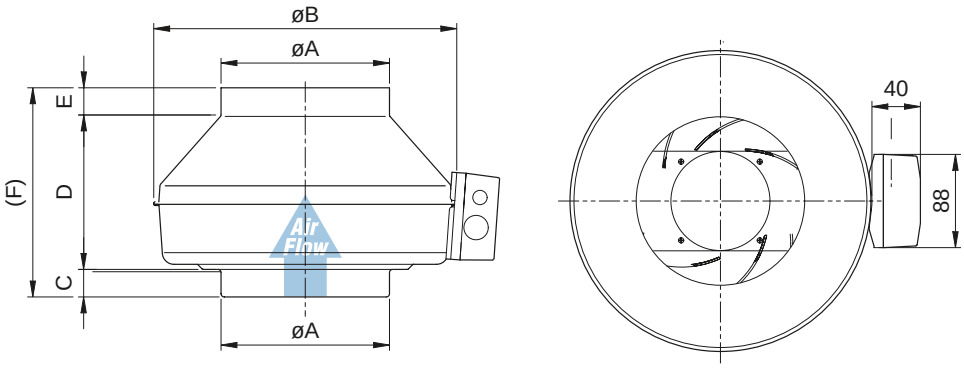


MTV 1/010
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TECHNICAL DATA

K		160 EC	200 EC	250 EC	315 M EC	315 L EC
Art no.		2580	2581	2583	2584	2585
Voltage/Frequency	V/50 Hz	230 1~	230 1~	230 1~	230 1~	230 1~
Power	W	79.4	78.6	120	166	340
Current	A	0.628	0.626	0.921	1.14	2.08
Max air flow	m^3/s	0.151	0.215	0.287	0.393	0.481
R.p.m.	min^{-1}	3105	2468	2628	2113	2719
Max temp. of transported air	°C	60	60	40	40	55
" when speed controlled	°C	60	60	40	40	55
Sound pressure level at 3 m	dB(A)	47	51	46	50	57
Weight	kg	3	3.3	3.5	6	7.2
Insulation class, motor		B	B	B	B	B
Enclosure class, motor		IP 44	IP 44	IP 44	IP 44	IP 44
Motor protection		Integral	Integral	Integral	Integral	Integral
Speed control, stepless	Electronic	MTP 10	MTP 10	MTP 10	MTP 10	MTP 10
Wiring diagram p. 391-400		41	41	41	41	41

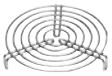
DIMENSIONS



	A	B	C	D	E	(F)
K 160 EC	159	286	25	147	26	198
K 200 EC	199	336	30	148	27	205
K 250 EC	249	336	30.5	144.5	27	202
K 315 M EC	314	408	32.5	160.5	27	220
K 315 L EC	314	408	37.5	160.5	27	225

VENTILATION ACCESSORIES


FK p. 355


SG p. 357


VK p. 356

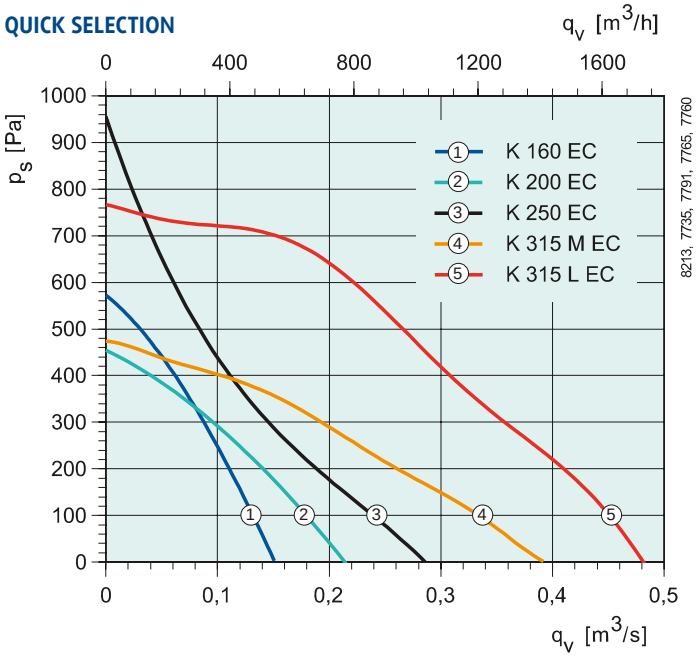

RSK p. 355


LDC p. 348


FFR p. 349

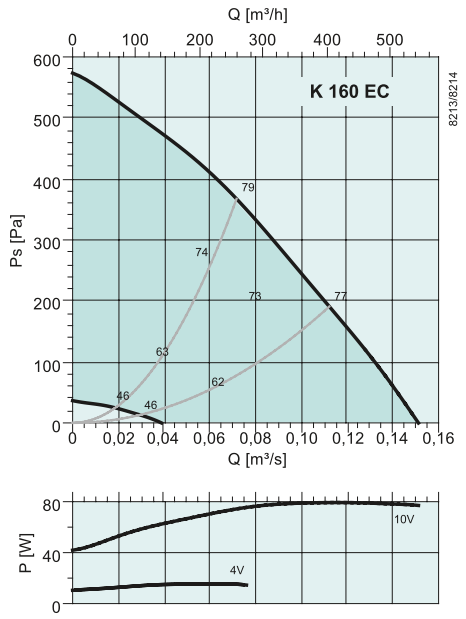

CB p. 350

QUICK SELECTION

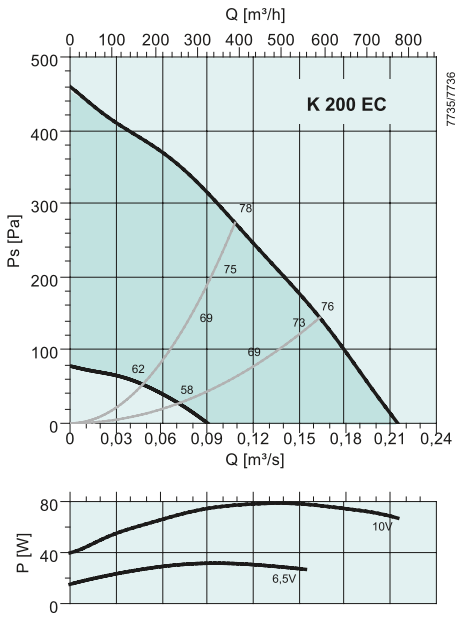


Circular duct fans

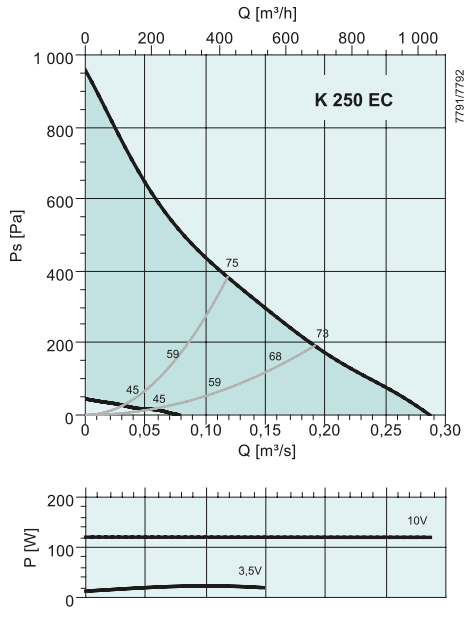
PERFORMANCE



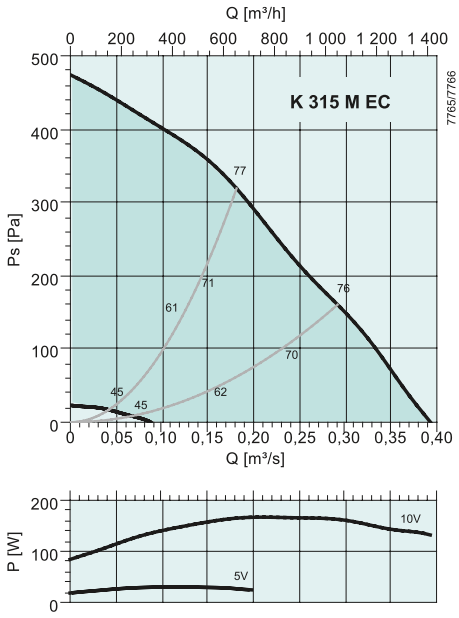
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Duct	78	53	72	73	73	69	66	56	46
LwA Surrounding	54	22	28	39	50	48	47	40	29
With LDC 160-900									
L_{wA} Duct	69	51	68	63	45	27	23	36	31
Measurement point: 0,0717 m³/s; 367 Pa									



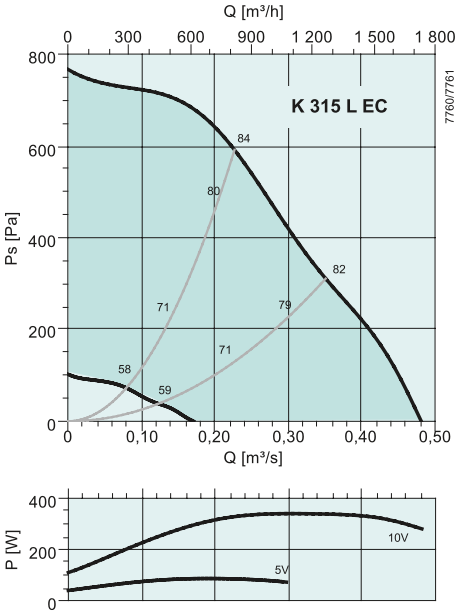
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Duct	77	51	70	68	73	68	63	55	47
L_{wA} Surrounding	58	24	38	45	57	50	45	39	29
With LDC 200-900									
LwA Duct	67	49	66	60	49	36	29	42	37
Measurement point: 0,108 m³/s; 274 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
LwA Duct	74	52	65	68	68	66	61	53	43
LwA Surrounding	53	16	36	40	50	46	44	34	23
With LDC 250-900									
LwA Duct	64	49	61	60	48	40	38	43	35
Measurement point: 0,119 m³/s; 383 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Duct	76	53	70	67	70	69	65	65	60
L_{wA} Surrounding	57	24	33	48	52	49	50	48	36
With LDC 315-900									
L_{wA} Duct	69	52	67	60	54	47	53	59	53
Measurement point: 0,181 m³/s; 319 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Duct	82	67	74	74	78	75	71	69	67
L_{wA} Surrounding	64	47	45	58	61	54	54	52	44
With LDC 315-900									
L_{wA} Duct	74	66	71	67	62	53	59	63	60
Measurement point: 0,227 m^3/s; 591 Pa									

Circular duct fans



K/KV

- Speed-controllable
- Integral thermal contacts
- Can be installed in any position
- Can be installed outdoors
- Maintenance-free and reliable

The K series is designed for installation in ducts and the KV is designed to be used as a wall mounted duct-connected extract fan. All the K/KV-fans have a minimum 25 mm long spigot connections. The fans have backward-curved blades and external rotor motors. To simplify installation the K-fan has a fixing bracket together with screws for mounting the bracket included as standard.

The FK mounting clamp facilitates easy installation and removal, and prevents the transfer of vibration to the duct. The fans can be speed-controlled via a stepless thyristor or a 5-step transformer.

To protect the motor from overheating K/KV 100 M and 125 M is impedance protected, K/KV 100 XL-315 L has integral thermal contacts with electrical reset.

The casing is manufactured from galvanised sheet steel and folded which gives the fan an air tight casing. Duct connected outdoor and wet room applications of the fan are possible due to the air tight casing.

ELECTRICAL ACCESSORIES



RE p. 320

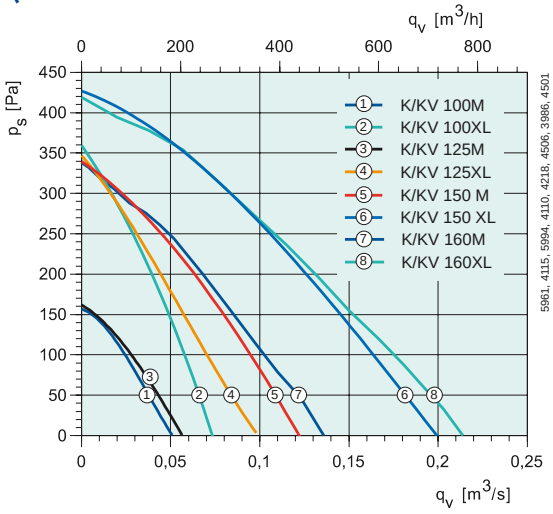


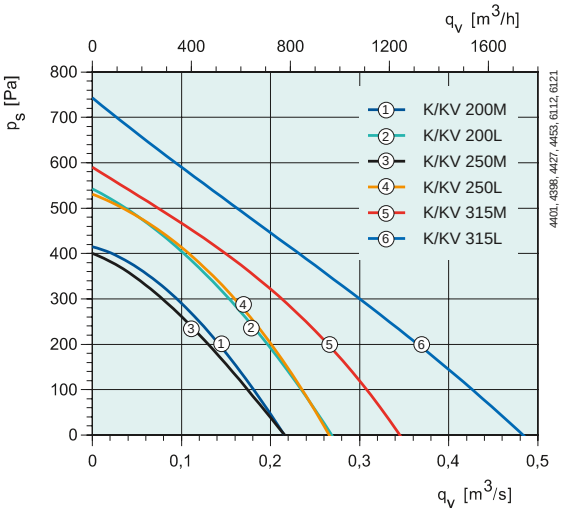
REU p. 320



REE p. 321

QUICK SELECTION

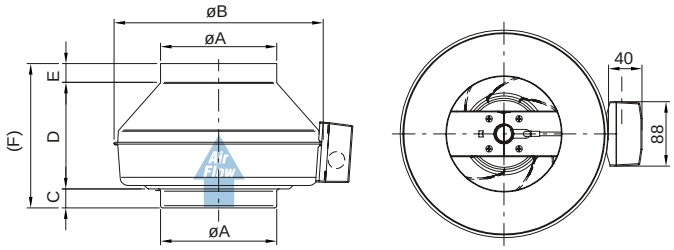




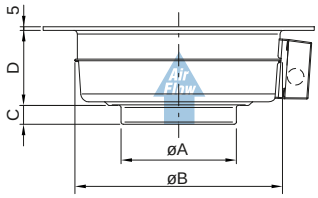
TECHNICAL DATA

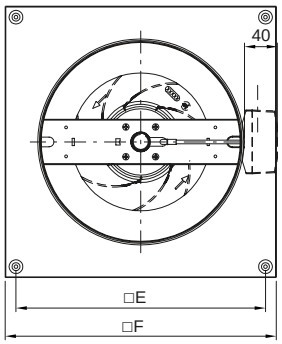
K/KV		100 M	100 XL	125 M	125 XL	150 M	150 XL	160 M
Art no.		1001/1205	1004/1207	1002/1208	1003/1210	1017/1211	1018/1212	1005/1213
Voltage/Frequency	V/50 Hz	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~
Power	W	29.9	58.6	29.1	62	61	104	59
Current	A	0.171	0.253	0.172	0.271	0.264	0.458	0.259
Max air flow	m^3/s	0.051	0.074	0.057	0.0978	0.122	0.199	0.136
R.p.m.	min^{-1}	2443	2425	2483	2390	2412	2567	2499
Max temp. of transported air	°C	70	70	70	70	70	70	70
" when speed controlled	°C	70	70	70	70	70	70	70
Sound pressure level at 3 m	dB(A)	38	48	34	50	42	55	44
Weight	kg	2.5	2.5	2.5	2.5	3.5	4.5	3
Insulation class, motor		B	B	B	B	B	B	B
Enclosure class, motor		IP 44	IP 44	IP 44	IP 44	IP 44	IP 44	IP 44
Capacitor	µF	–	2	–	2	2	3	2
Motor protection		Integral	Integral	Integral	Integral	Integral	Integral	Integral
Speed control, five-step	Transformer	RE 1.5	RE 1.5	RE 1.5	RE 1.5	RE 1.5	RE 1.5	RE 1.5
Speed control, five step high/low	Transformer	REU 1.5	REU 1.5	REU 1.5	REU 1.5	REU 1.5	REU 1.5	REU 1.5
Speed control, stepless	Thyristor	REE 1	REE 1	REE 1	REE 1	REE 1	REE 1	REE 1
Wiring diagram p. 391-400		1	2	1	2	2	2	2

DIMENSIONS



K	A	B	C	D	E	F
100 M	99	218	26	166	26	218
100 XL	99	246	26	161	26	213
125 M	124	218	27	142	27	196
125 XL	124	246	26	151	26	203
150 M	149	286	25	152	25	202
150 XL	149	336	29	171	26	226
160 M	159	286	25	147	26	198
160 XL	159	336	29	166	26	221
200 M	199	336	30	148	27	205
200 L	199	336	30	174	27	231
250 M	249	336	30.5	119.5	27	177
250 L	249	336	30.5	144.5	27	202
315 M	314	408	32.5	160.5	27	220
315 L	314	408	37.5	160.5	27	225

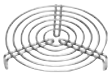




KV	A	B	C	D	□E	□F
100 M	99	218	26	143	254	284
100 XL	99	246	26	125	304	334
125 M	124	218	27	131	254	284
125 XL	124	246	26	127	304	334
150 M	149	286	25	113	344	374
150 XL	149	336	29	147	394	425
160 M	159	286	25	113	344	374
160 XL	159	336	29	147	394	425
200 M	199	336	30	134	394	425
200 L	199	336	30	158	394	425
250 M	249	336	30.5	135	394	425
250 L	249	336	30.5	159	394	425
315 M	314	408	32.5	145	458	489
315 L	314	408	37.5	145	458	489

VENTILATION ACCESSORIES


FK p. 355


SG p. 357


VK p. 356


RSK p. 355


LDC p. 348

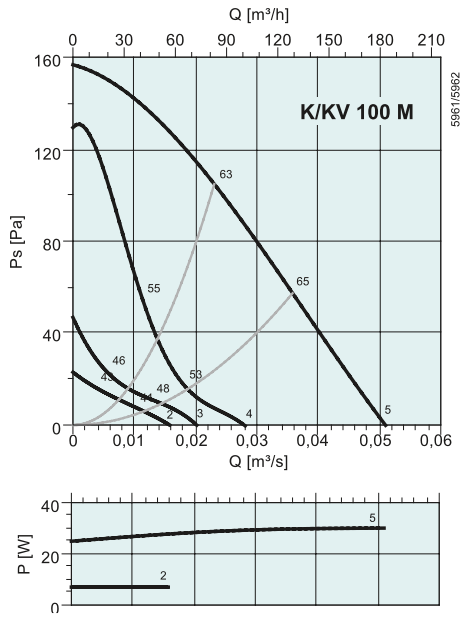

FFR p. 349


CB p. 350

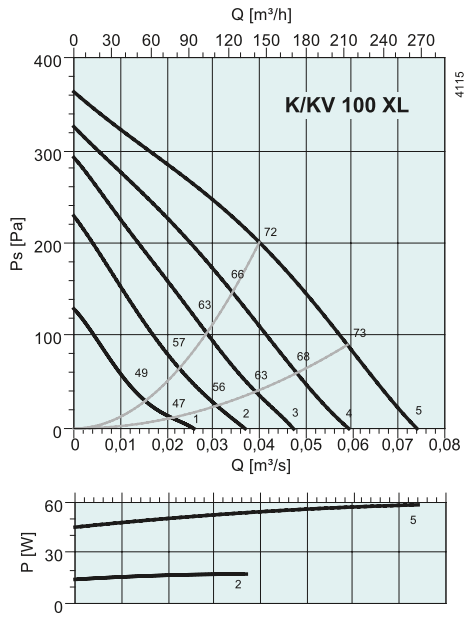
K/KV		160 XL	200 M	200 L	250 M	250 L	315 M	315 L
Art no.		1006/1214	1007/1215	1008/1216	1009/1217	1010/1218	1011/1219	1012/1220
Voltage/Frequency	V/50 Hz	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~
Power	W	105	106	158	103	157	202	318
Current	A	0.457	0.463	0.709	0.448	0.699	0.893	1.39
Max air flow	m^3/s	0.214	0.216	0.269	0.216	0.267	0.347	0.48
R.p.m.	min^{-1}	2553	2551	2630	2579	2641	2578	2318
Max temp. of transported air	°C	70	70	50	70	70	51	51
" when speed controlled	°C	70	70	50	70	70	51	45
Sound pressure level at 3 m	dB(A)	53	51	50	49	49	47	50
Weight	kg	4.5	4.5	4.5	4.5	5	6	7
Insulation class, motor		B	B	B	B	B	F	F
Enclosure class, motor		IP 44	IP 44	IP 44	IP 44	IP 44	IP 44	IP 44
Capacitor	µF	3	3	4	3	4	5	7
Motor protection		Integral	Integral	Integral	Integral	Integral	Integral	Integral
Speed control, five-step	Transformer	RE 1.5	RE 1.5	RE 1.5	RE 3	RE 3	RE 1.5	RE 1.5
Speed control, five step high/low	Transformer	REU 1.5	REU 1.5	REU 1.5	REU 3	REU 3	REU 1.5	REU 1.5
Speed control, stepless	Thyristor	REE 1	REE 1	REE 1	REE 1	REE 1	REE 2	REE 2
Wiring diagram p. 391-400		2	2	2	2	2	2	2

Circular duct fans

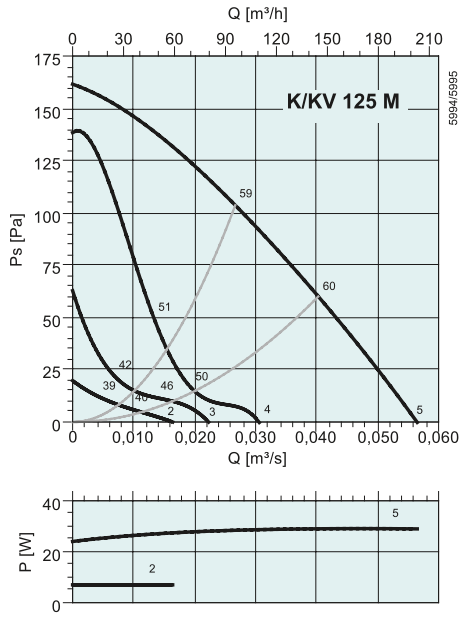
PERFORMANCE



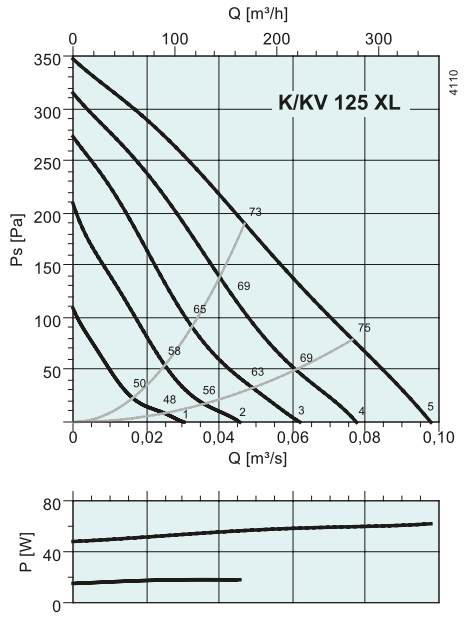
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	63	50	59	56	58	50	47	40	28
L_{wA} Outlet	60	35	54	55	54	49	44	38	27
L_{wA} Surrounding	45	21	14	23	36	41	42	29	17
With LDC 100-600									
L_{wA} Inlet	57	46	56	45	34	14	0	6	11
L_{wA} Outlet	52	31	51	44	30	13	0	4	10
Measurement point: 0,231 m³/s; 105 Pa									



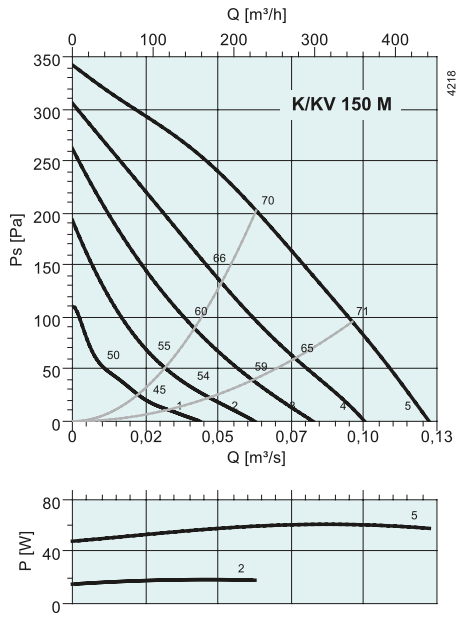
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	72	49	65	68	66	62	55	52	40
L_{wA} Outlet	69	49	63	63	65	60	55	54	44
L_{wA} Surrounding	55	28	28	47	51	48	46	44	30
With LDC 100-600									
L_{wA} Inlet	63	45	62	57	42	26	6	18	23
L_{wA} Outlet	61	45	60	52	41	24	6	20	27
Measurement point: 0,04 m³/s; 201 Pa									



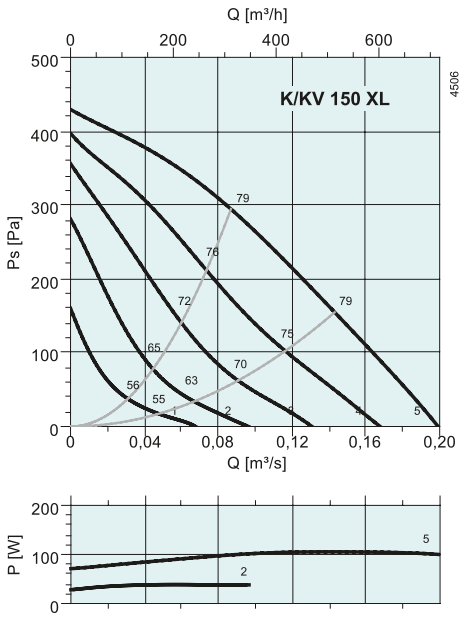
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	59	33	51	54	55	48	45	36	29
L_{wA} Outlet	60	40	46	58	55	47	44	38	31
L_{wA} Surrounding	41	12	9	24	39	32	33	25	18
With LDC 125-600									
L_{wA} Inlet	50	30	48	45	32	18	5	14	15
L_{wA} Outlet	50	37	43	49	32	17	4	16	17
Measurement point: 0,0267 m³/s; 104 Pa									



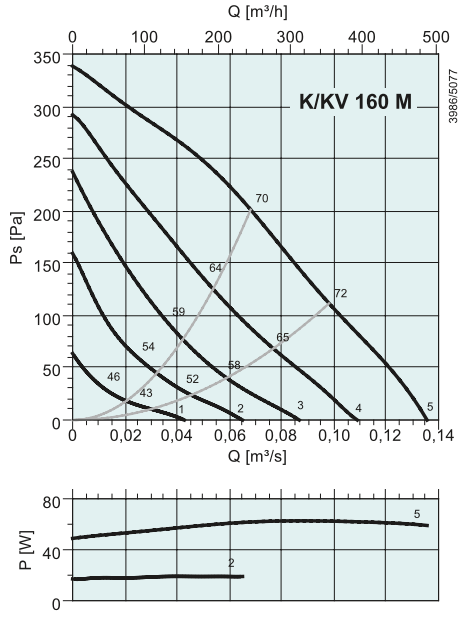
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	73	56	65	68	69	65	61	52	41
L_{wA} Outlet	73	55	64	68	68	64	61	57	50
L_{wA} Surrounding	57	35	31	46	53	52	48	40	29
With LDC 125-600									
L_{wA} Inlet	64	53	62	59	46	35	21	30	27
L_{wA} Outlet	64	52	61	59	45	34	21	35	36
Measurement point: 0,0469 m³/s; 190 Pa									



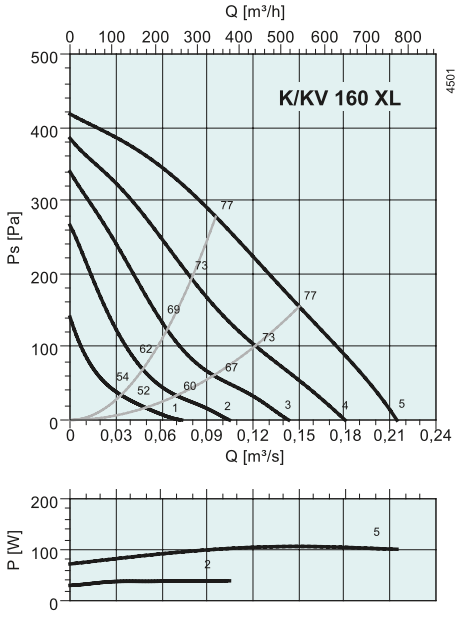
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	70	45	63	66	64	58	55	51	42
L_{wA} Outlet	69	46	63	66	60	56	52	50	41
L_{wA} Surrounding	49	24	25	43	46	40	39	36	24
With LDC 150-600									
L_{wA} Inlet	63	45	60	59	44	31	24	35	31
L_{wA} Outlet	63	46	60	59	40	29	21	34	30
Measurement point: 0,063 m³/s; 202 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	78	56	67	75	74	67	62	62	54
L_{wA} Outlet	76	51	67	73	70	65	61	60	49
L_{wA} Surrounding	62	26	28	43	61	47	49	50	36
With LDC 150-600									
L_{wA} Inlet	70	56	64	68	54	40	31	46	43
L_{wA} Outlet	68	51	64	66	50	38	30	44	38
Measurement point: 0,0869 m³/s; 294 Pa									

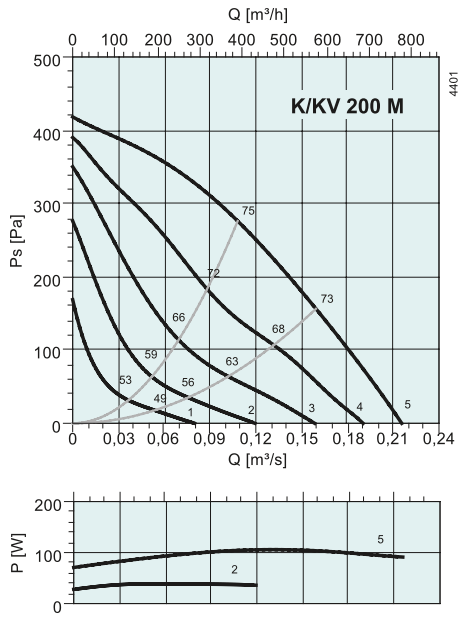


dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	70	43	65	64	65	61	59	48	37
L_{wA} Outlet	68	44	62	64	61	59	56	48	37
L_{wA} Surrounding	51	13	23	35	47	43	46	38	23
With LDC 160-900									
L_{wA} Inlet	62	41	61	54	37	19	16	28	22
L_{wA} Outlet	60	42	58	54	33	17	13	28	22
Measurement point: 0,0681 m³/s; 201 Pa									

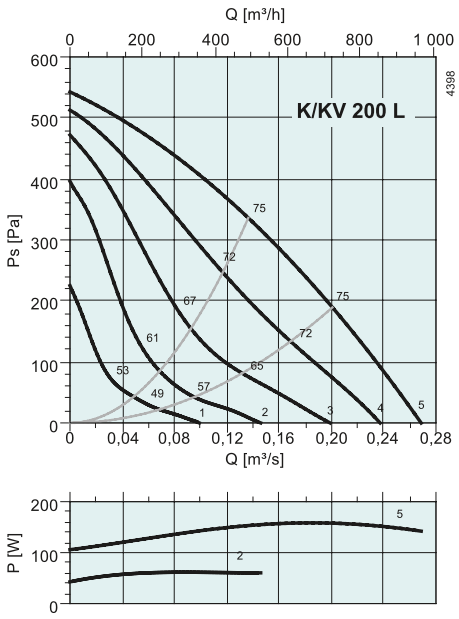


dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	77	49	65	72	73	67	63	63	51
L_{wA} Outlet	75	47	65	72	68	65	63	62	50
L_{wA} Surrounding	60	24	31	42	59	46	46	49	35
With LDC 160-900									
L_{wA} Inlet	65	47	61	62	45	25	20	43	36
L_{wA} Outlet	65	45	61	62	40	23	20	42	35
Measurement point: 0,0956 m³/s; 278 Pa									

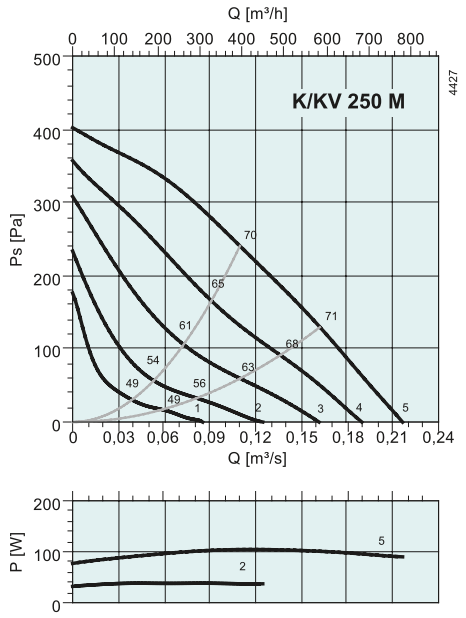
Circular duct fans



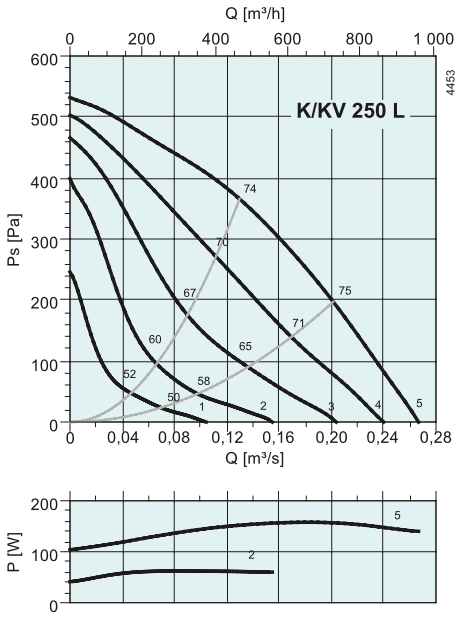
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	75	47	67	67	72	65	61	59	50
L_{wA} Outlet	74	45	65	69	68	63	62	61	50
L_{wA} Surrounding	58	16	40	39	54	49	52	52	37
With LDC 200-900									
L_{wA} Inlet	65	45	63	59	48	33	27	46	40
L_{wA} Outlet	64	43	61	61	44	31	28	48	40
Measurement point: 0,108 m^3/s; 276 Pa									



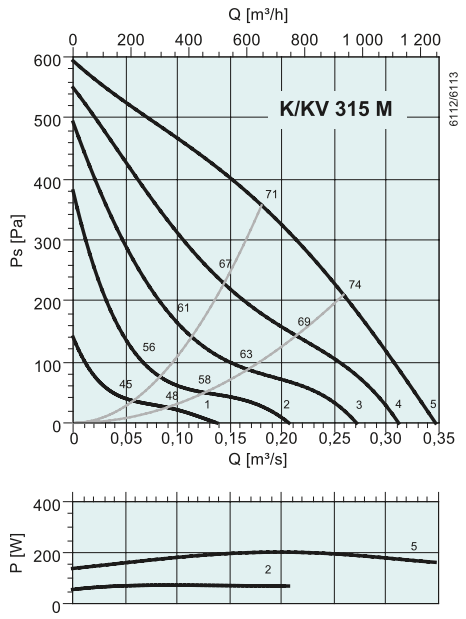
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	75	49	68	70	71	65	62	58	50
L_{wA} Outlet	74	51	66	71	67	64	62	60	53
L_{wA} Surrounding	57	17	30	41	52	49	52	48	36
With LDC 200-900									
L_{wA} Inlet	66	47	64	62	47	33	28	45	40
L_{wA} Outlet	66	49	62	63	43	32	28	47	43
Measurement point: 0,136 m^3/s; 336 Pa									



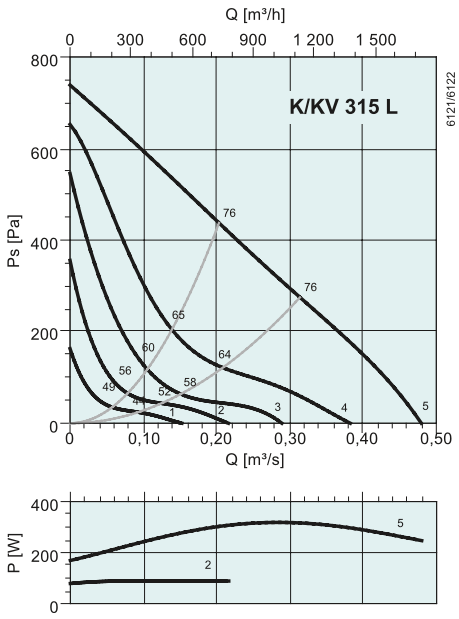
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	70	45	59	61	65	62	60	62	53
L_{wA} Outlet	70	46	58	62	64	61	63	62	51
L_{wA} Surrounding	56	18	31	31	48	44	51	52	39
With LDC 250-900									
L_{wA} Inlet	59	42	55	53	45	36	37	52	45
L_{wA} Outlet	59	43	54	54	44	35	40	52	43
Measurement point: 0,11 m^3/s; 241 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	74	59	66	67	68	67	62	55	46
L_{wA} Outlet	75	58	64	71	66	68	66	58	49
L_{wA} Surrounding	56	34	33	45	52	47	50	46	33
With LDC 250-900									
L_{wA} Inlet	65	56	62	59	48	41	39	45	38
L_{wA} Outlet	65	55	60	63	46	42	43	48	41
Measurement point: 0,13 m^3/s; 366 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	73	51	60	66	69	67	62	58	55
L_{wA} Outlet	70	49	56	62	62	65	64	58	54
L_{wA} Surrounding	54	22	28	39	48	45	47	43	50
With LDC 315-900									
L_{wA} Inlet	63	50	57	59	53	45	50	52	48
L_{wA} Outlet	60	48	53	55	46	43	52	52	47
Measurement point: 0,18 m^3/s; 357 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	76	55	67	70	71	68	66	63	58
L_{wA} Outlet	77	63	67	71	69	70	69	63	57
L_{wA} Surrounding	57	24	37	45	52	49	50	46	46
With LDC 315-900									
L_{wA} Inlet	68	54	64	63	55	46	54	57	51
L_{wA} Outlet	69	62	64	64	53	48	57	57	50
Measurement point: 0,203 m^3/s; 438 Pa									

Circular duct fans



RVK

- Speed-controllable
- Integral thermal contacts
- Can be installed in any position
- Inclusive mounting bracket
- Maintenance-free and reliable

The RVK series is designed for installation in ducts. The casing is manufactured from PA6 fibreglass reinforced plastic which gives the fan a low leakage casing. Duct connected wet room applications of the fan are possible due to a close to air tight casing and the IP 44 rated terminal box.The fans have backward-curved blades and external rotor motors. The FK mounting clamp facilitates easy installation and removal, and prevents the transfer of vibration to the duct. The fans can be speed-controlled via a stepless thyristor or a 5-step transformer. The RVK fans have integral thermal contacts with automatic reset.

ELECTRICAL ACCESSORIES



RE p. 320

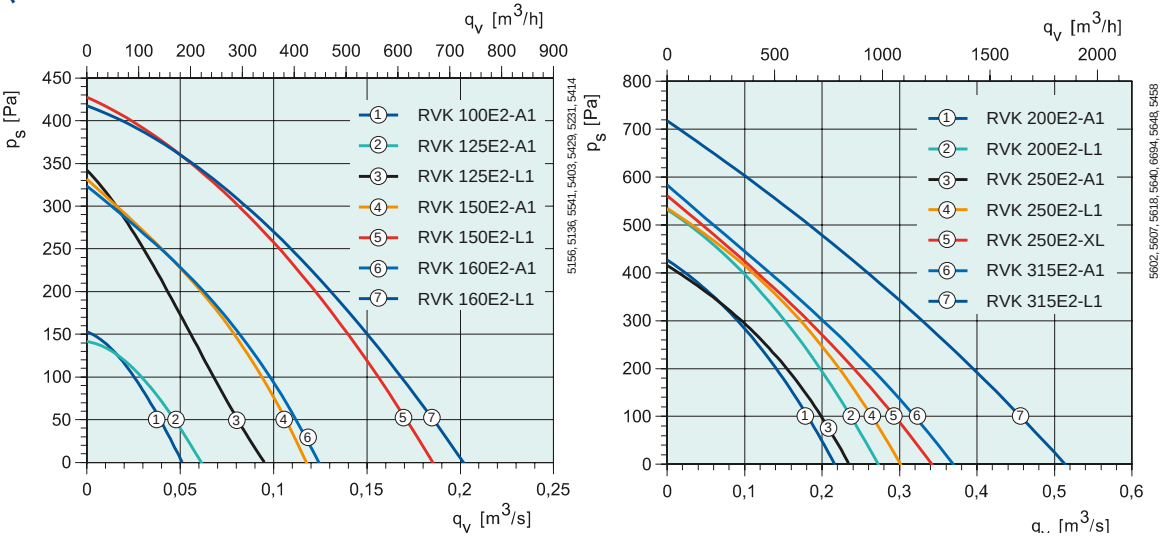


REU p. 320



REE p. 321

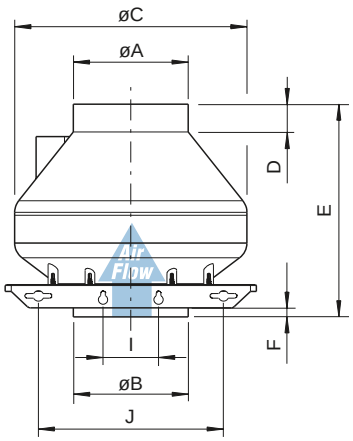
QUICK SELECTION

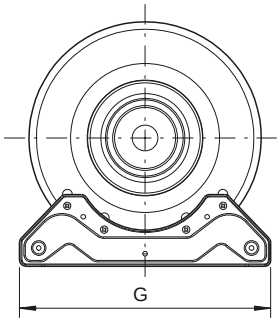


TECHNICAL DATA

RVK		100E2-A1	125E2-A1	125E2-L1	150E2-A1	150E2-L1	160E2-A1	160E2-L1
Art no.		5755	5756	9775	5757	5758	5759	5760
Voltage/Frequency	V/50 Hz	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~
Power	W	29.1	29.2	61.2	59.9	115	57.8	112
Current	A	0.171	0.172	0.26	0.261	0.5	0.257	0.485
Max air flow	m^3/s	0.0512	0.0612	0.0947	0.118	0.185	0.125	0.202
R.p.m.	min^{-1}	2482	2469	2436	2418	2497	2429	2530
Max temp. of transported air	°C	70	70	70	70	70	70	70
" when speed controlled	°C	70	70	70	70	70	70	70
Sound pressure level at 3 m	dB(A)	35	38	43	48	50	43	48
Weight	kg	2	2	2	3	2.7	3	2.7
Insulation class, motor		B	B	B	B	B	B	B
Enclosure class, motor		IP 44	IP 44	IP 44	IP 44	IP 44	IP 44	IP 44
Capacitor	µF	–	–	2	2	3	2	3
Motor protection		Impedans	Impedans	Integral	Integral	Integral	Integral	Integral
Speed control, five-step	Transformer	RE 1.5	RE 1.5	RE 1.5	RE 1.5	RE 1.5	RE 1.5	RE 1.5
Speed control, five step high/low	Transformer	REU 1.5	REU 1.5	REU 1.5	REU 1.5	REU 1.5	REU 1.5	REU 1.5
Speed control, stepless	Thyristor	REE 1	REE 1	REE 1	REE 1	REE 1	REE 1	REE 1
Wiring diagram p. 391-400		1	1	2	2	2	2	2

DIMENSIONS

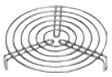




RVK	øA	øB	øC	D	E	F	G	I	J
100E2-A1	99	99	251	30	230	30	271.5	60	200
125E2-A1	124	124	251	30	230	30	271.5	60	200
125E2-L1	124	124	251	30	230	30	271.5	60	200
150E2-A1	149	149	340.5	30	230	30	271.5	60	200
150E2-L1	149	149	340.5	30	230	30	271.5	60	200
160E2-A1	159	159	340.5	30	230	30	271.5	60	200
160E2-L1	159	159	340.5	30	230	30	271.5	60	200
200E2-A1	199	199	340.5	30	230	30	271.5	60	200
200E2-L1	199	199	340.5	30	250	30	271.5	60	200
250E2-A1	249	249	340.5	30	230	30	271.5	60	200
250E2-L1	249	249	340.5	30	230	30	271.5	60	200
250E2-XL	249	249	340.5	30	230	30	271.5	60	200
315E2-A1	315	315	405	30	275	30	271.5	60	200
315E-L1	315	315	405	30	275	30	271.5	60	200

VENTILATION ACCESSORIES


FK p. 355


SG p. 357


VK p. 356


RSK p. 355


LDC p. 348

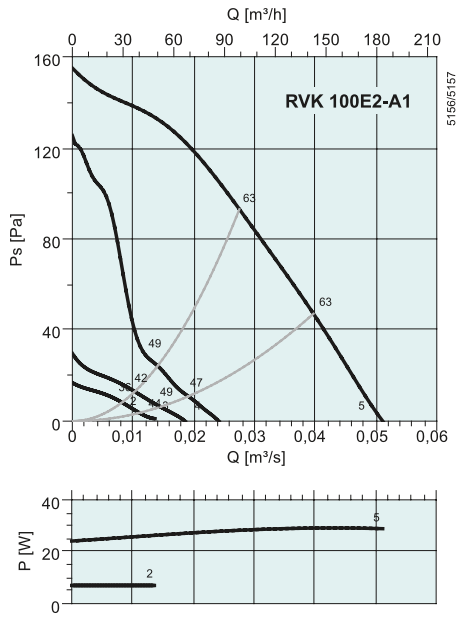

FFR p. 349


CB p. 350

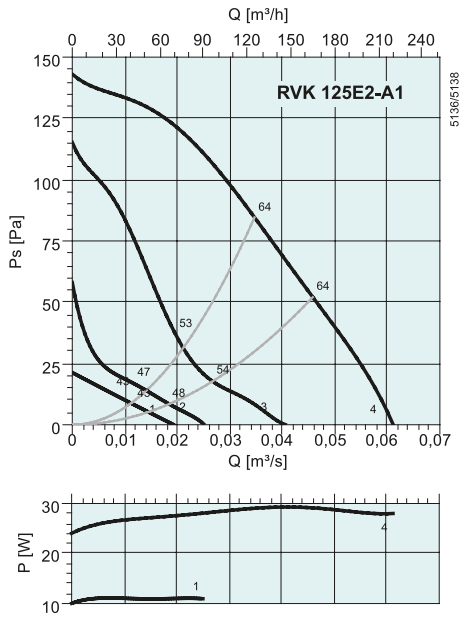
RVK		200E2-A1	200E2-L1	250E2-A1	250E2-L1	250E2-XL	315E2-A1	315E2-L1
Art no.		5761	5762	5763	5764	30901	5765	5766
Voltage/Frequency	V/50 Hz	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~
Power	W	107	160	109	159	213	176	318
Current	A	0.47	0.705	0.476	0.706	0.935	0.773	1.39
Max air flow	m^3/s	0.216	0.273	0.234	0.302	0.341	0.369	0.51
R.p.m.	min^{-1}	2550	2581	2546	2595	2415	2387	2433
Max temp. of transported air	°C	70	70	70	57	51	70	38
" when speed controlled	°C	70	55	70	57	38	70	38
Sound pressure level at 3 m	dB(A)	45	46	48	44	49	40	45
Weight	kg	3.3	3.7	3.3	4	6	5.0	5.2
Insulation class, motor		B	B	B	B	B	F	F
Enclosure class, motor		IP 44	IP 44	IP 44	IP 44	IP 44	IP 44	IP 44
Capacitor	µF	3	4	3	4	5	5	7
Motor protection		Integral	Integral	Integral	Integral	Integral	Integral	Integral
Speed control, five-step	Transformer	RE 1.5	RE 1.5	RE 1.5	RE 3	RE 1.5	RE 1.5	RE 1.5
Speed control, five step high/low	Transformer	REU 1.5	REU 1.5	REU 1.5	REU 3	REU 1.5	REU 1.5	REU 1.5
Speed control, stepless	Thyristor	REE 1	REE 1	REE 1	REE 1	REE 1	REE 1	REE 2
Wiring diagram p. 391-400		2	2	2	2	2	2	2

Circular duct fans

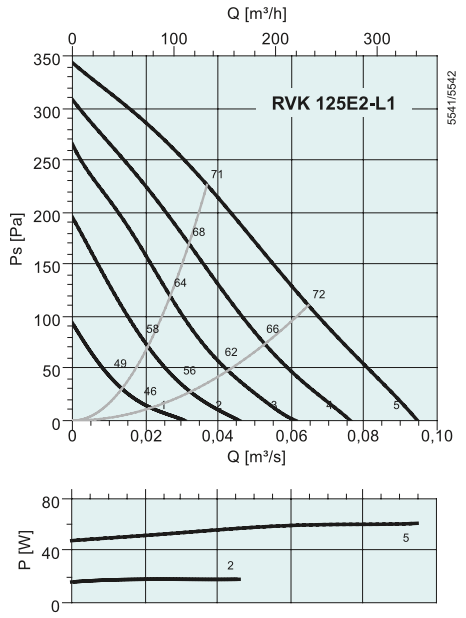
PERFORMANCE



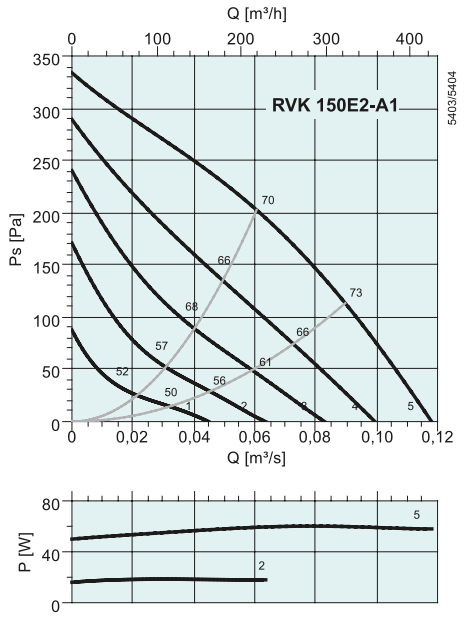
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	62	39	57	57	57	51	44	39	27
L_{wA} Outlet	57	42	52	51	51	47	43	39	28
L_{wA} Surrounding	41	1	11	30	37	37	34	25	14
With LDC 100-600									
L_{wA} Inlet	55	35	54	46	33	15	0	5	10
L_{wA} Outlet	50	38	49	40	27	11	0	5	11
Measurement point: 0,0275 m^3/s; 93 Pa									



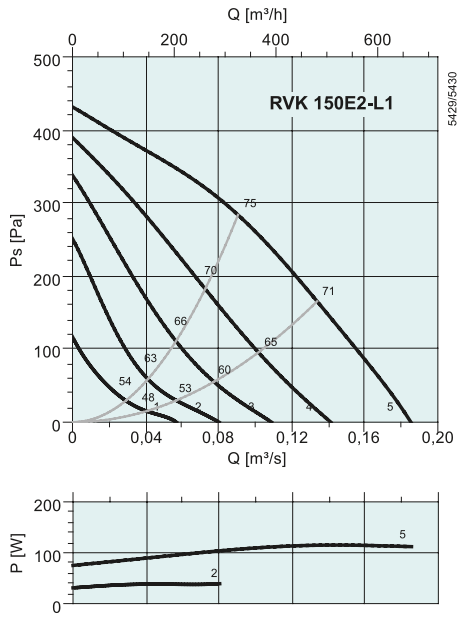
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	63	36	56	57	60	52	46	41	33
L_{wA} Outlet	60	36	54	56	53	50	47	42	33
L_{wA} Surrounding	45	12	15	28	42	37	36	27	28
With LDC 125-600									
L_{wA} Inlet	54	33	53	48	37	22	6	19	19
L_{wA} Outlet	53	33	51	47	30	20	7	20	19
Measurement point: 0,0347 m^3/s; 85 Pa									



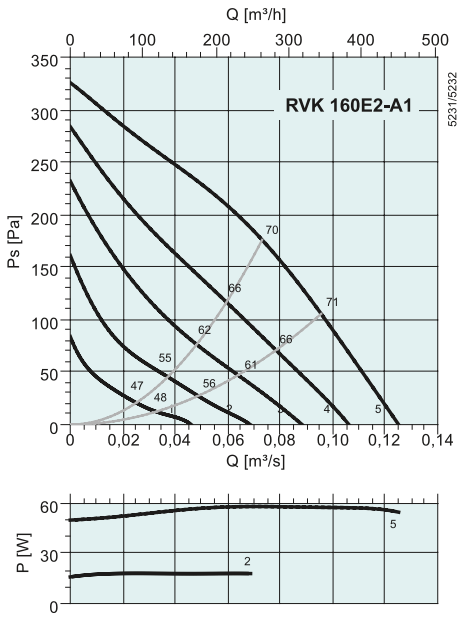
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	70	49	66	64	65	59	55	52	42
L_{wA} Outlet	69	50	64	64	64	58	55	53	44
L_{wA} Surrounding	50	23	37	36	48	43	43	35	23
With LDC 125-600									
L_{wA} Inlet	64	46	63	55	42	29	15	30	28
L_{wA} Outlet	62	47	61	55	41	28	15	31	30
Measurement point: 0,0369 m^3/s; 226 Pa									



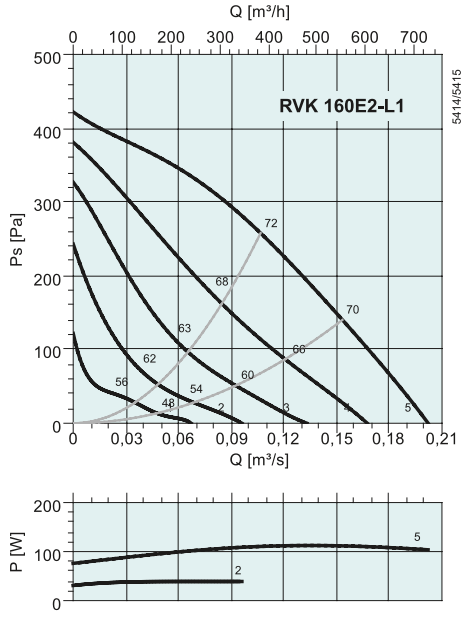
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	70	43	61	66	64	58	56	53	43
L_{wA} Outlet	69	44	60	67	59	57	52	51	42
L_{wA} Surrounding	54	23	32	42	52	47	44	38	27
With LDC 150-600									
L_{wA} Inlet	62	43	58	59	44	31	25	37	32
L_{wA} Outlet	62	44	57	60	39	30	21	35	31
Measurement point: 0,0606 m^3/s; 203 Pa									



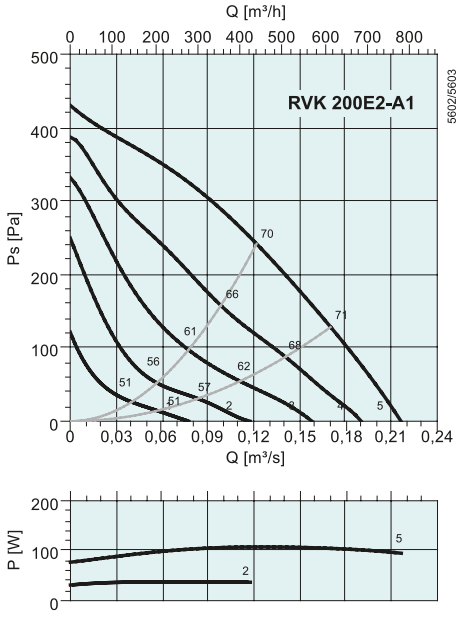
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	74	42	67	68	71	62	57	58	48
L_{wA} Outlet	73	43	68	69	68	59	55	57	48
L_{wA} Surrounding	57	19	35	39	56	49	45	42	29
With LDC 150-600									
L_{wA} Inlet	66	42	64	61	51	35	26	42	37
L_{wA} Outlet	67	43	65	62	48	32	24	41	37
Measurement point: 0,0906 m^3/s; 284 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	69	40	58	66	63	60	56	54	43
L_{wA} Outlet	66	39	58	64	56	58	53	53	41
L_{wA} Surrounding	50	23	18	38	46	45	42	37	29
With LDC 160-900									
L_{wA} Inlet	58	38	54	56	35	18	13	34	28
L_{wA} Outlet	57	37	54	54	28	16	10	33	26
Measurement point: 0,0731 m^3/s; 176 Pa									

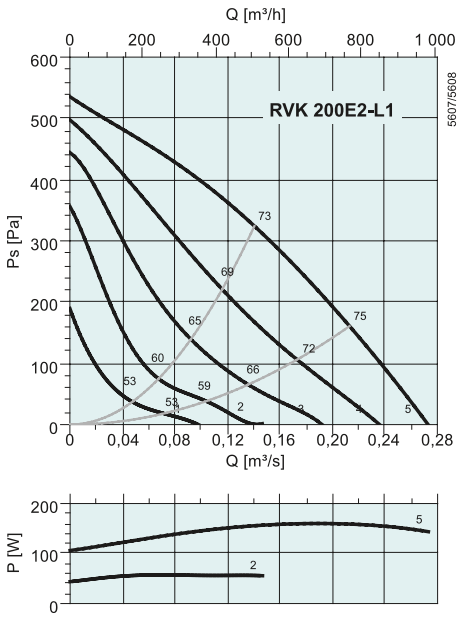


dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	71	41	62	63	68	62	59	60	50
L_{wA} Outlet	70	42	63	65	64	60	58	59	49
L_{wA} Surrounding	55	18	35	31	53	47	45	43	33
With LDC 160-900									
L_{wA} Inlet	59	39	58	53	40	20	16	40	35
L_{wA} Outlet	61	40	59	55	36	18	15	39	34
Measurement point: 0,107 m^3/s; 258 Pa									

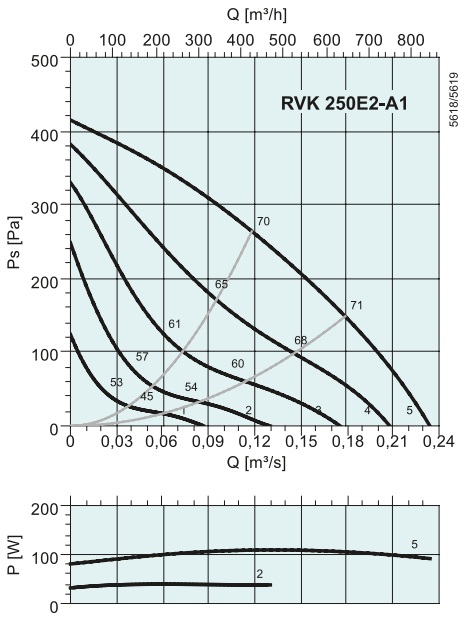


dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	70	43	58	61	66	62	61	59	48
L_{wA} Outlet	69	45	58	62	65	59	60	60	48
L_{wA} Surrounding	52	17	26	26	49	44	44	42	27
With LDC 200-900									
L_{wA} Inlet	57	41	54	53	42	30	27	46	38
L_{wA} Outlet	58	43	54	54	41	27	26	47	38
Measurement point: 0,122 m^3/s; 242 Pa									

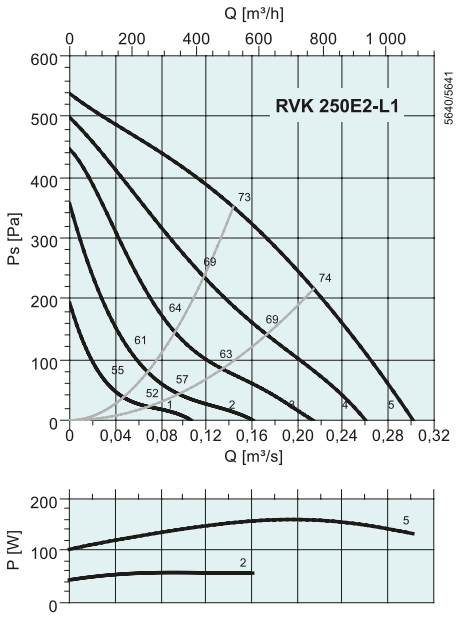
Circular duct fans



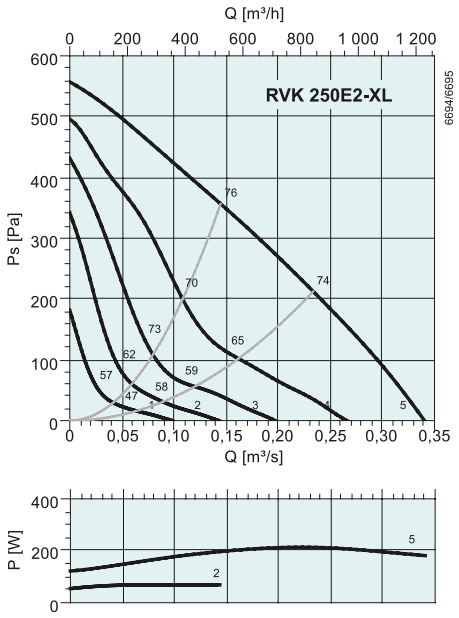
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	73	49	64	67	68	63	61	58	49
L_{wA} Outlet	73	48	64	69	65	62	63	58	49
L_{wA} Surrounding	53	14	27	36	51	47	45	38	28
With LDC 200-900									
L_{wA} Inlet	63	47	60	59	44	31	27	45	39
L_{wA} Outlet	64	46	60	61	41	30	29	45	39
Measurement point: 0,141 m³/s; 324 Pa									



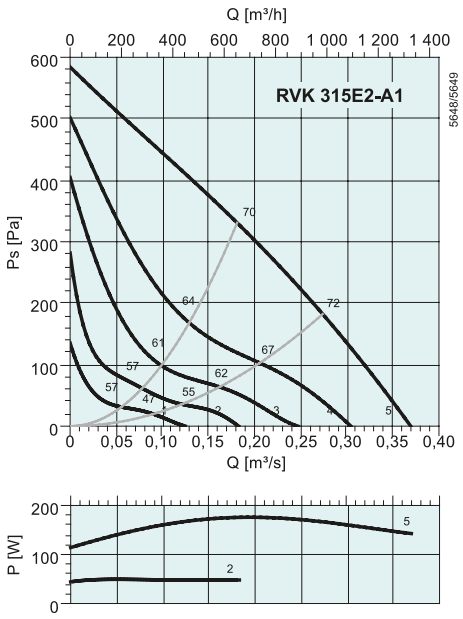
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	69	43	59	61	64	61	60	59	49
L_{wA} Outlet	69	47	58	62	64	59	62	61	49
L_{wA} Surrounding	55	16	31	40	52	51	42	40	28
With LDC 250-900									
L_{wA} Inlet	58	40	55	53	44	35	37	49	41
L_{wA} Outlet	58	44	54	54	44	33	39	51	41
Measurement point: 0,118 m³/s; 264 Pa									

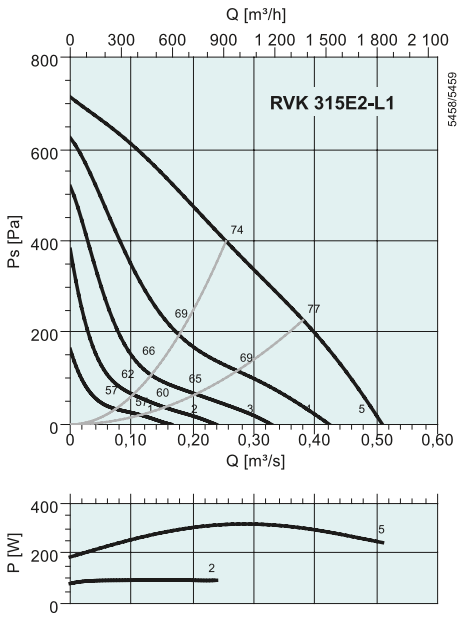


dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	71	49	65	66	65	61	59	57	49
L_{wA} Outlet	73	52	64	71	62	61	61	58	50
L_{wA} Surrounding	51	19	41	37	48	44	42	37	26
With LDC 250-900									
L_{wA} Inlet	63	46	61	58	45	35	36	47	41
L_{wA} Outlet	65	49	60	63	42	35	38	48	42
Measurement point: 0,144 m³/s; 351 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	75	58	68	66	70	67	62	59	53
L_{wA} Outlet	75	58	70	69	66	68	66	61	53
L_{wA} Surrounding	56	31	53	41	51	44	43	34	25
With LDC 250-900									
L_{wA} Inlet	66	55	64	58	50	41	39	49	45
L_{wA} Outlet	68	55	66	61	46	42	43	51	45
Measurement point: 0,145 m³/s; 357 Pa									





dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	69	43	57	62	62	61	59	61	54
L_{wA} Outlet	70	46	59	62	64	60	61	61	54
L_{wA} Surrounding	47	12	25	38	45	40	38	36	26
With LDC 315-900									
L_{wA} Inlet	60	42	54	55	46	39	47	55	47
L_{wA} Outlet	61	45	56	55	48	38	49	55	47
Measurement point: 0,181 m^3/s; 331 Pa									

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	73	47	62	66	68	64	64	66	59
L_{wA} Outlet	74	47	63	66	68	66	67	67	59
L_{wA} Surrounding	52	17	29	40	49	44	44	44	35
With LDC 315-900									
L_{wA} Inlet	65	46	59	59	52	42	52	60	52
L_{wA} Outlet	66	46	60	59	52	44	55	61	52
Measurement point: 0,254 m^3/s; 399 Pa									

Circular duct fans



KVO

- Speed-controllable
- Integral thermal contacts
- Low sound level
- Compact construction

KVO has a single-inlet centrifugal fan (size 100-160 and size 355-400 with forward curved blades, size 200-315 with backward curved blades) and a maintenance-free external rotor motor. In all KVO models, the motor and impeller are mounted on the cover for easy cleaning and maintenance.

To protect the motor from overheating, the KVO 100-315 have integral thermal contacts with electrical reset, size 355-400 with integral thermal contact with external leads for connection to a motor protection device. The fans can be installed in any position, and are easy to connect to spiral ducts using FK mounting clamps.

The lid is insulated with 40 mm rockwool. The casing is manufactured from galvanised sheet steel.

ELECTRICAL ACCESSORIES



S-ET p. 341



RTRE p. 320



RE p. 320

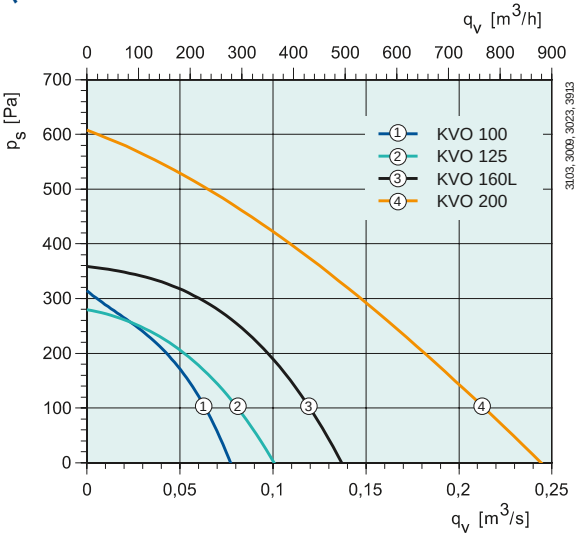


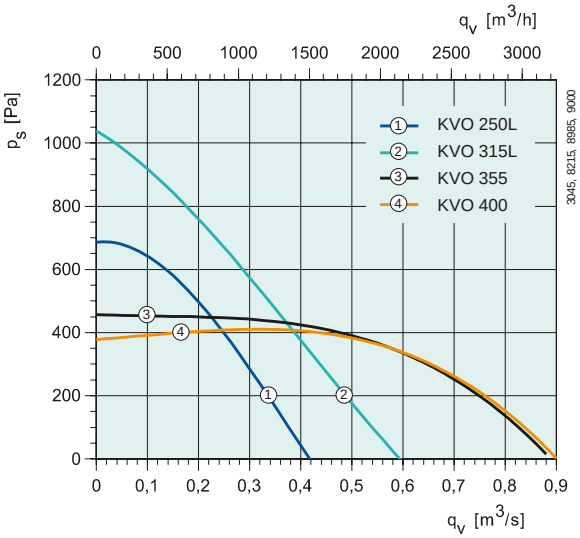
REU p. 320



REE p. 321

QUICK SELECTION

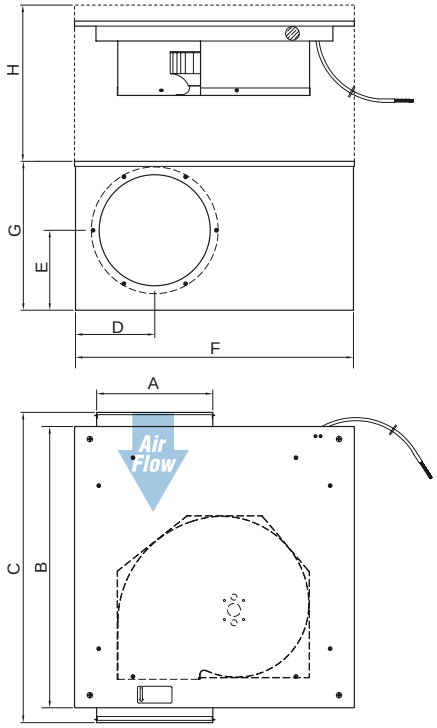




TECHNICAL DATA

KVO		100	125	160	200	250	315
Art no.		2075	2020	2024	2025	2027	2029
Voltage/Frequency	V/50 Hz	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~
Power	W	77.9	89	135	151	301	549
Current	A	0.346	0.393	0.59	0.681	1.33	2.38
Max air flow	m³/s	0.0778	0.101	0.138	0.244	0.417	0.592
R.p.m.	min⁻¹	2438	2175	2544	2632	2480	2227
Max temp. of transported air	°C	60	64	70	70	70	48
" when speed controlled	°C	60	64	70	70	70	41
Sound pressure level at 3 m	dB(A)	40	38	43	51	52	56
Weight	kg	6	6	7	12.5	20	27.2
Insulation class, motor		B	B	B	F	F	F
Enclosure class, motor		IP 44	IP 44	IP 44	IP 44	IP 44	IP 44
Capacitor	µF	2	2	4	4	7	10
Motor protection		Integral	Integral	Integral	Integral	Integral	Integral
Speed control, five-step	Transformer	RE 1.5	RE 1.5	RE 1.5	RE 1.5	RE 1.5	RE 3
Speed control, five step high/low	Transformer	REU 1.5	REU 1.5	REU 1.5	REU 1.5	REU 1.5	REU 5
Speed control, stepless	Thyristor	REE 1	REE 1	REE 1	REE 1	REE 2	REE 4
Wiring diagram p. 391-400		2	2	2	2	2	2

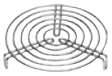
DIMENSIONS



KVO	A	B	C	D	E	F	G	H
100	100	329	367	69	76	300	150	150
125	125	329	367	84	72	300	150	150
160	160	329	367	99	90	300	185	185
200	200	419	466	123	109	435	220	220
250	250	527.5	568	151	133	558	270	270
315	315	535.5	580	186	166	580	340	550
355	355	572	661	209	231	640	425	600
400	400	572	653	221	209	640	425	600

VENTILATION ACCESSORIES


FK p. 355


SG p. 357


VK p. 356


RSK p. 355


LDC p. 348


FGR p. 348

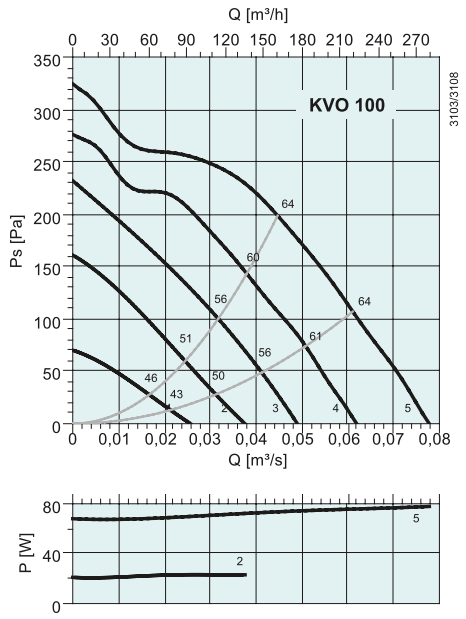

CB p. 350

KVO		355	400			
Art no.		2030	2031			
Voltage/Frequency	V/50 Hz	230 1~	230 1~			
Power	W	1196	1257			
Current	A	5.69	5.95			
Max air flow	m^3/s	0.882	0.893			
R.p.m.	min^{-1}	1118	1075			
Max temp. of transported air	°C	65	58			
" when speed controlled	°C	65	58			
Sound pressure level at 3 m	dB(A)	53	56			
Weight	kg	38.6	38.6			
Insulation class, motor		F	F			
Enclosure class, motor		IP 54	IP 54			
Capacitor	µF	20	20			
Motor protection		S-ET 10	Integral			
Speed control, five-step	Transformer	RTRE 7	RTRE 7			
Speed control, five step high/low	Transformer	REU 7*	REU 7*			
Speed control, stepless	Thyristor	–	–			
Wiring diagram p. 391-400		6	6			

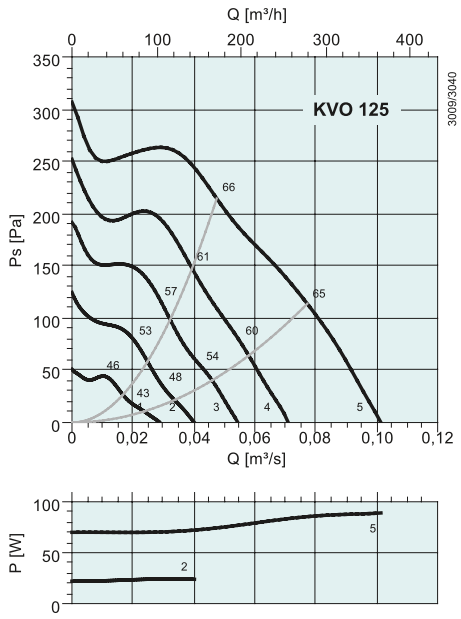
* + S-ET 10

Circular duct fans

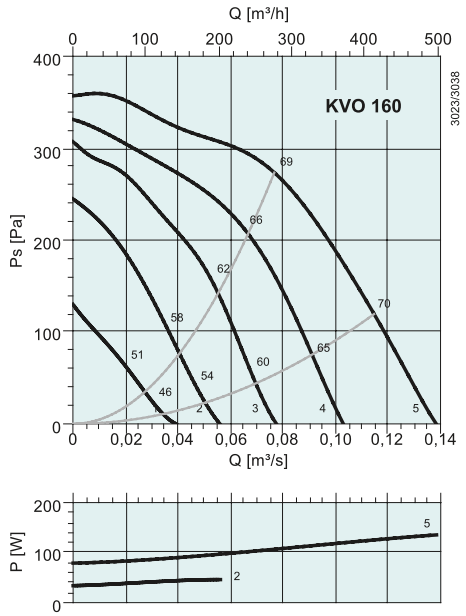
PERFORMANCE



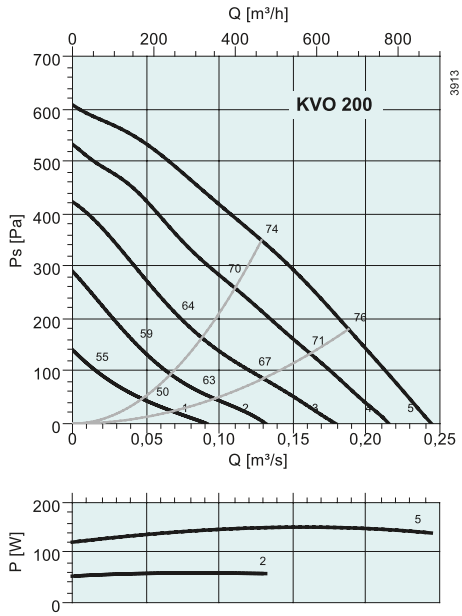
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	63	47	60	57	55	52	47	43	38
L_{wA} Outlet	68	55	61	58	60	63	58	51	45
L_{wA} Surrounding	47	21	36	41	39	42	37	28	22
With LDC 100-600									
L_{wA} Inlet	58	43	57	46	31	16	0	9	21
L_{wA} Outlet	59	51	58	47	36	27	9	17	28
Measurement point: 0,0447 m^3/s; 105 Pa									



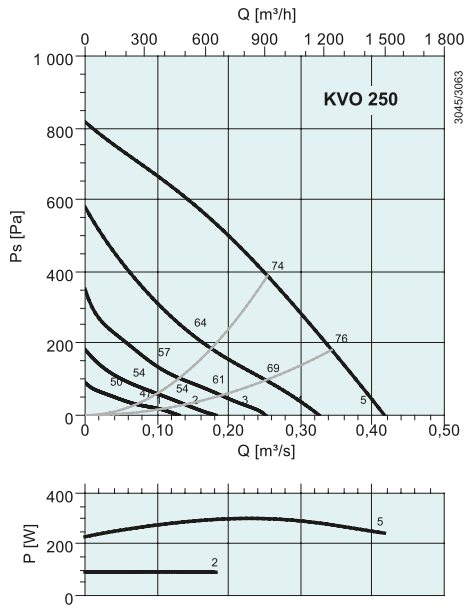
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	65	44	61	56	58	57	52	49	43
L_{wA} Outlet	66	46	56	58	59	61	57	50	39
L_{wA} Surrounding	45	19	36	38	38	39	38	33	26
With LDC 125-600									
L_{wA} Inlet	58	41	58	47	35	27	12	27	29
L_{wA} Outlet	55	43	53	49	36	31	17	28	25
Measurement point: 0,0475 m^3/s; 214 Pa									



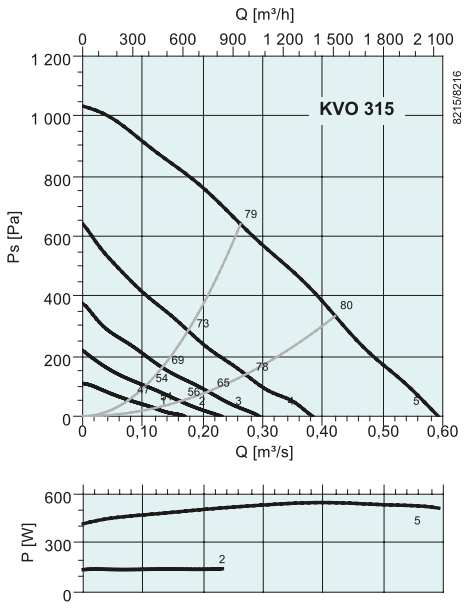
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	68	52	62	63	61	58	57	56	53
L_{wA} Outlet	75	55	63	69	67	67	69	63	59
L_{wA} Surrounding	50	31	39	45	42	40	41	40	39
With LDC 160-900									
L_{wA} Inlet	60	50	58	53	33	16	14	36	38
L_{wA} Outlet	63	53	59	59	39	25	26	43	44
Measurement point: 0,0767 m^3/s; 272 Pa									



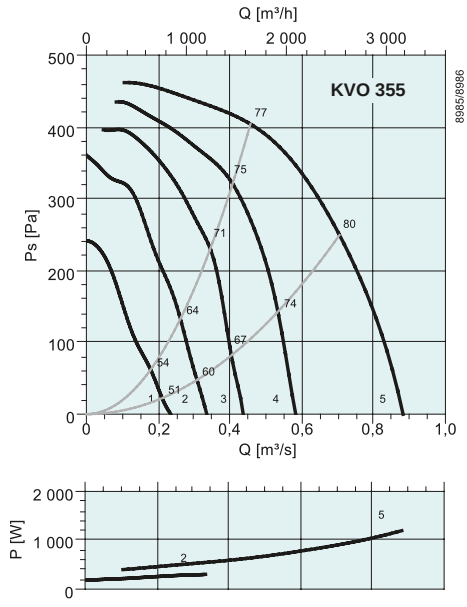
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	73	53	61	70	66	66	62	56	49
L_{wA} Outlet	76	56	60	70	71	71	69	60	51
L_{wA} Surrounding	58	34	42	55	51	50	46	37	28
With LDC 200-900									
L_{wA} Inlet	64	51	57	62	42	34	28	43	39
L_{wA} Outlet	64	54	56	62	47	39	35	47	41
Measurement point: 0,129 m^3/s; 349 Pa									



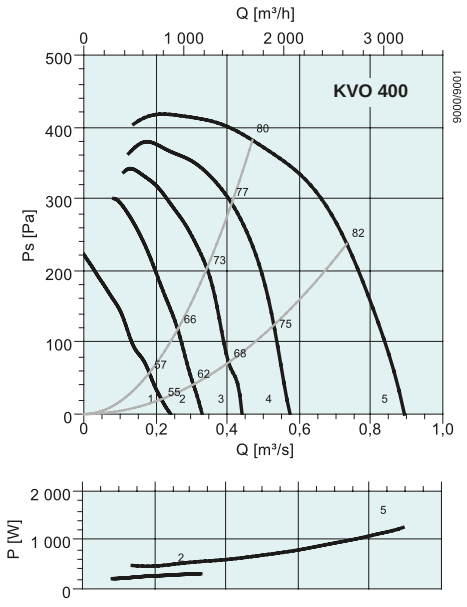
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	73	55	60	64	68	66	65	61	56
L_{wA} Outlet	78	57	60	66	75	71	71	64	59
L_{wA} Surrounding	59	37	41	48	57	51	48	42	36
With LDC 250-900									
L_{wA} Inlet	61	52	56	56	48	40	42	51	48
L_{wA} Outlet	63	54	56	58	55	45	48	54	51
Measurement point: 0,254 m³/s; 388 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	78	56	73	73	67	67	68	65	57
L_{wA} Outlet	86	64	75	84	79	75	72	67	61
L_{wA} Surrounding	63	42	53	59	59	54	50	43	35
With LDC 315-900									
L_{wA} Inlet	72	55	70	66	51	45	56	59	50
L_{wA} Outlet	79	63	72	77	63	53	60	61	54
Measurement point: 0,263 m³/s; 640 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	77	57	73	66	66	69	69	68	63
L_{wA} Outlet	83	66	72	71	74	78	75	74	68
L_{wA} Surrounding	60	41	55	52	52	53	51	46	41
With LDC 355-900									
L_{wA} Inlet	72	57	70	60	53	51	59	62	56
L_{wA} Outlet	74	66	69	65	61	60	65	68	61
Measurement point: 0,457 m³/s; 404 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	80	61	75	71	69	73	72	70	65
L_{wA} Outlet	84	68	73	74	75	78	76	75	69
L_{wA} Surrounding	63	39	56	57	54	57	54	51	45
With LDC 400-900									
L_{wA} Inlet	75	60	72	66	59	60	65	65	59
L_{wA} Outlet	77	67	70	69	65	65	69	70	63
Measurement point: 0,47 m³/s; 381 Pa									

Circular duct fans



KD

- High efficiency – low noise
- Speed-controllable
- Integral thermal contacts
- Can be installed in any position
- Maintenance-free and reliable

The KD series have external rotor motors with a mixed flow impeller which reduces the external dimensions of the fans. These fans have high flow capacity in relation to their compact design. Brackets are supplied with the fans to make installation easier. The FK mounting clamp facilitates easy installation and removal and prevents the transfer of vibration to the duct. To protect the motor from overheating KD 200 L1, 250 M, 315 M1, 315 L1 and and 355 S1 have integral thermal contacts with electrical reset, and the remaining sizes have integral thermal contacts with leads to a motor protection device. The casing is manufactured from galvanised sheet steel.

ELECTRICAL ACCESSORIES



S-ET p. 341



RTRE p. 320



RE p. 320

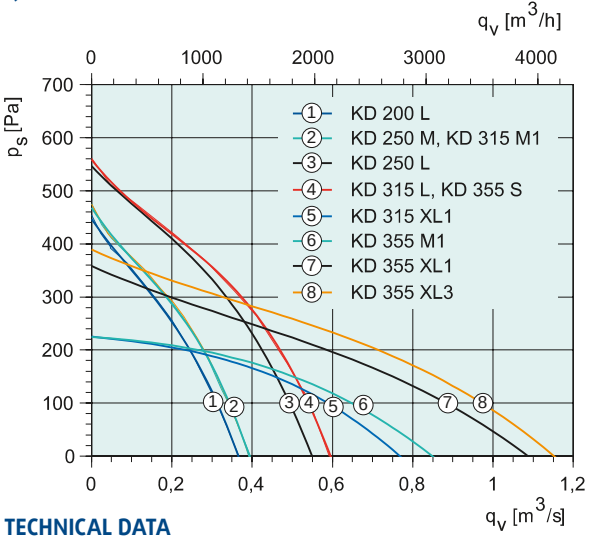


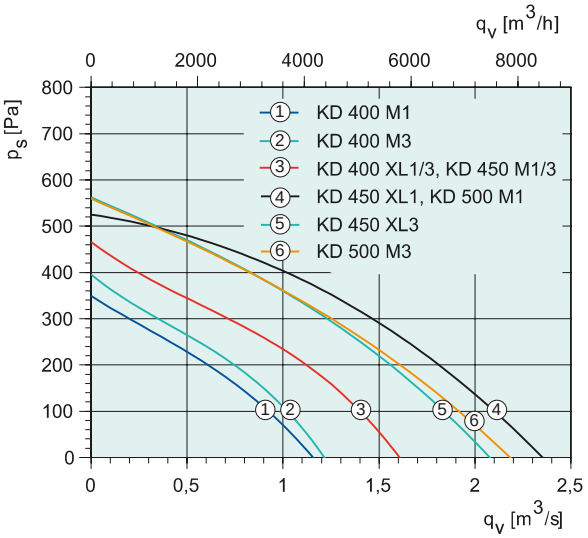
REU p. 320



REE p. 321

QUICK SELECTION



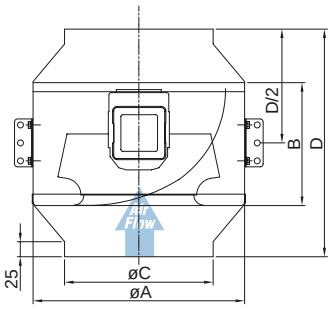


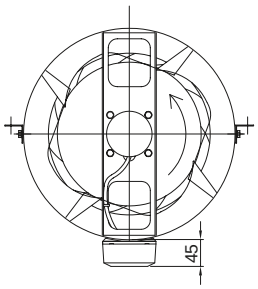
TECHNICAL DATA

KD		200 L	250 M	250 L	315 M	315 L	315 XL	355 S	355 M	355 XL1	355 XL3
Art no.		1284	1285	1286	1287	1288	1289	1291	1292	1294	1296
Voltage/Frequency	V/50 Hz	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~	400 3~
Power	W	257	254	369	252	372	276	371	275	431	451
Current	A	1.14	1.13	1.60	1.12	1.62	1.29	1.61	1.30	1.90	0.96
Max air flow	m^3/s	0.37	0.40	0.55	0.39	0.59	0.77	0.60	0.85	1.10	1.16
R.p.m.	min^{-1}	2562	2572	2604	2573	2595	1375	2597	1375	1309	1399
Max temp. of transported air	°C	55	55	70	55	70	70	70	70	70	70
" when speed controlled	°C	46	46	70	46	70	70	70	70	70	70
Sound pressure level at 3 m	dB(A)	53	54	55	59	54	52	54	50	56	58
Weight	kg	7	6.5	9.5	5.5	9	15.5	8	15	20.5	18
Insulation class, motor		F	F	F	F	F	B	F	B	F	F
Enclosure class, motor		IP 44	IP 44	IP 44	IP 44	IP 44	IP 54	IP 44	IP 54	IP 54	IP 54
Capacitor	µF	6	6	10	6	10	6	10	6	10	–
Motor protection		Integral	Integral	Integral	Integral	Integral	S-ET 10	Integral	S-ET 10	S-ET 10	STDT 16
Speed control, five-step	Transformer	RE 1.5	RE 1.5	RE 3	RE 1.5	RE 3	RTRE 3	RE 3	RTRE 1.5	RTRE 3	RTRD 2
Speed control, five step high/low	Transformer	REU 1.5	REU 1.5	REU 3	REU 1.5	REU 3	REU 1.5*	REU 3	REU 1.5*	REU 3*	RTRDU 2
Speed control, stepless	Thyristor	REE 2	REE 2	REE 2	REE 2	REE 2	REE 2*	REE 2	REE 2*	REE 4*	–
Wiring diagram p. 391-400		2	2	2	2	2	6	2	6	6	8

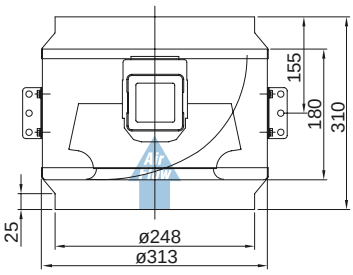
*+ S-ET 10

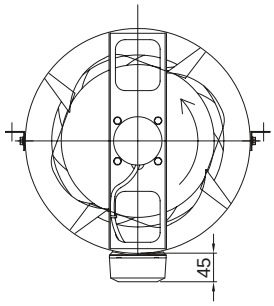
DIMENSIONS



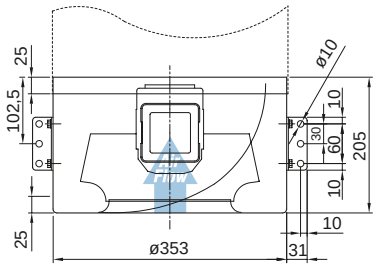


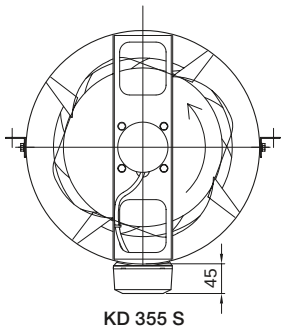
KD	A	B	C	D
250 L	353	205	248	385
315 L	353	205	313	305
315 XL	455	–	315	484
355 M	455	–	355	435
355 XL	503	–	355	516
400 M	503	–	400	480
400 XL	560	–	400	602
450 M	560	–	450	559
450 XL	560	–	450	742
500 M	717	–	500	699





KD 250 M



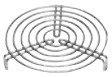


KD 355 S

VENTILATION ACCESSORIES



FK p. 355



SG p. 357



VK p. 356



RSK p. 355



LDC p. 348



FFR p. 349



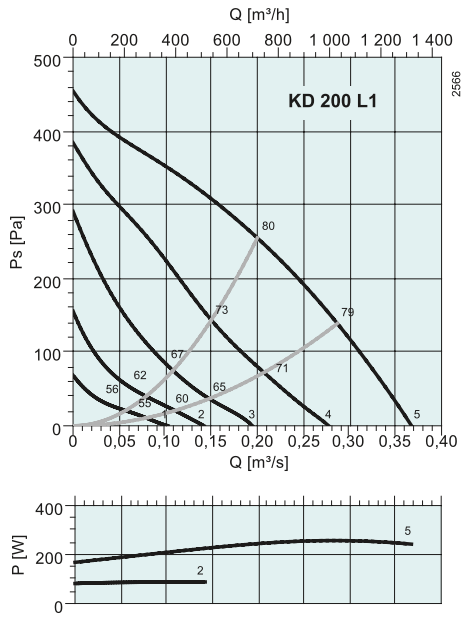
CB p. 350

KD		400 M1	400 M3	400 XL1	400 XL3	450 M1	450 M3	450 XL1	450 XL3	500 M1	500 M3
Art no.		1297	1300	1301	1302	1303	1304	1305	1307	1309	1310
Voltage/Frequency	V/50 Hz	230 1~	400 3~	230 1~	400 3~	230 1~	400 3~	230 1~	400 3~	230 1~	400 3~
Power	W	432	456	855	792	857	778	1392	1246	1386	1243
Current	A	1.90	0.952	4.24	1.53	4.21	1.53	6.16	2.22	6.12	2.20
Max air flow	m^3/s	1.16	1.22	1.62	1.65	1.60	1.64	2.35	2.07	2.37	2.18
R.p.m.	min^{-1}	1307	1397	1298	1304	1308	1307	1289	1325	1290	1315
Max temp. of transported air	°C	70	70	65	67	65	70	60	61	62	62
" when speed controlled	°C	70	70	65	67	65	70	60	30	57	51
Sound pressure level at 3 m	dB(A)	54	57	64	61	61	63	61	61	64	65
Weight	kg	19.5	17.5	28.5	25.5	28	25.5	36.5	35	39	34.5
Insulation class, motor		F	F	F	F	F	F	F	F	F	F
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
Capacitor	µF	10	–	16	–	16	–	30	–	30	–
Motor protection		S-ET 10	STDT 16	S-ET 10	STDT 16	S-ET 10	STDT 16	S-ET 10	STDT 16	S-ET 10	STDT 16
Speed control, five-step	Transformer	RTRE 3	RTRD 2	RTRE 5	RTRD 2	RTRE 5	RTRD 2	RTRE 7	RTRD 4	RTRE 7	RTRD 4
Speed control, five step high/low	Transformer	REU 3*	RTRDU 2	REU 5*	RTRDU 2	REU 5*	RTRDU 2	REU 7*	RTRDU 4	REU 7*	RTRDU 4
Speed control, stepless	Thyristor	REE 4*	–	–	–	REE 2*	–	–	–	–	–
Wiring diagram p. 391-400		6	8	6	8	6	8	6	8	6	8

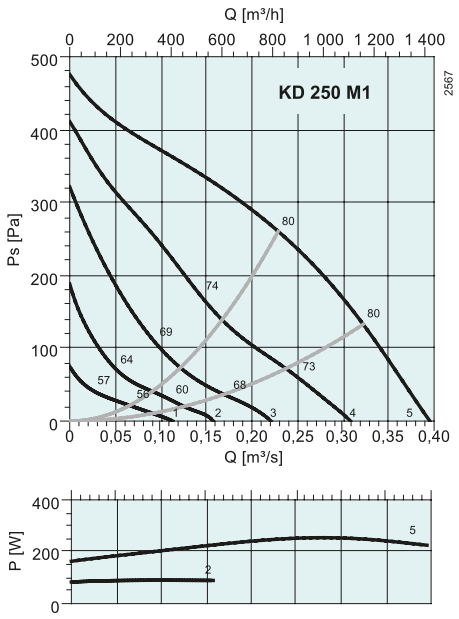
*+ S-ET 10

Circular duct fans

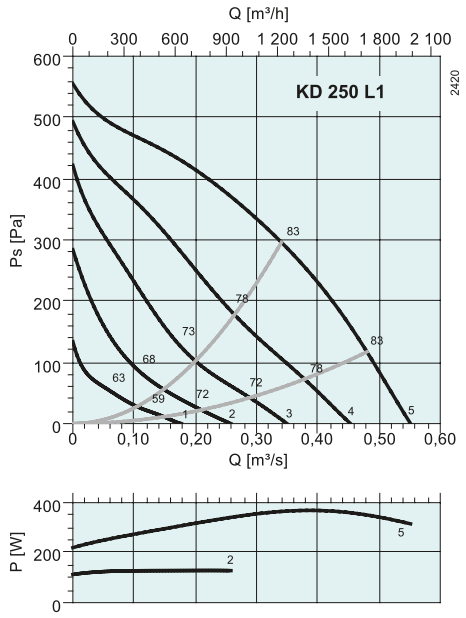
PERFORMANCE



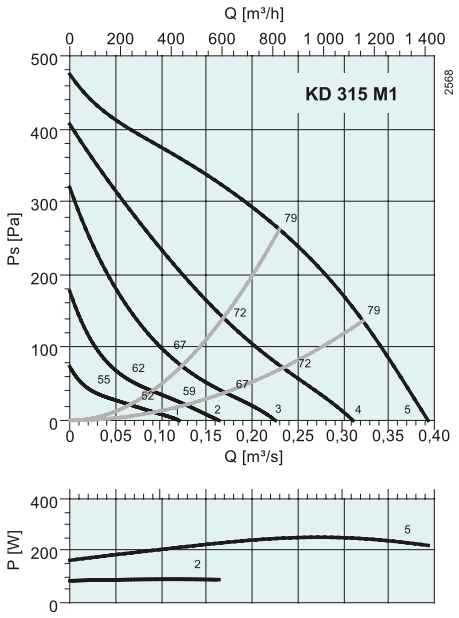
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	79	60	70	71	75	71	64	64	57
L_{wA} Outlet	84	57	71	75	76	76	78	75	73
L_{wA} Surrounding	60	27	27	46	55	56	52	48	39
With LDC 200-900									
L_{wA} Inlet	68	58	66	63	51	39	30	51	47
L_{wA} Outlet	72	55	67	67	52	44	44	62	63
Measurement point: 0,2 m³/s; 255 Pa									



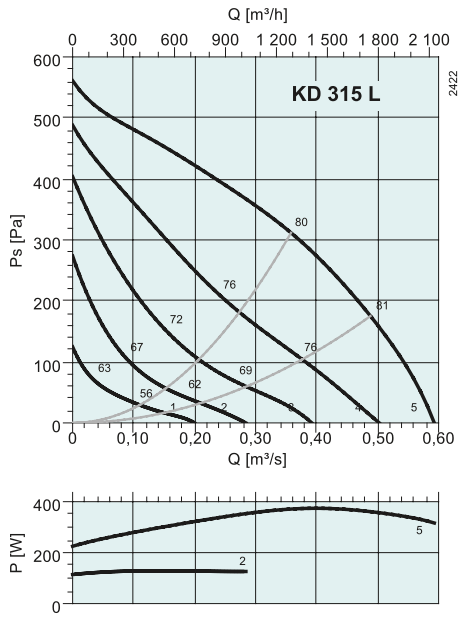
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	79	55	66	69	76	73	66	65	61
L_{wA} Outlet	79	55	70	71	73	73	72	65	59
L_{wA} Surrounding	61	22	27	43	56	56	53	50	44
With LDC 250-900									
L_{wA} Inlet	73	73	49	51	36	33	34	48	51
L_{wA} Outlet	68	52	66	63	53	47	49	55	51
Measurement point: 0,229 m³/s; 260 Pa									



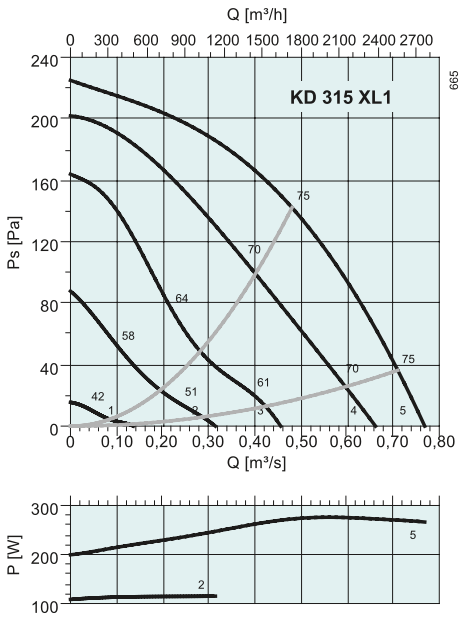
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	82	56	73	75	78	75	71	71	64
L_{wA} Outlet	81	56	71	71	75	74	76	71	64
L_{wA} Surrounding	62	28	37	46	61	50	48	49	37
With LDC 250-900									
L_{wA} Inlet	72	53	69	67	58	49	48	61	56
L_{wA} Outlet	70	53	67	63	55	48	53	61	56
Measurement point: 0,341 m³/s; 296 Pa									



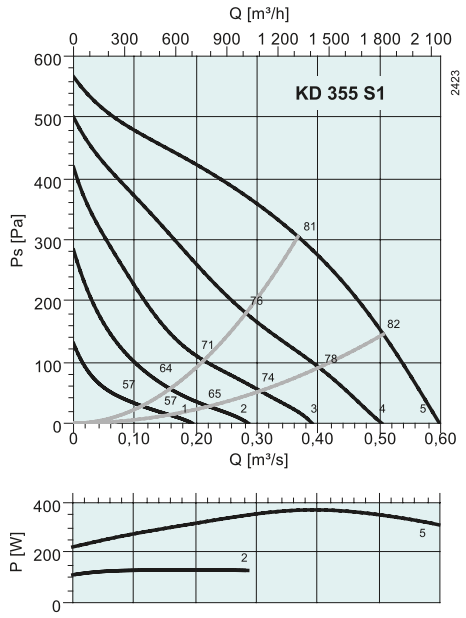
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	79	54	64	68	76	73	68	66	62
L_{wA} Outlet	81	58	69	70	76	75	74	67	60
L_{wA} Surrounding	66	32	33	41	65	50	46	45	40
With LDC 315-900									
L_{wA} Inlet	67	53	61	61	60	51	56	60	55
L_{wA} Outlet	70	57	66	63	60	53	62	61	53
Measurement point: 0,23 m³/s; 262 Pa									



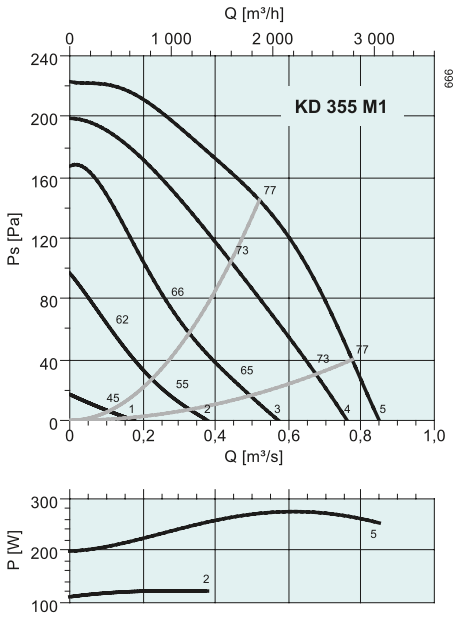
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	80	58	69	71	75	75	71	69	67
L_{wA} Outlet	81	54	68	70	73	75	76	71	65
L_{wA} Surrounding	61	32	36	44	60	50	47	48	40
With LDC 315-900									
L_{wA} Inlet	71	57	66	64	59	53	59	63	60
L_{wA} Outlet	71	53	65	63	57	53	64	65	58
Measurement point: 0,358 m³/s; 312 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	74	60	63	68	69	68	61	56	46
L_{wA} Outlet	75	59	69	66	67	69	66	56	48
L_{wA} Surrounding	59	33	42	51	52	55	52	38	27
With LDC 315-900									
L_{wA} Inlet	65	59	60	61	53	46	49	50	39
L_{wA} Outlet	68	58	66	59	51	47	54	50	41
Measurement point: 0,481 m³/s; 142 Pa									

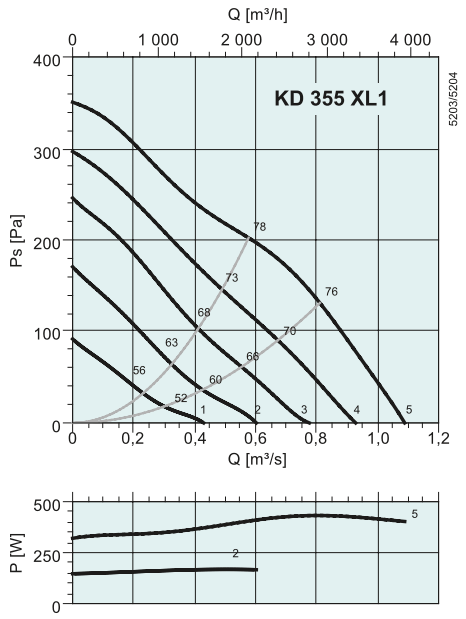


dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	80	57	68	69	75	74	72	70	68
L_{wA} Outlet	83	58	68	68	76	77	78	72	67
L_{wA} Surrounding	61	32	35	43	60	50	48	49	41
With LDC 355-900									
L_{wA} Inlet	71	57	65	63	62	56	62	64	61
L_{wA} Outlet	73	58	65	62	63	59	68	66	60
Measurement point: 0,367 m³/s; 305 Pa									

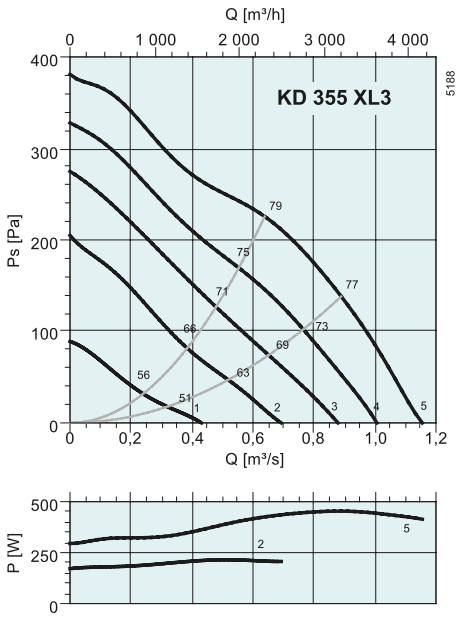


dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	73	62	65	67	66	65	61	56	46
L_{wA} Outlet	75	57	69	66	68	70	65	56	48
L_{wA} Surrounding	57	40	40	48	51	52	49	38	27
With LDC 355-900									
L_{wA} Inlet	67	62	62	61	53	47	51	50	39
L_{wA} Outlet	68	57	66	60	55	52	55	50	41
Measurement point: 0,52 m³/s; 145 Pa									

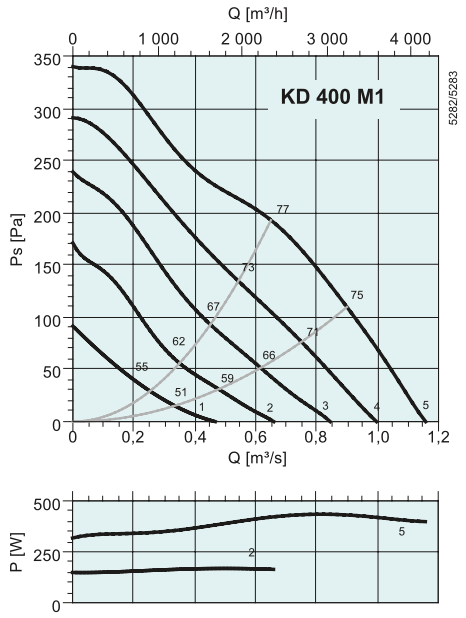
Circular duct fans



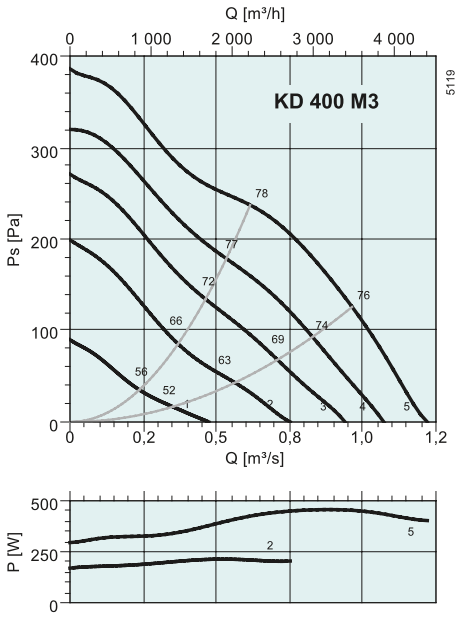
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	78	55	75	72	69	66	62	61	56
L_{wA} Outlet	78	50	75	70	70	68	65	64	59
L_{wA} Surrounding	63	26	48	60	59	53	47	47	42
With LDC 355-900									
L_{wA} Inlet	73	55	72	66	56	48	52	55	49
L_{wA} Outlet	73	50	72	64	57	50	55	58	52
Measurement point: 0,577 m^3/s; 202 Pa									



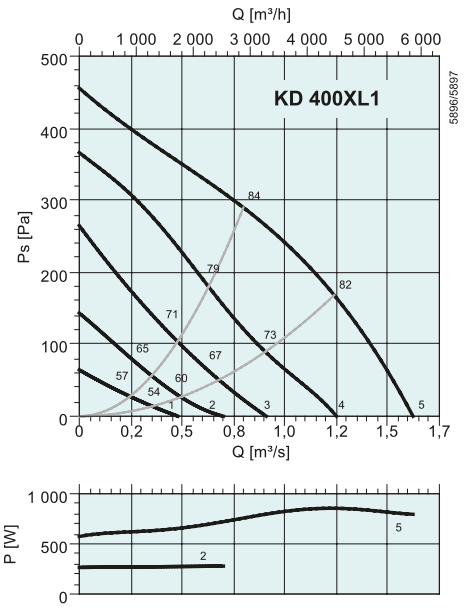
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	79	55	77	73	71	67	63	63	57
L_{wA} Outlet	79	50	76	71	72	70	66	66	61
L_{wA} Surrounding	65	29	52	60	60	57	51	51	42
With LDC 355-900									
L_{wA} Inlet	75	55	74	67	58	49	53	57	50
L_{wA} Outlet	74	50	73	65	59	52	56	60	54
Measurement point: 0,639 m^3/s; 226 Pa									



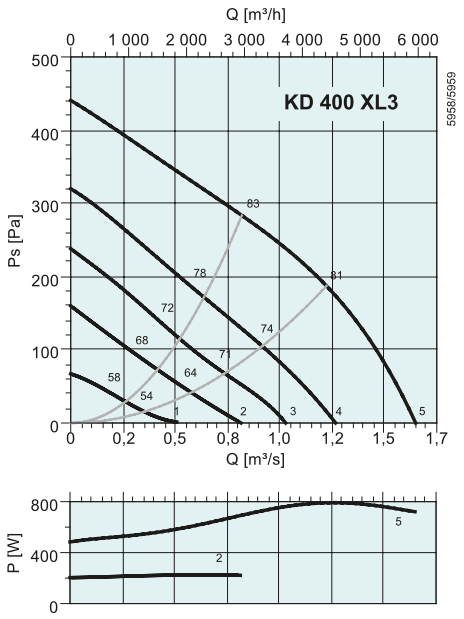
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	77	52	73	71	69	64	61	60	54
L_{wA} Outlet	77	48	73	70	71	68	65	64	59
L_{wA} Surrounding	60	27	45	56	57	51	46	46	39
With LDC 400-900									
L_{wA} Inlet	72	51	70	66	59	51	54	55	48
L_{wA} Outlet	72	47	70	65	61	55	58	59	53
Measurement point: 0,65 m^3/s; 193 Pa									



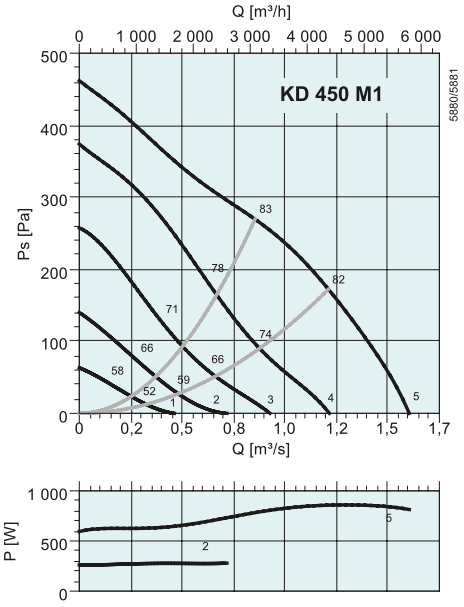
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	78	54	76	72	70	67	63	62	57
L_{wA} Outlet	79	51	74	71	72	71	67	65	61
L_{wA} Surrounding	64	24	47	60	59	56	49	49	44
With LDC 400-900									
L_{wA} Inlet	74	53	73	67	60	54	56	57	51
L_{wA} Outlet	73	50	71	66	62	58	60	60	55
Measurement point: 0,615 m^3/s; 237 Pa									



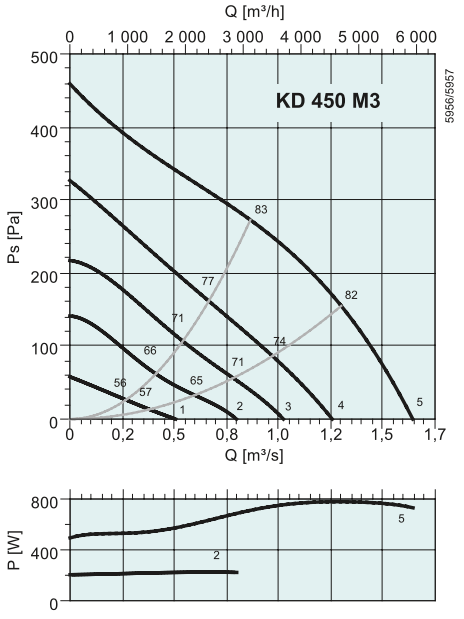
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{WA} Inlet	84	55	79	78	78	71	68	66	58
L_{WA} Outlet	85	55	79	80	79	75	71	69	61
L_{WA} Surrounding	71	21	62	64	68	59	54	51	41
With LDC 400-900									
L_{WA} Inlet	78	54	76	73	68	58	61	61	52
L_{WA} Outlet	79	54	76	75	69	62	64	64	55
Measurement point: 0,798 m³/s; 290 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{WA} Inlet	83	53	78	77	77	71	68	66	58
L_{WA} Outlet	85	55	78	79	79	75	72	70	60
L_{WA} Surrounding	68	18	44	61	65	61	53	51	42
With LDC 400-900									
L_{WA} Inlet	77	52	75	72	67	58	61	61	52
L_{WA} Outlet	79	54	75	74	69	62	65	65	54
Measurement point: 0,818 m³/s; 283 Pa									

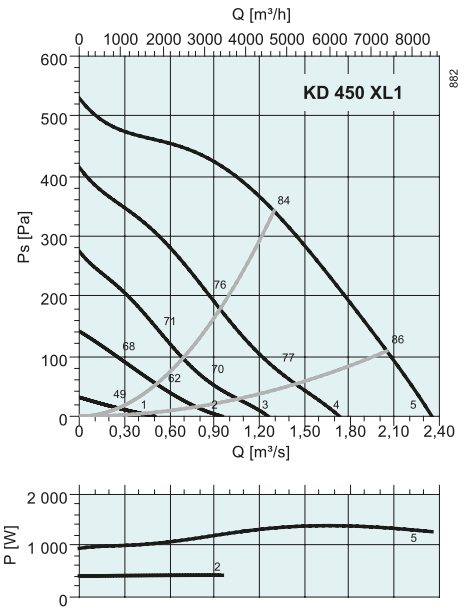


dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{WA} Inlet	83	57	77	79	77	69	68	65	58
L_{WA} Outlet	83	51	75	76	79	75	69	66	61
L_{WA} Surrounding	68	25	47	67	61	56	55	50	43
Measurement point: 0,854 m³/s; 270 Pa									



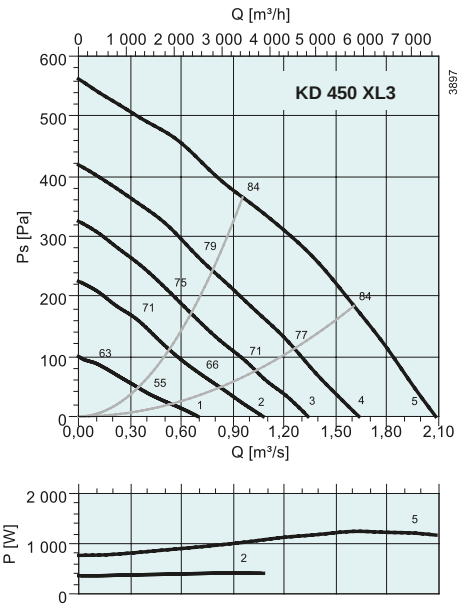
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{WA} Inlet	83	53	78	78	77	68	68	66	58
L_{WA} Outlet	84	52	77	77	80	75	71	69	61
L_{WA} Surrounding	70	15	45	68	66	59	53	50	42
Measurement point: 0,865 m³/s; 273 Pa									

Circular duct fans



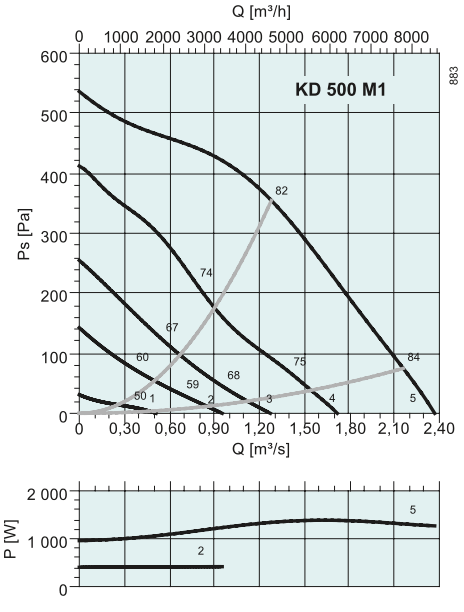
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	82	69	76	75	75	73	73	66	59
L_{wA} Outlet	82	69	75	73	76	76	72	66	61
L_{wA} Surrounding	68	35	54	60	65	61	59	46	40

Measurement point: 1,3 m^3/s; 342 Pa



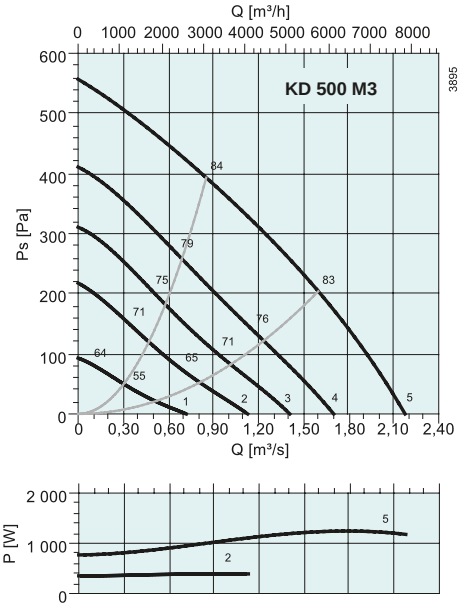
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	84	64	76	78	78	77	73	66	60
L_{wA} Outlet	86	61	76	78	82	81	75	69	63
L_{wA} Surrounding	68	34	48	60	61	65	60	47	40

Measurement point: 0,957 m^3/s; 365 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	82	69	75	75	75	73	72	65	59
L_{wA} Outlet	83	70	75	72	76	78	73	67	60
L_{wA} Surrounding	71	41	58	63	68	64	60	48	48

Measurement point: 1,28 m^3/s; 355 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	84	66	77	78	78	75	73	66	60
L_{wA} Outlet	86	62	78	77	82	81	75	68	63
L_{wA} Surrounding	71	26	47	63	67	67	63	55	51

Measurement point: 0,853 m^3/s; 393 Pa

Reference



Project: EON Kharadi
Type of Building: SEZ IT Park
City/Country: Pune, India
Products/ Solution: MUB, Inline (K, KD), Axial, Jet Nozzles, Grilles

Circular duct fans



KVK

- Speed-controllable
- Integral thermal contacts
- Low sound level
- Compact construction

The KVK 125-160 models have a single-inlet centrifugal fan, size 200-500 have double-inlet centrifugal fans. All sizes have forward-curved blades and a maintenance-free external rotor motor.

To protect the motor from overheating the KVK 125-160 has integral thermal contacts with electrical reset, and size 200-500 has leads for connection to a motor protection device.

The fans can be installed in any position, and are easy to connect to spiral ducts using FK mounting clamps.

The KVK models are manufactured from galvanised sheet steel and are thermally and acoustically insulated with a 50 mm layer of rockwool with a surface liner which prevents the migration of fibres into the air-stream.

ELECTRICAL ACCESSORIES



S-ET p. 341



RTRE p. 320



RE p. 320

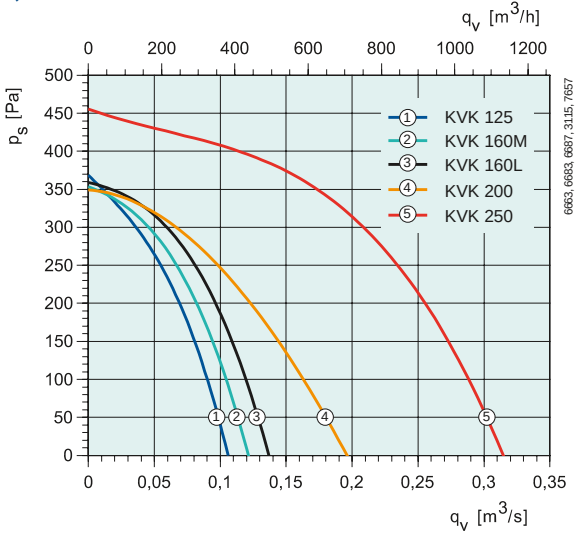


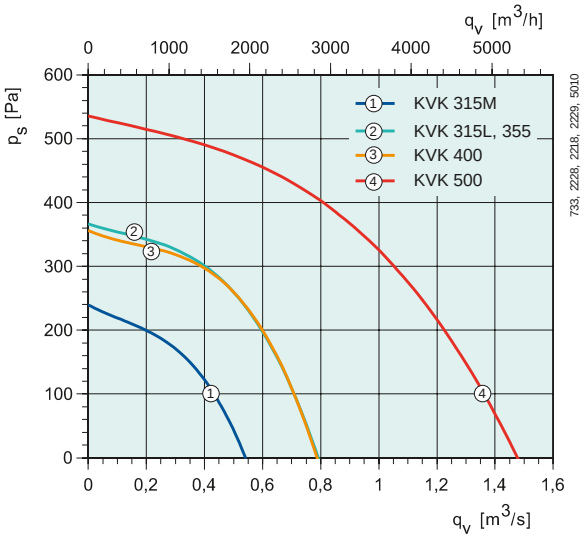
REU p. 320



REE p. 321

QUICK SELECTION



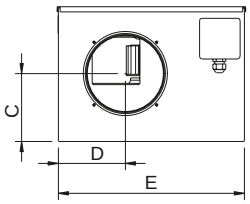


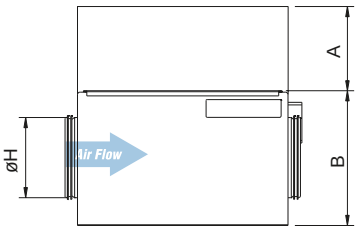
TECHNICAL DATA

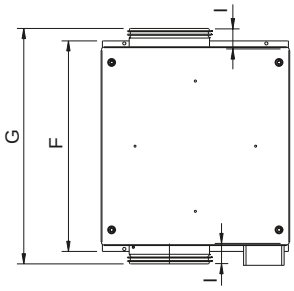
KVK		125	160 M	160 L	200	250
Art no.		2430	2433	2434	1337	1347
Voltage/Frequency	V/50 Hz	230 1~	230 1~	230 1~	230 1~	230 1~
Power	W	92.7	111	134	172	308
Current	A	0.409	0.48	0.59	0.75	1.34
Max air flow	m^3/s	0.106	0.123	0.138	0.197	0.311
R.p.m.	min^{-1}	1978	2062	2519	1807	1833
Max temp. of transported air	°C	68	70	70	57	50
" when speed controlled	°C	68	70	70	57	50
Sound pressure level at 3 m	dB(A)	38	39	39	40	43.2
Weight	kg	11	11	11.8	12.9	17
Insulation class, motor		B	B	B	B	F
Enclosure class, motor		IP 44	IP 44	IP 44	IP 44	IP 44
Capacitor	µF	2	2	4	4	8
Motor protection		Integral	Integral	Integral	S-ET 10	S-ET 10
Speed control, five-step	Transformer	RE 1.5	RE 1.5	RE 1.5	RTRE 1.5	RTRE 1.5
Speed control, five step high/low	Transformer	REU 1.5	REU 1.5	REU 1.5	REU 1.5*	REU 1.5*
Speed control, stepless	Thyristor	REE 1	REE 1	REE 1	REE 1*	REE 2*
Wiring diagram p. 391-400		2	2	2	5	5

* + S-ET 10

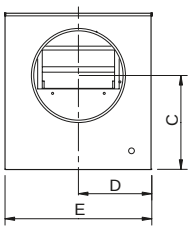
DIMENSIONS

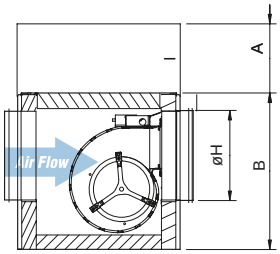


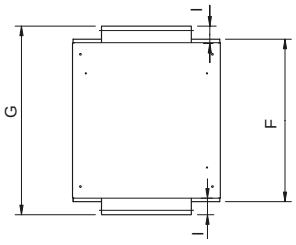




KVK	A	B	C	D	E	F	G	øH	I
125	230	266	151	114	367	415	464	125	40
160	230	266	134	132	367	415	464	160	40



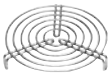




KVK	A	B	C	D	E	F	G	øH	I
200	340	345	191	193	395	395	440	200	20
250	380	385	198	228	460	400	490	250	40
315	540	545	328	256	520	570	655	315	40
355	540	545	328	256	520	570	655	355	40
400	540	545	328	256	520	570	680	400	50
500	750	680	400	355	710	718	850	500	80

VENTILATION ACCESSORIES


FK p. 355


SG p. 357


VK p. 356


IGK p. 357


RSK p. 355


LDC p. 348


FFR p. 349

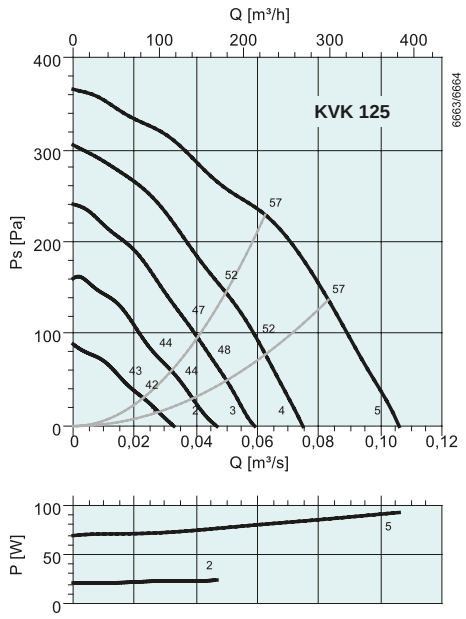

CB p. 350

KVK		315 M	315 L	355	400	500
Art no.		1357	1365	1370	1375	4506
Voltage/Frequency	V/50 Hz	230 1~	230 1~	230 1~	230 1~	230 1~
Power	W	335	643	614	603	1452
Current	A	1.49	2.82	2.69	2.64	6.27
Max air flow	m^3/s	0.542	0.789	0.72	0.73	1.49
R.p.m.	min^{-1}	1324	1201	1220	1186	1235
Max temp. of transported air	°C	70	53	40	40	68
" when speed controlled	°C	70	53	40	40	68
Sound pressure level at 3 m	dB(A)	35	36	36	39	56
Weight	kg	30	32.2	32.1	32	66.9
Insulation class, motor		B	B	B	B	F
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	IP 54
Capacitor	µF	10	20	20	20	25
Motor protection		S-ET 10	S-ET 10	S-ET 10	S-ET 10	S-ET 10
Speed control, five-step	Transformer	RTRE 3	RTRE 3	RTRE 3	RTRE 3	RTRE 7
Speed control, five step high/low	Transformer	REU 3*	REU 3*	REU 3*	REU 3*	REU 7*
Speed control, stepless	Thyristor	REE 2*	REE 4*	REE 4*	REE 4*	–
Wiring diagram p. 391-400		5	5	5	5	3

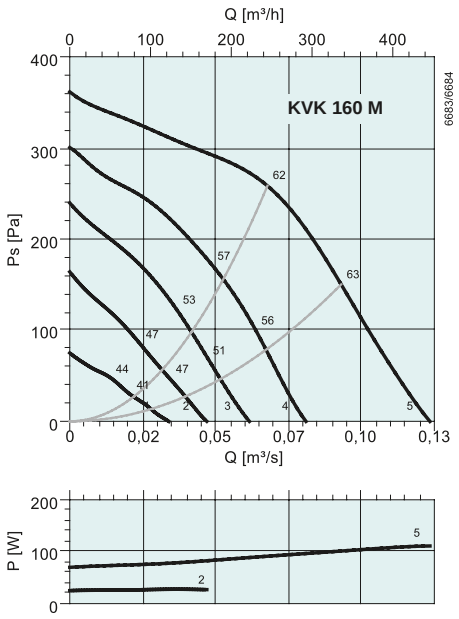
* + S-ET 10

Circular duct fans

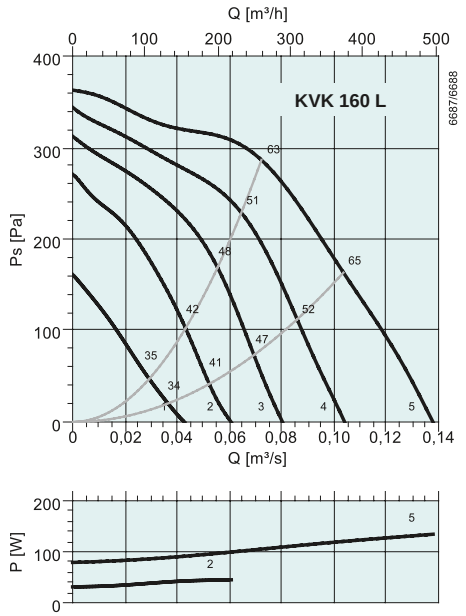
PERFORMANCE



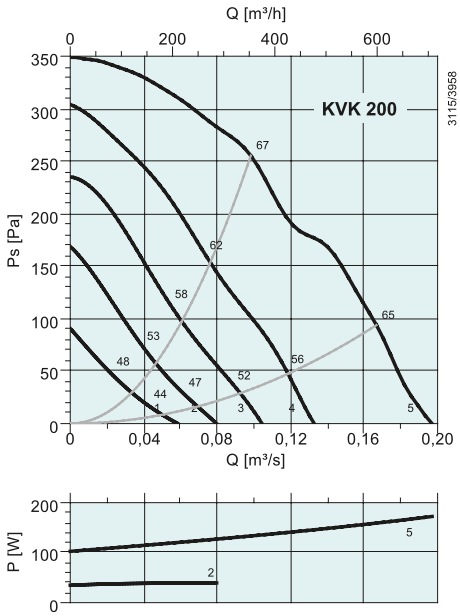
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	57	37	55	50	44	42	41	36	30
L_{wA} Outlet	70	50	61	58	60	66	62	55	48
L_{wA} Surrounding	45	17	33	40	41	36	36	25	16
With LDC 125-900									
L_{wA} Inlet	51	33	51	38	11	0	0	6	13
L_{wA} Outlet	58	46	57	46	27	21	12	25	31
Measurement point: 0,0625 m^3/s; 229 Pa									



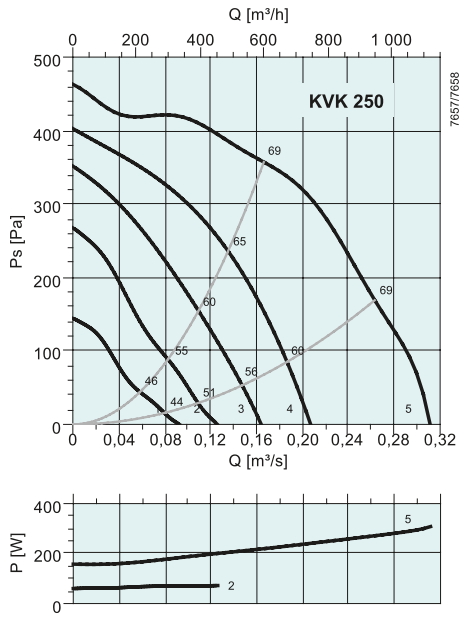
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	62	39	61	53	48	44	41	38	35
L_{wA} Outlet	72	53	64	64	64	68	65	57	51
L_{wA} Surrounding	46	10	43	38	37	38	27	24	21
With LDC 160-900									
L_{wA} Inlet	57	37	57	43	20	2	0	18	20
L_{wA} Outlet	61	51	60	54	36	26	22	37	36
Measurement point: 0,0678 m^3/s; 258 Pa									



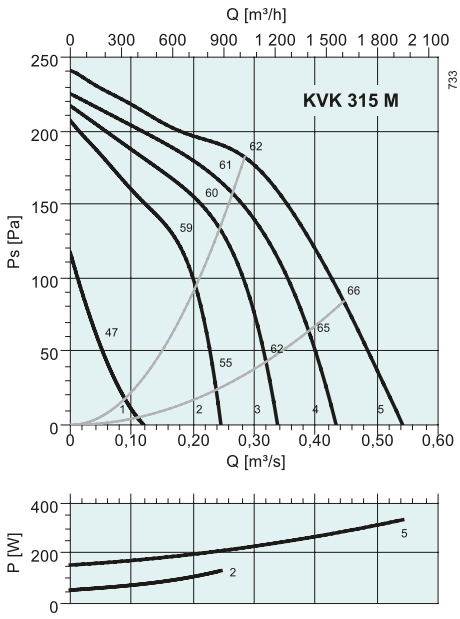
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	63	48	62	53	49	46	44	42	38
L_{wA} Outlet	75	56	66	66	67	69	69	62	57
L_{wA} Surrounding	46	25	43	39	38	34	30	25	18
With LDC 160-900									
L_{wA} Inlet	58	46	58	43	21	4	1	22	23
L_{wA} Outlet	64	54	62	56	39	27	26	42	42
Measurement point: 0,0722 m^3/s; 286 Pa									



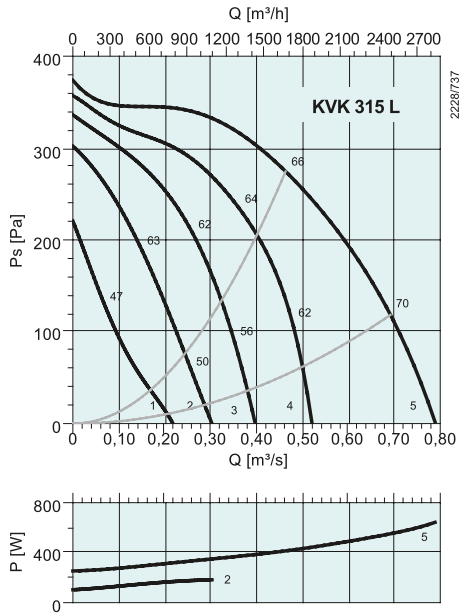
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	66	47	63	59	58	55	48	41	35
L_{wA} Outlet	73	59	63	66	67	66	66	61	54
L_{wA} Surrounding	47	19	38	43	42	35	31	26	19
With LDC 200-900									
L_{wA} Inlet	60	45	59	51	34	23	14	28	25
L_{wA} Outlet	63	57	59	58	43	34	32	48	44
Measurement point: 0,0983 m^3/s; 255 Pa									



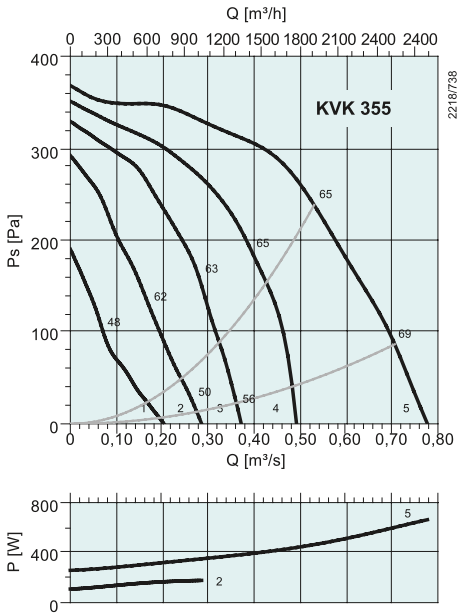
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	67	46	66	60	56	47	49	44	36
L_{wA} Outlet	76	61	68	68	69	68	69	65	58
L_{wA} Surrounding	50	27	46	45	43	38	37	31	21
With LDC 250-900									
L_{wA} Inlet	62	43	62	52	36	21	26	34	28
L_{wA} Outlet	67	58	64	60	49	42	46	55	50
Measurement point: 0,166 m³/s; 357 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	60	55	56	51	42	42	41	39	36
L_{wA} Outlet	71	59	63	57	63	66	62	59	57
L_{wA} Surrounding	42	36	35	35	33	30	27	22	17
With LDC 315-900									
L_{wA} Inlet	57	54	53	44	26	20	29	33	29
L_{wA} Outlet	63	58	60	50	47	44	50	53	50
Measurement point: 0,284 m³/s; 182 Pa									

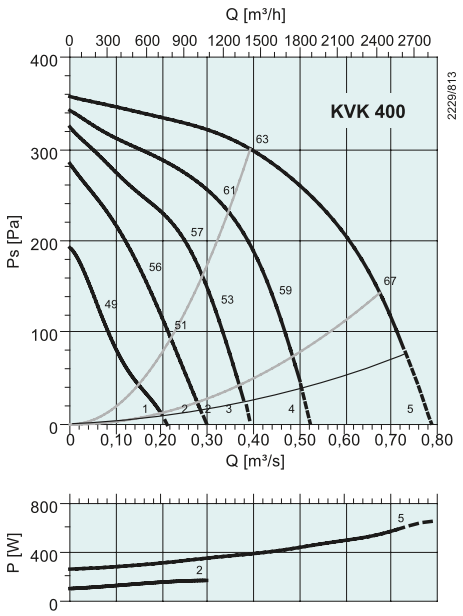


dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	63	61	55	51	45	46	43	40	38
L_{wA} Outlet	73	59	61	61	64	68	66	63	59
L_{wA} Surrounding	43	31	35	36	37	35	33	29	26
With LDC 315-900									
L_{wA} Inlet	61	60	52	44	29	24	31	34	31
L_{wA} Outlet	64	58	58	54	48	46	54	57	52
Measurement point: 0,463 m³/s; 275 Pa									

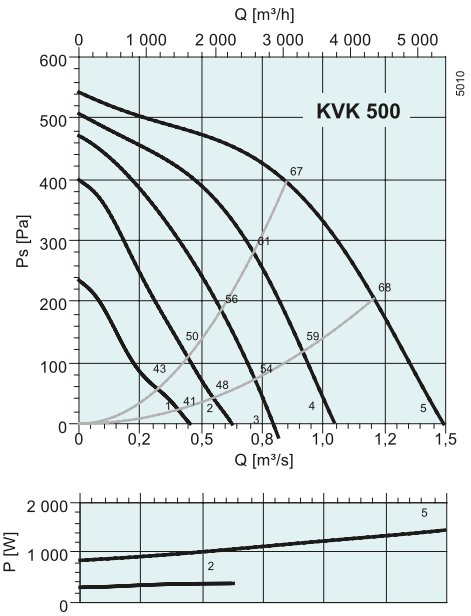


dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	62	60	55	51	44	46	43	40	38
L_{wA} Outlet	72	58	60	60	64	68	66	63	59
L_{wA} Surrounding	43	31	35	36	37	35	33	29	26
With LDC 355-900									
L_{wA} Inlet	61	60	52	45	31	28	33	34	31
L_{wA} Outlet	64	58	57	54	51	50	56	57	52
Measurement point: 0,531 m³/s; 238 Pa									

Circular duct fans



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	63	60	58	54	51	51	47	47	46
L_{wA} Outlet	73	62	61	63	64	68	66	64	60
L_{wA} Surrounding	46	33	37	38	41	37	36	37	27
With LDC 400-900									
L_{wA} Inlet	61	59	55	49	41	38	40	42	40
L_{wA} Outlet	67	61	58	58	54	55	59	59	54
Measurement point: 0,393 m^3/s; 296 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	71	53	68	66	54	52	53	58	57
L_{wA} Outlet	78	64	68	68	69	69	69	72	66
L_{wA} Surrounding	63	31	59	59	48	44	38	41	41
Measurement point: 0,848 m^3/s; 396 Pa									

Reference



Project: Ukraine hotel complex
Type of Building: The hotel "Ukraine" is not only one of the best hotels but also an integral part of the architectural and historical view in Moscow.
City/Country: Moscow, Russia
Products/Solution: 98 modular air handling units, type DV, including 15 DV Coolers
81 duct and roof fans; K, KD, KT, RSI, DVSI
4 Compact heat recovery units; Topvex
4 Compact supply units; TLP
2 Residential heat recovery units; VR

Circular duct fans



KVK DUO

- Speed-controllable
- Integral thermal contacts
- Low sound level
- Twin fan

KVK DUO models are designed for applications where a standby fan is required.

The fans have double inlet centrifugal fans with forward-curved impellers and maintenance-free external rotor motors. To protect the motors from overheating the fans have integral thermal contacts with leads for connection to a motor protection device.

The fans are easy to connect to spiral ducts using FK mounting clamps. The KVK DUO models are manufactured from galvanised sheet steel and are thermally and acoustically insulated with a 50 mm layer of mineral wool. Internal surfaces are protected with perforated galvanised sheet steel.

ELECTRICAL ACCESSORIES



S-ET p. 341



AWE-SK p. 342



RTRE p. 320

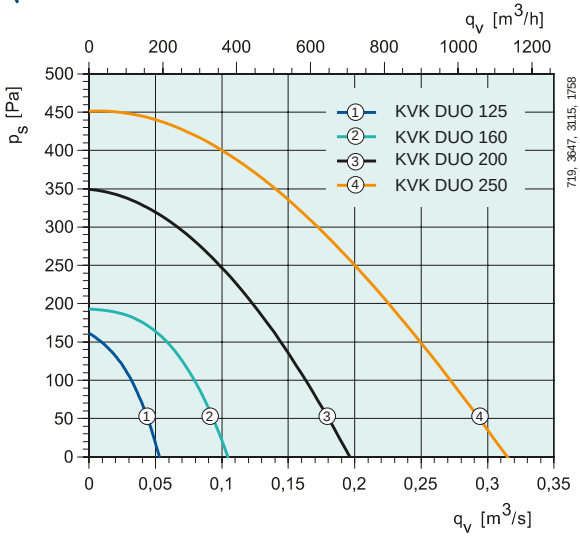


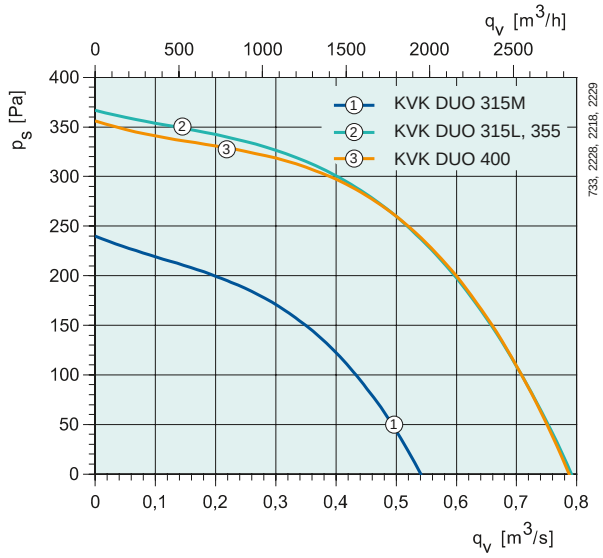
REU p. 320



REE p. 321

QUICK SELECTION



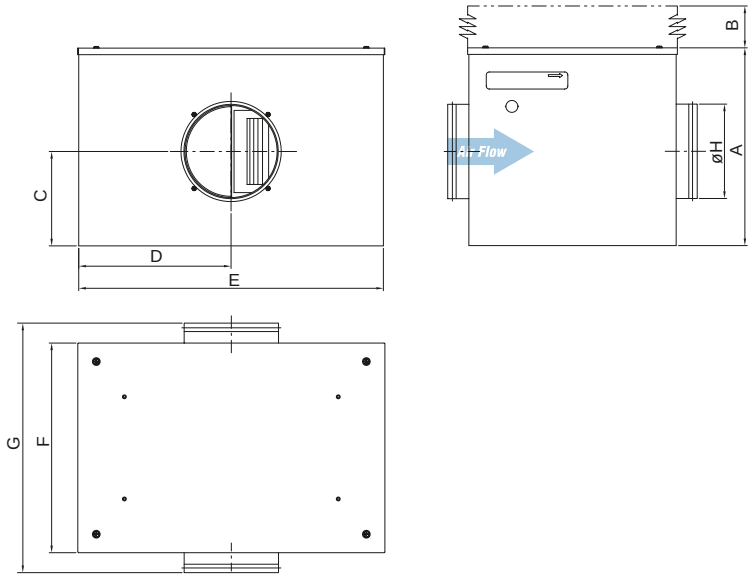


TECHNICAL DATA

KVK DUO		125	160	200	250	315M	315L
Art no.		5341	5127	5030	5031	5032	5773
Voltage/Frequency	V/50 Hz	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~
Power	W	41.4	69.1	172	304	335	643
Current	A	0.171	0.301	0.75	1.31	1.49	2.82
Max air flow	m^3/s	0.0528	0.105	0.197	0.316	0.542	0.789
R.p.m.	min^{-1}	1724	1943	1807	1962	1324	1201
Max temp. of transported air	°C	69	35	56	50	69	53
" when speed controlled	°C	69	35	56	55	69	53
Sound pressure level at 3 m	dB(A)	29	37	40	42	35	36
Weight	kg	18.3	19.5	27.9	45	66	74
Insulation class, motor		B	B	B	F	B	B
Enclosure class, motor		IP 44	IP 22	IP 44	IP 44	IP 54	IP 54
Capacitor	µF	1.5	2	4	8	10	20
Motor protection		AWE-SK	AWE-SK	S-ET 10	S-ET 10	S-ET 10	S-ET 10
Speed control, five-step	Transformer	RTRE 1.5	RTRE 1.5	RTRE 1.5	RTRE 1.5	RTRE 3	RTRE 3
Speed control, five step high/low	Transformer	REU 1.5*	REU 1.5*	REU 1.5**	REU 1.5**	REU 3**	REU 3**
Speed control, stepless	Thyristor	REE 1*	REE 1*	REE 1**	REE 2**	REE 2*	REE 4**
Wiring diagram p. 391-400		5	5	5	5	5	5

* + AWE-SK, ** + S-ET 10

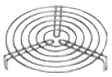
DIMENSIONS



KVK DUO	A	B	C	D	E	F	G	øH
125	333	275	165	255	510	350	425	125
160	333	275	165	255	510	350	425	160
200	386	325	190	300	600	400	475	200
250	460	400	207	360	720	500	615	250
315M	505	450	250	473	946	565	680	315
315L	505	450	250	473	946	565	680	315
355	505	450	250	473	946	565	680	355
400	505	450	250	473	946	565	680	400

VENTILATION ACCESSORIES


FK p. 355


SG p. 357


VK p. 356


RSK p. 355


LDC p. 348


FGR p. 348

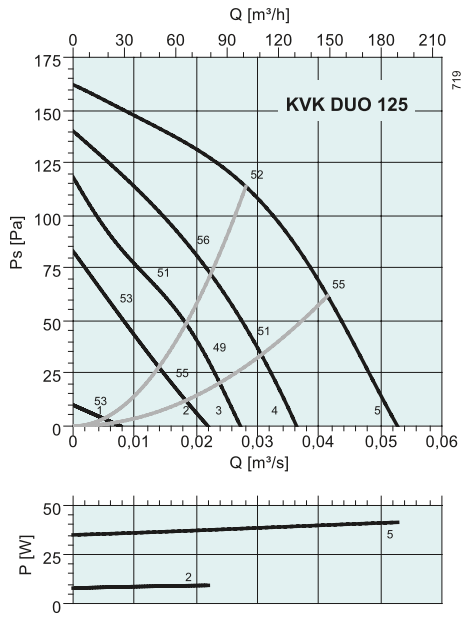

CB p. 350

KVK DUO		355	400			
Art no.		5774	5775			
Voltage/Frequency	V/50 Hz	230 1~	230 1~			
Power	W	614	603			
Current	A	2.69	2.64			
Max air flow	m^3/s	0.72	0.73			
R.p.m.	min^{-1}	1220	1186			
Max temp. of transported air	°C	40	40			
" when speed controlled	°C	40	40			
Sound pressure level at 3 m	dB(A)	36	39			
Weight	kg	67	72			
Insulation class, motor		B	B			
Enclosure class, motor		IP 54	IP 54			
Capacitor	µF	20	20			
Motor protection		S-ET 10	S-ET 10			
Speed control, five-step	Transformer	RTRE 3	RTRE 3			
Speed control, five step high/low	Transformer	REU 3*	REU 3*			
Speed control, stepless	Thyristor	REE 4*	REE 4*			
Wiring diagram p. 391-400		5	5			

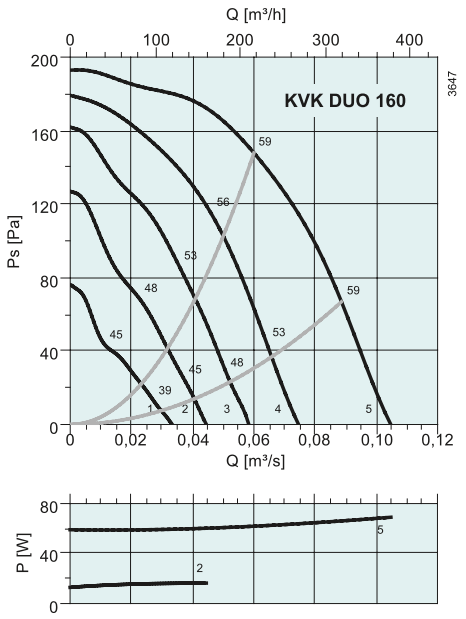
* + S-ET 10

Circular duct fans

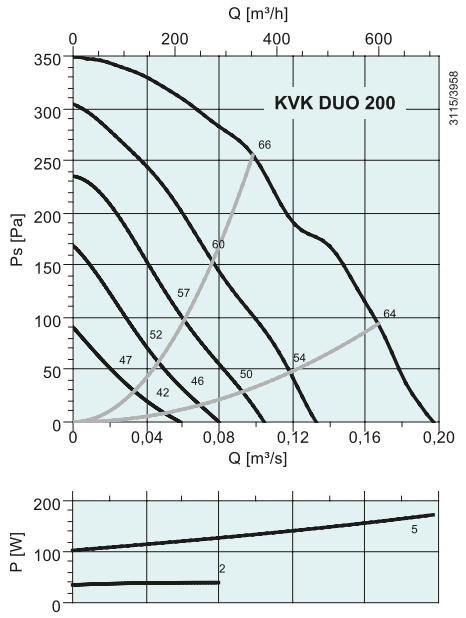
PERFORMANCE



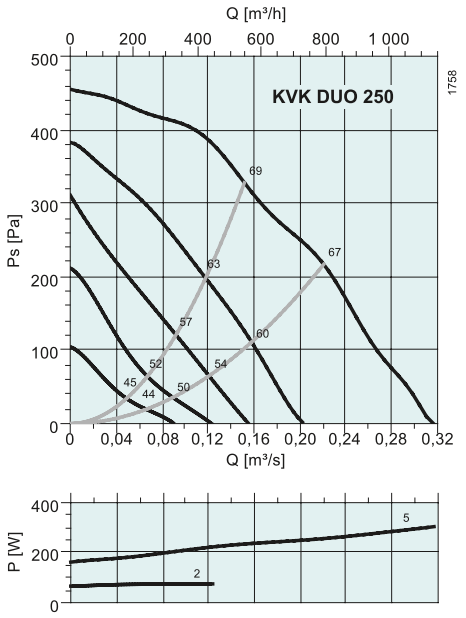
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	52	49	47	41	40	38	33	26	25
L_{wA} Outlet	61	46	53	53	54	53	53	46	38
L_{wA} Surrounding	36	30	32	24	25	26	17	18	19
With LDC 125-900									
L_{wA} Inlet	47	45	43	29	7	0	0	0	8
L_{wA} Outlet	50	42	49	41	21	8	3	16	21
Measurement point: 0,0281 m³/s; 114 Pa									



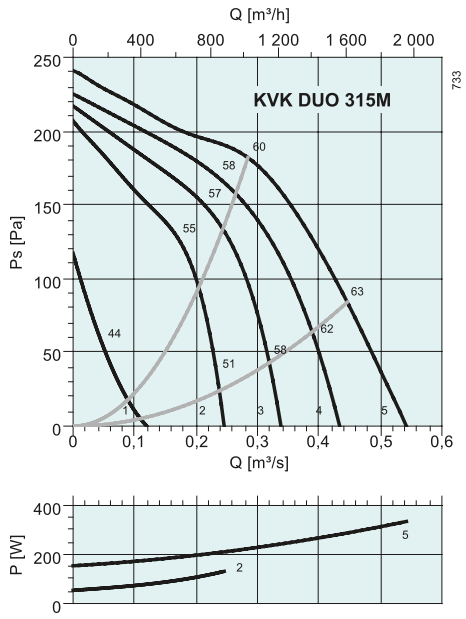
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	59	39	56	55	52	45	39	33	26
L_{wA} Outlet	68	49	57	62	64	60	59	54	48
L_{wA} Surrounding	44	6	32	42	40	30	22	20	12
With LDC 160-900									
L_{wA} Inlet	53	37	52	45	24	3	0	13	11
L_{wA} Outlet	56	47	53	52	36	18	16	34	33
Measurement point: 0,06 m³/s; 148 Pa									



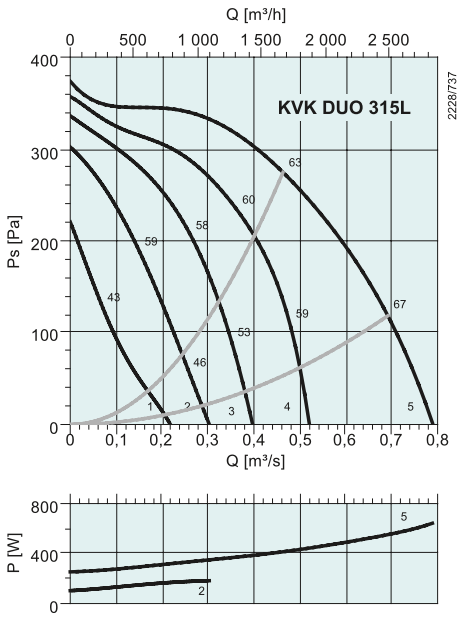
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	66	47	63	59	58	55	48	41	35
L_{wA} Outlet	73	59	63	66	67	66	66	61	54
L_{wA} Surrounding	47	19	38	43	42	35	31	26	19
With LDC 200-900									
L_{wA} Inlet	60	45	59	51	34	23	14	28	25
L_{wA} Outlet	63	57	59	58	43	34	32	48	44
Measurement point: 0,0983 m³/s; 255 Pa									



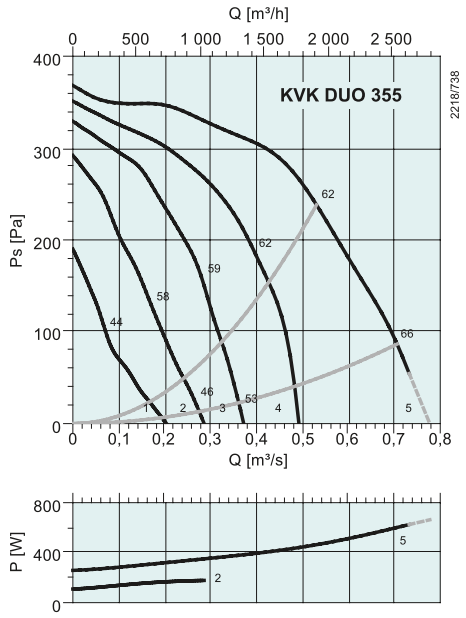
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	69	50	67	62	59	53	50	46	40
L_{wA} Outlet	77	62	68	67	69	69	71	67	62
L_{wA} Surrounding	49	22	42	45	45	37	32	27	23
With LDC 250-900									
L_{wA} Inlet	64	47	63	54	39	27	27	36	32
L_{wA} Outlet	67	59	64	59	49	43	48	57	54
Measurement point: 0,152 m³/s; 328 Pa									



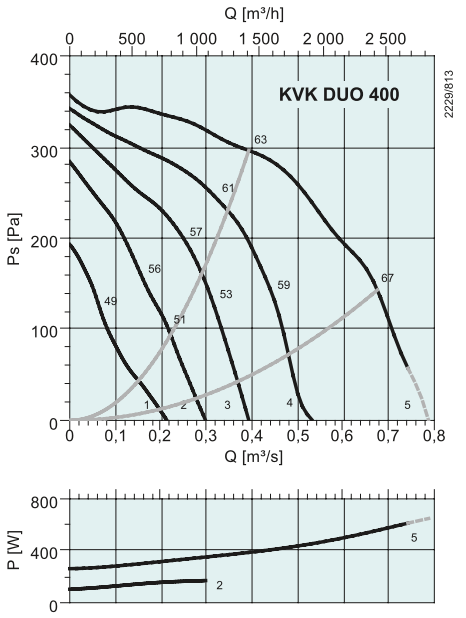
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	60	55	56	51	42	42	41	39	36
L_{wA} Outlet	71	59	63	57	63	66	62	59	57
L_{wA} Surrounding	42	36	35	35	33	30	27	22	17
With LDC 315-900									
L_{wA} Inlet	57	54	53	44	26	20	29	33	29
L_{wA} Outlet	63	58	60	50	47	44	50	53	50
Measurement point: 0,284 m³/s; 182 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	63	61	55	51	45	46	43	40	38
L_{wA} Outlet	73	59	61	61	64	68	66	63	59
L_{wA} Surrounding	43	31	35	36	37	35	33	29	26
With LDC 315-900									
L_{wA} Inlet	61	60	52	44	29	24	31	34	31
L_{wA} Outlet	64	58	58	54	48	46	54	57	52
Measurement point: 0,463 m³/s; 275 Pa									

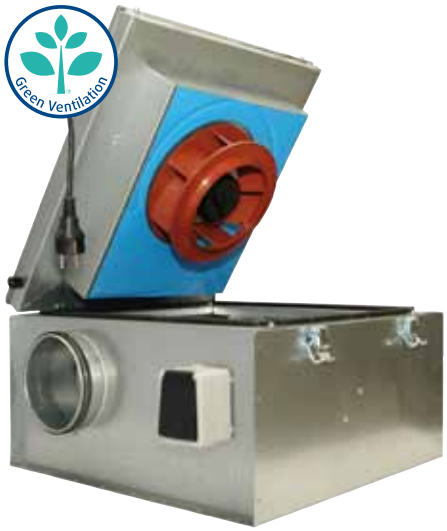


dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	62	60	55	51	44	46	43	40	38
L_{wA} Outlet	72	58	60	60	64	68	66	63	59
L_{wA} Surrounding	43	31	35	36	37	35	33	29	26
With LDC 355-900									
L_{wA} Inlet	61	60	52	45	31	28	33	34	31
L_{wA} Outlet	64	58	57	54	51	50	56	57	52
Measurement point: 0,531 m³/s; 238 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	63	60	58	54	51	51	47	47	46
L_{wA} Outlet	73	62	61	63	64	68	66	64	60
L_{wA} Surrounding	46	33	37	38	41	37	36	37	27
With LDC 400-900									
L_{wA} Inlet	61	59	55	49	41	38	40	42	40
L_{wA} Outlet	67	61	58	58	54	55	59	59	54
Measurement point: 0,393 m³/s; 296 Pa									

Circular duct fans



KVKE EC

- EC-motors, high level of efficiency
- 100% speed controllable
- Low sound level
- Integrated motor protection
- Potentiometer included for ease of commissioning

EC technology is intelligent technology; using integral electronic control which eliminates the slip losses in the motor and ensures that the motor always runs at optimal load and guarantees that the proportion of energy utilised effectively is many times higher and that the energy usage is considerably lower compared to AC motors.

Another special feature of EC fans is their energy-saving potential not only at full load, but especially at part-load. When operating at part-load, the energy used is much lower than with an asynchronous motor of equivalent output.

Reduced energy usage guarantees a drop in operating costs.

The KVKE EC models have a single inlet centrifugal fan with backward-curved blades and a maintenance-free external rotor motor(EC). These fans develop relatively high static pressure and have a very high efficiency. The fans are delivered with a pre-wired potentiometer (0-10V) which allows you to easily set the desired working point.

The KVKE motor and impeller are mounted on the access cover for ease of maintenance. The service cover can be easily removed by withdrawing the hinge pin. Motor protection is integrated in the electronics of the motor. The fans can be installed in any position and are easy to connect to spiral ducts using FK mounting clamps. The KVKE models are manufactured from galvanised sheet steel and are thermally and acoustically insulated with a 50 mm layer of rockwool with a surface liner which prevents the migration of fibres into the airstream.

By using an EC fan you eliminate the need for an electrical protection unit and speed controller. This should be considered when doing a cost comparison with a standard AC fan model. It also simplifies the process when commissioning.

ELECTRICAL ACCESSORIES



MTP 10
p. 341



EC-Vent
p. 329-330

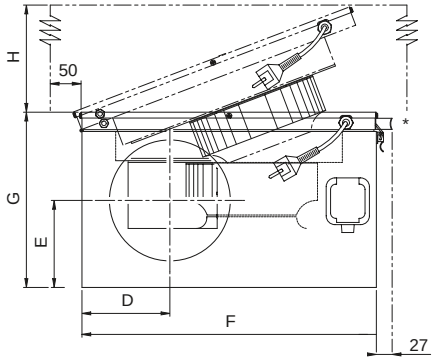


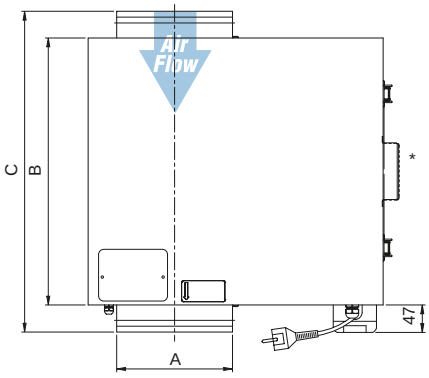
MTV 1/010
p. 341

TECHNICAL DATA

KVKE		125 EC	160 EC	200 EC	250 EC	315 EC
Art no.		2570	2571	2575	2577	2578
Voltage/Frequency	V/50 Hz	230 1~	230 1~	230 1~	230 1~	230 1~
Power	W	68.7	67.7	156	265	308
Current	A	0.536	0.531	1.10	1.64	1.89
Max air flow	m^3/s	0.104	0.151	0.24	0.321	0.492
R.p.m.	min^{-1}	3339	2592	3033	2821	2215
Max temp. of transported air	°C	60	60	60	55	45
" when speed controlled	°C	60	60	60	55	45
Sound pressure level at 3 m	dB(A)	41	39	46	49	47
Weight	kg	13.2	17	18.8	28.1	38.8
Insulation class, motor		B	B	B	B	B
Enclosure class, motor		IP 44	IP 44	IP 44	IP 44	IP 44
Motor protection		Integral	Integral	Integral	Integral	Integral
Speed control	Electronic	MTP	MTP	MTP	MTP	MTP
Wiring diagram p. 391-400		42	42	42	42	42

DIMENSIONS



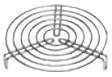


	A	B	C	D	E	F	G	H
KVKE 125 EC	125	433	479	125	128,5	442	246	470
KVKE 160 EC	160	482	528	145,5	132,5	505	266	530
KVKE 200 EC	200	482	534	150,5	149	505	303	530
KVKE 250 EC	250	578	700	176	174	596	359	620
KVKE 315 EC	315	680	802	208.5	207.5	705.5	430	730

** Handle 315M/L*

VENTILATION ACCESSORIES


FK p. 355


SG p. 357


VK p. 356


IGK p. 357

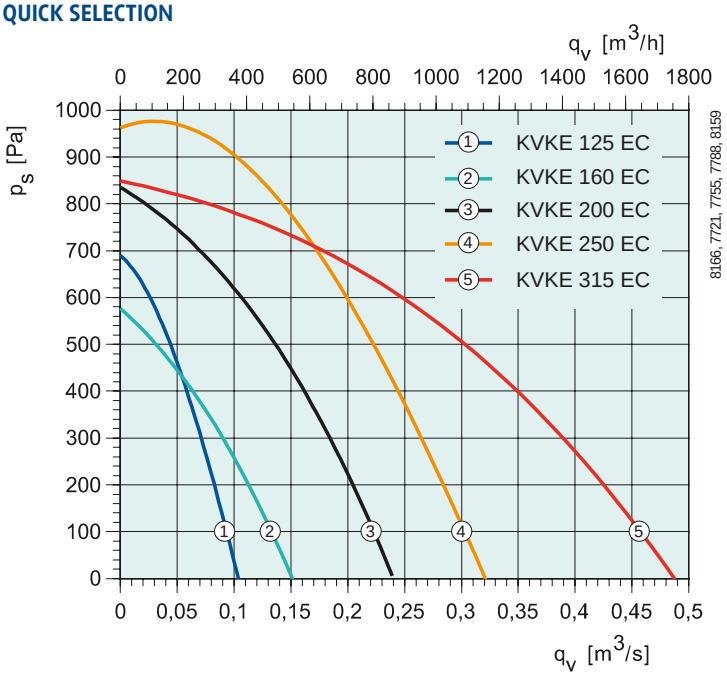

RSK p. 355


LDC p. 348


FFR p. 349

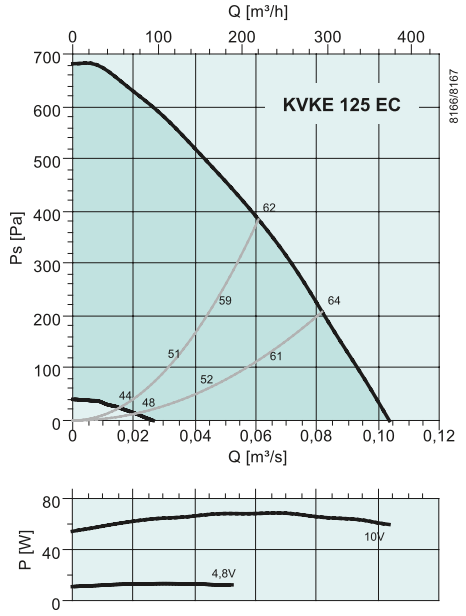

CB p. 350

QUICK SELECTION

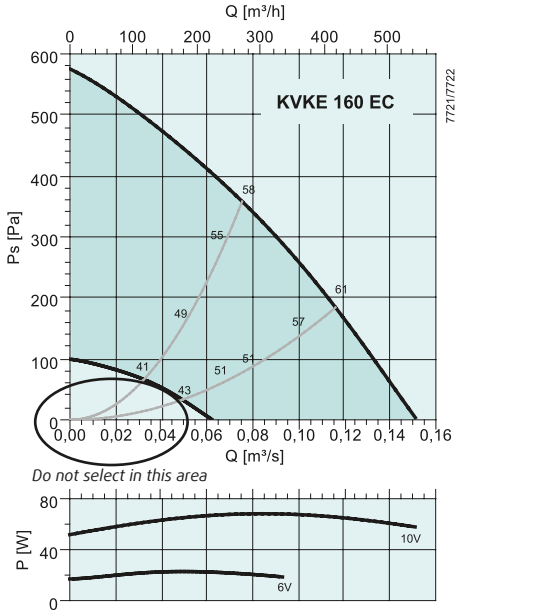


Circular duct fans

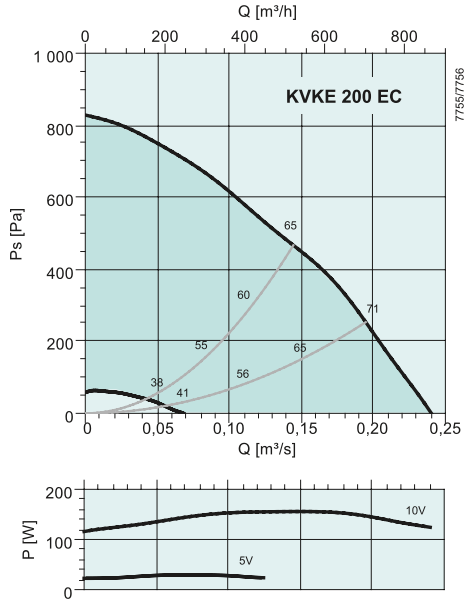
PEFORMANCE



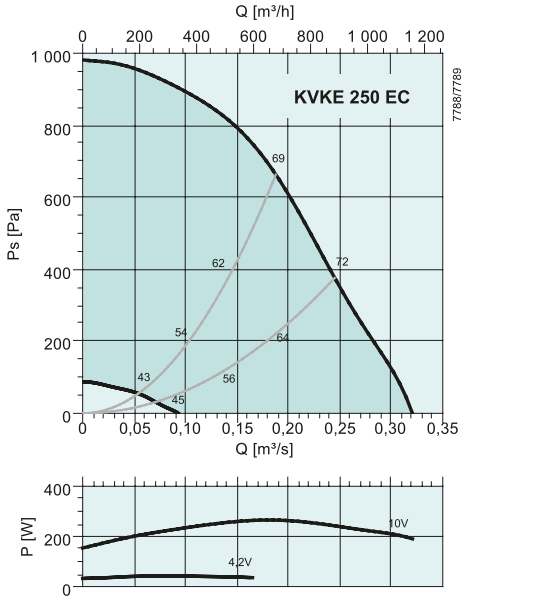
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	60	46	57	56	50	45	40	37	35
L_{wA} Outlet	76	54	63	69	71	69	66	60	46
L_{wA} Surrounding	48	18	40	41	43	40	38	35	32
With LDC 125-900									
L_{wA} Inlet	54	42	53	44	17	0	0	7	18
L_{wA} Outlet	61	50	59	57	38	24	16	30	29
Measurement point: 0,0608 m^3/s; 384 Pa									



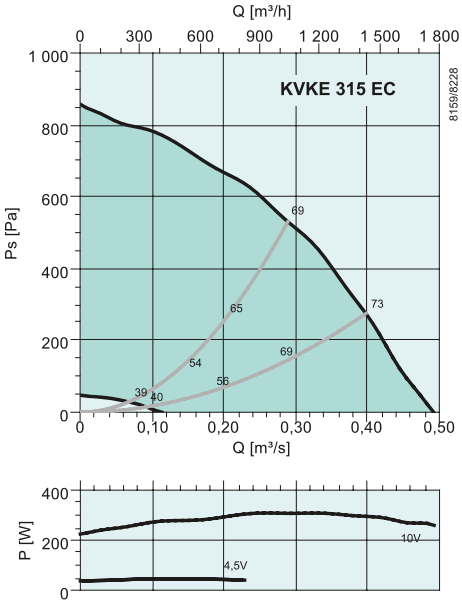
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	57	42	54	49	47	44	47	40	33
L_{wA} Outlet	72	50	59	62	68	65	62	55	42
L_{wA} Surrounding	46	19	39	36	39	34	39	36	28
With LDC 160-900									
L_{wA} Inlet	51	40	50	39	19	2	4	20	18
L_{wA} Outlet	57	48	55	52	40	23	19	35	27
Measurement point: 0,0753 m^3/s; 358 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	64	52	59	60	56	53	50	47	45
L_{wA} Outlet	80	57	64	72	76	74	71	64	53
L_{wA} Surrounding	53	27	43	49	49	40	39	39	35
With LDC 200-900									
L_{wA} Inlet	58	50	55	52	32	21	16	34	35
L_{wA} Outlet	66	55	60	64	52	42	37	51	43
Measurement point: 0,144 m^3/s; 467 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	67	53	64	60	59	54	48	46	40
L_{wA} Outlet	83	64	70	72	80	76	75	66	56
L_{wA} Surrounding	56	32	49	50	53	42	39	35	26
With LDC 250-900									
L_{wA} Inlet	61	50	60	52	39	28	25	36	32
L_{wA} Outlet	70	61	66	64	60	50	52	56	48
Measurement point: 0,188 m^3/s; 663 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	66	53	64	61	51	49	45	41	36
L_{wA} Outlet	85	62	71	83	75	72	67	62	54
L_{wA} Surrounding	54	36	48	52	44	40	36	32	26
With LDC 315-900									
L_{wA} Inlet	62	52	61	54	35	27	33	35	29
L_{wA} Outlet	77	61	68	76	59	50	55	56	47
Measurement point: 0,289 m^3/s; 530 Pa									

Circular duct fans



KVKE

- Speed controllable
- Integral thermal contacts
- Low sound level
- Servicing cover

The KVKE models have a single inlet centrifugal fan with backward-curved blades and a maintenance-free external rotor motor. These fans develop relatively high static pressure and have a high efficiency.

The KVKE motor and impeller are mounted on the access cover for ease of maintenance. The service cover can be easily removed by withdrawing the hinge pin. To protect the motor from overheating, the fans have integral thermal contacts with automatic reset. The fans can be installed in any position and are easy to connect to spiral ducts using FK mounting clamps.

The KVKE models are manufactured from galvanised sheet steel and are thermally and acoustically insulated with a 50 mm layer of rockwool with a surface liner which prevents the migration of fibres into the air-stream.

ELECTRICAL ACCESSORIES



RE p. 320



REU p. 320

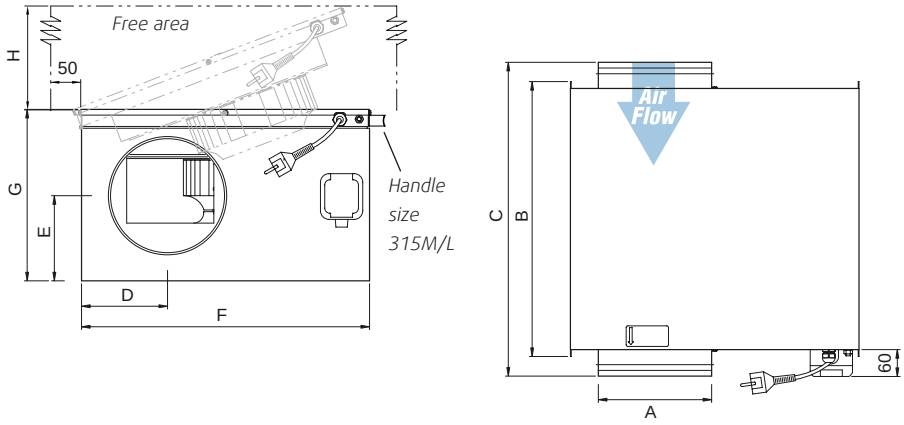


REE p. 321

TECHNICAL DATA

KVKE		125	160	200	250 M	250 L	315 M	315 L
Art no.		1406	1409	1412	1416	1419	1421	1423
Voltage/Frequency	V/50 Hz	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~
Power	W	55.1	97.6	152	186	258	285	496
Current	A	0.244	0.422	0.67	0.841	1.10	1.23	2.15
Max air flow	m^3/s	0.0854	0.148	0.211	0.27	0.317	0.44	0.61
R.p.m.	min^{-1}	2548	2687	2661	2655	2578	2505	2364
Max temp. of transported air	°C	70	70	70	58	60	60	59
" when speed controlled	°C	70	70	70	58	56	60	49
Sound pressure level at 3 m	dB(A)	34	36	47	38	45	41	50
Weight	kg	14	18	19.5	26.5	28.5	40.5	42
Insulation class, motor		B	B	F	B	F	F	F
Enclosure class, motor		IP 44	IP 44	IP 44	IP 44	IP 44	IP 44	IP 44
Capacitor	µF	2	3	4	5	7	7	12
Motor protection		Integral	Integral	Integral	Integral	Integral	Integral	Integral
Speed control, five-step	Transformer	RE 1.5	RE 1.5	RE 1.5	RE 1.5	RE 1.5	RE 1.5	RE 3
Speed control, five step high/low	Transformer	REU 1,5	REU 1.5	REU 1.5	REU 1.5	REU 1.5	REU 1.5	REU 3
Speed control, stepless	Thyristor	REE 1	REE 1	REE 1	REE 1	REE 2	REE 2	REE 4
Wiring diagram p. 391-400		4	4	4	4	4	4	4

DIMENSIONS

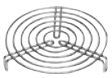


KVKE	A	B	C	D	E	F	G	H
125	125	433	479	125	128.5	442	246	470
160	160	482	528	145.5	132.5	505	266	530
200	200	482	534	150.5	149	505	303	530
250	250	578	700	176	174	596	359	620
315	315	680	802	208.5	207.5	705.5*	430	730

** + handle*

VENTILATION ACCESSORIES


FK p. 355


SG p. 357


VK p. 356


IGK p. 357

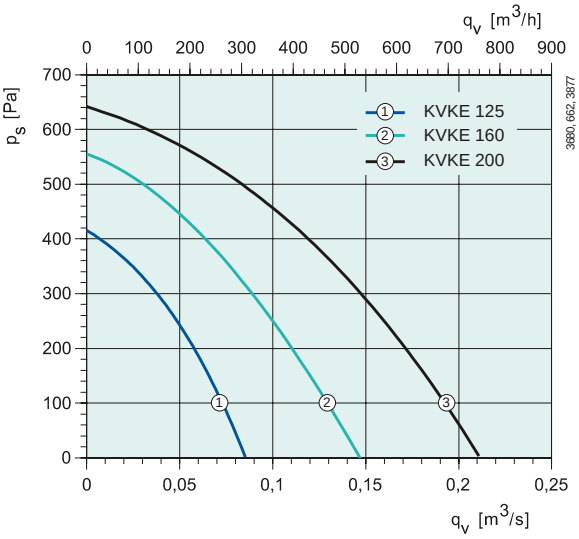

RSK p. 355

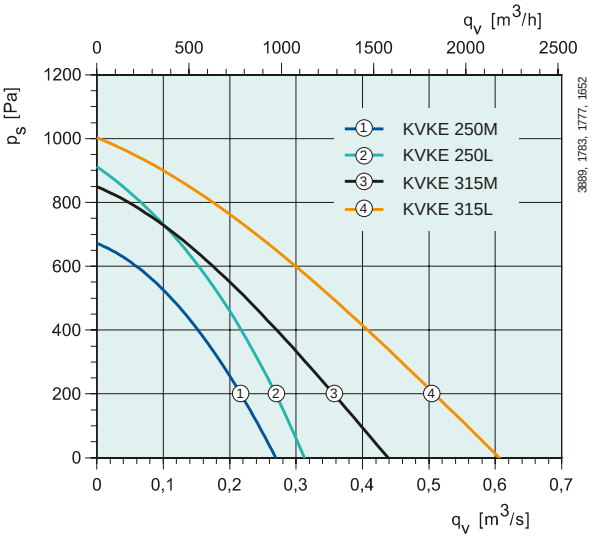

LDC p. 348


FFR p. 349


CB p. 350

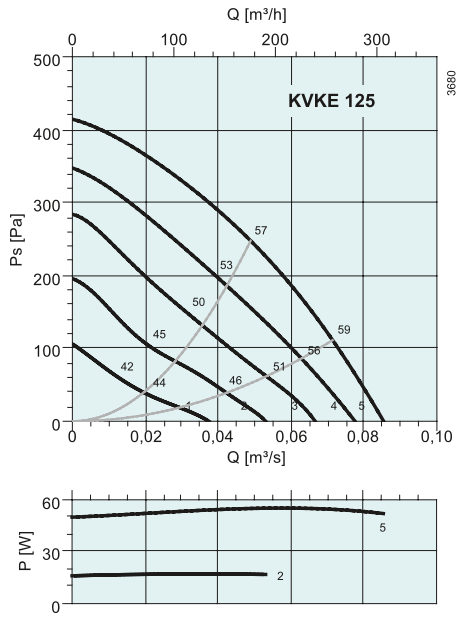
QUICK SELECTION



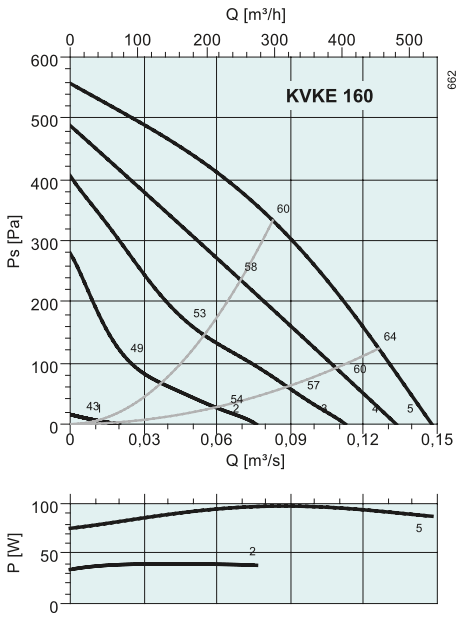


Circular duct fans

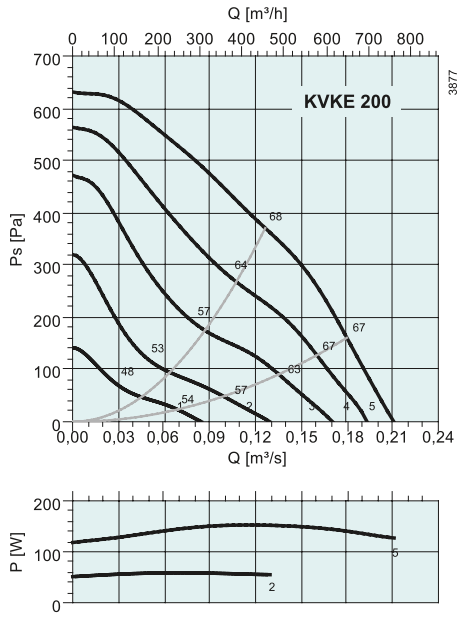
PERFORMANCE



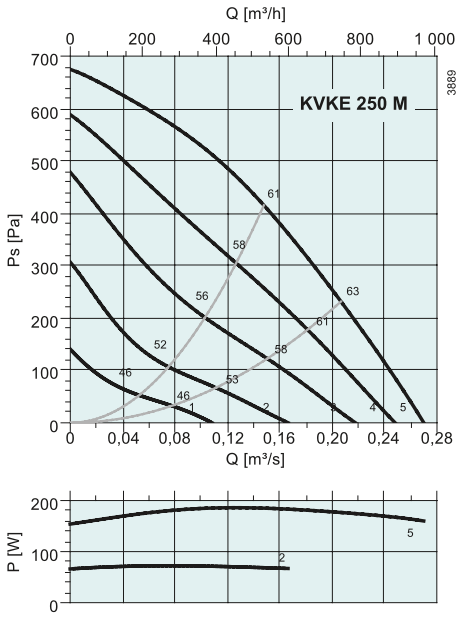
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	56	35	50	55	42	40	32	21	17
L_{wA} Outlet	70	50	59	67	63	63	61	56	36
L_{wA} Surrounding	41	6	35	38	31	32	29	20	15
With LDC 125-900									
L_{wA} Inlet	48	31	46	43	9	0	0	0	0
L_{wA} Outlet	58	46	55	55	30	18	11	26	19
Measurement point: 0,0489 m^3/s; 248 Pa									



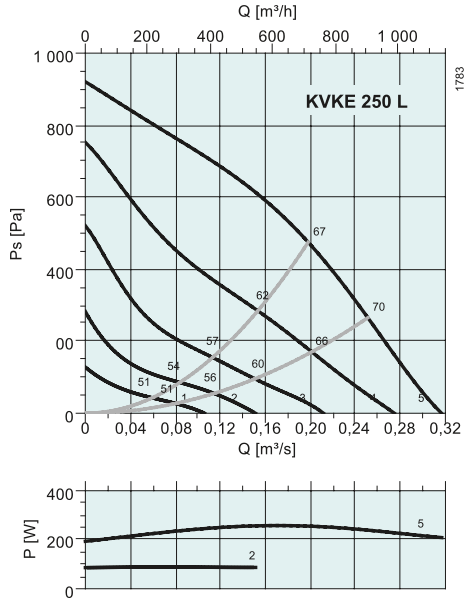
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	57	55	48	49	48	43	38	35	38
L_{wA} Outlet	71	53	58	62	68	65	61	54	40
L_{wA} Surrounding	43	32	30	33	37	35	33	34	35
With LDC 160-900									
L_{wA} Inlet	54	53	44	39	20	1	0	15	23
L_{wA} Outlet	57	51	54	52	40	23	18	34	25
Measurement point: 0,0828 m^3/s; 333 Pa									



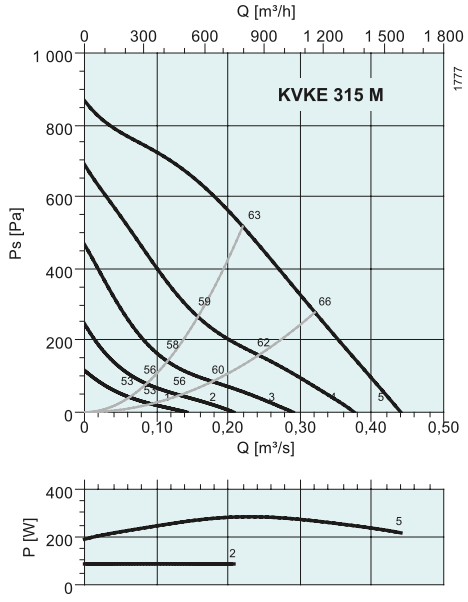
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	67	44	58	66	54	52	45	36	33
L_{wA} Outlet	79	56	61	75	73	71	69	59	49
L_{wA} Surrounding	54	12	40	54	43	38	35	31	20
With LDC 200-900									
L_{wA} Inlet	60	42	54	58	30	20	11	23	23
L_{wA} Outlet	68	54	57	67	49	39	35	46	39
Measurement point: 0,126 m^3/s; 371 Pa									



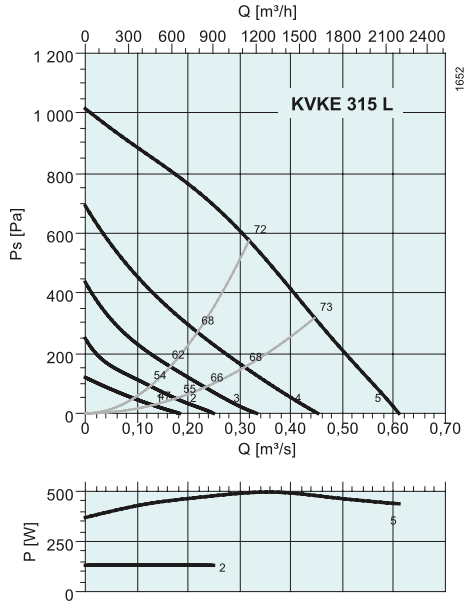
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	60	44	54	54	53	51	49	45	37
L_{wA} Outlet	73	56	56	62	70	67	65	58	48
L_{wA} Surrounding	45	17	37	37	42	35	31	30	23
With LDC 250-900									
L_{wA} Inlet	52	41	50	46	33	25	26	35	29
L_{wA} Outlet	59	53	52	54	50	41	42	48	40
Measurement point: 0,148 m^3/s; 415 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	65	51	60	61	57	52	45	45	41
L_{wA} Outlet	78	60	62	69	75	71	70	62	54
L_{wA} Surrounding	52	28	44	49	46	36	28	31	23
With LDC 250-900									
L_{wA} Inlet	58	48	56	53	37	26	22	35	33
L_{wA} Outlet	65	57	58	61	55	45	47	52	46
Measurement point: 0,198 m³/s; 475 Pa									

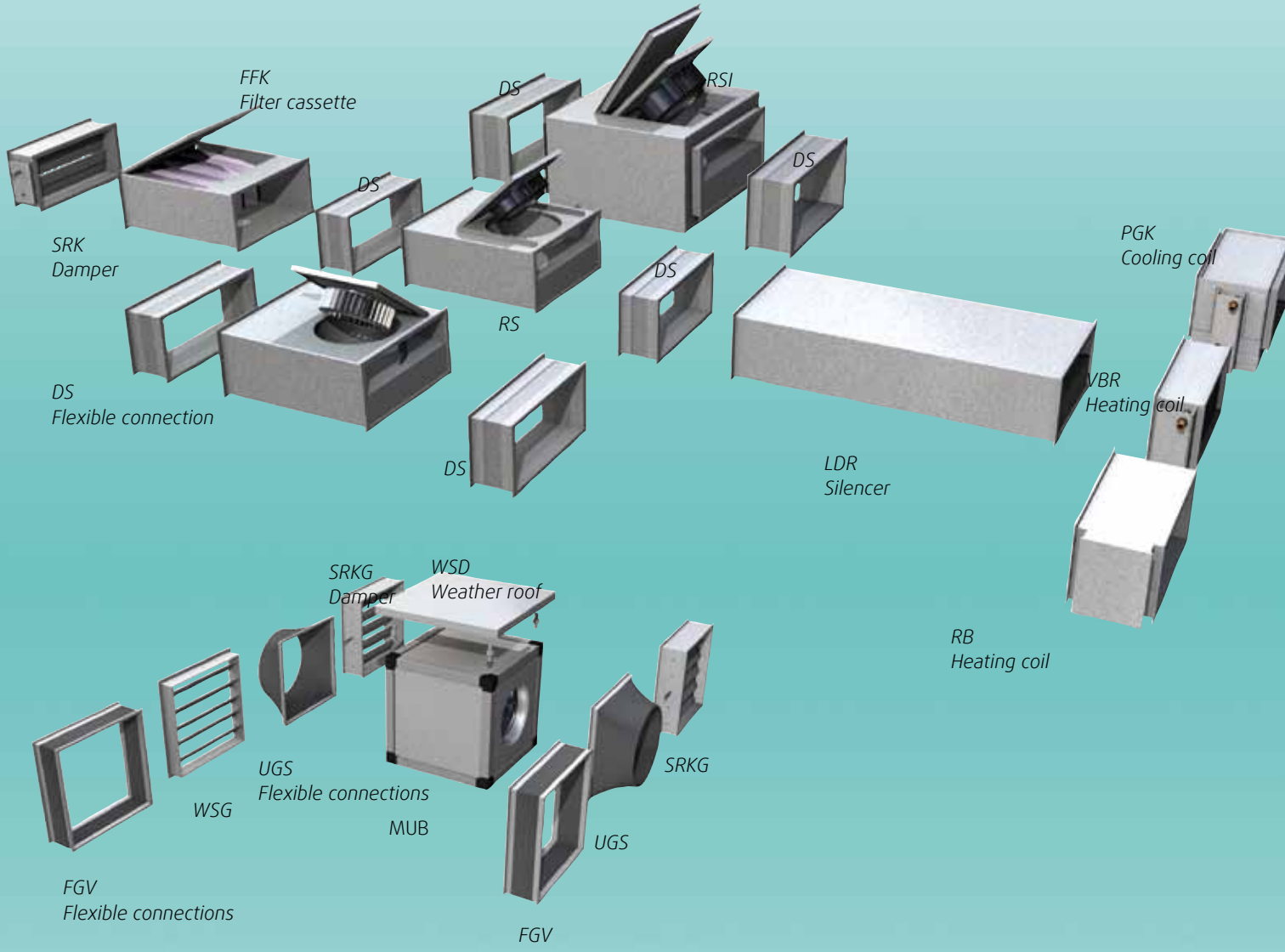


dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	61	46	57	55	52	52	46	47	45
L_{wA} Outlet	76	60	59	65	73	68	66	60	55
L_{wA} Surrounding	47	21	38	43	43	36	29	28	26
With LDC 315-900									
L_{wA} Inlet	56	45	54	48	36	30	34	41	38
L_{wA} Outlet	65	59	56	58	57	46	54	54	48
Measurement point: 0,22 m³/s; 517 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	70	58	66	66	54	55	45	43	39
L_{wA} Outlet	85	62	71	83	76	74	66	60	53
L_{wA} Surrounding	57	37	48	56	46	40	36	34	29
With LDC 315-900									
L_{wA} Inlet	65	57	63	59	38	33	33	37	32
L_{wA} Outlet	77	61	68	76	60	52	54	54	46
Measurement point: 0,318 m³/s; 576 Pa									

Rectangular & square duct fans



General

Systemair rectangular and square duct fans have been developed for use in compact exhaust and supply air systems. Covering a wide performance spectrum and availability of a comprehensive range of accessories, including heating and cooling coils, filters, silencers and more, offers solutions for complete systems for almost all applications. Our experience over the past 35 years and continuous research and development of new products and technology have made the Systemair duct fan a market leader. Our motto "the straight way" is revealed in the straight routing of airflow in a ducted system.

For instance, the flexibility offered by removable panels allows the MUB Range to be adapted to all installation positions and airflow directions, which can still be decided during installation. The MUB Range is suited for outdoor applications (complete with Systemair weather protection accessories).

Systemair range

Systemair rectangular duct fans are available in 3 different versions. Where high pressure losses occur in a system we offer the KE/KT range. The RS and RSI Range is ideal for installing where the ease of maintenance or comfort is a requirement. The RSI Range is perfectly suited where low noise levels are a pre-requisite. The casings are manufactured from galvanized steel. The RSI Models have double skin with mineral wool insulation (40-60 kg/m^3).

Systemair Multiboxes, MUB, are offered in four box sizes with varying capacities available within one size. The casing consists of a self supporting aluminium profiled frame, with either aluminium or PA6 plastic corner pieces. The double skin panels have 20 mm acoustic and thermal insulation, consisting of mineral wool with a density of 25 kg/m^3.

The MUB/T Therma Multibox has the motor out of the airstream which enables temperatures of up to 100°C to be exhausted. The bottom panel serves as a drain pan and is complete with a drain plug. The motor and impeller can easily be removed from the unit for cleaning and servicing.

Motors

All Systemair rectangular duct fans have external rotor motors which are suitable to control by means of voltage control. All motors have thermal motor protection embedded in the windings.

The MUB Range of square duct fans is equipped with powerful external rotor motors up to size 499 and from size 500 with IEC standard motors. All MUB/T versions are equipped with IEC standard motors separated from the airstream.

By combining a Systemair motor protection device optimum operational reliability is guaranteed.

KE, KE(I) 66

Rectangular duct fans: up to 0.81 m³/s, forward curved impeller, 1 phase. (I) insulated version.



KT, KT(I). 70

Rectangular duct fans: up to 2.47 m³/s, forward curved impeller, 3 phase. (I) insulated version.



RS 78

Rectangular duct fans: up to 3.36 m³/s, backward-curved impeller, 1 and 3 phase.



RSI 84

Insulated rectangular duct fans: up to 3.35 m³/s, backward-curved impeller, 1 and 3 phase.



KVD 90

Box fans: up to 2.0 m³/s, 1 and 3 phase, forward curved impeller, direct driven.



MUB EC 94

Multibox fan with EC-motor: up to 3.62 m³/s, 1 and 3 phase.



MUB. 102

Multibox fans: up to 4.80 m³/s, backward curved impeller, 1 and 3 phase.



KDRE/KDRD 114

Mixed flow square duct fans: up to 4.12 m³/s, mixed flow impeller, 1 and three phase.



MUB/T. 118

Thermo Multibox: up to 4.4 m³/s, backward curved impeller, 1 phase and 3 phase.





KE, KE(I)

- Swing-out
- Speed-controllable
- Integral thermal contacts
- Can be installed in any position
- Maintenance-free and reliable

The KE models have impellers with forward-curved blades and external rotor motors. The motor and impeller are mounted on the access cover to facilitate easy maintenance. The casing is manufactured from galvanised sheet steel. To protect the motor from overheating the fans have integral thermal contacts with external leads for connection to a motor protection device. The fans can be installed in any position and are simple to couple using DS flexible connections. The KE fans have a prewired, integral terminal box.

KE(I) versions have double skin side panels, manufactured from galvanised steel with 25 mm mineral wool insulation.

ELECTRICAL ACCESSORIES



S-ET p. 341



RTRE p. 320



RE p. 320

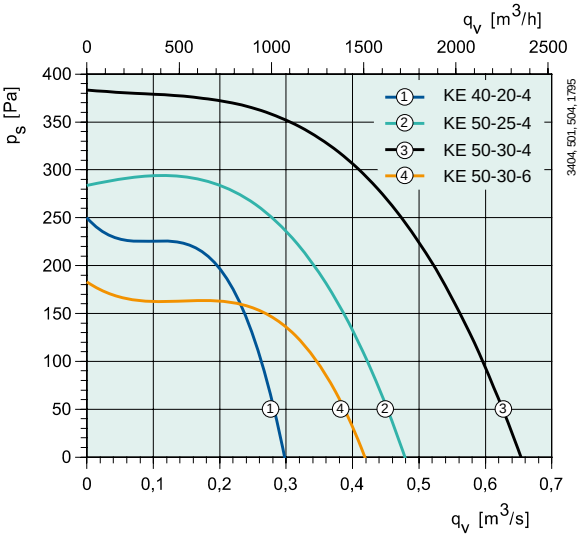


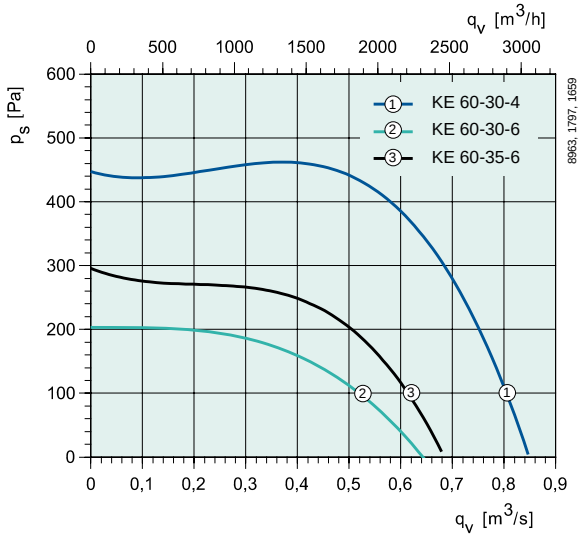
REU p. 320



REE p. 321

QUICK SELECTION



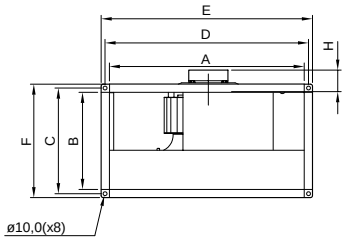


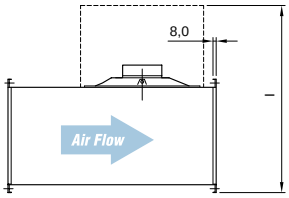
TECHNICAL DATA

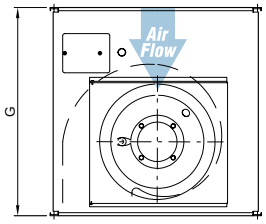
		KE 40-20-4	KE 50-25-4	KE 50-30-4	KE 50-30-6	KE 60-30-4	KE 60-30-6	KE 60-35-6
Art no. KE		1463	1467	1473	1471	1478	1476	1480
Art no. KE(I)		68560	68562	68565	–	68569	68570	68573
Voltage/Frequency	V/50 Hz	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~
Power	W	248	533	819	294	1261	493	554
Current	A	1.08	2.51	3.67	1.48	5.93	2.30	2.63
Max air flow	m^3/s	0.293	0.479	0.64	0.404	0.847	0.659	0.68
R.p.m.	min^{-1}	1059	1298	1193	676	1046	898	565
Max temp. of transported air	°C	45	70	70	70	43	70	41
" when speed controlled	°C	45	69	70	70	43	70	41
Sound pressure level at 3 m	dB(A)	55/49	55/51	59/55	49	58/56	55/50	51/44
Weight	kg	13.8/15	19.8/33	24.8/39	23.3	32/55	33/36	34.5/54
Insulation class, motor		F	F	F	F	F	F	F
Enclosure class, motor		IP 44	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
Capacitor	µF	6	8	14	6	20	14	8
Motor protection		S-ET 10	S-ET 10	S-ET 10	S-ET 10	S-ET 10	S-ET 10	S-ET 10
Speed control, five-step	Transformer	RTRE 1,5	RTRE 3	RTRE 5	RTRE 3	RTRE 7	RTRE 3	RTRE 3
Speed control, five step high/low	Transformer	REU 1,5	REU 3	REU 5	REU 3	REU 7	REU 3	REU 3
Speed control, stepless	Thyristor	REE 2 *	REE 4	REE 4	REE 2	–	REE 4	REE 4
Wiring diagram p. 391-400		5	6	6	6	6	6	6

* + S-ET 10

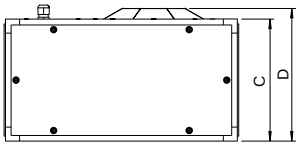
DIMENSIONS

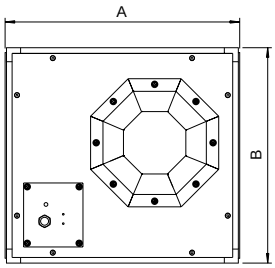






	A	B	C	D	E	F	G	H	I
KE 40-20-4	398	198	220	420	440	240	502	28	530
KE 50-25-4	498	248	270	520	540	290	532	30	610
KE 50-30-4/6	498	298	320	520	540	340	562	32	695
KE 60-30-4/6	598	298	320	620	640	340	642	34	715
KE 60-35-6	598	348	370	620	640	390	717	47	805





KE (I)	A	B	C	D
40-20	502	461	261	283.9
50-25	532	561	311	334.9
50-30-4	562	561	361	396
60-30-4	642	661	361	400.1

VENTILATION ACCESSORIES


DS p. 363


VK p. 368

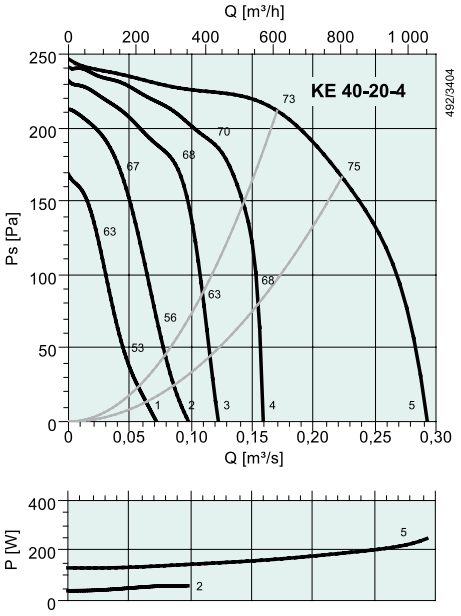

LDR p. 358


FFK p. 355


RB p. 359

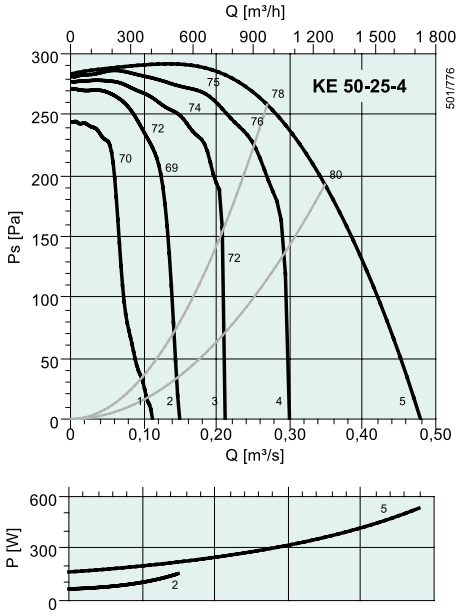

VBR p. 365

PERFORMANCE



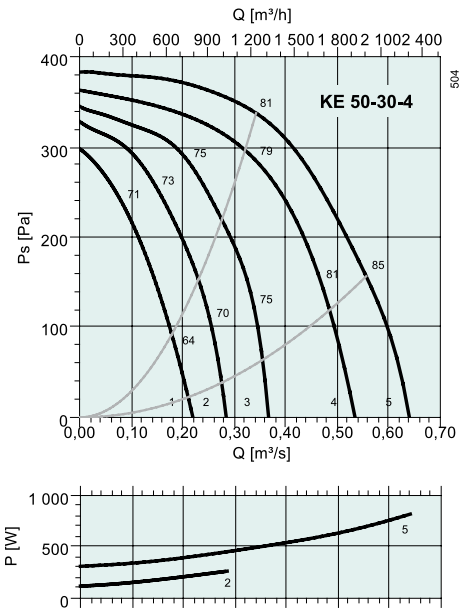
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	69	54	66	62	61	57	56	55	49
L_{wA} Outlet	72	55	63	66	65	66	63	61	54
L_{wA} Surrounding	62	42	49	58	55	55	49	46	41
L_{wA} Surr. KE(I)	56	30	42	54	47	46	43	38	32
With LDR 40-20									
L_{wA} Inlet	63	54	61	53	46	34	40	43	39
L_{wA} Outlet	62	55	58	57	50	43	47	49	44

Measurement point: 0,17 m³/s; 211 Pa



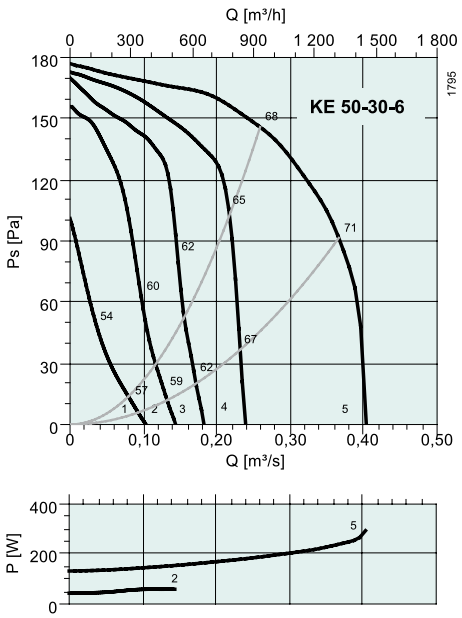
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	73	62	69	65	59	63	64	62	59
L_{wA} Outlet	77	56	64	66	68	73	70	68	64
L_{wA} Surrounding	62	35	50	56	58	55	51	46	50
L_{wA} Surr. KE(I)	58	26	47	54	53	48	49	46	40
With LDR 50-25									
L_{wA} Inlet	59	55	53	51	40	41	43	46	42
L_{wA} Outlet	77	77	46	49	41	43	53	55	56

Measurement point: 0,269 m³/s; 258 Pa



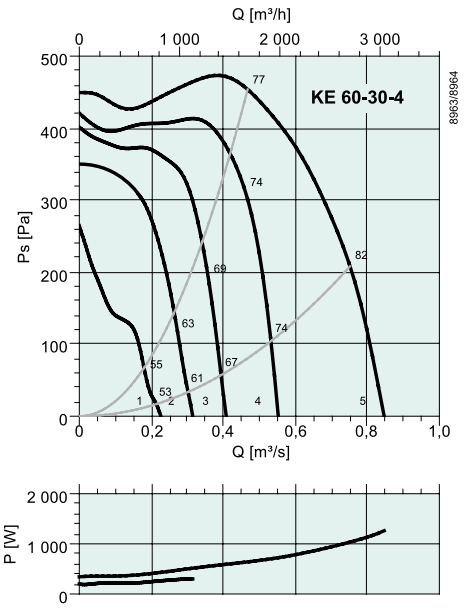
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	76	66	71	66	63	67	68	66	62
L_{wA} Outlet	80	60	68	67	71	76	73	72	66
L_{wA} Surrounding	66	38	57	62	58	61	55	51	47
L_{wA} Surr. KE(I)	62	33	54	56	55	55	54	51	47
With LDR 50-30									
L_{wA} Inlet	77	77	48	49	46	37	56	56	57
L_{wA} Outlet	66	60	60	52	51	45	56	58	55

Measurement point: 0,343 m³/s; 337 Pa



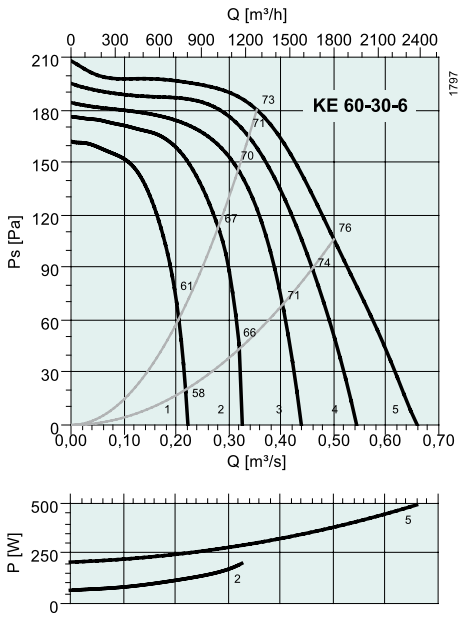
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	67	58	61	57	56	59	59	56	49
L_{wA} Outlet	70	55	58	57	64	65	62	61	53
L_{wA} Surrounding	56	50	48	49	45	49	43	38	34
With LDR 50-30									
L_{wA} Inlet	59	58	53	42	36	28	42	42	38
L_{wA} Outlet	57	55	50	42	44	34	45	47	42

Measurement point: 0,259 m³/s; 146 Pa



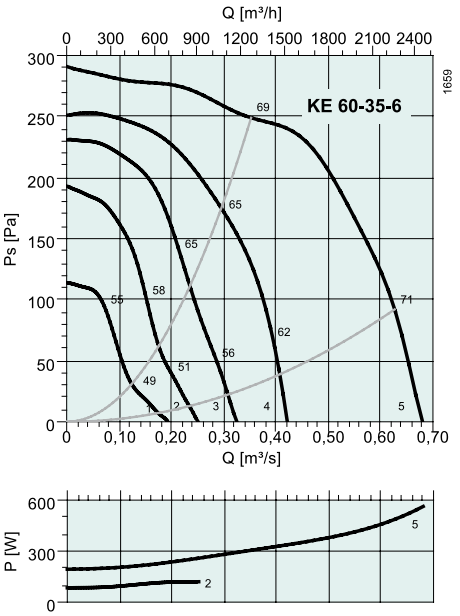
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	77	63	73	66	65	70	69	68	63
L_{wA} Outlet	82	63	71	68	74	77	74	75	69
L_{wA} Surrounding	65	46	60	55	55	59	56	55	49
L_{wA} Surr. KE(I)	63	28	51	53	55	57	57	54	44
With LDR 60-30									
L_{wA} Inlet	68	63	65	51	45	39	52	54	52
L_{wA} Outlet	68	63	63	53	54	46	57	61	58

Measurement point: 0,468 m³/s; 454 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	71	64	65	63	60	62	62	59	53
L_{wA} Outlet	75	55	65	62	69	69	67	65	57
L_{wA} Surrounding	62	56	51	58	50	51	49	44	37
L_{wA} Surr. KE(I)	57	41	49	52	50	49	46	40	32
With LDR 60-30									
L_{wA} Inlet	65	64	57	48	40	31	45	45	42
L_{wA} Outlet	61	55	57	47	49	38	50	51	46

Measurement point: 0,354 m³/s; 180 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	67	60	60	57	57	59	59	58	51
L_{wA} Outlet	72	56	60	61	66	65	64	64	56
L_{wA} Surrounding	58	52	49	52	49	51	46	45	37
L_{wA} Surr. KE(I)	51	42	45	42	42	42	42	38	30
With LDR 60-35									
L_{wA} Inlet	61	60	53	44	40	41	46	48	43
L_{wA} Outlet	61	56	53	48	49	47	51	54	48

Measurement point: 0,353 m³/s; 249 Pa



KT, KT(I)

- Swing-out
- Speed-controllable
- Integral thermal contacts
- Can be installed in any position
- Maintenance-free and reliable

The KT models have impellers with forward-curved blades and external rotor motors. The motor and impeller are mounted on the access cover to facilitate easy maintenance. The casing is manufactured from galvanised sheet steel. To protect the motor from overheating the fans have integral thermal contacts with external leads for connection to a motor protection device. The fans can be installed in any position and are simple to couple using DS flexible connections. The KT fans have a pre-wired, integral terminal box.

KT(I) versions have double skin side panels, manufactured from galvanised steel with 25 mm mineral wool insulation.

ELECTRICAL ACCESSORIES



STDT p. 342

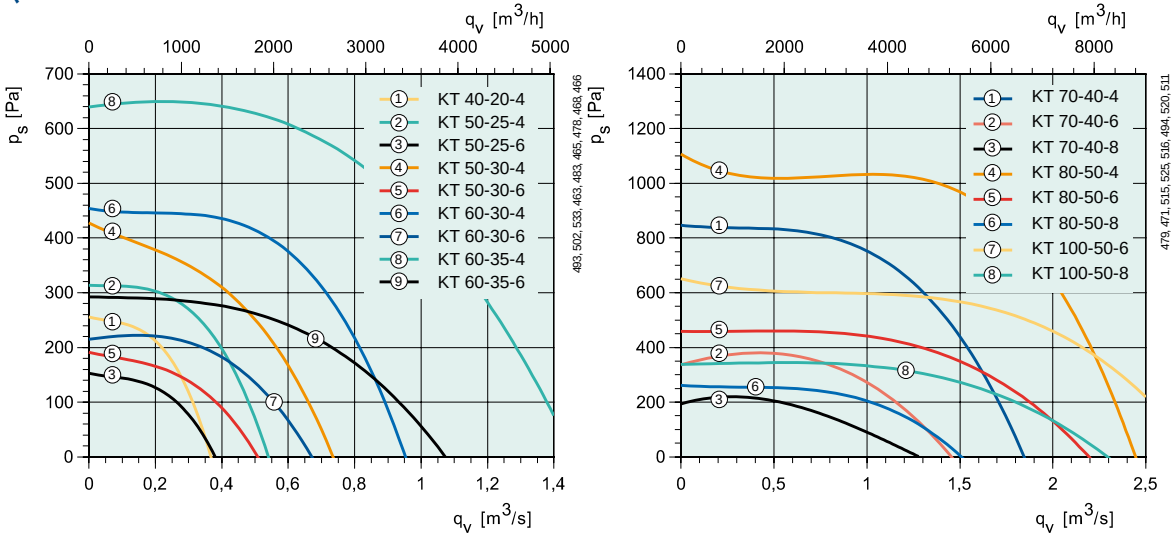


RTRD p. 321



RTRDU p. 321

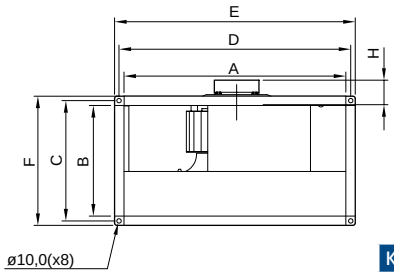
QUICK SELECTION

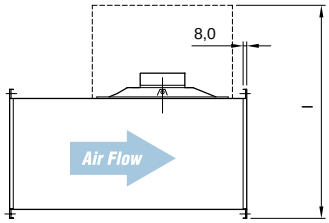


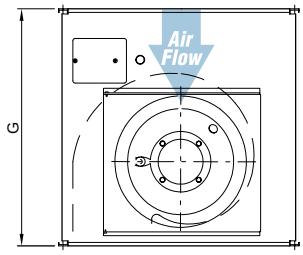
TECHNICAL DATA

KT		40-20-4	50-25-4	50-25-6	50-30-4	50-30-6	60-30-4	60-30-6	60-35-4	60-35-6
Art no. KT		1482	1487	1485	1489	1491	1494	1493	1499	1497
Art no. KT(I)		68561	68563	–	68567	68568	68571	68572	68575	68574
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~
Power	W	289	565	220	935	330	1362	418	2478	935
Current	A	0.519	0.969	0.44	1.64	0.66	2.36	0.855	4.15	1.84
Max air flow	m^3/s	0.368	0.544	0.381	0.72	0.509	0.953	0.598	1.32	1.08
R.p.m.	min^{-1}	1303	1287	826	1223	804	1279	837	1244	777
Max temp. of transported air	°C	63.4	66.3	70	41	49.9	62.5	39.9	42.3	44.3
" when speed controlled	°C	63.4	51.3	70	41	49.9	62.5	39.9	42.3	44.3
Sound pressure level at 3 m	dB(A)	52/49	55/50	44	57/53	51/48	58/55	48/43	61/58	52.5/48
Weight KT/KT(I)	kg	13.5/25	18.5/32	17.5	23/23	21.5/36	33.2/36	26.5/36	40.5/61	34.5/40
Insulation class, motor		B	F	B	F	F	F	F	F	F
Enclosure class, motor		IP 44	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
Motor protection		STDT 16	STDT 16	STDT 16	STDT 16	STDT 16	STDT 16	STDT 16	STDT 16	STDT 16
Speed control, five-step	Transformer	RTRD 2	RTRD 2	RTRD 2	RTRD 2	RTRD 2	RTRD 4	RTRD 2	RTRD 7	RTRD 2
Speed control, five step high/low	Transformer	RTRDU 2	RTRDU 2	RTRDU 2	RTRDU 2	RTRDU 2	RTRDU 4	RTRDU 2	RTRDU 7	RTRDU 2
Wiring diagram p. 391-400		7	8	8	8	8	8	8	8	8

DIMENSIONS

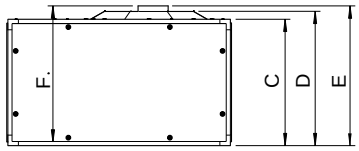


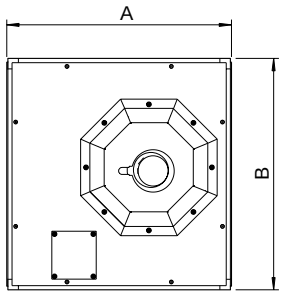




KT	A	B	C	D	E	F	G	H	I *
40-20-4	398	198	220	420	440	240	502	32	530
50-25-4/6	498	248	270	520	540	290	532	68	610
50-30-4/6	498	298	320	520	540	340	562	68	695
60-30-4/6	598	298	320	620	640	340	642	89	715
60-35-4/6	598	348	370	620	640	390	717	92	805
70-40-4	698	398	420	720	740	440	787	92	900
70-40-6/8	698	398	420	720	740	440	787	92	900
80-50-4/6/8	798	497	520	820	840	540	880	113	1090
100-50-6/8	998	497	520	1020	1040	540	980	113	1140

** Dimension with fully open hatch*





KT (I)	A	B	C	D	E	F
50-30-4	562	561	361	–	396	385.5
60-30-4	642	661	361	383.7	418.5	408
60-30-6	642	661	361	383.7	399	388.5
60-35	717	661	411	433.7	473.5	463
70-40-4	787	761	461	470.3	523.5	513
70-40-6	787	761	461	470.3	506.5	496
80-50	880	861	560	587.3	625	614.5
100-50	980	1061	560	588.8	626.5	616

VENTILATION ACCESSORIES


DS p. 363


VK p. 368


LDR p. 358

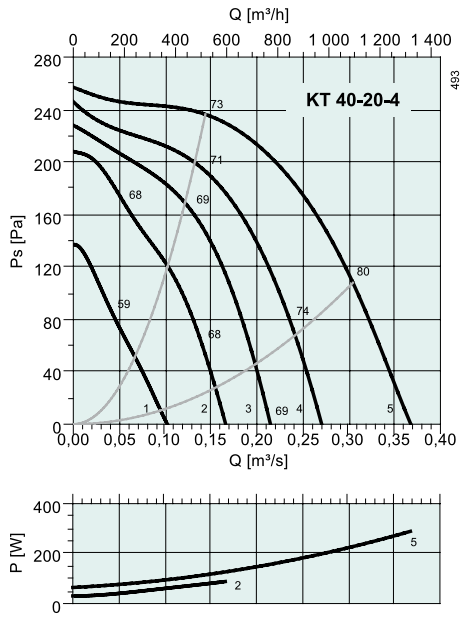

FFK p. 355


RB p. 359


VBR p. 365

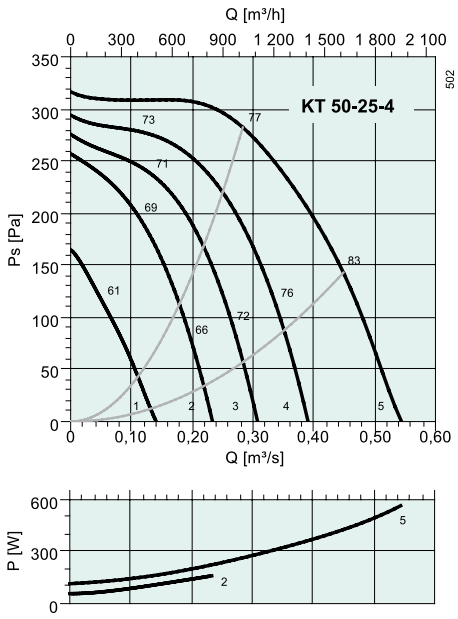
KT		70-40-4	70-40-6	70-40-8	80-50-4	80-50-6	80-50-8	100-50-6	100-50-8	
Art no. KT		1506	1504	1502	1513	1511	1509	1516	1514	
Art no. KT(I)		68576	68577	68578	–	–	–	68582	68583	
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	
Power	W	4186	1628	951	5639	2799	1167	4450	2287	
Current	A	7.15	3.02	1.89	9.22	5.12	2.44	7.82	4.68	
Max air flow	m3/s	1.84	1.46	1.28	2.15	2.1	1.52	2.73	2.30	
R.p.m.	min-1	1250	805	661	1266	828	548	794	614	
Max temp. of transported air	°C	48.5	60.8	68.7	41	70	62	43	70	
" when speed controlled	°C	48.5	60.8	68.7	41	70	62	43	70	
Sound pressure level at 3 m	dB(A)	66/60	57/51	51/50	67	59	59	62/61	58/58	
Weight KT/KT(I)	kg	57.7/65	46.7/72	45.5/65	73.5	67.5	60.5	83.5/100	81.5/100	
Insulation class, motor		F	F	F	F	F	F	F	F	
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	
Motor protection		STDT 16	STDT 16	STDT 16	STDT 16	STDT 16	STDT 16	STDT 16	STDT 16	
Speed control, five-step	Transformer	RTRD 14	RTRD 4	RTRD 4	RTRD 14	RTRD 7	RTRD 4	RTRD 14	RTRD 7	
Speed control, five step high/low	Transformer	–	RTRDU 4	RTRDU 4	–	RTRDU 7	RTRDU 4	–	RTRDU 7	
Wiring diagram p. 391-400		8	8	8	8	8	8	8	8	

PERFORMANCE



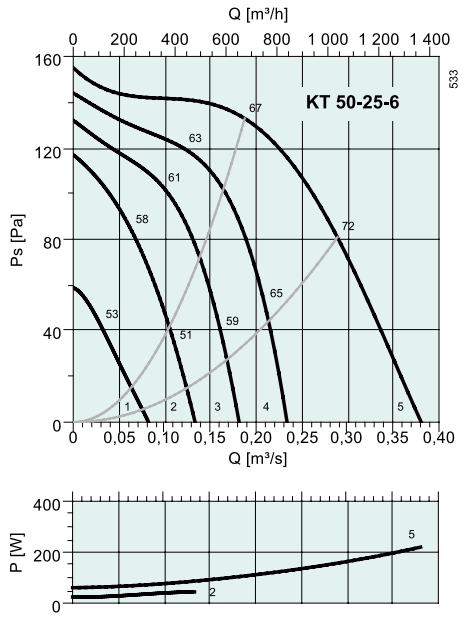
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	70	56	67	63	59	56	55	53	46
L_{wA} Outlet	72	53	63	67	63	65	62	59	53
L_{wA} Surrounding	59	34	46	57	51	49	44	40	34
L_{wA} Surr. KT(I)	56	28	42	54	48	43	43	39	31
With LDR 40-20									
L_{wA} Inlet	64	56	62	54	44	33	39	41	36
L_{wA} Outlet	62	53	58	58	48	42	46	47	43

Measurement point: 0,144 m³/s; 236 Pa



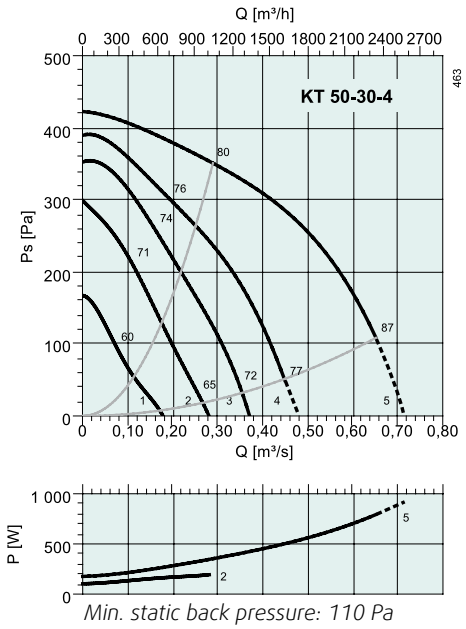
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	72	60	67	64	59	64	64	62	58
L_{wA} Outlet	76	56	63	64	67	71	69	67	65
L_{wA} Surrounding	62	39	50	53	54	56	52	50	55
L_{wA} Surr. KT(I)	57	32	46	49	47	50	51	48	42
With LDR 50-25									
L_{wA} Inlet	58	53	53	52	38	40	42	44	41
L_{wA} Outlet	61	56	53	49	42	46	49	52	53

Measurement point: 0,283 m³/s; 282 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	63	52	59	55	52	53	53	50	44
L_{wA} Outlet	66	50	55	55	60	59	57	54	48
L_{wA} Surrounding	51	33	41	46	45	43	37	33	30
With LDR 50-25									
L_{wA} Inlet	54	52	49	40	27	28	33	35	32
L_{wA} Outlet	52	50	45	40	35	34	37	39	36

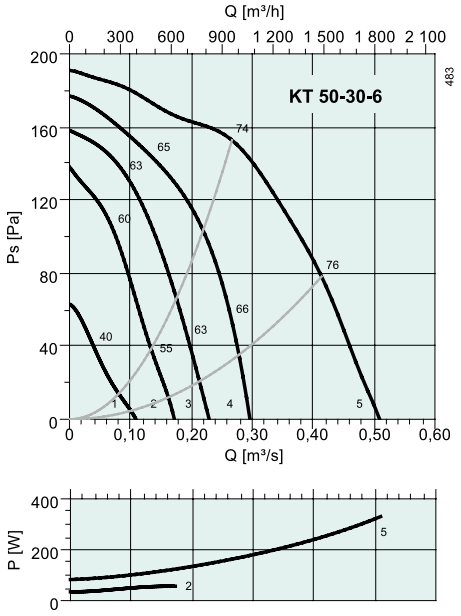
Measurement point: 0,188 m³/s; 133 Pa



Min. static back pressure: 110 Pa

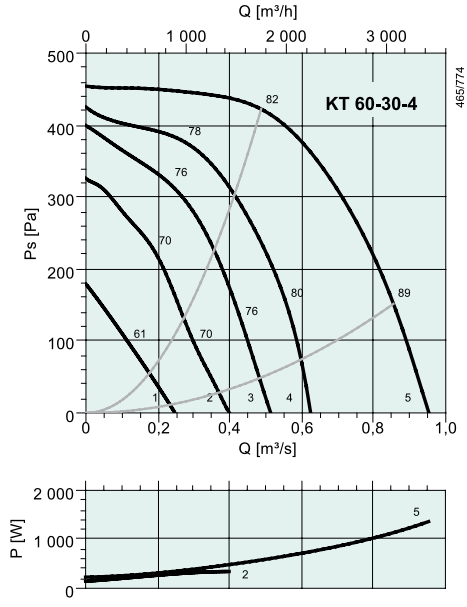
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	75	66	70	64	63	67	67	66	62
L_{wA} Outlet	79	62	68	67	70	74	72	71	66
L_{wA} Surrounding	64	45	55	59	55	58	54	49	48
L_{wA} Surr. KT(I)	60	36	53	53	50	52	51	50	44
With LDR 50-30									
L_{wA} Inlet	68	66	62	49	43	36	50	52	51
L_{wA} Outlet	66	62	60	52	50	43	55	57	55

Measurement point: 0,29 m³/s; 351 Pa



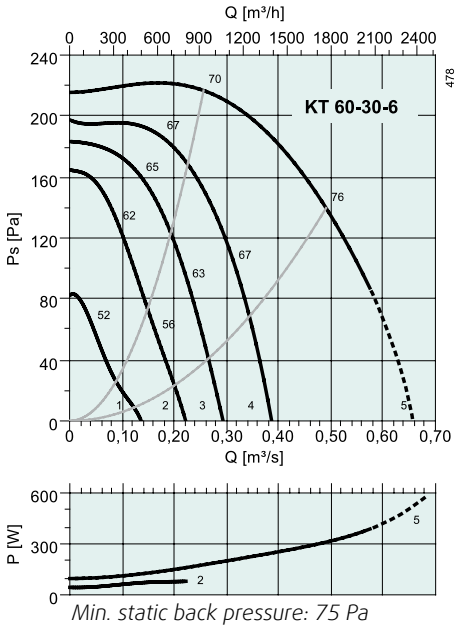
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	66	54	60	55	56	58	58	56	48
L_{wA} Outlet	73	53	60	59	68	67	64	63	55
L_{wA} Surrounding	58	30	48	52	53	50	46	44	37
L_{wA} Surr. KT(I)	55	25	46	47	51	46	45	43	36
With LDR 50-30									
L_{wA} Inlet	57	54	52	40	36	27	41	42	37
L_{wA} Outlet	58	53	52	44	48	36	47	49	44

Measurement point: 0,267 m³/s; 153 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	78	71	71	67	66	71	71	67	63
L_{wA} Outlet	81	59	70	68	73	76	73	73	68
L_{wA} Surrounding	65	39	59	60	59	57	54	52	48
L_{wA} Surr. KT(I)	61	33	55	52	55	54	53	50	43
With LDR 60-30									
L_{wA} Inlet	72	71	63	52	46	40	54	53	52
L_{wA} Outlet	67	59	62	53	53	45	56	59	57

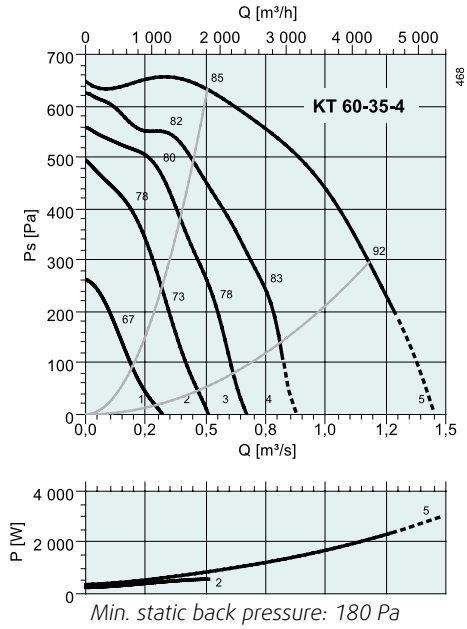
Measurement point: 0,487 m³/s; 422 Pa



Min. static back pressure: 75 Pa

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	66	59	60	55	55	58	56	54	47
L_{wA} Outlet	69	53	62	58	62	62	60	59	51
L_{wA} Surrounding	55	35	49	50	48	45	42	40	35
L_{wA} Surr. KT(I)	50	25	44	44	45	42	39	35	29
With LDR 60-30									
L_{wA} Inlet	60	59	52	40	35	27	39	40	36
L_{wA} Outlet	57	53	54	43	42	31	43	45	40

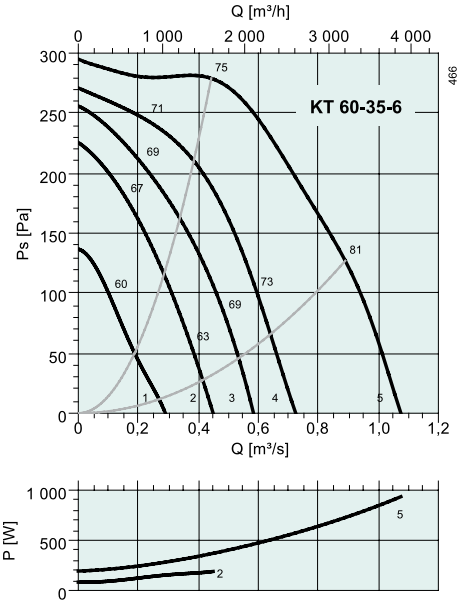
Measurement point: 0,256 m³/s; 217 Pa



Min. static back pressure: 180 Pa

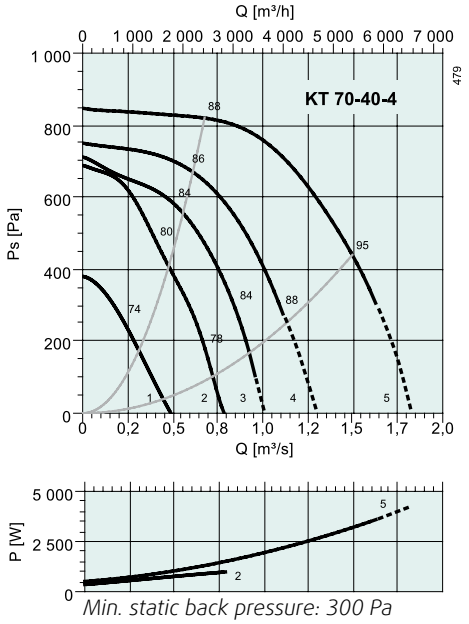
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	80	72	75	67	68	73	72	69	65
L_{wA} Outlet	84	67	73	72	76	79	77	75	70
L_{wA} Surrounding	68	52	62	63	59	60	55	52	48
L_{wA} Surr. KT(I)	65	44	57	57	57	59	56	52	47
With LDR 60-35									
L_{wA} Inlet	74	72	68	54	51	55	59	59	57
L_{wA} Outlet	73	67	66	59	59	61	64	65	62

Measurement point: 0,508 m³/s; 632 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	70	65	65	57	60	61	60	58	54
L_{wA} Outlet	73	58	63	62	68	67	65	64	58
L_{wA} Surrounding	59	41	52	56	52	50	46	45	41
L_{wA} Surr. KT(I)	55	34	47	48	47	48	47	43	37
With LDR 60-35									
L_{wA} Inlet	66	65	58	44	43	43	47	48	46
L_{wA} Outlet	63	58	56	49	51	49	52	54	50

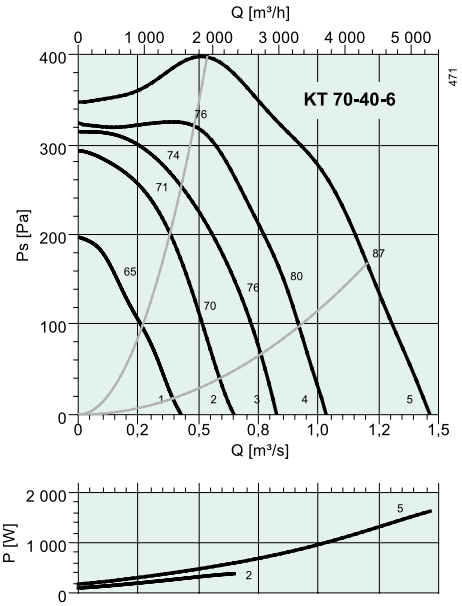
Measurement point: 0,443 m³/s; 279 Pa



Min. static back pressure: 300 Pa

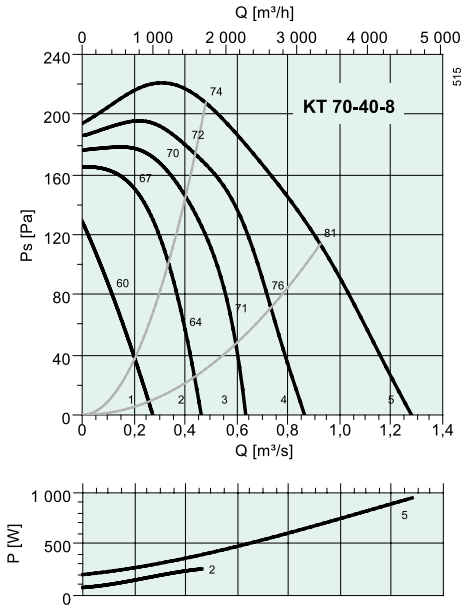
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	84	80	77	70	69	76	74	71	68
L_{wA} Outlet	86	73	75	75	79	81	79	77	72
L_{wA} Surrounding	73	55	64	67	65	68	63	63	59
L_{wA} Surr. KT(I)	67	52	60	61	58	59	58	53	48
With LDR 70-40									
L_{wA} Inlet	81	80	70	59	55	62	64	63	62
L_{wA} Outlet	78	73	68	64	65	67	69	69	66

Measurement point: 0,677 m³/s; 820 Pa



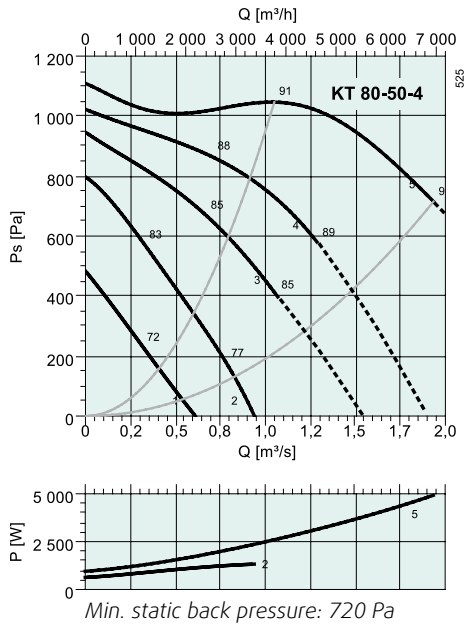
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	72	67	64	60	63	65	63	61	55
L_{wA} Outlet	76	65	66	66	71	70	68	67	60
L_{wA} Surrounding	64	46	57	57	60	54	49	46	42
L_{wA} Surr. KT(I)	58	44	50	52	54	48	48	43	39
With LDR 70-40									
L_{wA} Inlet	68	67	57	49	49	51	53	53	49
L_{wA} Outlet	68	65	59	55	57	56	58	59	54

Measurement point: 0,537 m³/s; 397 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	69	62	60	59	59	61	60	59	52
L_{wA} Outlet	73	56	59	63	68	66	65	64	56
L_{wA} Surrounding	58	35	49	52	53	51	45	42	37
L_{wA} Surr. KT(I)	57	35	48	50	54	49	47	44	41
With LDR 70-40									
L_{wA} Inlet	63	62	53	48	45	47	50	51	46
L_{wA} Outlet	63	56	52	52	54	52	55	56	50

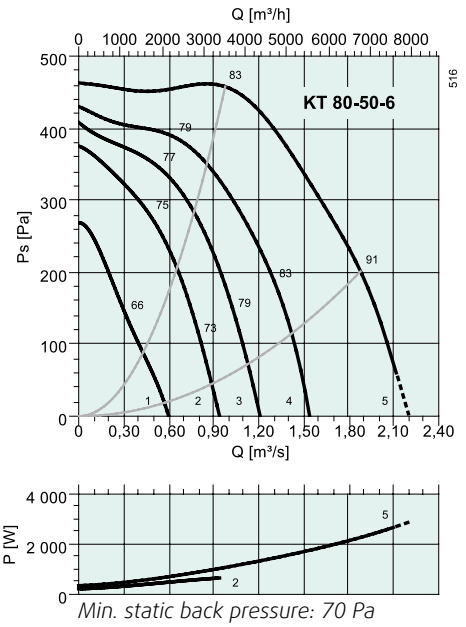
Measurement point: 0,48 m³/s; 208 Pa



Min. static back pressure: 720 Pa

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	82	71	74	74	71	76	75	71	67
L_{wA} Outlet	90	72	77	77	82	86	84	80	76
L_{wA} Surrounding	74	61	68	67	66	69	64	60	58
With LDR 80-50									
L_{wA} Inlet	76	71	68	66	61	65	67	65	64
L_{wA} Outlet	82	72	71	69	72	75	76	74	73

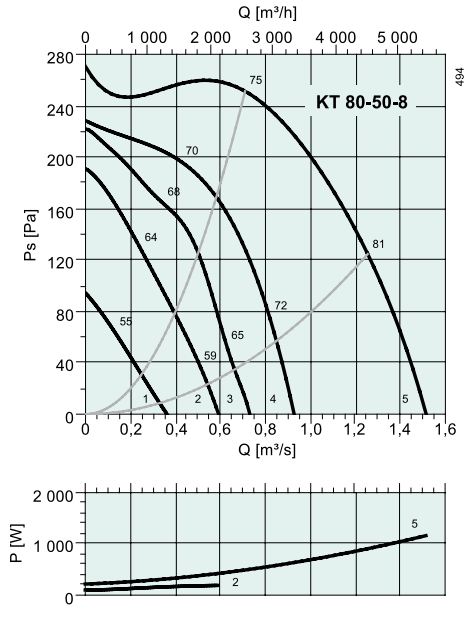
Measurement point: 1,05 m^3/s; 1046 Pa



Min. static back pressure: 70 Pa

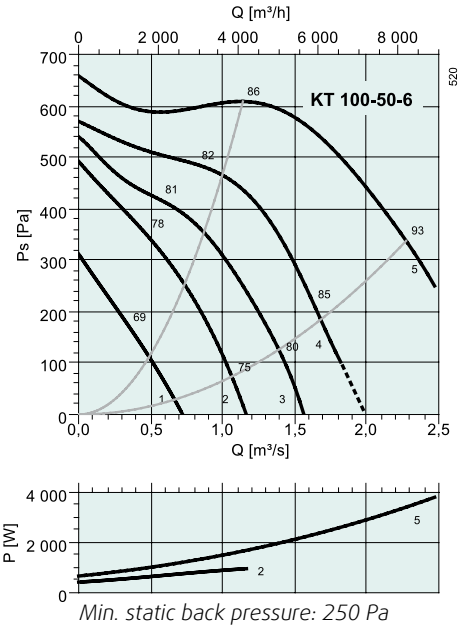
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	77	64	66	65	69	72	71	67	62
L_{wA} Outlet	82	62	66	69	77	76	75	72	66
L_{wA} Surrounding	66	51	57	58	62	60	55	51	50
With LDR 80-50									
L_{wA} Inlet	70	64	60	57	59	61	63	61	59
L_{wA} Outlet	74	62	60	61	67	65	67	66	63

Measurement point: 0,976 m^3/s; 458 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	68	59	59	59	59	62	62	58	50
L_{wA} Outlet	73	55	59	64	68	66	66	64	54
L_{wA} Surrounding	66	50	51	57	54	53	54	57	63
With LDR 100-50									
L_{wA} Inlet	63	59	53	51	49	51	54	52	47
L_{wA} Outlet	65	55	53	56	58	55	58	58	51

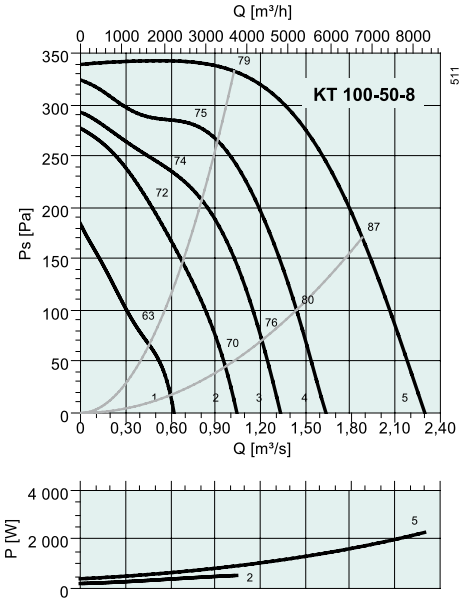
Measurement point: 0,709 m^3/s; 251 Pa



Min. static back pressure: 250 Pa

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	79	71	68	65	72	72	72	69	65
L_{wA} Outlet	84	69	71	72	78	78	77	74	69
L_{wA} Surrounding	69	59	63	61	63	61	58	53	53
L_{wA} Surr. KT(I)	68	55	61	60	61	60	61	53	47
With LDR 100-50									
L_{wA} Inlet	74	71	62	57	62	61	64	63	62
L_{wA} Outlet	71	69	65	64	68	67	69	68	66

Measurement point: 1,14 m^3/s; 608 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	73	64	61	61	66	65	66	63	56
L_{wA} Outlet	78	62	63	68	73	70	71	68	61
L_{wA} Surrounding	65	52	55	59	60	57	56	54	46
L_{wA} Surr. KT(I)	65	47	53	59	58	56	59	54	41
With LDR 100-50									
L_{wA} Inlet	67	64	55	53	56	54	58	57	53
L_{wA} Outlet	70	62	57	60	63	59	63	62	58

Measurement point: 0,17 m^3/s; 211 Pa

Reference



Project: Ice Hockey Stadium
City/Country: Bratislava, Slovakia
Products/Solutions: K, KD, KT to ventilate different premises at stadium + air distribution products (grilles, diffusers).



RS

- Speed-controllable
- Integral thermal contacts
- Can be installed in any position
- Maintenance-free and reliable

The RS models have impellers with backward-curved blades and external rotor motors. The motor and impeller are mounted on the access cover to facilitate easy maintenance. To protect the motor from overheating RS 30-15 to 50-25 have an integral thermal contact with electrical reset, RS 60-35 M to 100-50 have integral thermal contacts with external leads for connection to a motor protection device. The fans can be installed in any position and are simple to couple using DS flexible-connections. The casing is manufactured from galvanised sheet steel.

ELECTRICAL ACCESSORIES



S-ET/STDT p. 341-342



RTRE p. 320



RE p. 320



REU p. 320

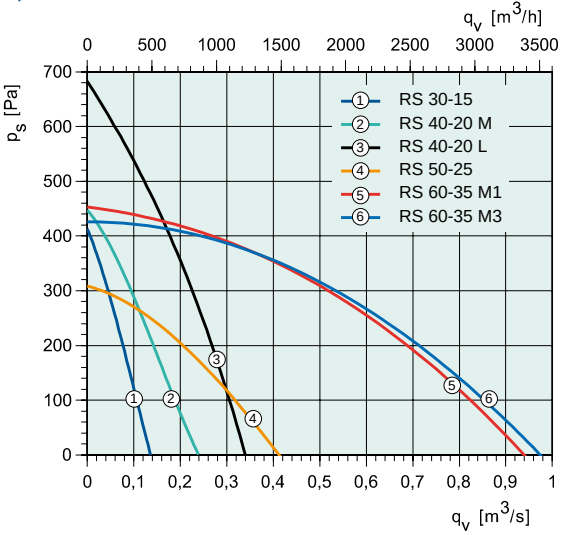


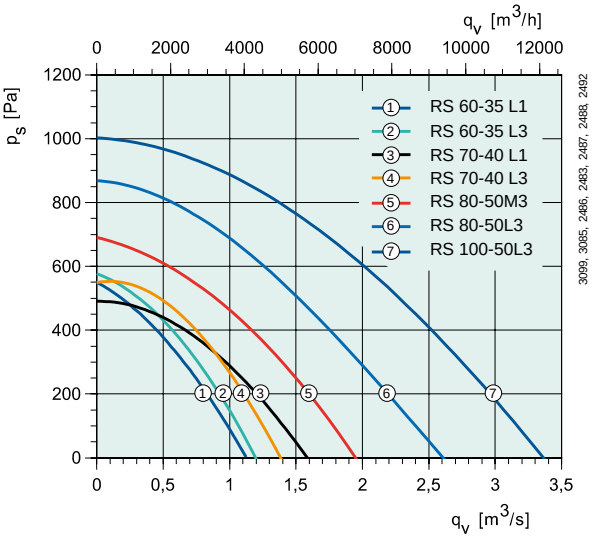
REE p. 321



RTRD/RTRDU p. 321

QUICK SELECTION



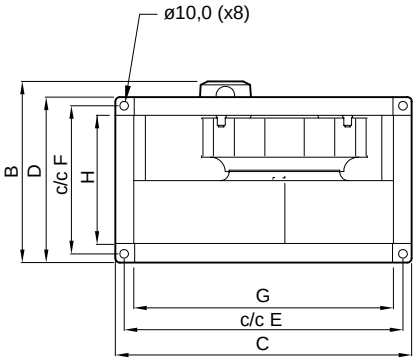


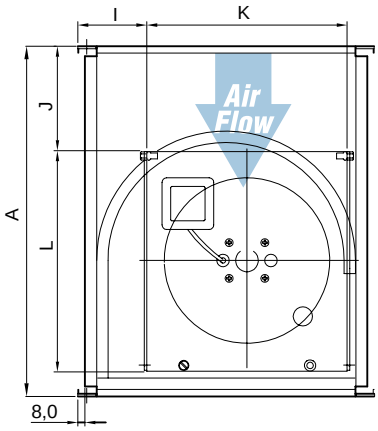
TECHNICAL DATA

RS		30-15	40-20 M	40-20 L	50-25	60-35 M1	60-35 M3	60-35 L1
Art no.		1435	1439	1443	1447	1795	1796	2046
Voltage/Frequency	V/50 Hz	230 1~	230 1~	230 1~	230 1~	230 1~	400 3~	230 1~
Power	W	59.9	106	208	138	401	399	626
Current	A	0.264	0.461	0.926	0.604	1.91	0.795	2.80
Max air flow	m³/s	0.135	0.238	0.342	0.411	0.941	0.974	1.12
R.p.m.	min⁻¹	2431	2597	2556	1362	1365	1371	1308
Max temp. of transported air	°C	70	70	65	53	70	70	70
" when speed controlled	°C	70	70	65	53	70	70	70
Sound pressure level at 3 m	dB(A)	48	52	53	46	58	58	58
Weight	kg	6.8	11.8	12.8	17	33.4	32.2	37.2
Insulation class, motor		B	B	F	B	F	F	F
Enclosure class, motor		IP 44	IP 44	IP 44	IP 44	IP 54	IP 54	IP 54
Capacitor	µF	2	3	5	5	8	–	14
Motor protection		Integral	Integral	Integral	Integral	S-ET 10	STDT 16	S-ET 10
Speed control, five-step	Transformer	RE 1.5	RE 1.5	RE 1.5	RE 1.5	RTRE 3*	RTRD 2	RTRE 3*
Speed control, five step high/low	Transformer	REU 1.5	REU 1.5	REU 1.5	REU 1.5	REU 3	RTRDU 2	REU 3
Speed control, stepless	Thyristor	REE 1	REE 1	REE 1	REE 1	REE 2*	–	REE 4*
Wiring diagram p. 391-400		2	2	2	2	6	8	6

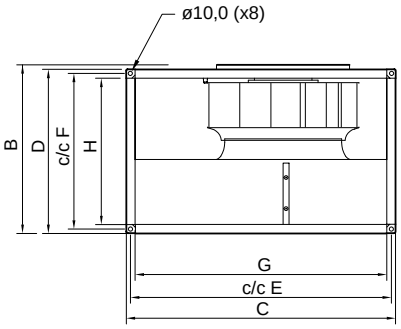
* + S-ET 10

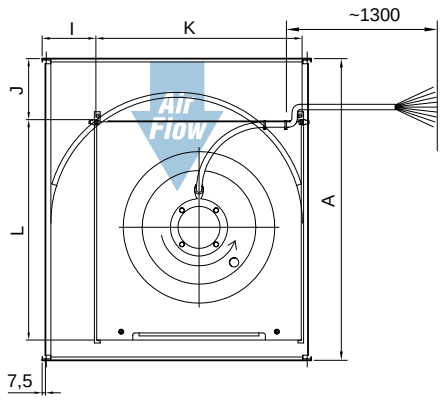
DIMENSIONS





RS	A	B	C	D	E	F	G	H	I	J	K	L
30-15	402	217	340	190	320	170	298	148	79	120	230	254
40-20 M	502	267	440	240	420	220	398	198	99	125	310	352
40-20 L	502	267	440	240	420	220	398	198	99	125	310.5	352.5
50-25	532	317	540	290	520	270	498	248	125	85.5	366	423





RS	A	B	C	D	E	F	G	H	I	J	K	L
60-35 M/L	717	402	640	390	620	370	598	348	128	145	490	524
70-40 L	787	452	740	440	720	420	698	398	189,5	215	490	524
80-50 L	882	573	840	541	820	520	798	498	182,5	190	614	644
100-50 L	982	583	1040	541	1020	520	998	498	298,5	290	614	644

VENTILATION ACCESSORIES


DS p. 363


VK p. 368


LDR p. 358

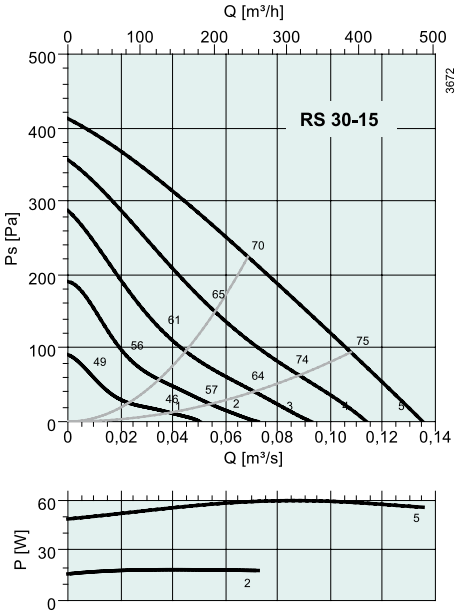

FFK p. 355


RB p. 359

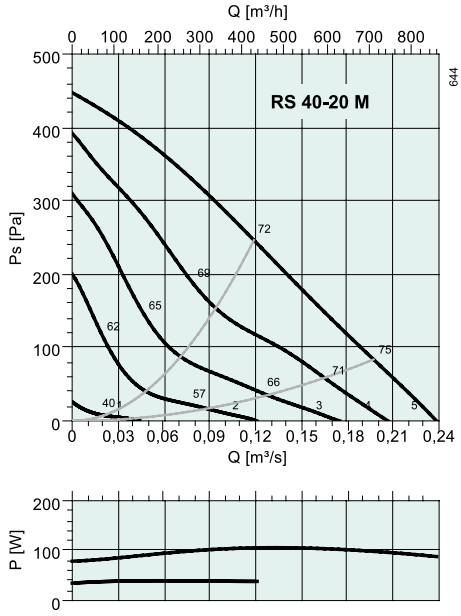

VBR p. 365

RS		60-35 L3	70-40 L1	70-40 L3	80-50 M3	80-50 L3	100-50 L3
Art no.		2047	1797	1798	1799	1800	1801
Voltage/Frequency	V/50 Hz	400 3~	230 1~	400 3~	400 3~	400 3~	400 3~
Power	W	667	623	704	1089	1893	2962
Current	A	1.59	2.84	1.70	1.97	3.60	5.09
Max air flow	m3/s	1.21	1.59	1.39	1.96	2.60	3.36
R.p.m.	min-1	1408	1308	1410	1335	1385	1361
Max temp. of transported air	°C	70	67	70	70	70	70
" when speed controlled	°C	70	67	70	55	64	51
Sound pressure level at 3 m	dB(A)	61	60	61	60	63	65
Weight	kg	37	41.8	41.4	59.5	71.5	96.5
Insulation class, motor		F	F	F	F	F	F
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
Motor protection		STDT 16	S-ET 10	STDT 16	STDT 16	STDT 16	STDT 16
Speed control, five-step	Transformer	RTRD 2	RTRE 5	RTRD 2	RTRD 4	RTRD 7	RTDR 7
Speed control, five step high/low	Transformer	RTRDU 2	REU 5*	RTRDU 2	RTRDU 4	RTRDU 7	RTRDU 7
Speed control, stepless	Thyristor	–	REE 4*	–	–	–	–
Wiring diagram p. 391-400		8	6	8	8	8	8

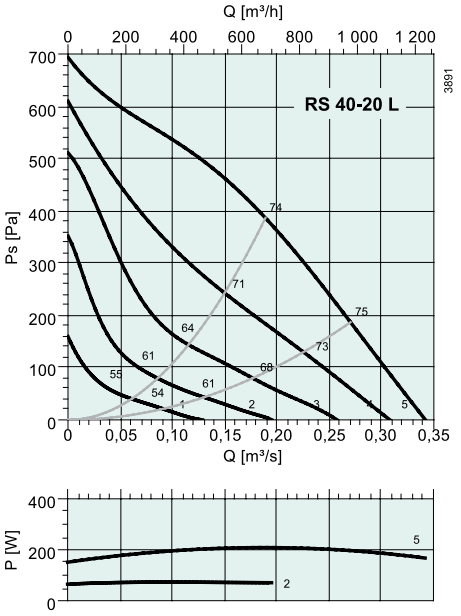
PERFORMANCE



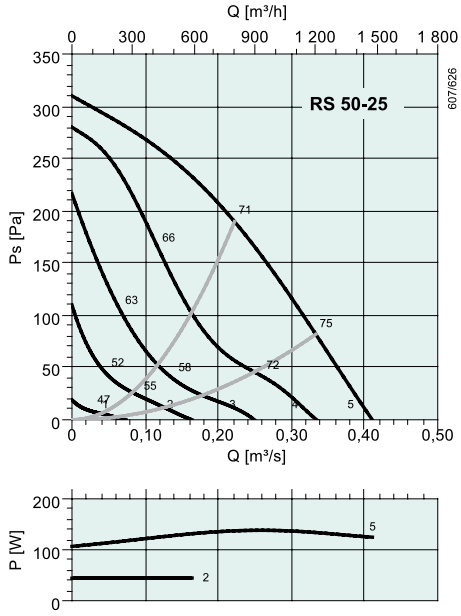
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	69	47	59	67	59	58	56	50	41
L_{wA} Outlet	72	51	56	69	66	64	61	54	46
L_{wA} Surrounding	55	29	36	53	48	47	44	38	30
With LDR 30-15									
L_{wA} Inlet	56	47	52	52	41	33	31	31	22
L_{wA} Outlet	57	51	49	54	48	39	36	35	27
Measurement point: 0,0686 m³/s; 224 Pa									



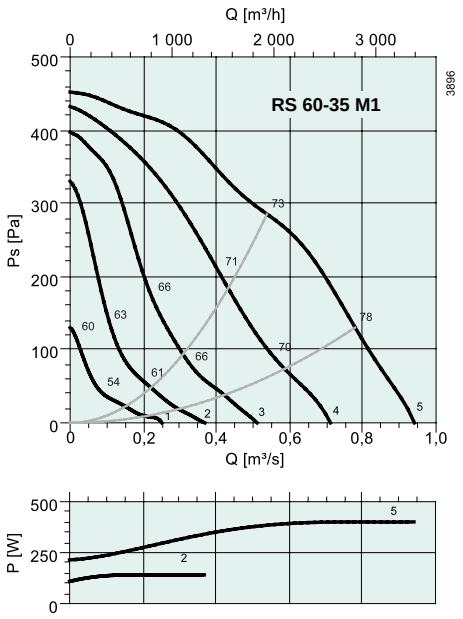
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	71	52	64	66	63	64	59	54	46
L_{wA} Outlet	74	51	62	67	70	67	65	60	48
L_{wA} Surrounding	59	37	49	56	54	49	46	41	34
With LDR 40-20									
L_{wA} Inlet	62	52	59	57	48	41	43	42	36
L_{wA} Outlet	62	51	57	58	55	44	49	48	38
Measurement point: 0,119 m³/s; 246 Pa									



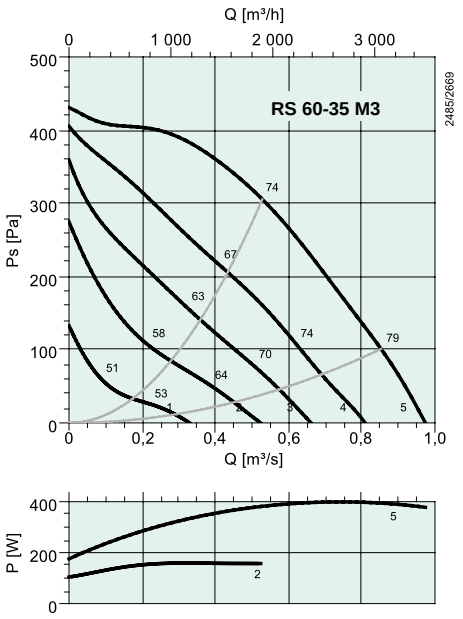
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	73	53	58	65	66	68	64	61	57
L_{wA} Outlet	77	51	57	66	72	71	71	64	59
L_{wA} Surrounding	60	34	42	51	57	53	52	47	45
With LDR 40-20									
L_{wA} Inlet	61	53	53	56	51	45	48	49	47
L_{wA} Outlet	63	51	52	57	57	48	55	52	49
Measurement point: 0,189 m³/s; 386 Pa									



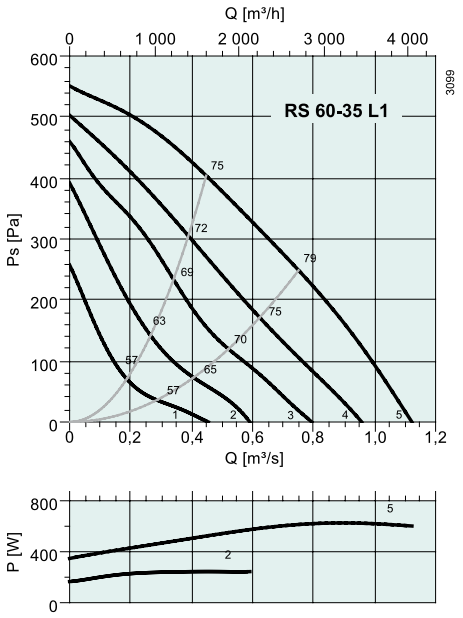
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	68	59	66	60	55	56	50	47	45
L_{wA} Outlet	69	54	65	63	62	60	57	49	42
L_{wA} Surrounding	53	40	48	49	44	41	37	35	37
With LDR 50-25									
L_{wA} Inlet	61	59	56	45	30	31	30	32	33
L_{wA} Outlet	58	54	55	48	37	35	37	34	30
Measurement point: 0,222 m³/s; 190 Pa									



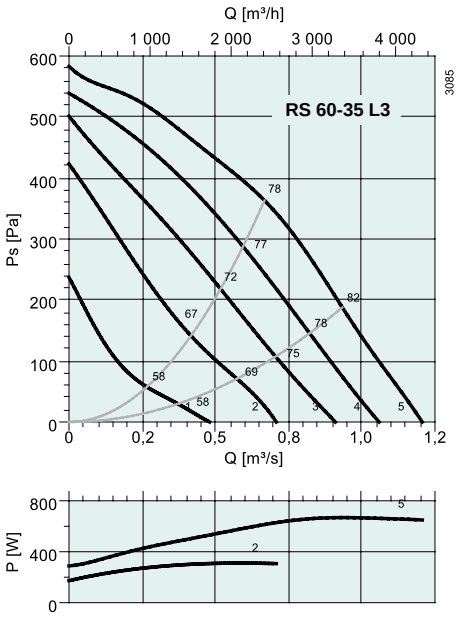
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	73	57	61	70	67	64	63	56	47
L_{wA} Outlet	81	60	68	78	74	73	70	61	50
L_{wA} Surrounding	65	41	54	62	56	56	53	46	37
With LDR 60-35									
L_{wA} Inlet	62	57	54	57	50	46	50	46	39
L_{wA} Outlet	68	60	61	65	57	55	57	51	42
Measurement point: 0,538 m³/s; 285 Pa									



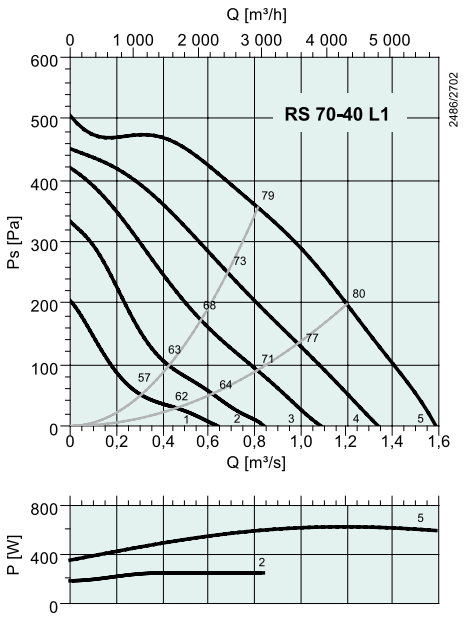
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	74	59	62	69	68	65	64	59	52
L_{wA} Outlet	79	57	65	74	72	71	70	62	53
L_{wA} Surrounding	65	44	54	63	55	55	53	48	38
With LDR 60-35									
L_{wA} Inlet	63	59	55	56	51	47	51	49	44
L_{wA} Outlet	66	57	58	61	55	53	57	52	45
Measurement point: 0,528 m³/s; 306 Pa									



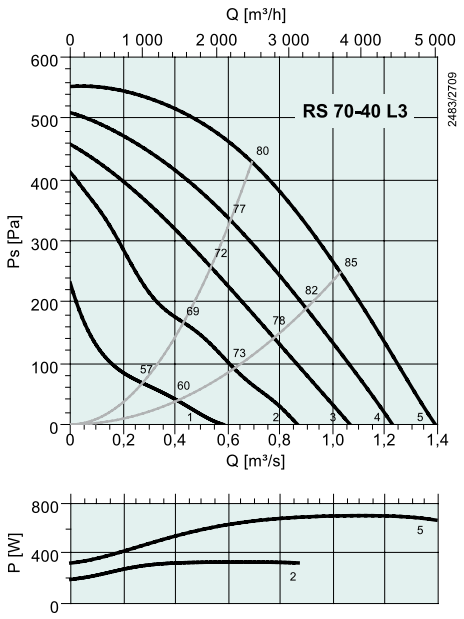
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	75	63	67	69	68	66	65	59	52
L_{wA} Outlet	80	61	68	73	74	74	70	65	56
L_{wA} Surrounding	65	47	56	62	58	57	54	49	39
With LDR 60-35									
L_{wA} Inlet	66	63	60	56	51	48	52	49	44
L_{wA} Outlet	67	61	61	60	57	56	57	55	48
Measurement point: 0,448 m³/s; 404 Pa									



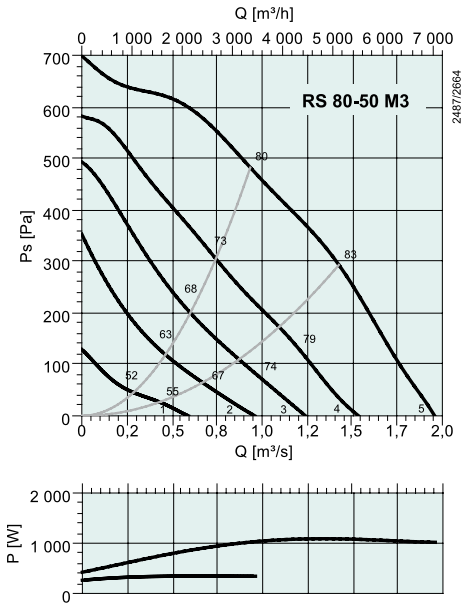
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	78	64	68	72	72	70	69	63	56
L_{wA} Outlet	82	60	70	77	77	76	73	67	59
L_{wA} Surrounding	68	50	57	64	60	61	57	52	43
With LDR 60-35									
L_{wA} Inlet	68	64	61	59	55	52	56	53	48
L_{wA} Outlet	69	60	63	64	60	58	60	57	51
Measurement point: 0,668 m³/s; 363 Pa									



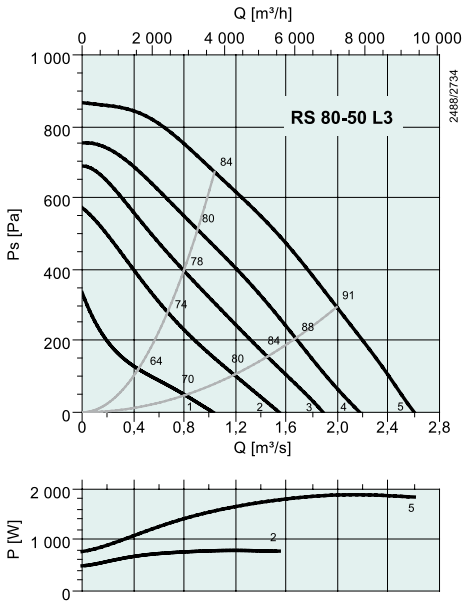
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	77	62	65	72	72	68	68	62	53
L_{wA} Outlet	80	62	66	75	74	74	72	65	57
L_{wA} Surrounding	67	46	56	64	60	57	54	47	40
With LDR 70-40									
L_{wA} Inlet	67	62	58	61	58	54	58	54	47
L_{wA} Outlet	70	62	59	64	60	60	62	57	51
Measurement point: 0,815 m³/s; 355 Pa									



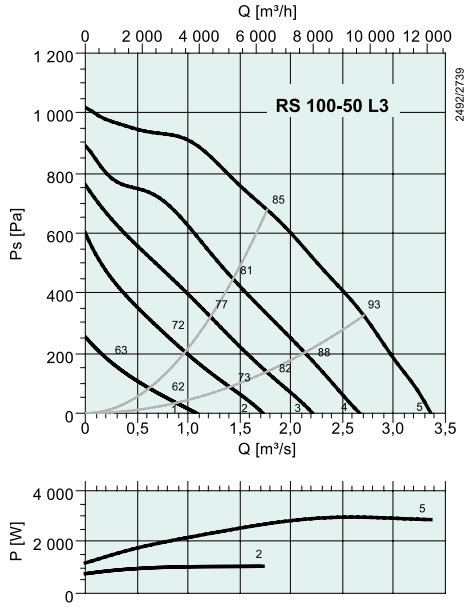
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	78	60	67	73	72	69	70	65	57
L_{wA} Outlet	81	63	66	76	75	74	72	65	57
L_{wA} Surrounding	68	44	59	64	59	59	58	52	45
With LDR 70-40									
L_{wA} Inlet	68	60	60	62	58	55	60	57	51
L_{wA} Outlet	70	63	59	65	61	60	62	57	51
Measurement point: 0,693 m³/s; 429 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	78	60	68	69	73	71	69	64	57
L_{wA} Outlet	83	60	69	80	77	76	72	65	57
L_{wA} Surrounding	67	47	56	61	62	59	58	51	45
With LDR 80-50									
L_{wA} Inlet	70	60	62	61	63	60	61	58	54
L_{wA} Outlet	75	60	63	72	67	65	64	59	54
Measurement point: 0,935 m³/s; 482 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	82	64	73	73	77	74	72	67	60
L_{wA} Outlet	88	70	74	81	82	83	79	72	64
L_{wA} Surrounding	70	51	62	64	66	62	60	53	47
With LDR 80-50									
L_{wA} Inlet	73	64	67	65	67	63	64	61	57
L_{wA} Outlet	79	70	68	73	72	72	71	66	61
Measurement point: 1,04 m³/s; 672 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	83	69	73	74	77	77	76	72	66
L_{wA} Outlet	91	73	78	84	85	87	82	75	66
L_{wA} Surrounding	72	61	66	64	66	65	64	59	52
With LDR 100-50									
L_{wA} Inlet	76	69	67	66	67	66	68	66	63
L_{wA} Outlet	83	73	72	76	75	76	74	69	63
Measurement point: 1,77 m^3/s; 678 Pa									



RSI

- Speed-controllable
- Integral thermal contacts
- Can be installed in any position
- Maintenance-free and reliable

The RSI models have impellers with backward-curved blades and external rotor motors. The motor and impeller are mounted on the access cover to facilitate easy maintenance. The RSI models are thermally and acoustically insulated with 50 mm mineral wool, with perforated sheet steel on the inner surface. To protect the motor from overheating the RSI fans have integral thermal contacts with external leads for connection to a motor protection device. The fans can be installed in any position and are simple to couple using DS flexible connections. The casing is manufactured from galvanised sheet steel.

ELECTRICAL ACCESSORIES



S-ET/STDT p. 341-342



RTRE p. 320



REU p. 320

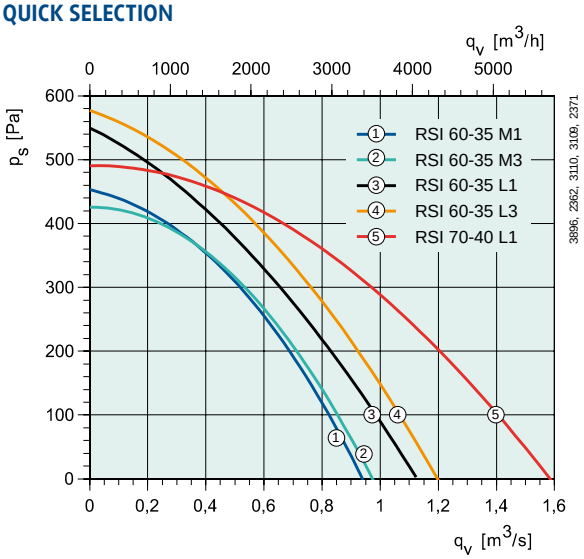


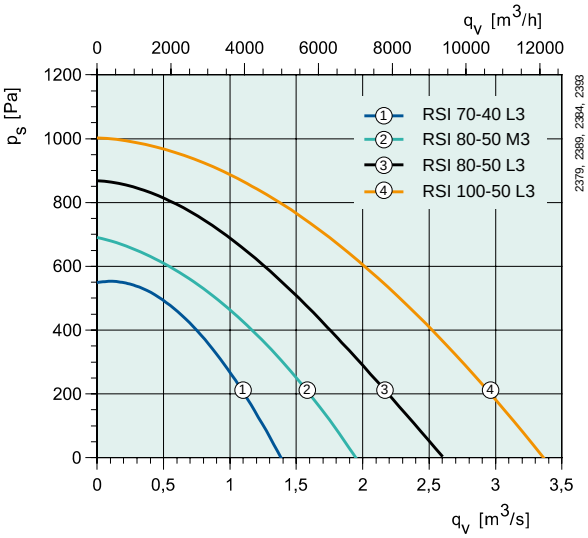
REE p. 321



RTRD/RTRDU p. 321

QUICK SELECTION



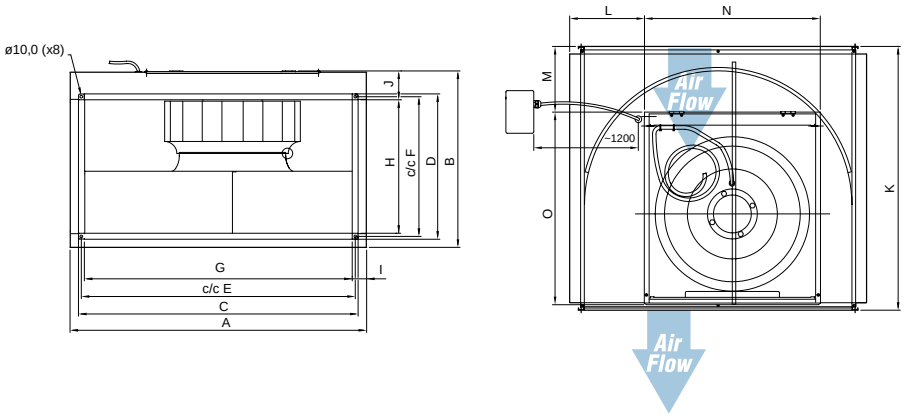


TECHNICAL DATA

RSI		60-35 M1	60-35 M3	60-35 L1	60-35 L3	70-40 L1	70-40 L3
Art no.		1788	1789	2042	2043	1790	1791
Voltage/Frequency	V/50 Hz	230 1~	400 3~	230 1~	400 3~	230 1~	400 3~
Power	W	401	399	626	667	623	704
Current	A	1.91	0.795	2.80	1.59	2.84	1.70
Max air flow	m^3/s	0.941	0.974	1.12	1.21	1.59	1.39
R.p.m.	min^{-1}	1365	1371	1308	1408	1308	1410
Max temp. of transported air	°C	70	70	70	70	67	70
" when speed controlled	°C	70	70	70	70	67	70
Sound pressure level at 3 m	dB(A)	50	48	52	57	51	51
Weight	kg	61	60.5	65	65	82.5	81.2
Insulation class, motor		F	F	F	F	F	F
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
Capacitor		8	–	14	–	14	–
Motor protection		S-ET 10	STDT 16	S-ET 10	STDT 16	S-ET 10	STDT 16
Speed control, five-step	Transformer	RTRE 3	RTRD 2	RTRE 3	RTRD 2	RTRE 2	RTRD 2
Speed control, five step high/low	Transformer	REU 3*	RTRDU 2	REU 3*	RTRDU 2	REU 3*	RTRDU 2
Speed control, stepless	Thyristor	REE 2*	–	REE 4*	–	REE 4*	–
Wiring diagram p. 391-400		6	8	6	8	6	8

* + S-ET 10

DIMENSIONS



RSI	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
60-35	708	492	640.5	391	620	370	598	347.5	55	92.5	717	139.5	99.5	532	597
70-40	808	542	741	441	720	420	697	397	55.5	92.5	787	201	169.5	532	597
80-50	908	662	841	541	820	520	797	497	55.5	112.5	882	194	144.5	656	717
100-50	1108	662	1041	541	1020	520	997	497	55.5	112.5	982	310	244.5	656	717

VENTILATION ACCESSORIES


DS p. 363


VK p. 368


LDR p. 358

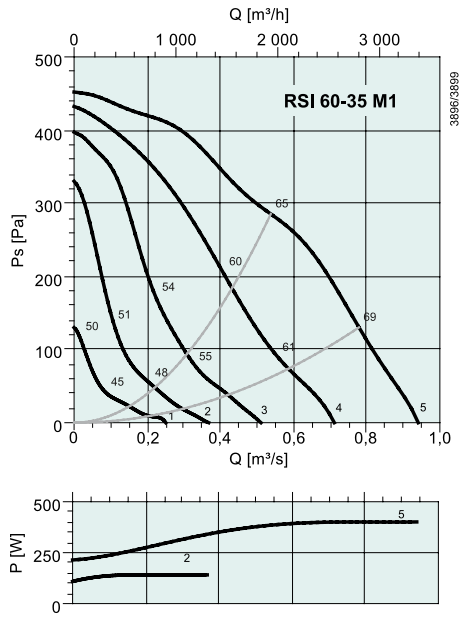

FFK p. 355


RB p. 359

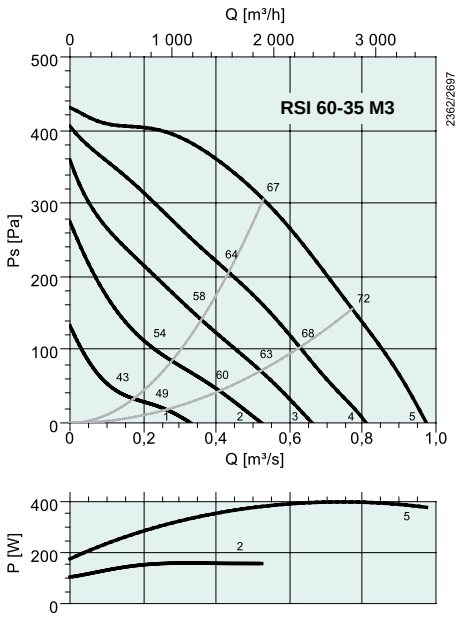

VBR p. 365

RSI		80-50 M3	80-50 L3	100-50 L3			
Art no.		1792	1793	1794			
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~			
Power	W	1089	1893	2962			
Current	A	1.97	3.60	5.09			
Max air flow	m3/s	1.96	2.60	3.36			
R.p.m.	min-1	1335	1385	1361			
Max temp. of transported air	°C	70	70	70			
" when speed controlled	°C	55	64	51			
Sound pressure level at 3 m	dB(A)	53	56	62			
Weight	kg	109	122	159			
Insulation class, motor		F	F	F			
Enclosure class, motor		IP 54	IP 54	IP 54			
Motor protection		STDT 16	STDT 16	STDT 16			
Speed control, five-step	Transformer	RTRD 4	RTRD 7	RTRD 7			
Speed control, five step high/low	Transformer	RTRDU 4	RTRDU 7	RTRDU 7			
Speed control, stepless	Thyristor	–	–	–			
Wiring diagram p. 391-400		8	8	8			

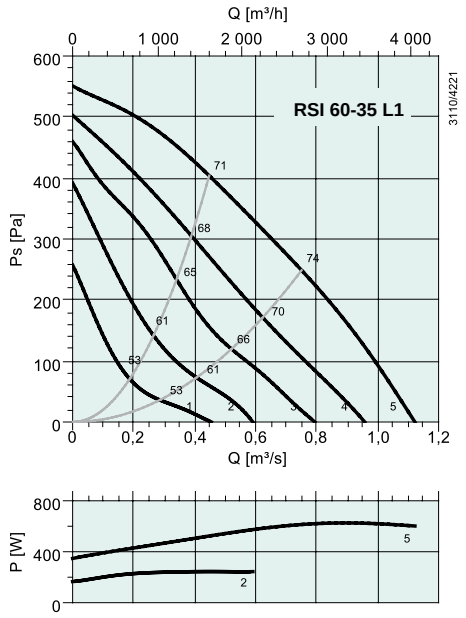
PERFORMANCE



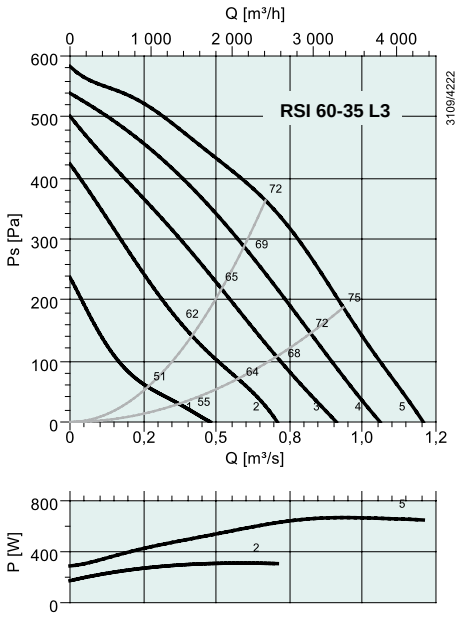
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	65	43	53	61	59	55	55	49	42
L_{wA} Outlet	79	48	61	74	73	72	70	60	50
L_{wA} Surrounding	57	29	47	54	47	47	44	38	29
With LDR 60-35									
L_{wA} Inlet	52	43	46	48	42	37	42	39	34
L_{wA} Outlet	65	48	54	61	56	54	57	50	42
Measurement point: 0,538 m³/s; 285 Pa									



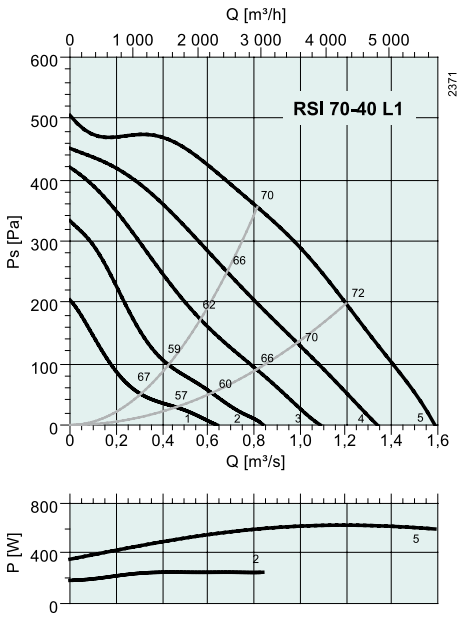
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	67	55	62	62	60	55	55	51	47
L_{wA} Outlet	79	57	65	74	72	71	70	62	53
L_{wA} Surrounding	55	29	47	50	48	47	45	37	35
With LDR 60-35									
L_{wA} Inlet	59	55	55	49	43	37	42	41	39
L_{wA} Outlet	66	57	58	61	55	53	57	52	45
Measurement point: 0,528 m³/s; 306 Pa									



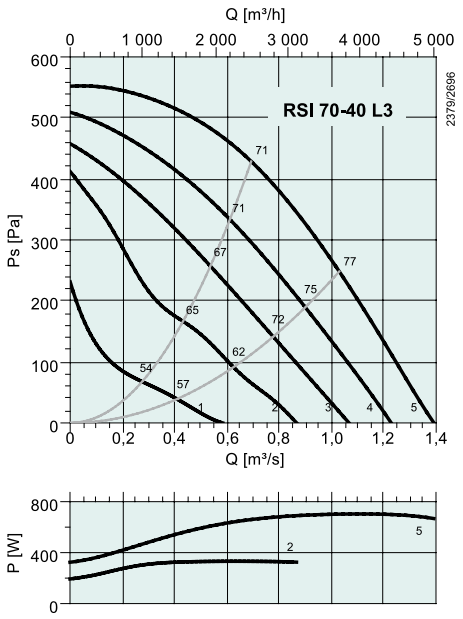
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	71	60	66	65	63	58	57	54	47
L_{wA} Outlet	82	66	69	74	74	77	74	62	53
L_{wA} Surrounding	59	40	54	54	52	49	47	43	39
With LDR 60-35									
L_{wA} Inlet	63	60	59	52	46	40	44	44	39
L_{wA} Outlet	70	66	62	61	57	59	61	52	45
Measurement point: 0,448 m³/s; 404 Pa									



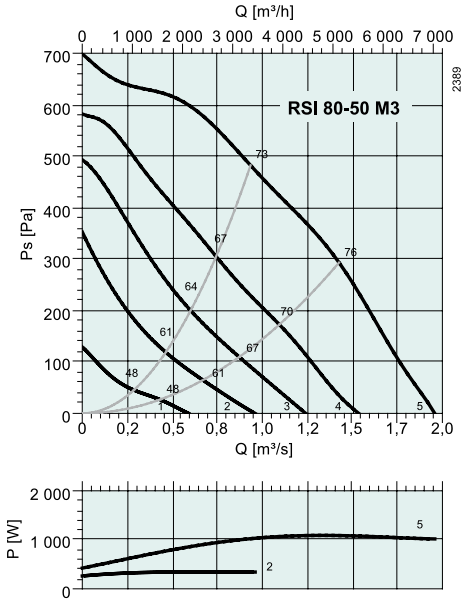
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	72	55	67	67	66	58	59	59	52
L_{wA} Outlet	83	60	70	77	77	76	73	67	59
L_{wA} Surrounding	64	26	56	59	57	52	54	55	48
With LDR 60-35									
L_{wA} Inlet	63	55	60	54	49	40	46	49	44
L_{wA} Outlet	69	60	63	64	60	58	60	57	51
Measurement point: 0,668 m³/s; 363 Pa									



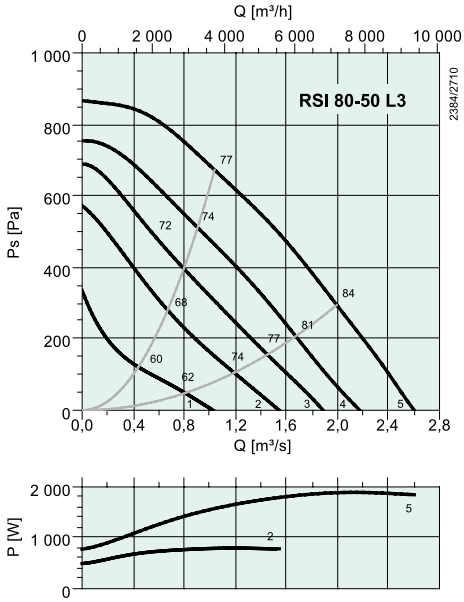
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	67	57	61	62	60	57	56	51	46
L_{wA} Outlet	80	62	66	75	74	74	72	65	57
L_{wA} Surrounding	58	41	46	52	51	50	48	46	44
With LDR 70-40									
L_{wA} Inlet	60	57	54	51	46	43	46	43	40
L_{wA} Outlet	70	62	59	64	60	60	62	57	51
Measurement point: 0,815 m³/s; 355 Pa									



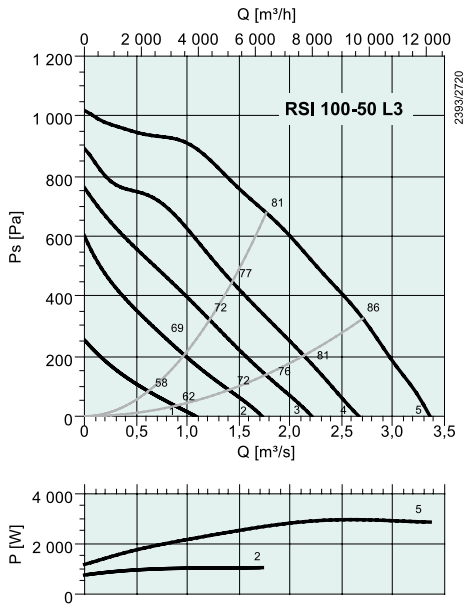
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	68	57	62	62	62	57	58	55	49
L_{wA} Outlet	81	63	66	76	75	74	72	65	57
L_{wA} Surrounding	57	39	46	51	52	50	48	44	39
With LDR 70-40									
L_{wA} Inlet	61	57	55	51	48	43	48	47	43
L_{wA} Outlet	70	63	59	65	61	60	62	57	51
Measurement point: 0,693 m³/s; 429 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	71	58	64	62	64	61	61	60	56
L_{wA} Outlet	83	59	68	80	77	76	72	65	57
L_{wA} Surrounding	60	40	51	53	53	52	49	49	50
With LDR 80-50									
L_{wA} Inlet	64	58	58	54	54	50	53	54	53
L_{wA} Outlet	75	59	62	72	67	65	64	59	54
Measurement point: 0,935 m³/s; 482 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	74	63	69	66	67	65	65	61	58
L_{wA} Outlet	88	70	74	81	82	83	79	72	64
L_{wA} Surrounding	63	43	56	55	59	54	52	46	46
With LDR 80-50									
L_{wA} Inlet	68	63	63	58	57	54	57	55	55
L_{wA} Outlet	79	70	68	73	72	72	71	66	61
Measurement point: 1,04 m³/s; 672 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	79	68	73	71	72	70	68	62	59
L_{wA} Outlet	91	73	78	84	85	87	82	75	66
L_{wA} Surrounding	69	53	62	61	61	63	61	56	54
With LDR 100-50									
L_{wA} Inlet	72	68	67	63	62	59	60	56	56
L_{wA} Outlet	83	73	72	76	75	76	74	69	63
Measurement point: 1,77 m^3/s; 678 Pa									

Reference



Project Bolshoi Ice Palace
City/Country: Sochi, Russia
The building has been constructed for the Olympic Games in 2014. It is located in Olympic Park near the sea. It will be a major hockey stadium during the Games in 2014. Arena is designed for 12,000 visitors. The architecture of Arena resembles the famous Fabergé egg, based on the concept of the image of frozen droplets.

The arena is equipped with 75 AXC fans for smoke pressurization. TA units and duct fans are used for supply and extract air.

Completion date of construction is 2012. Total building area is around 55,000 m².



KVD

- Double inlet direct driven range
- Easy to install
- Robust and quiet operation

Direct driven box fan for in-line operation and suitable for outdoor installation. The unit is fitted with a forward curve double inlet fan and IP54 F class motor.The casing is manufactured from 1mm galvanized steel.The fan is mounted on 4 anti-vibration rubber mounts and the outlet connected to the casing via an 18mm flexible connection. An IP 55 connection box is fitted on the casing for easy access.

Belt driven box fan for in-line operation and suitable for outdoor installation. The units are fitted with either forward curved or backward curved belt driven centrifugal fans and IP 55 Class F IE2 motors.

Selection programme available as a download



ELECTRICAL ACCESSORIES



REV p. 340

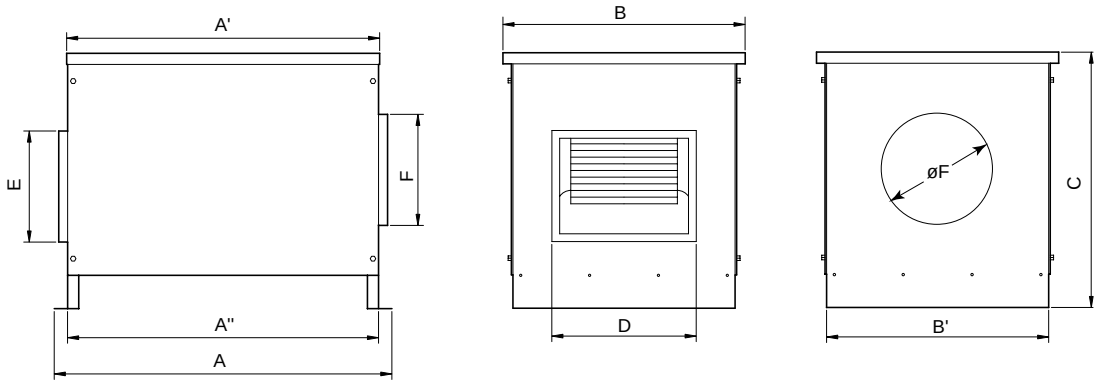


DTV p. 343

TECHNICAL DATA

KVD		7-7-E4	7-7-E6	9-7-E4	9-7-E6	9-9-E4	9-9-E6	10-8-E6
Art no.		645348	645327	645329	645328	645349	645330	645332
Voltage/Frequency	V/50 Hz	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~
Power	W	146	73	370	237	550	237	237
Current	A	2.20	1.10	4.00	2.5	5.90	2.40	3.00
Max air flow	m3/s	0.47	0.47	0.76	0.70	0.88	0.72	0.71
R.p.m.	min-1	1410	960	1410	950	1450	950	950
Max temp. of transported air	°C	50	50	50	50	50	50	50
Sound pressure level at 1 m	dB(A)	58	54	61	59	64	61	63
Weight	kg	20	20	30	30	32	31	35
Insulation class, motor		F	F	F	F	F	F	F
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
Wiring diagram p. 391-400		1	1	1	1	1	1	1

DIMENSIONS



KVD	A	A´	A´´	B	B´	C	D	E	øF
7-7	498	458	454	457	415	442	273	253	200
9-7	548	508	504	507	465	532	336	304	250
9-9	548	508	504	507	465	532	336	304	250
10-8	648	608	604	607	565	592	371	330	300
10-10	648	608	604	607	565	592	371	330	300
12-9	698	658	654	657	615	642	434	382	350
12-12	698	658	654	657	615	642	434	382	350

VENTILATION ACCESSORIES


LDC p. 348

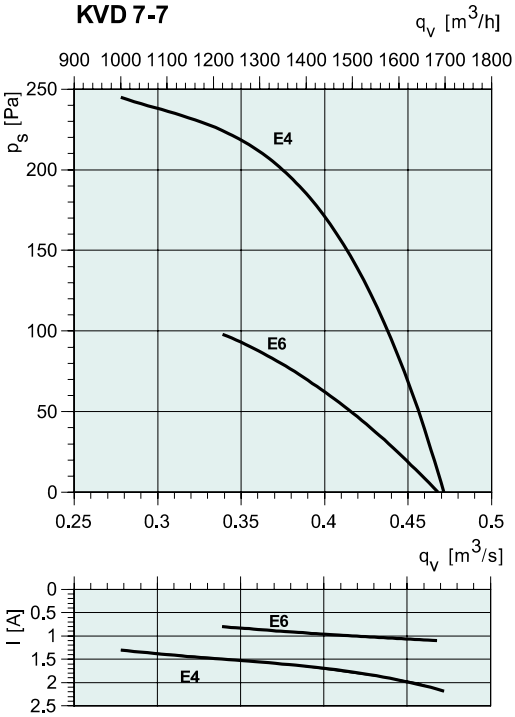

FK p. 355


RSK p. 355

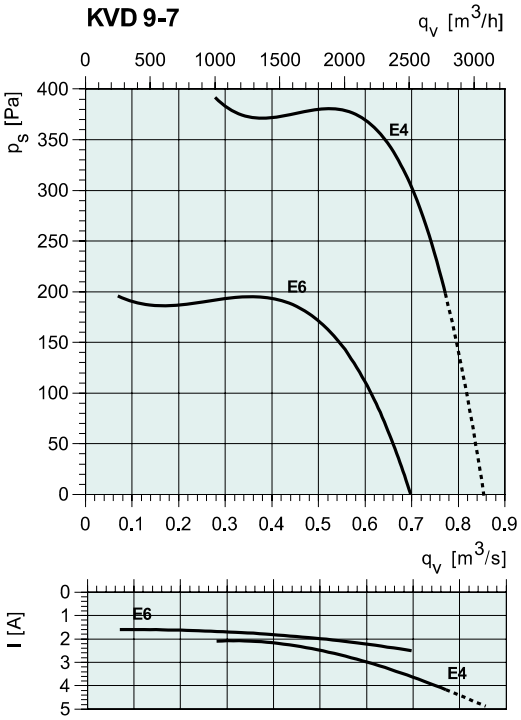

ORH p. 357

KVD		10-10-E4	10-10-E6	12-9-E6	12-12-E6 550W	12-12-E6 736W	12-12-E6
Art no.		645351	645333	645334	645335	645352	645347
Voltage/Frequency	V/50 Hz	230 1~	230 1~	230 1~	230 1~	230 1~	400 3~
Power	W	550	237	765	525	736	1100
Current	A	6.00	3.10	8.50	6.40	9.80	5.10
Max air flow	m3/s	0.90	0.75	1.34	1.22	1.60	1.99
R.p.m.	min-1	1375	950	950	950	910	910
Max temp. of transported air	°C	50	50	50	50	50	50
Sound pressure level at 3 m	dB(A)	66	63	62	64	67	71
Weight	kg	37	36	50	50	52	53.5
Insulation class, motor		F	F	F	F	F	F
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
Wiring diagram p. 391-400		1	1	1	1	1	1

KVD 7-7

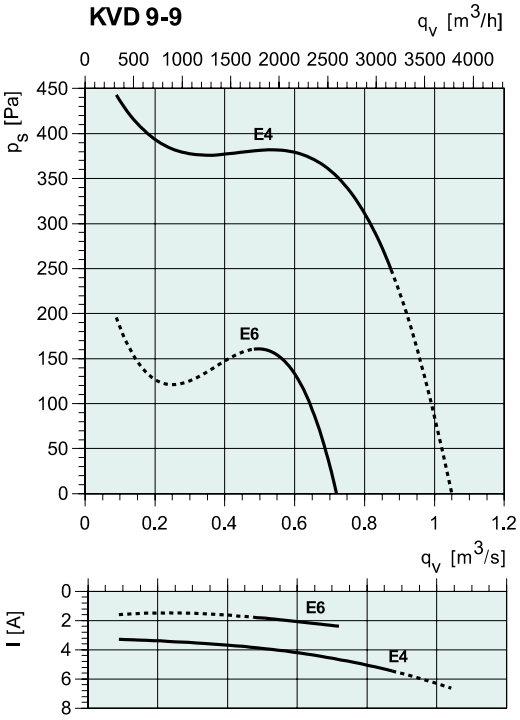


KVD 9-7



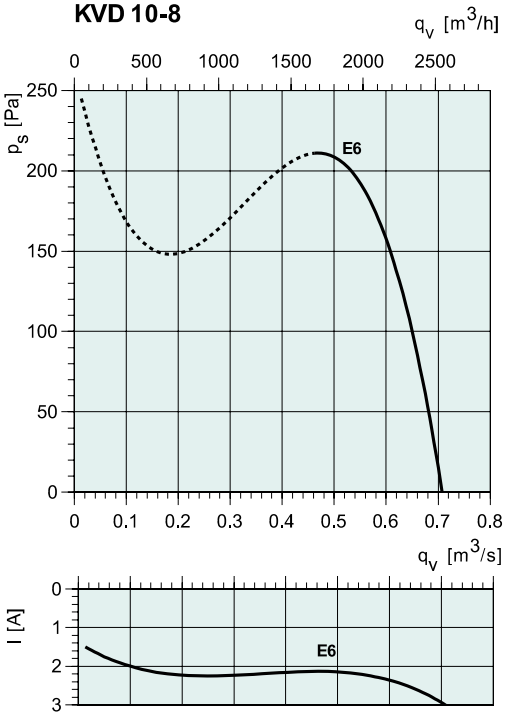
.....do not operate in dotted area

KVD 9-9

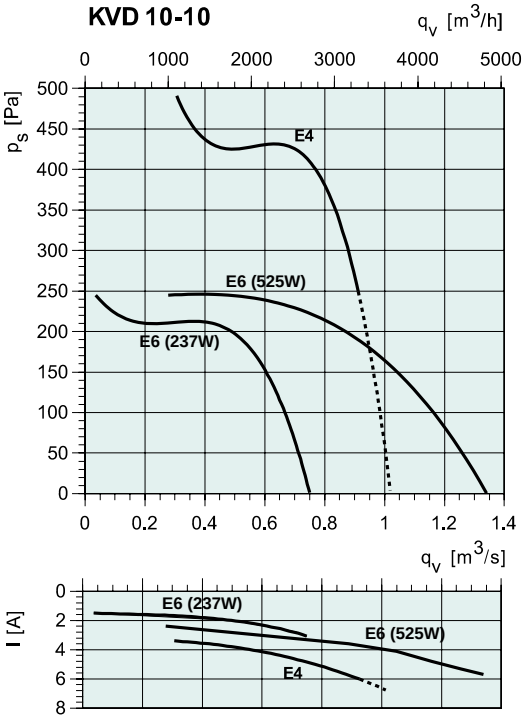


.....do not operate in dotted area

KVD 10-8

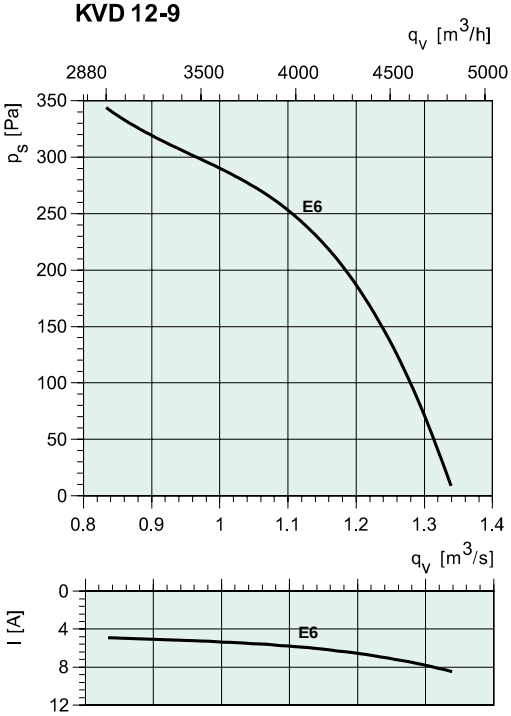


KVD 10-10

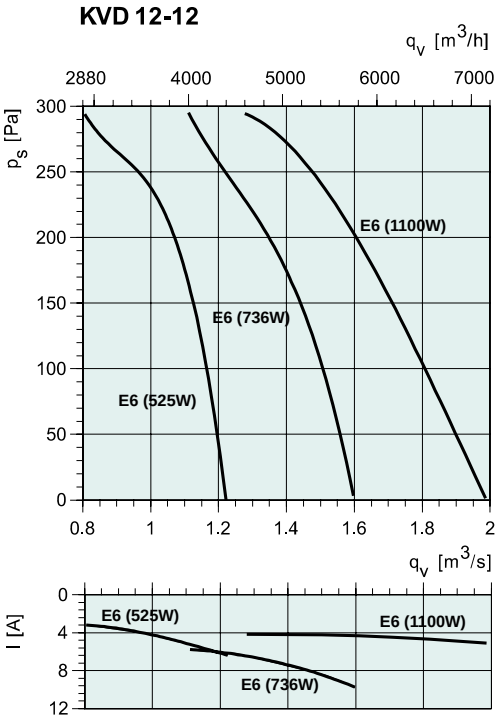


.....do not operate in dotted area

KVD 12-9



KVD 12-12





MUB EC

- 100% speed controllable
- Integrated electronic motor protection
- Modular system
- Low noise level
- Installation in any mounting position
- Safe and maintenance free operation
- Energy-saving
- Mini MUB has circular spigot connections

The MUB-EC fans are driven by EC-external rotor motors. These are energy saving motors with high efficiency. The power electronics are integrated in the motor housing. All models have one potential-free terminal for error message. All motors are suitable to be used for 50/60Hz. The input voltage for single phase units can vary between 200 and 277V, for three phase units between 380 and 480V. Speed control by a 0-10V signal. From size 450 the motor has an output voltage of 10V and 20V for an external potentiometer.

ELECTRICAL ACCESSORIES



MTP 10
p. 341



CXE/AVC
p. 322

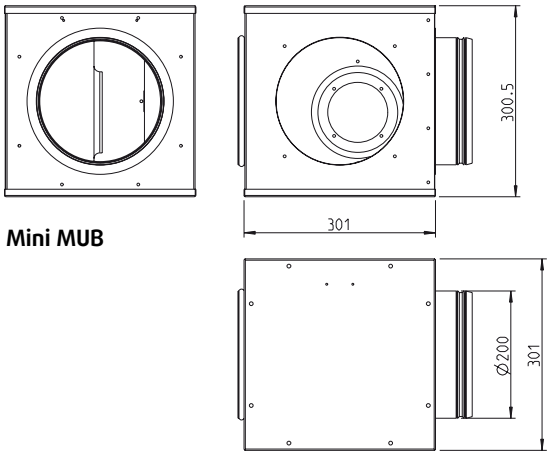


EC-Vent
p. 329-330

MUB-EC is equipped with impellers with backward curved blades, manufactured from aluminium. The Mini MUB 200EC box is equipped with impellers with backward curved blades, manufactured from plastic PA6 25GV.

The casing consists of an aluminium frame with fibreglass reinforced plastic corners of PA6; highly shock-resistant. The double skin panels are manufactured from galvanized steel with 20 mm mineralwool insulation. To avoid condensation the profile is provided with a separate chamber to fix the screws. The panels are removable, any outlet side can be chosen, allowing flexible ventilation solutions.

Installation in any mounting position is possible.

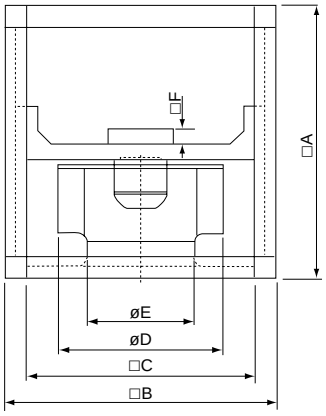


Mini MUB

TECHNICAL DATA

MUB		Mini MUB	025 315	025 355	042 400	042 450	042 450
Art no.		33032	30676	30670	30209	30610	31380
Techn.data is relating to 90° outlet		200 EC	EC-A2	EC-A2	EC-A2	EC-A2	EC-A2-K
Voltage/Frequency	V/50/60 Hz	230 1~	230 1~	230 1~	230 1~	400 3~	230 1~
Power	W	89.1	180	388	378	1170	597
Current	A	0.701	1.40	2.37	2.26	1.95	2.71
Max air flow	m3/s	0.174	0.685	0.884	1.08	1.75	1.41
R.p.m.	min-1	3965	1870	1639	1339	1560	1297
Max temp. of transported air	°C	40	60	60	60	60	60
" when speed controlled	°C	40	60	60	60	60	60
Sound pressure level at 3 m	dB(A)	47	44	53	51	56	56
Weight	kg	8.1	30	28	58	65	65
Insulation class, motor		B	B	B	B	B	B
Enclosure class, motor		IP 44	IP 44	IP 44	IP 44	IP 54	IP 54
Speed control, electronic		CXE/AVC	CXE/AVC	CXE/AVC	CXE/AVC	CXE/AVC	CXE/AVC
Speed control, electronic		MTP 10	MTP 10	MTP 10	MTP 10	MTP 10	MTP 10
Wiring diagram p. 391-400		23a	23b	23b	23b	28	28

DIMENSIONS



MUB	□A	□B	□C	øD	øE	□F
025 315EC-A2	500	500	420	315	200	40
025 355EC-A2	500	500	420	355	224	40
042 400EC-A2	670	670	590	400	253	40
042 450EC-A2	670	670	590	454	286	70
042 450EC-A2-K	670	670	590	450	286	70
042 500EC-A2	670	670	590	504	321	70
062 560EC-A2	800	800	720	560	360	70
062 630EC-A2	800	800	720	630	407	70

VENTILATION ACCESSORIES

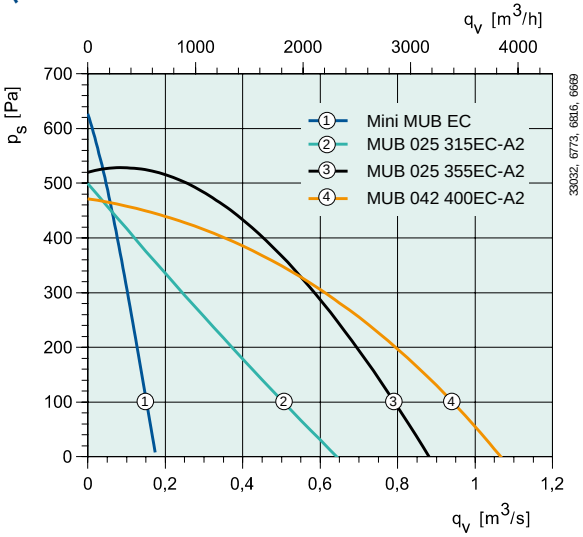

FGV p. 370

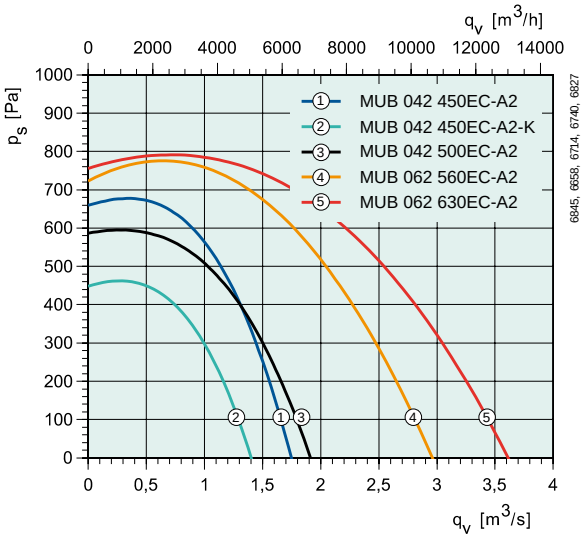

SRKG p. 370


UGS p. 370


WSG p. 370

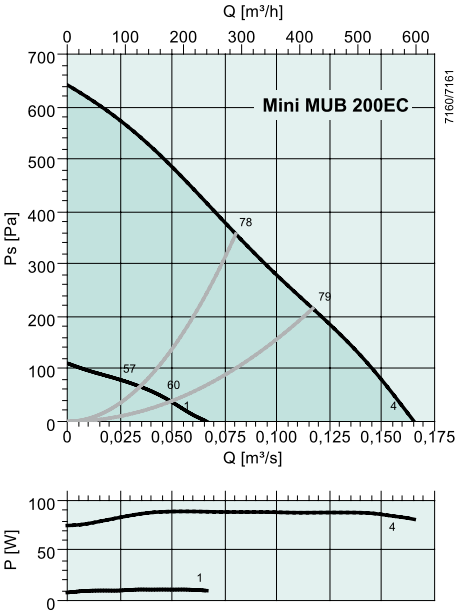
QUICK SELECTION

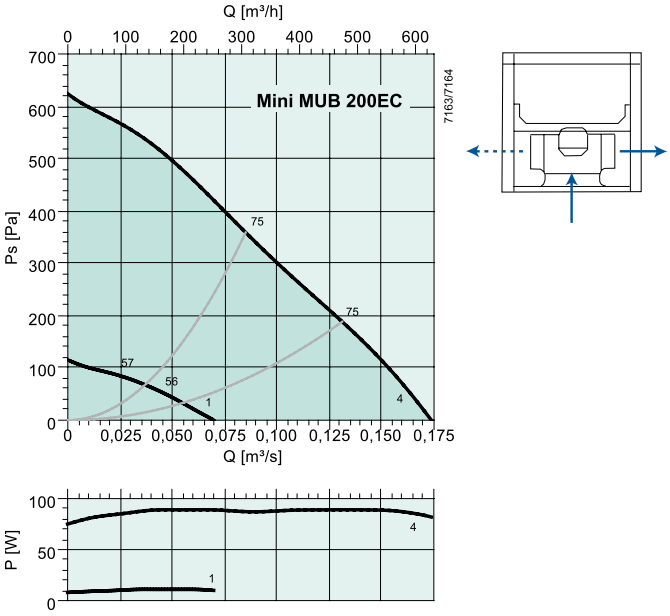




MUB		042 500	062 560	062 630			
Art no.		30314	30235	30207			
Techn.data is relating to 90° outlet		EC-A2	EC-A2	EC-A2			
Voltage/Frequency	V/50/60 Hz	400 3~	400 3~	400 3~			
Power	W	1100	2000	2560			
Current	A	2.18	3.10	3.90			
Max air flow	m^3/s	2.07	3.00	3.63			
R.p.m.	min^{-1}	1340	1360	1210			
Max temp. of transported air	°C	60	60	60			
" when speed controlled	°C	60	60	60			
Sound pressure level at 3 m	dB(A)	56	57	67			
Weight	kg	70	90	95			
Insulation class, motor		B	F	F			
Enclosure class, motor		IP 54	IP 54	IP 54			
Speed control, electronic		CXE/AVC	CXE/AVC	CXE/AVC			
Speed control, electronic		MTP 10	MTP 10	MTP 10			
Wiring diagram p. 391-400		28	28	28			

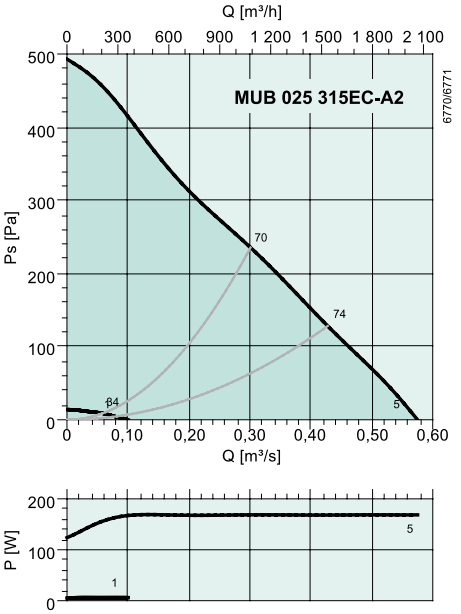
PERFORMANCE

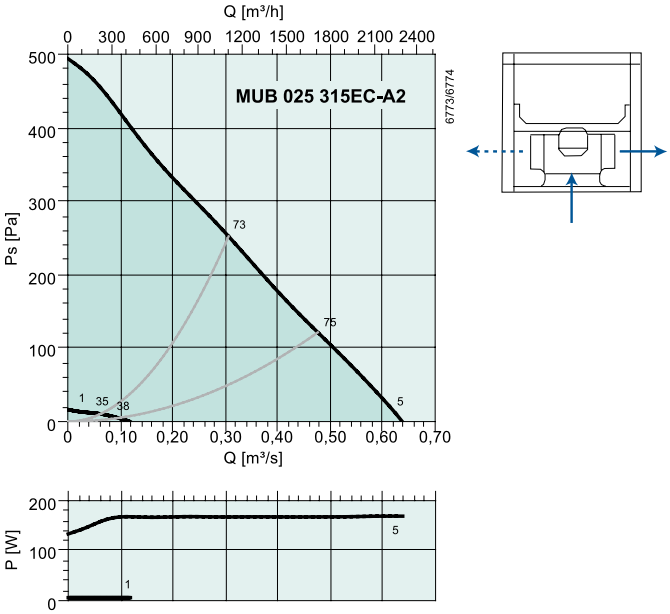




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	75	55	65	69	71	65	64	60	53
L_{wA} Outlet	80	59	65	71	78	72	68	64	56
L_{wA} Surrounding	54	32	43	46	51	49	42	32	24

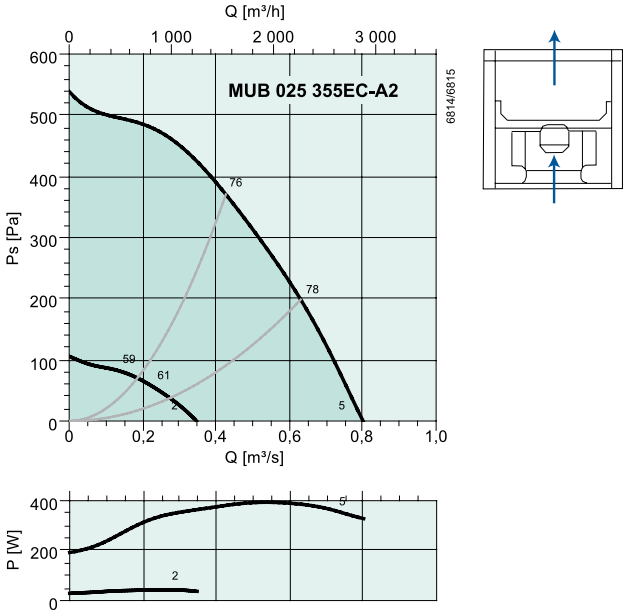
Measurement point: 0,085 m³/s; 359 Pa

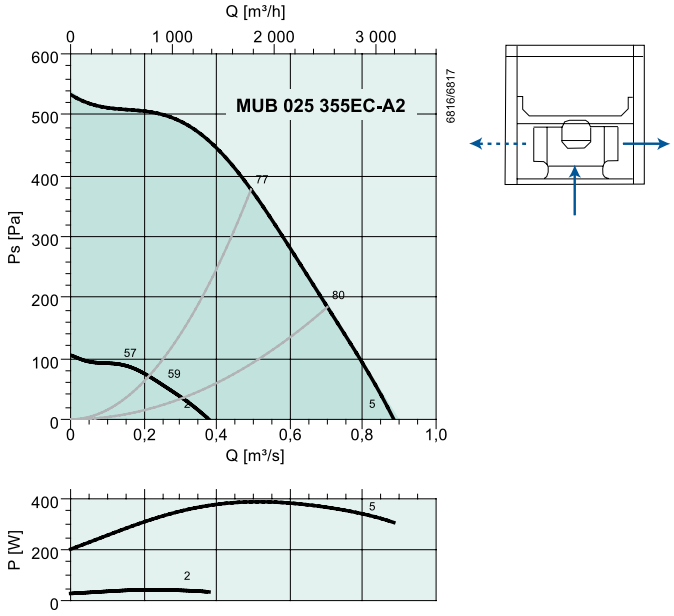




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	68	35	62	57	63	61	56	55	47
L_{wA} Outlet	72	48	70	61	65	64	59	55	46
L_{wA} Surrounding	54	22	51	45	48	45	44	33	23

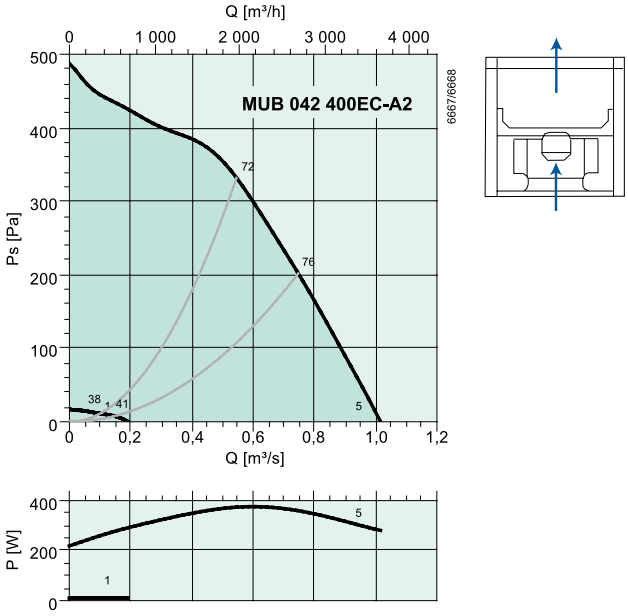
Measurement point: 0,306 m³/s; 252 Pa

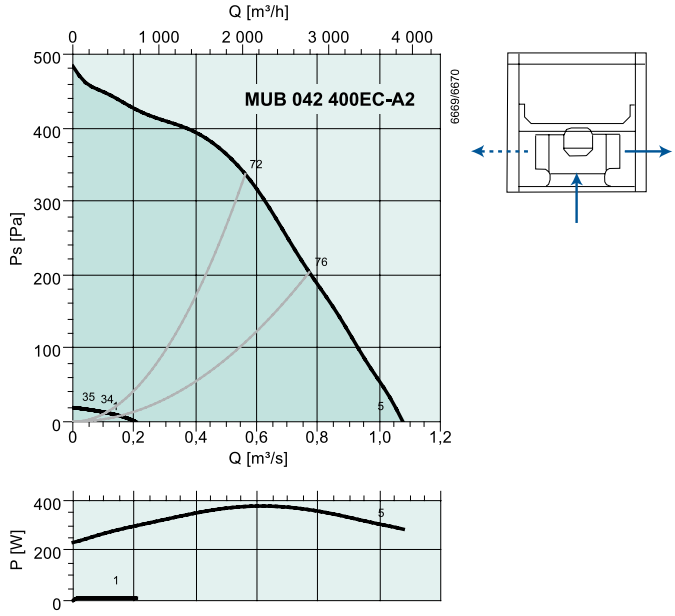




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	75	43	64	65	70	66	68	66	57
L_{wA} Outlet	77	43	69	66	70	70	69	66	58
L_{wA} Surrounding	60	35	53	53	54	51	53	50	35

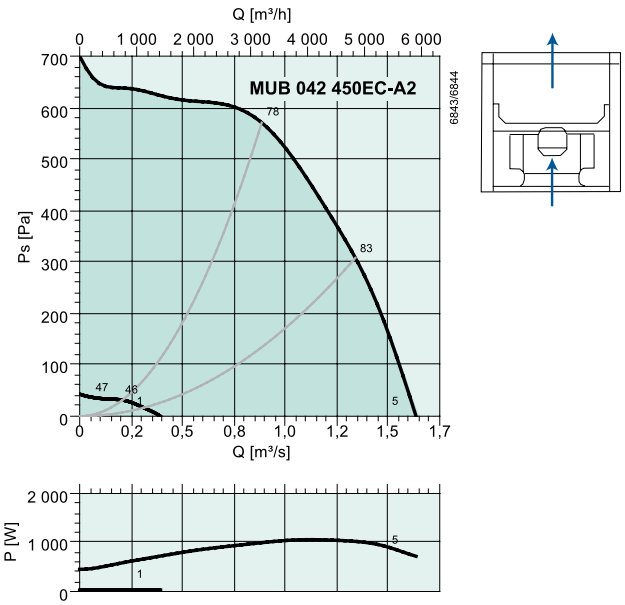
Measurement point: 0,494 m³/s; 377 Pa

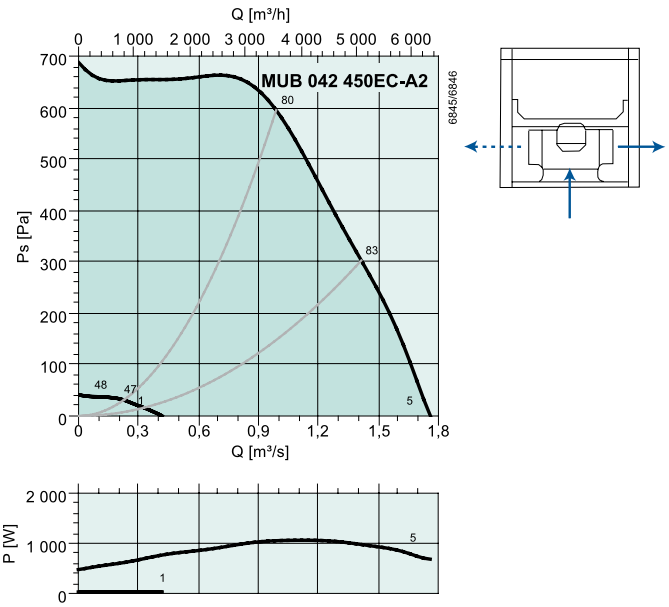




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	70	41	60	61	64	65	62	59	51
L_{wA} Outlet	74	49	67	64	67	68	65	60	53
L_{wA} Surrounding	59	31	51	52	49	54	51	43	29

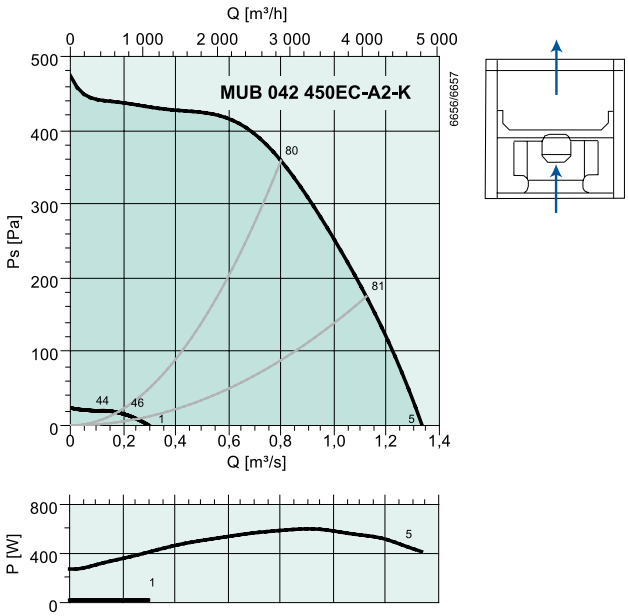
Measurement point: 0,563 m³/s; 337 Pa

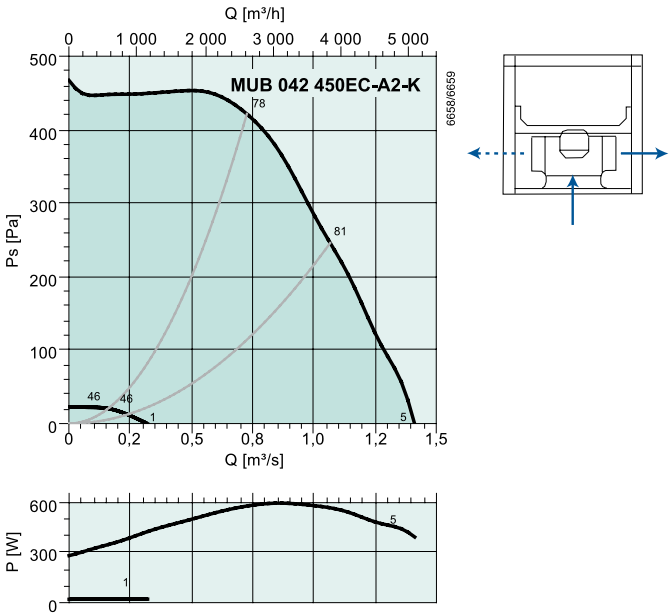




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	78	46	68	70	73	71	70	65	61
L_{wA} Outlet	83	68	76	71	76	78	75	68	63
L_{wA} Surrounding	70	29	67	62	61	61	59	52	44

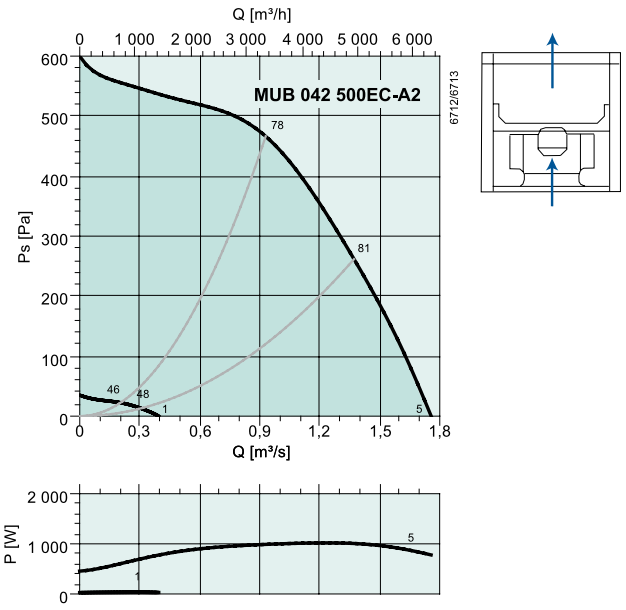
Measurement point: 0,988 m³/s; 595 Pa

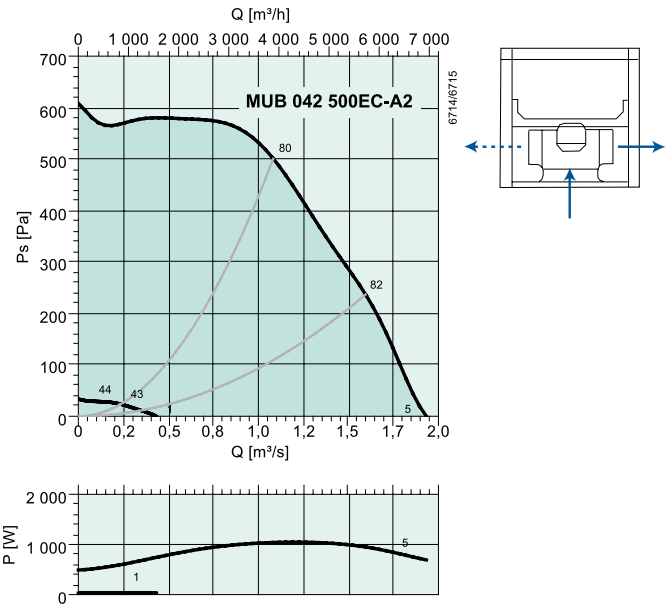




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	78	42	60	63	68	70	75	71	60
L_{wA} Outlet	77	47	63	62	68	71	73	68	58
L_{wA} Surrounding	64	33	51	52	52	54	61	55	38

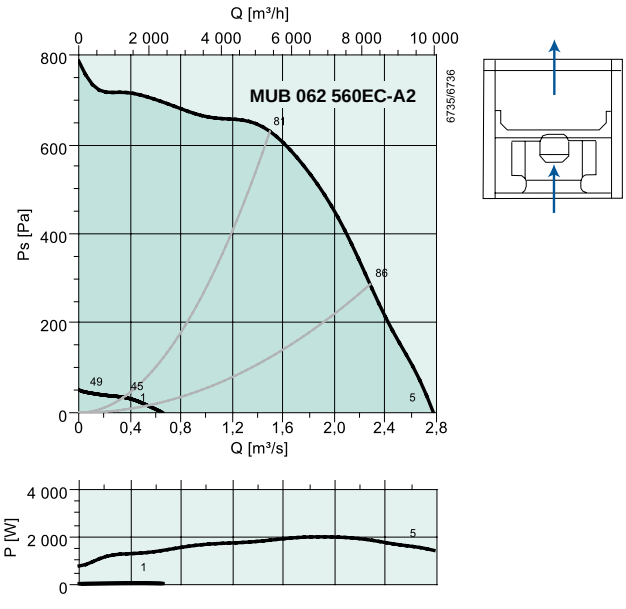
Measurement point: 0,727 m³/s; 421 Pa

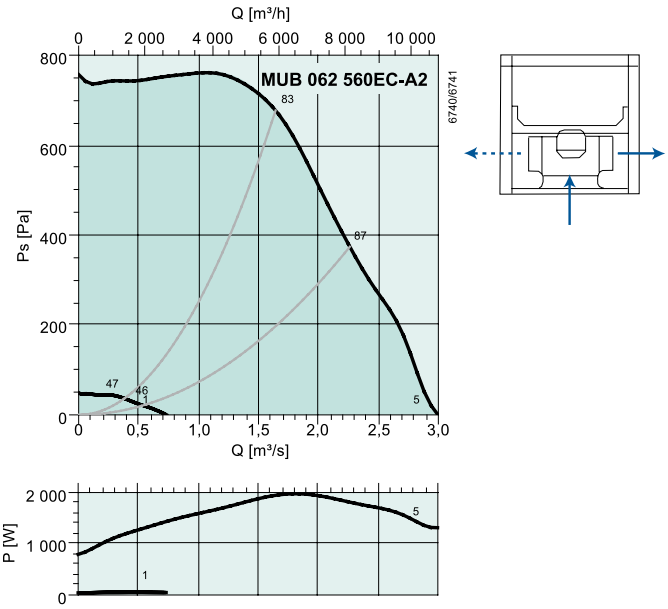




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	77	46	71	69	71	70	69	65	60
L_{wA} Outlet	80	49	70	71	75	74	72	67	64
L_{wA} Surrounding	65	35	55	61	59	57	56	51	39

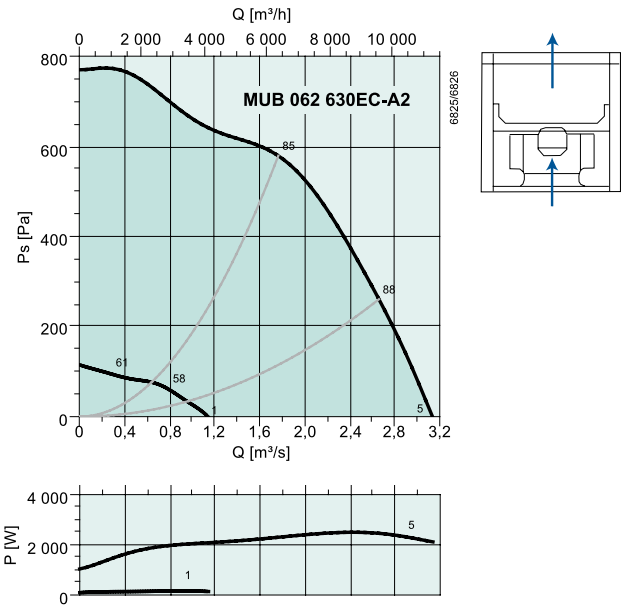
Measurement point: 1,08 m³/s; 501 Pa

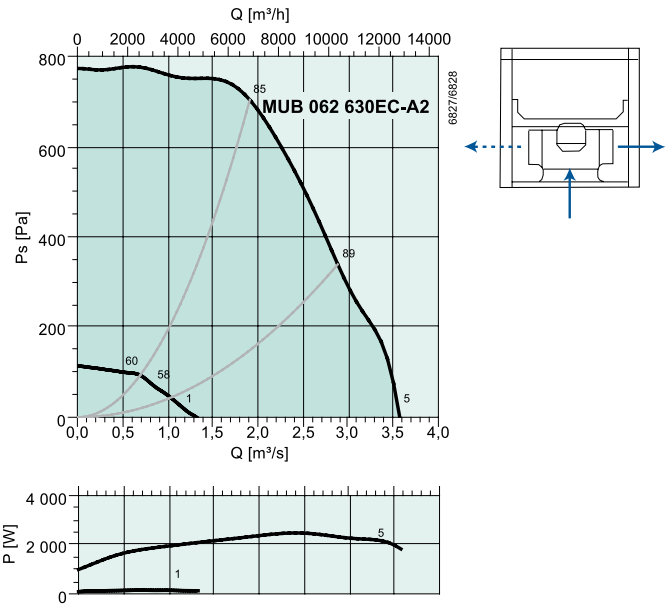




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	80	51	71	75	73	74	72	67	63
L_{wA} Outlet	77	57	70	70	71	70	67	64	58
L_{wA} Surrounding	71	40	66	67	61	60	58	48	36

Measurement point: 1,64 m³/s; 677 Pa





dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	82	54	75	76	73	74	73	69	65
L_{wA} Outlet	83	59	75	77	76	74	72	68	64
L_{wA} Surrounding	76	47	74	67	62	60	59	49	39

Measurement point: 1,91 m^3/s; 703 Pa



MUB

The MUB fans have impellers with backward curved blades, manufactured from polyamide (size 355), aluminium (size 400-560), welded steel painted in RAL 5002 (size 100 630D4-L). The MUB 355-500 is equipped with external rotor motors, fully speed controllable. MUB 500-560DV, DS are driven by an IEC standard motor. For size 630D4-A2, 630D4-L and 710D6-A speed control is only possible by using a frequency converter.

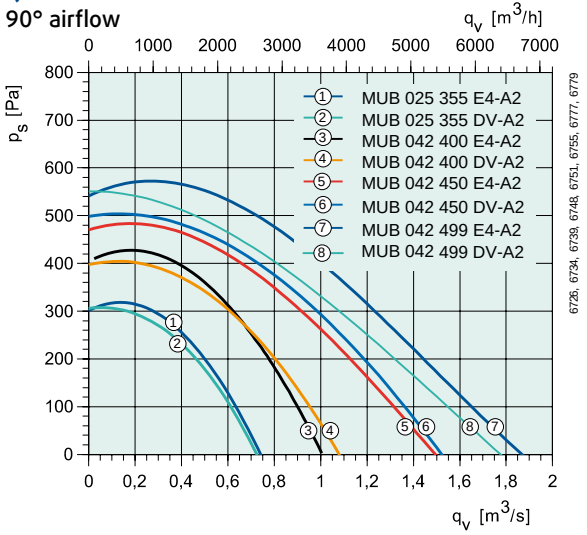
All single speed motors are in IE2 execution and possible to control via frequency converter. The three phase motors are D/Y connected for two speed operation. Motor protection is done by thermal contacts, which have to be connected to an external motor protection device.

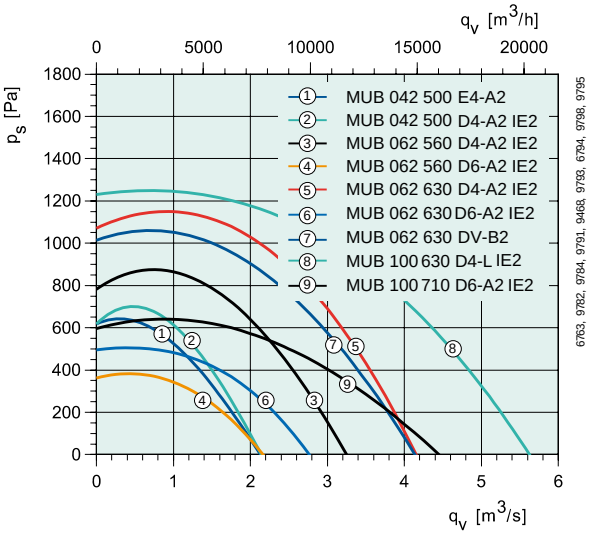
The casing consists of a corrosion-resistant aluminum frame with fiberglass reinforced plastic corners of PA6; highly shock resistant. The double skin panels are manufactured from galvanized steel with 20 mm mineral wool insulation.

To avoid condensation the profile is provided with a separate chamber to fix screws. The Multibox fans are delivered for straight through airflow but can easily be rebuilt due to removable panels. This allows flexible ventilation solutions. The MUB can also be used as extract- or supply air unit in air handling units. Installation in any mounting position is possible.

QUICK SELECTION

90° airflow





ELECTRICAL ACCESSORIES


S-ET/STDT p. 341-342


RTRE p. 320


REU p. 320


REE p. 321


RTRD/RTRDU p. 321


FRQ p. 325

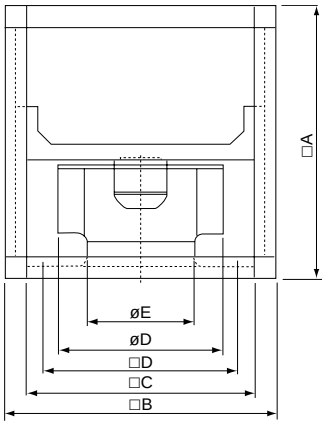

S-DT2 SKT p. 340

TECHNICAL DATA

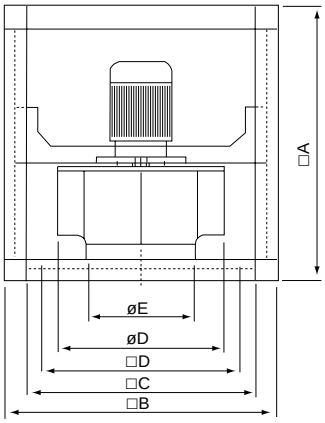
MUB		025 355	025 355	042 400	042 400	042 450	042 450	042 499	042 499	042 500
Art no.		2104	2775	2116	2112	2124	2123	2134	2133	2141
Techn.data is relating to 90° outlet		E4-A2	DV-A2	E4-A2	DV-A2	E4-A2	DV-A2	E4-A2	DV-A2	E4-A2
Voltage/Frequency	V/50 Hz	230 1~	400 3~	230 1~	400 3~	230 1~	400 3~	230 1~	400 3~	230 1~
Power	W	264	243	467	430	756	726	1023	1457	1310
Current	A	1.19	0.541	2.13	0.826	3.33	1.32	4.72	1.64	5.78
Max air flow	m3/s	0.741	0.731	1.01	1.08	1.48	1.52	1.87	1.76	2.13
R.p.m.	min-1	1399	1349	1358	1339	1249	1277	1270	1210	1332
Max temp. of transported air	°C	40	40	40	40	60	40	40	40	40
Sound pressure level at 3 m	dB(A)	55	55	49	49	52	52	48	48	56
Weight	kg	37	37	58	57	60	62	66	64	68
Insulation class, motor		B	B	F	F	F	F	F	F	F
Enclosure class, motor		IP 44	IP 44	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
Capacitor		8	–	10	–	16	–	20	–	30
Motor protection		S-ET 10	STDT 16	S-ET 10	STDT 16	S-ET 10	STDT 16	S-ET 10	STDT 16	S-ET 10
Speed control, five-step	Transformer	RTRE 1.5	RTRD 2	RTRE 3	RTRD 2	RTRE 5	RTRD 2	RTRE 5	RTRD 2	RTRE 7
Speed control, five step high/low	Transformer	REU 1.5*	RTRDU 2	REU 3*	RTRDU 2	REU 5*	RTRDU 2	REU 5	RTRDU 2	REU 7
Speed control, 2-step		–	S-D2SKT	–	S-D2SKT	–	S-D2SKT	–	S-D2SKT	–
Speed control, stepless	Thyristor	REE 2*	–	REE 4*	–	REE 4*	–	–	–	–
Wiring diagram p. 391-400		5	16	5	16	5	18	6	18	6

* + S-ET 10

DIMENSIONS



	□A	□B	□C	□D	øD	øE
MUB025 355	500	500	420	378	355	224
MUB042 400	670	670	590	548	404	253
MUB042 450	670	670	590	548	454	286
MUB042 499	670	670	590	548	504	321
MUB042 500E4-A2	670	670	590	548	504	321
MUB062 630DV-B2	800	800	720	678	635	407



	□A	□B	□C	□D	øD	øE
MUB042 500DS-A2	670	670	590	548	504	321
MUB042 500DV-A2	670	670	590	548	504	321
MUB062 560DS-A2	800	800	720	676	570	361
MUB062 560DV-A2	800	800	720	676	570	361
MUB062 630DV-B2	800	800	720	678	635	407
MUB062 630DS-B2	800	800	720	678	635	407
MUB062 630D4-L	1000	1000	920	878	630	389
MUB062 710D6-A2	1000	1000	920	878	715	460
MUB100 630D4-L	1000	1000	920	878	630	389
MUB100 710D6-A2	1000	1000	920	878	715	460

VENTILATION ACCESSORIES


FGV p. 370


SRKG p. 370

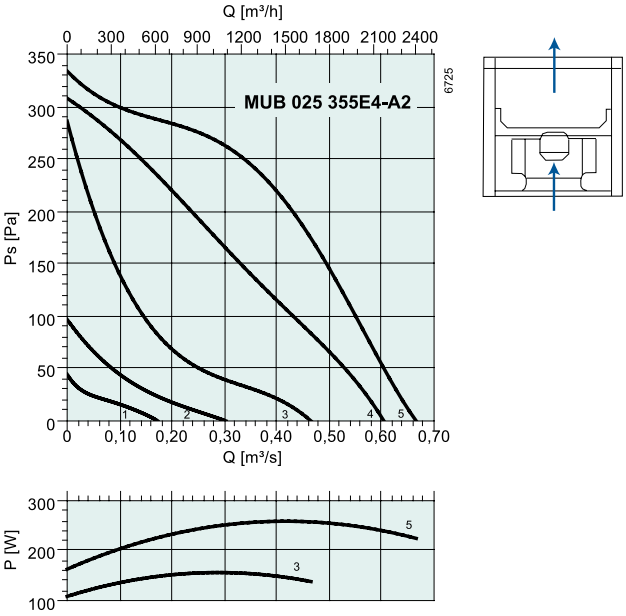

UGS p. 370

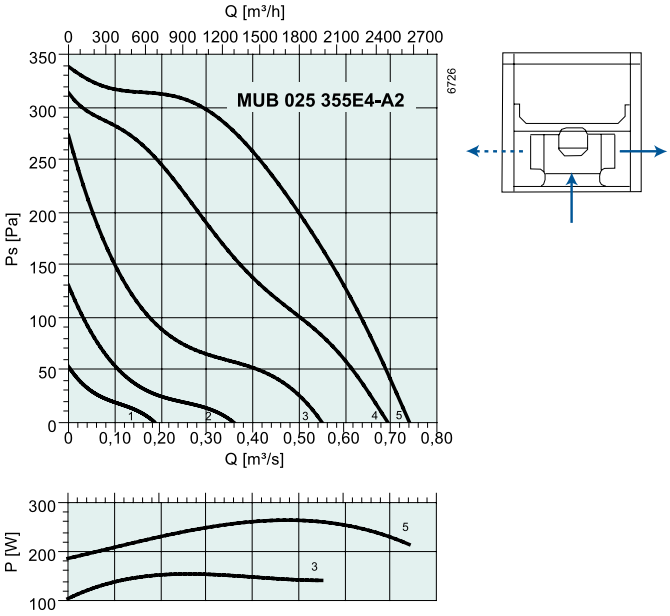

WSG p. 370

MUB		042 500	062 560	062 560	062 630	062 630	062 630	100 630	100 710
Art no.		33542	33543	33544	33545	33546	2150	33549	33548
Techn.data is relating to 90° outlet		D4-A2 IE2	D4-A2 IE2	D6-A2 IE2	D4-A2 IE2	D6-A2 IE2	DV-B2	D4-L IE2	D6-A2 IE2
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	230D/400 3~
Power at shaft (P2)	W	1500	2200	750	4000	1500	3890	4000	2200
Current	A	3.39	4.64	1.98	8.12	3.61	6.4	8.12	5.1
Max air flow	m3/s	2.15	3.25	2.19	3.89	2.76	4.17	5.07	4.47
R.p.m.	min-1	1400	1420	905	1450	940	1370	1450	945
Max temp. of transported air	°C	40	40	40	40	40	40	40	40
Sound pressure level at 3 m	dB(A)	55	56	47	68	53	69	74	59
Weight	kg	68	99	117	135	130	145	160	160
Insulation class, motor		F	F	F	F	F	F	F	F
Enclosure class, motor		IP 55	IP 55	IP 55	IP 55	IP 55	IP 54	IP 55	IP 55
Motor protection		–	–	–	–	–	STDT 16	–	–
Speed control, five-step		FRQ5(S)-4A	FRQ5(S)-10A	FRQ5(S)-4A	FRQ5(S)-10A	FRQ5(S)-4A	RTRD 14	FRQ5(S)-10A	FRQ5(S)-10A
Speed control, 2-step		–	–	–	–	–	S-D2SKT	–	–
Speed control, stepless		FRQ(S)-4A	FRQ(S)-10A	FRQ(S)-4A	FRQ(S)-10A	FRQ(S)-4A	–	FRQ(S)-10A	FRQ(S)-10A
Wiring diagram p. 391-400		13b Y	13b Y	13b Y	13b D	13b Y	18	13b D	13b Y

IE2
2009/640/EG

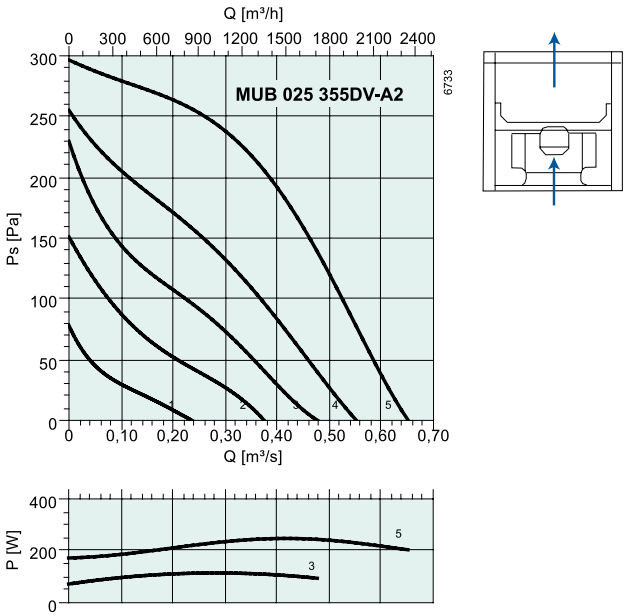
PERFORMANCE

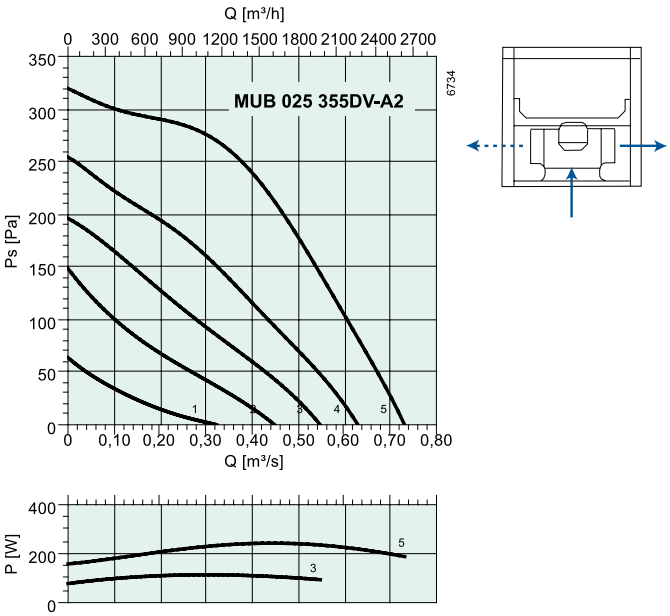




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	68	55	57	61	63	62	59	54	47
L_{wA} Outlet	70	57	59	63	65	64	61	56	49
L_{wA} Surrounding	62	49	51	55	57	56	53	48	41

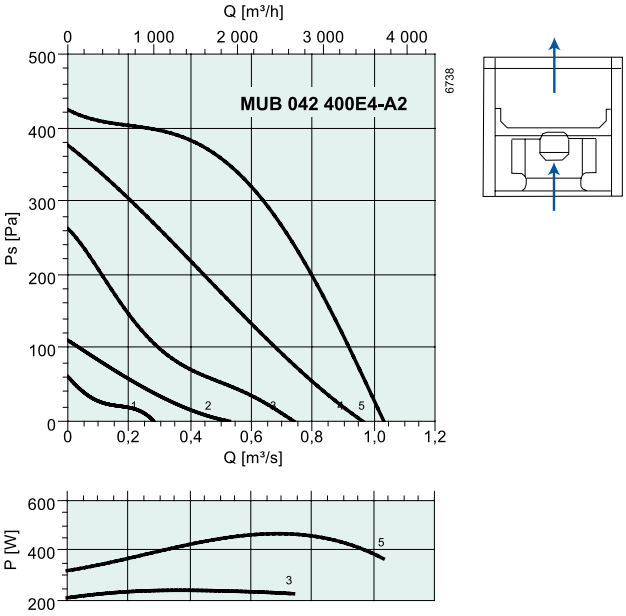
Measurement point: 0,33 m³/s; 270 Pa

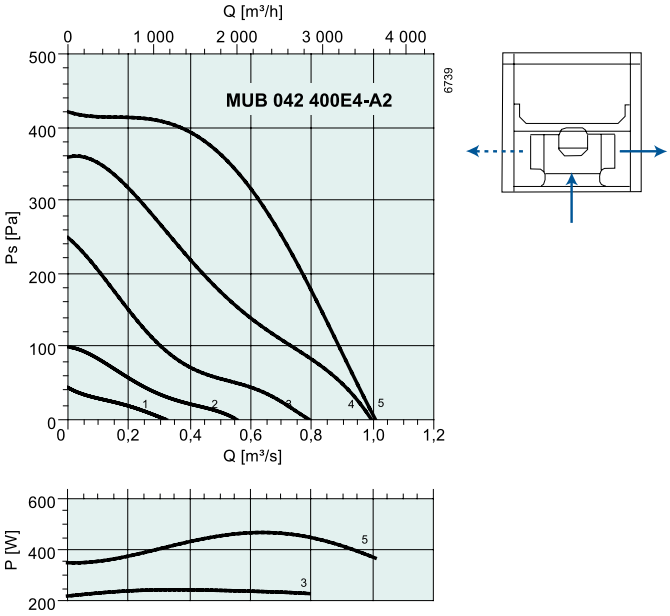




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	68	55	57	61	63	62	59	54	47
L_{wA} Outlet	70	57	59	63	65	64	61	56	49
L_{wA} Surrounding	62	49	51	55	57	56	53	48	41

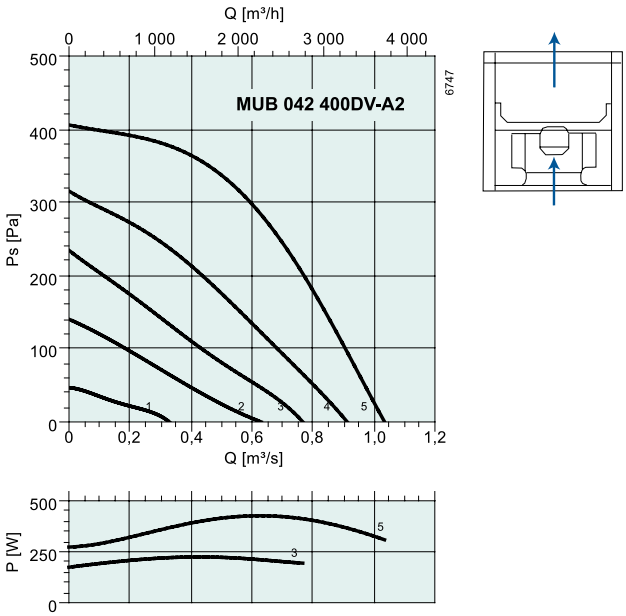
Measurement point: 0,42 m³/s; 250 Pa

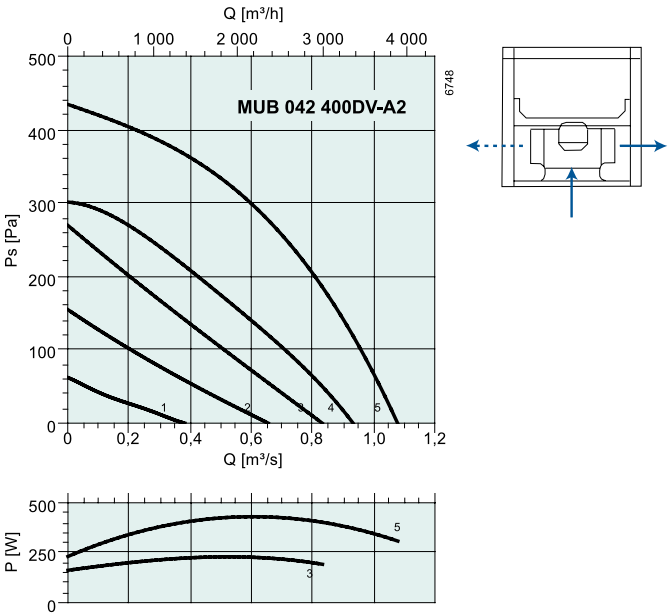




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	72	59	61	65	67	66	63	58	51
L_{wA} Outlet	74	61	63	67	69	68	65	60	53
L_{wA} Surrounding	56	43	45	49	51	50	47	42	53

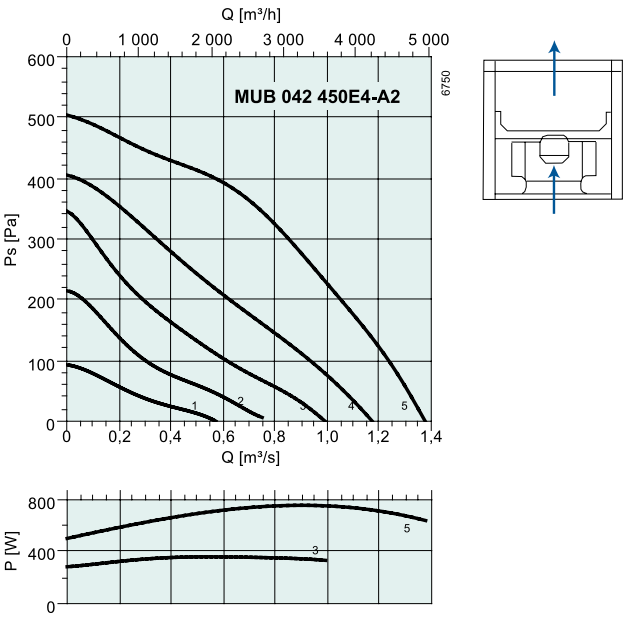
Measurement point: 0,48 m^3/s; 365 Pa

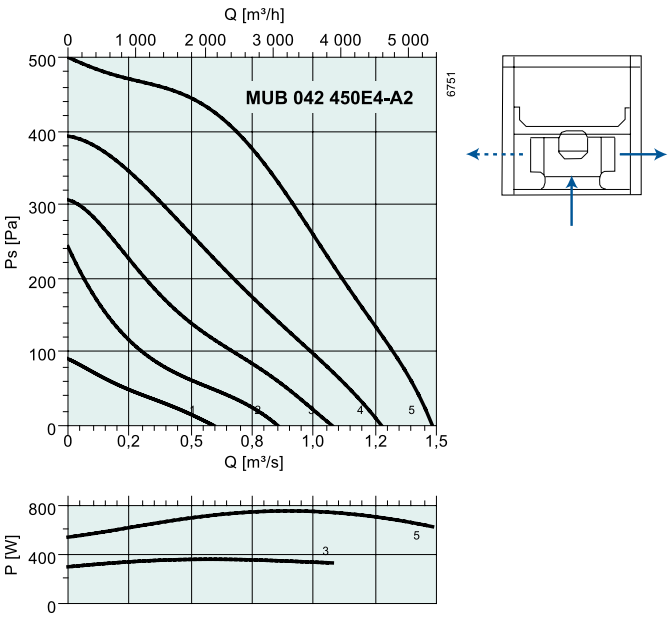




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	72	59	61	65	67	66	63	58	51
L_{wA} Outlet	74	61	63	67	69	68	65	60	53
L_{wA} Surrounding	56	43	45	49	51	50	47	42	35

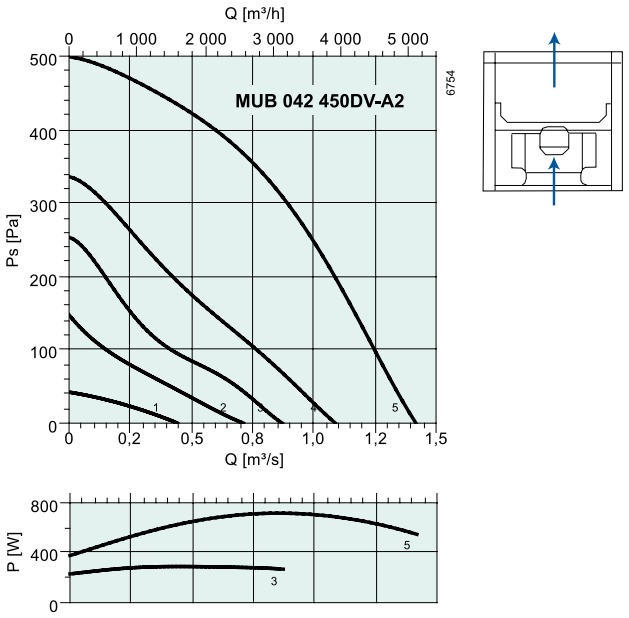
Measurement point: 0,56 m^3/s; 323 Pa

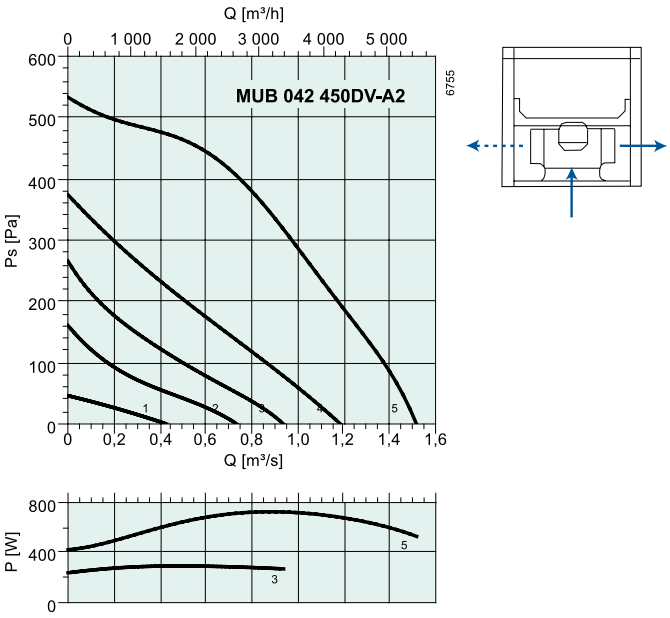




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	75	62	64	68	70	69	66	61	54
L_{wA} Outlet	77	64	66	70	72	71	68	63	56
L_{wA} Surrounding	59	46	48	52	54	53	50	45	38

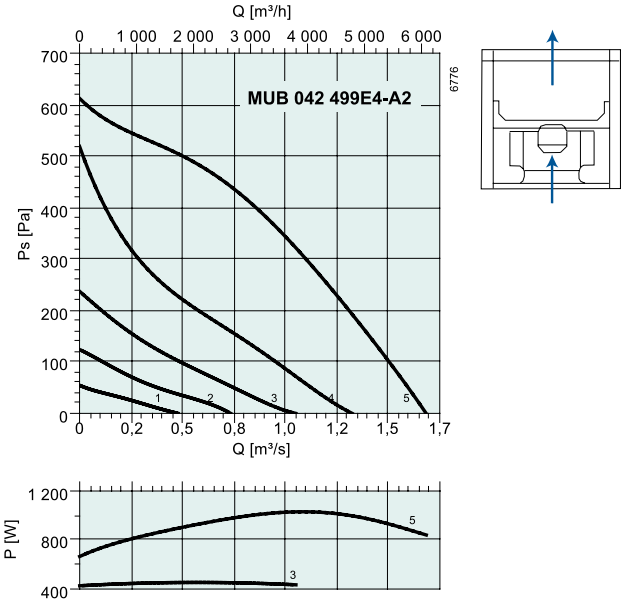
Measurement point: 1,06 m³/s; 250 Pa

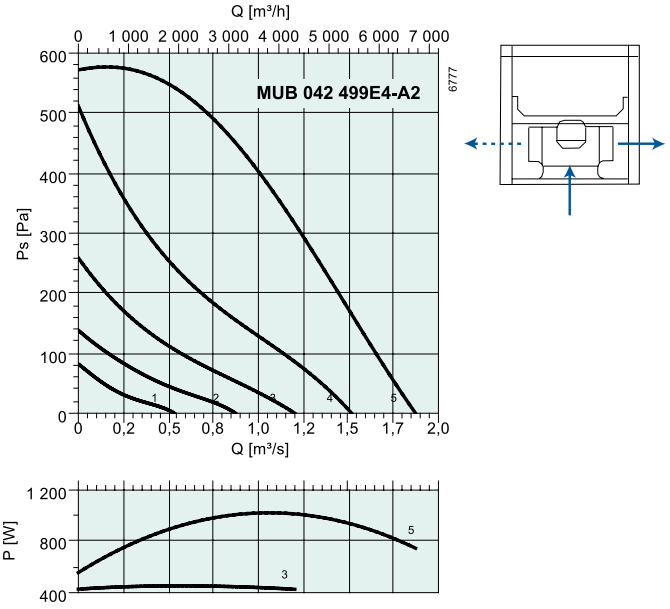




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	74	61	63	67	69	68	65	50	53
L_{wA} Outlet	76	63	65	69	71	70	67	62	55
L_{wA} Surrounding	59	46	48	52	54	53	50	45	38

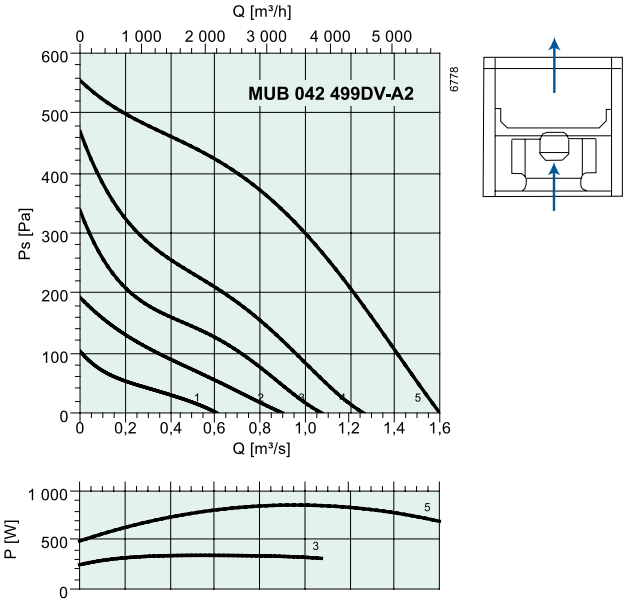
Measurement point: 0,81 m³/s; 325 Pa

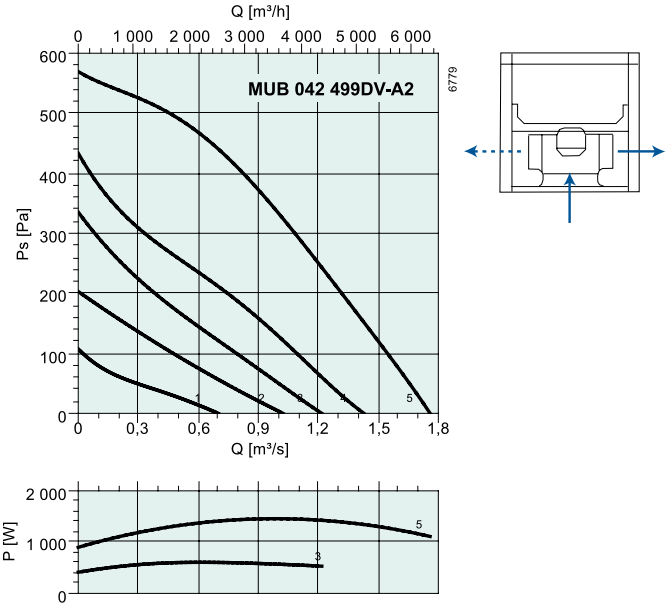




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	78	65	67	71	73	72	69	64	57
L_{wA} Outlet	80	67	69	73	75	74	71	66	59
L_{wA} Surrounding	55	42	44	48	50	49	46	41	34

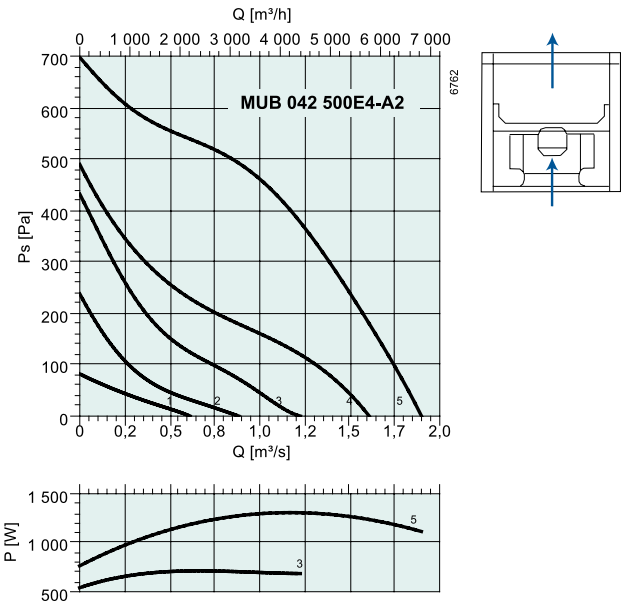
Measurement point: 0,94 m³/s; 451 Pa

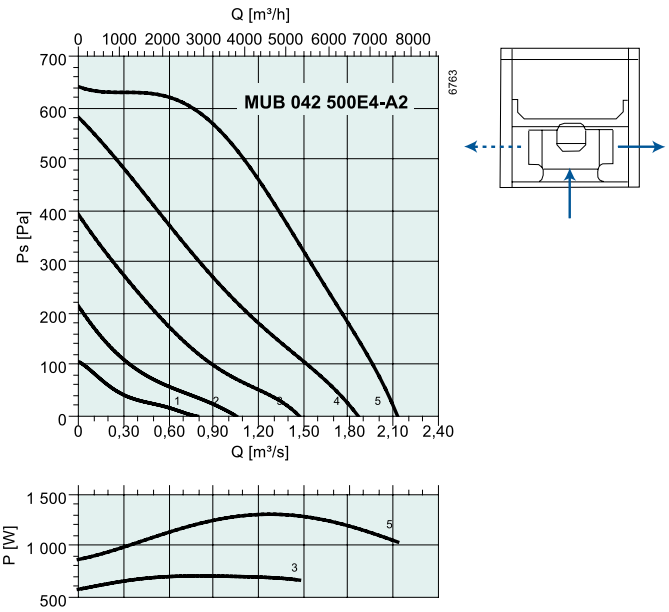




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	76	63	65	69	71	70	67	62	55
L_{wA} Outlet	78	65	67	71	73	72	69	64	57
L_{wA} Surrounding	55	42	44	48	50	49	46	41	34

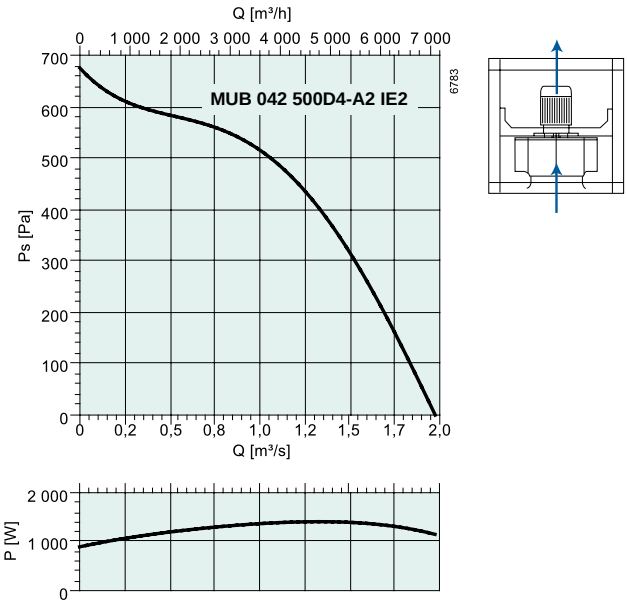
Measurement point: 1,02 m³/s; 370 Pa

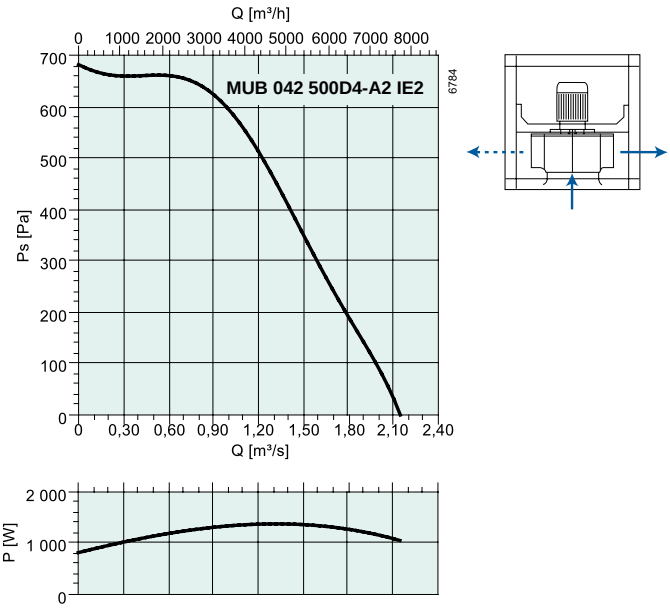




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	79	66	68	72	74	73	70	65	58
L_{wA} Outlet	81	68	70	74	76	75	72	67	60
L_{wA} Surrounding	63	50	52	56	58	57	54	49	42

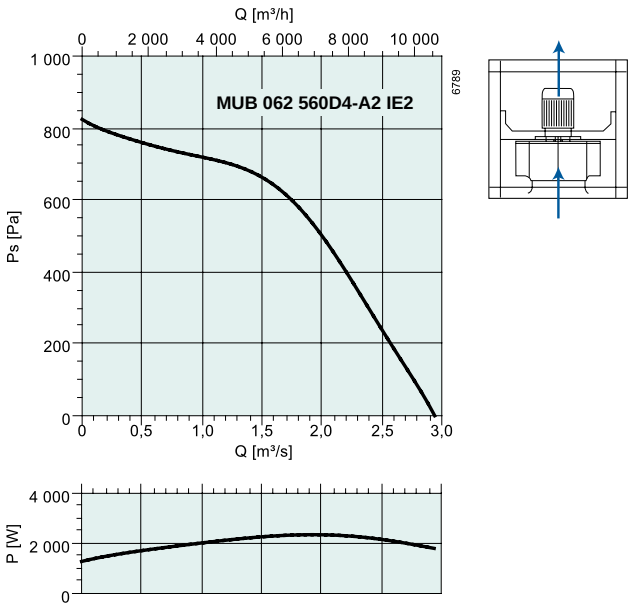
Measurement point: 1,35 m^3/s; 380 Pa

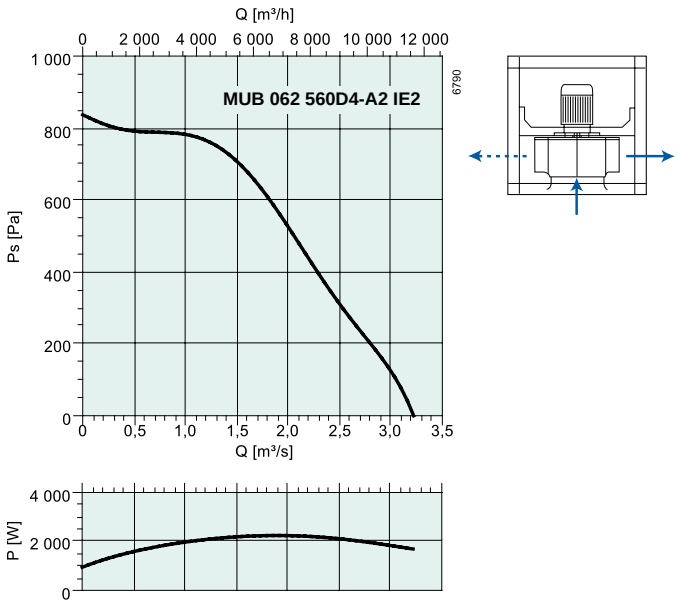




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	77	64	66	70	72	71	68	63	56
L_{wA} Outlet	79	66	68	72	74	73	70	65	68
L_{wA} Surrounding	62	49	51	55	57	56	53	48	41

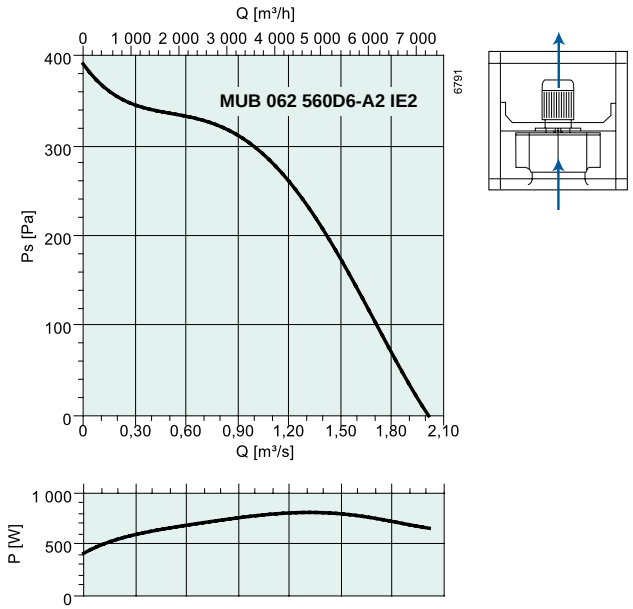
Measurement point: 1,40 m^3/s; 400 Pa

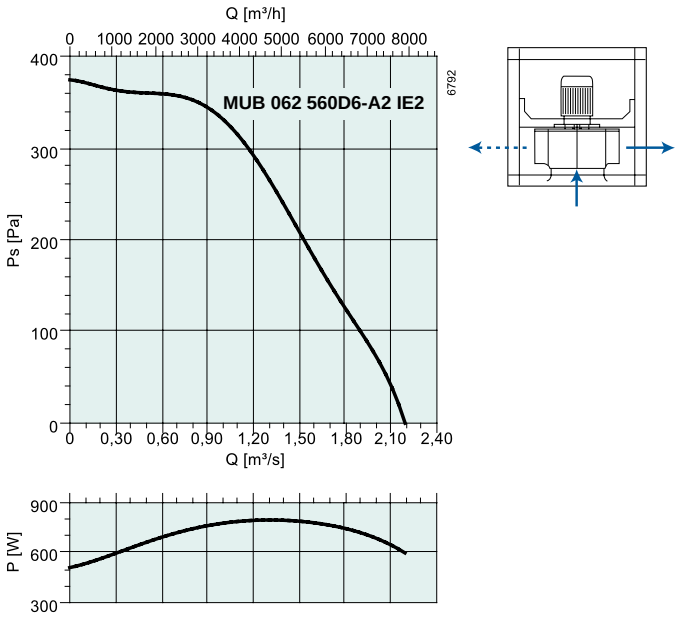




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	78	65	67	71	73	72	69	64	57
L_{wA} Outlet	80	67	69	73	75	74	71	66	59
L_{wA} Surrounding	63	50	52	56	58	57	54	49	42

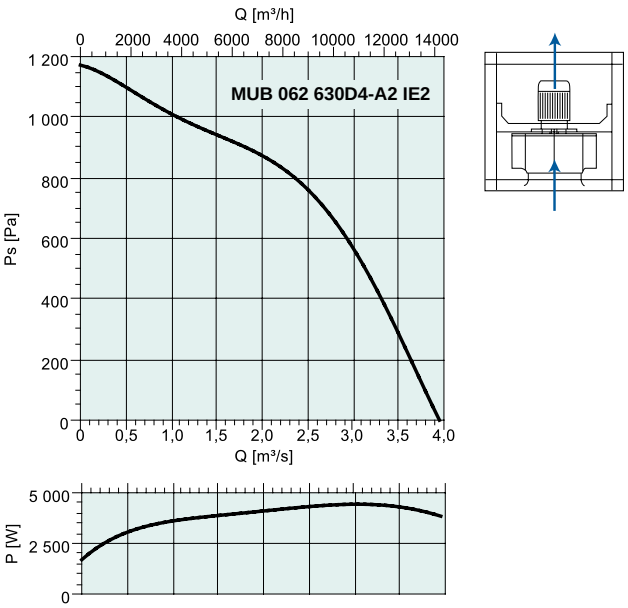
Measurement point: 2,25 m^3/s; 565 Pa

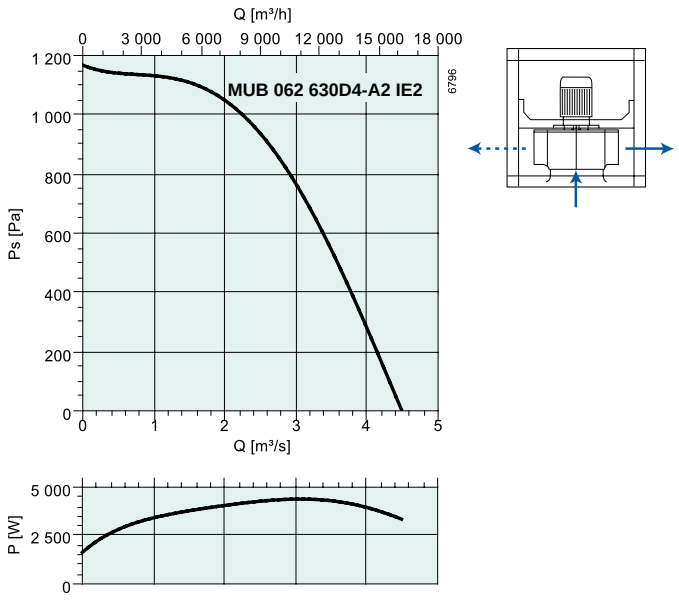




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	69	56	58	63	64	64	60	55	47
L_{wA} Outlet	71	58	60	65	66	66	62	57	49
L_{wA} Surrounding	54	51	43	48	49	49	45	40	32

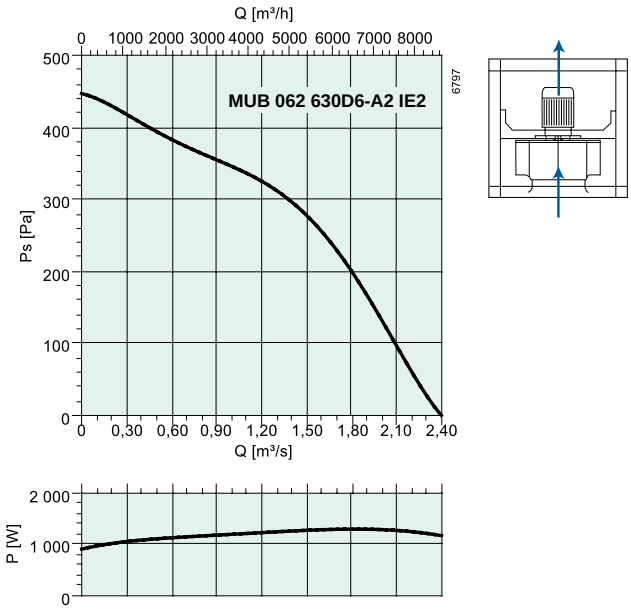
Measurement point: 1,31 m^3/s; 283 Pa

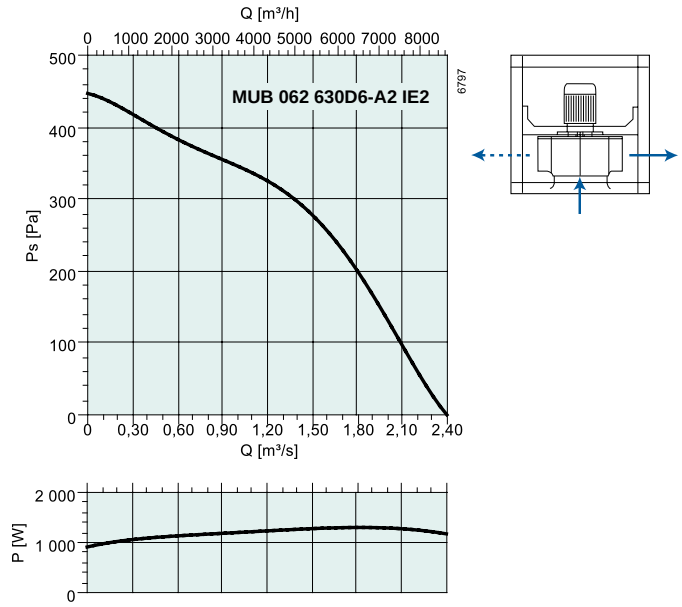




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	86	73	75	79	81	80	77	72	65
L_{wA} Outlet	88	75	77	81	83	82	79	74	67
L_{wA} Surrounding	75	62	64	68	70	59	66	61	54

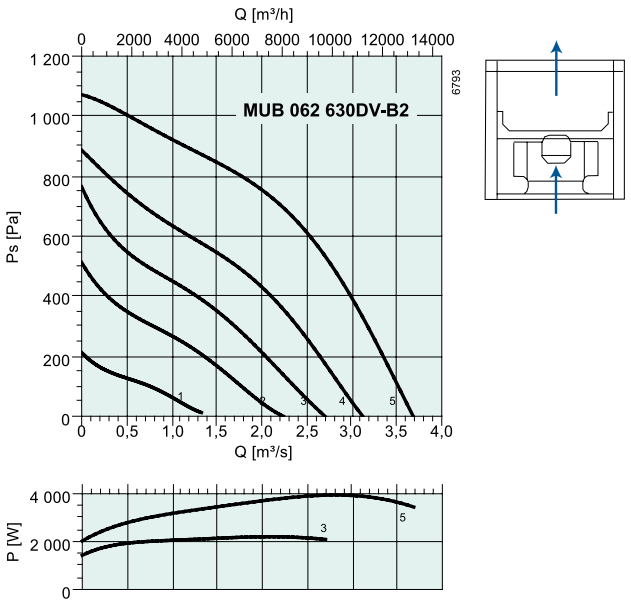
Measurement point: 1,95 m^3/s; 911 Pa

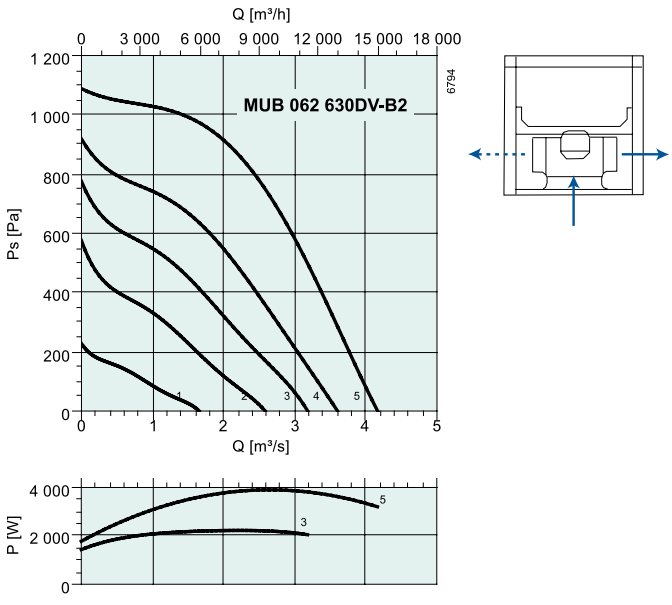




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	73	60	62	67	68	68	64	59	51
L_{wA} Outlet	75	62	64	69	70	70	66	61	53
L_{wA} Surrounding	60	47	49	54	55	55	51	46	38

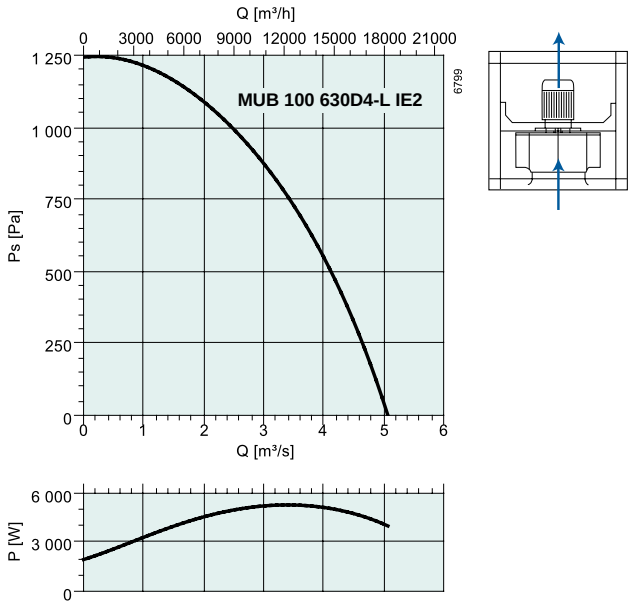
Measurement point: 1,92 m^3/s; 395 Pa

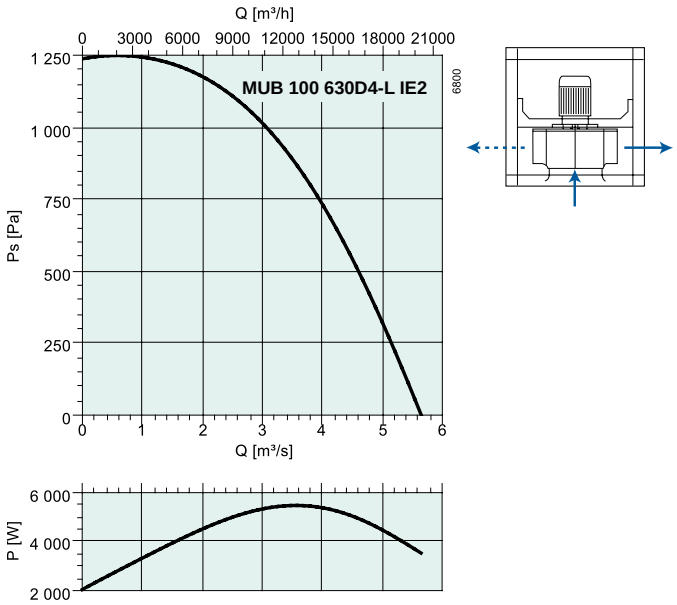




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	87	74	76	80	82	81	78	73	66
L_{wA} Outlet	89	76	78	82	84	83	80	75	68
L_{wA} Surrounding	76	63	65	69	71	70	67	62	55

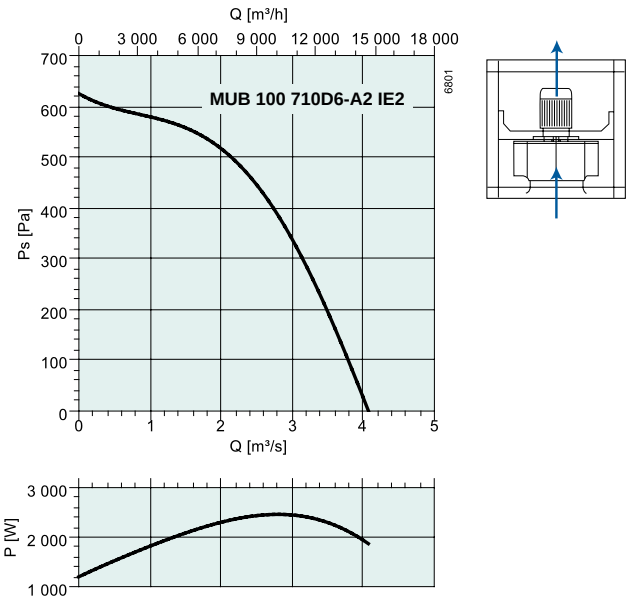
Measurement point: 2,78 m³/s; 761 Pa

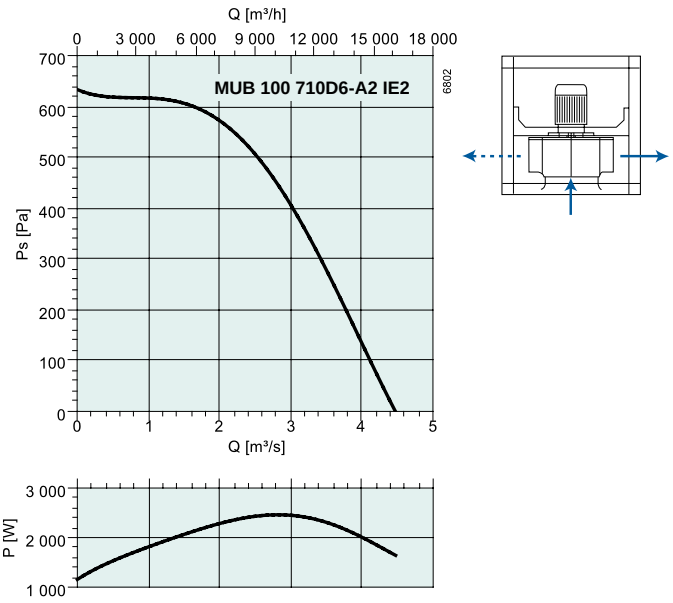




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	87	58	76	80	82	81	78	73	65
L_{wA} Outlet	89	60	78	82	84	83	80	75	67
L_{wA} Surrounding	81	52	70	74	76	75	72	66	59

Measurement point: 2,8 m³/s; 928 Pa



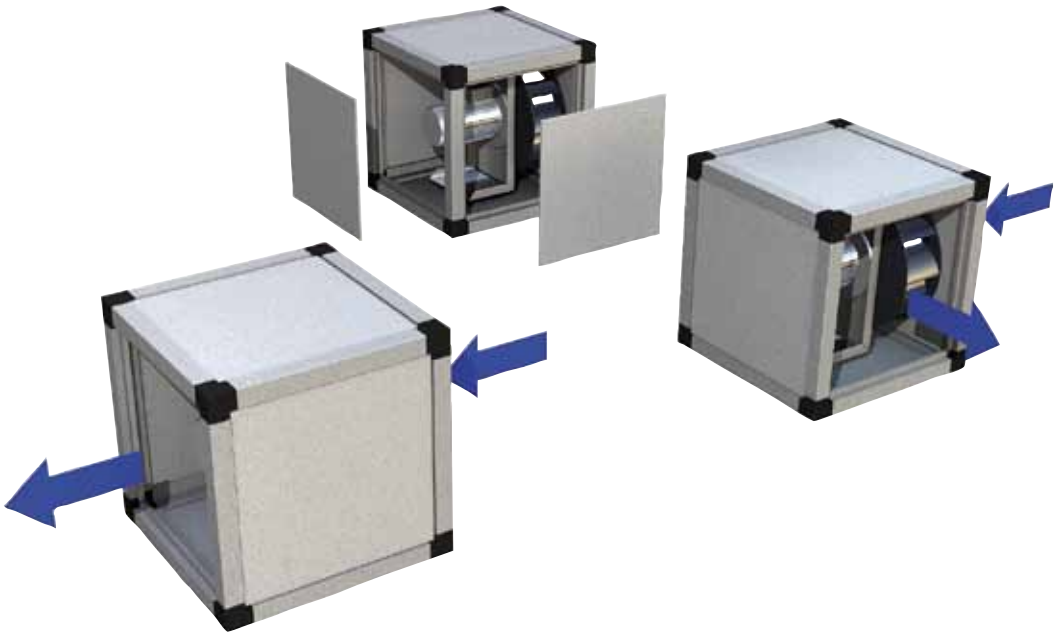


dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	78	65	67	72	73	73	69	64	56
L_{wA} Outlet	80	67	69	74	75	75	71	66	58
L_{wA} Surrounding	66	53	55	60	61	61	57	52	44

Measurement point: 2,25 m^3/s; 565 Pa

Installation example





Panels can be exchanged for different outlet positions.



KDRE/KDRD

- Speed-controllable
- Integral thermal contacts
- Can be installed in any position
- Maintenance-free and reliable

KDRE/KDRD fans have external rotor motors and mixed flow impeller. The KDRE/KDRD series is notable for its relatively high static pressure and high level of efficiency. The casing is manufactured from galvanised sheet steel.

To protect the motor from overheating, the KDRE/KDRD fans have integral thermal contacts with leads for connection to a motor protection device.

The fans can be installed in any position and are simple to couple using DS flexible connections.

ELECTRICAL ACCESSORIES



S-ET/STDT p. 341-342



RTRE p. 320



REU p. 320

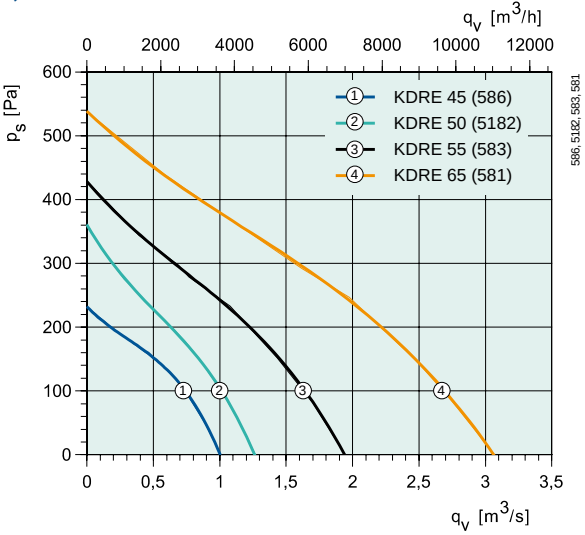


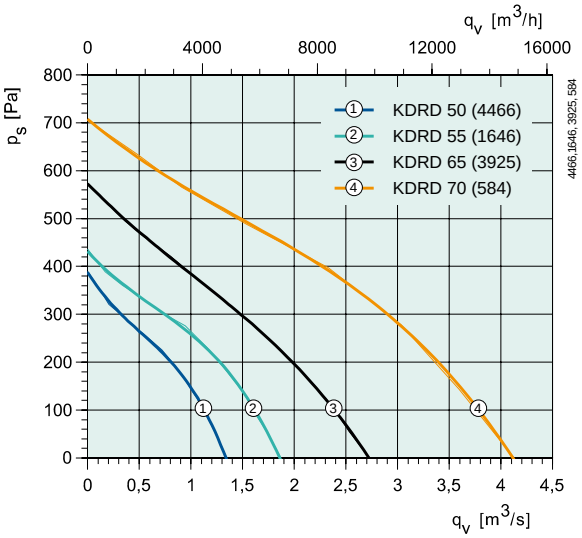
REE p. 321



RTRD/RTRDU p. 321

QUICK SELECTION



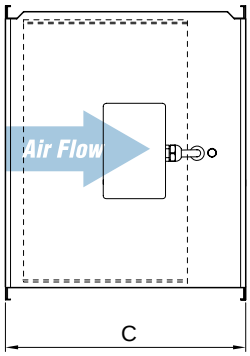


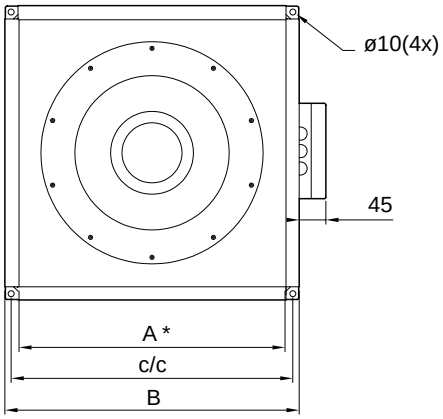
TECHNICAL DATA

		KDRE 45	KDRE 50	KDRD 50	KDRE 55	KDRD 55	KDRE 65
Art no.		1311	1313	1314	1315	1316	1317
Voltage/Frequency	V/50 Hz	230 1~	230 1~	400 3~	230 1~	400 3~	230 1~
Power	W	325	442	462	861	789	1501
Current	A	1.55	1.94	0.962	4.10	1.52	6.61
Max air flow	m3/s	1.00	1.27	1.34	1.94	1.87	3.07
R.p.m.	min-1	1387	1297	1397	1280	1315	1315
Max temp. of transported air	°C	70	70	70	45	49	70
" when speed controlled	°C	70	70	70	45	40	70
Sound pressure level at 3 m	dB(A)	45	52	54	51	55	61
Weight	kg	23.5	31	29	41	38	54
Insulation class, motor		F	F	F	F	F	F
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
Capacitor		8	10	–	16	–	30
Motor protection		S-ET 10	S-ET 10	STDT 16	S-ET 10	STDT 16	S-ET 10
Speed control, five-step	Transformer	RTRE 3	RTRE 5	RTRD 2	RTRE 5	RTRD 2	RTRE 7
Speed control, five step high/low	Transformer	REU 3*	REU 5*	RTRDU 2	REU 5*	RTRDU 2	REU 7*
Speed control, stepless	Thyristor	REE 2*	REE 4*	–	–	–	–
Wiring diagram p. 391-400		6	6	8	6	8	6

* + S-ET 10

DIMENSIONS





	A	c/c	B	C
KDRE 45	447	470	492	400
KDRE/D 50	502	520	547	450
KDRE/D 55	550	573	595	485
KDRE/D 65	661	680	707	510
KDRE	696	720	740	530

VENTILATION ACCESSORIES


DSK p. 370


LDK p. 365

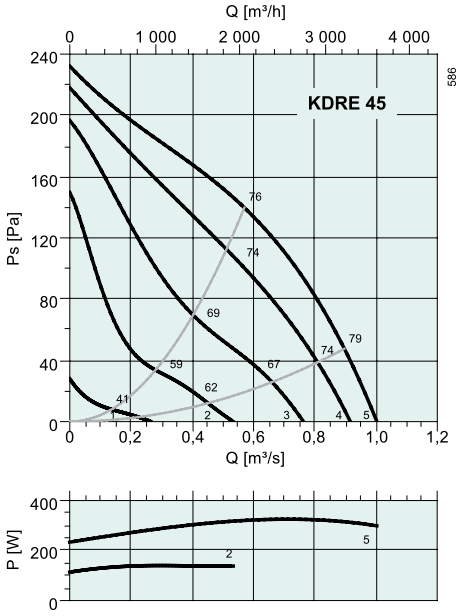

FFS p. 368


RBK p. 368

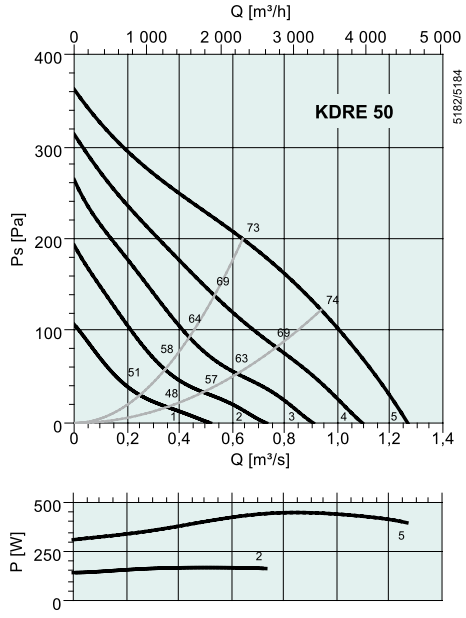

VBK p. 367

		KDRD 65	KDRD 70				
Art no.		1318	6690				
Voltage/Frequency	V/50 Hz	400 3~	400 3~				
Power	W	1250	2489				
Current	A	2.23	4.67				
Max air flow	m3/s	2.72	4.12				
R.p.m.	min-1	1341	1383				
Max temp. of transported air	°C	70	70				
" when speed controlled	°C	56	69				
Sound pressure level at 3 m	dB(A)	53	62				
Weight	kg	50	62				
Insulation class, motor		F	F				
Enclosure class, motor		IP 54	IP 54				
Motor protection		STDT 16	STDT 16				
Speed control, five-step	Transformer	RTRD 4	RTRD 7				
Speed control, five step high/low	Transformer	RTRDU 4	RTRDU 7				
Speed control, stepless	Thyristor	–	–				
Wiring diagram p. 391-400		8	8				

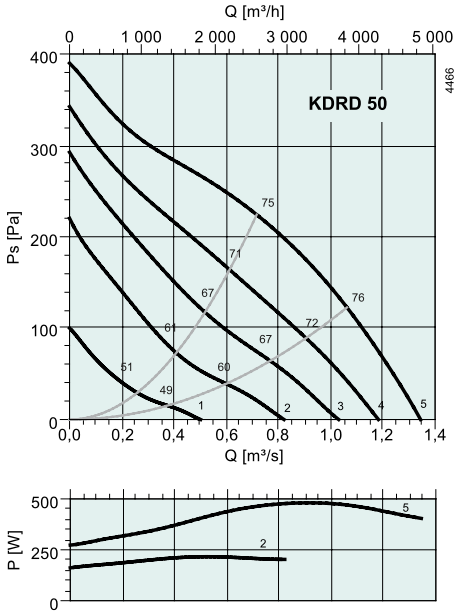
PERFORMANCE



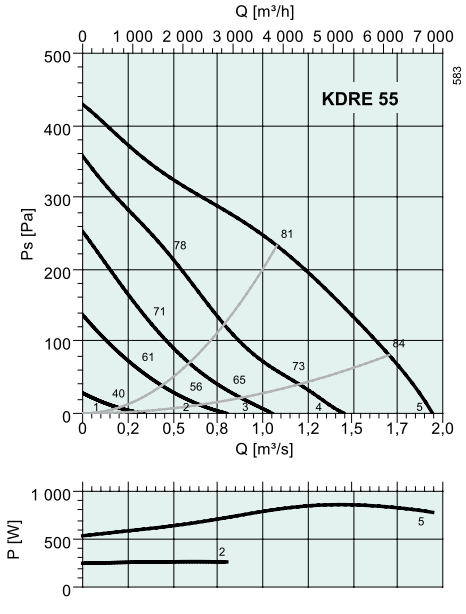
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	70	49	60	62	64	64	62	57	50
L_{wA} Outlet	74	51	61	63	66	71	67	58	49
L_{wA} Surrounding	52	33	40	47	46	47	43	35	31
With LDK 45									
L_{wA} Inlet	61	49	55	54	51	52	54	50	43
L_{wA} Outlet	64	51	56	55	53	59	59	51	42
Measurement point: 0,57 m³/s; 140 Pa									



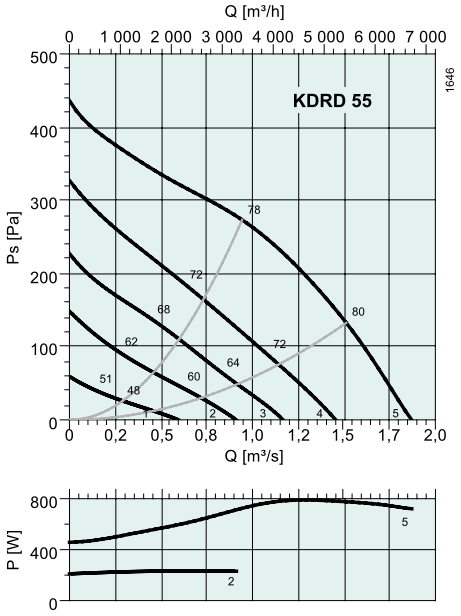
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	71	46	58	64	68	63	60	58	50
L_{wA} Outlet	74	47	62	64	68	69	65	62	54
L_{wA} Surrounding	59	27	45	57	52	49	47	44	40
With LDK 50									
L_{wA} Inlet	61	46	51	56	55	51	51	50	43
L_{wA} Outlet	64	47	55	56	55	57	56	54	47
Measurement point: 0,64 m³/s; 200 Pa									



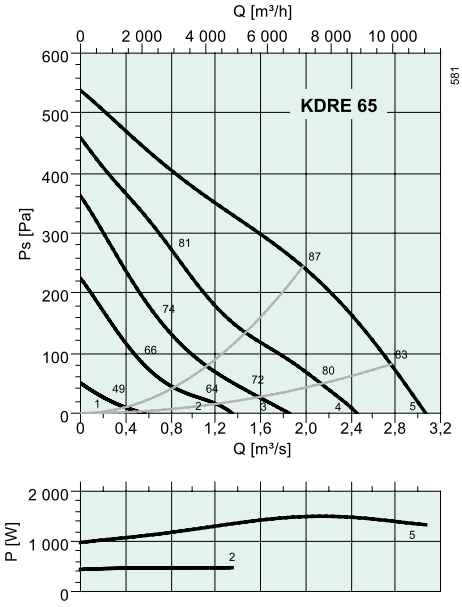
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	75	59	65	69	71	68	65	58	49
L_{wA} Outlet	79	57	68	69	71	75	71	63	54
L_{wA} Surrounding	61	30	51	57	53	56	52	44	36
With LDK 50									
L_{wA} Inlet	66	59	58	61	58	56	56	50	42
L_{wA} Outlet	69	57	61	61	58	63	62	55	47
Measurement point: 0,717 m³/s; 224 Pa									



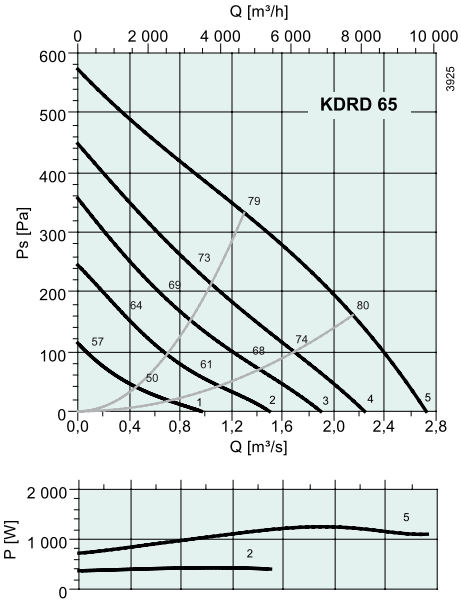
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	75	58	62	68	70	70	67	60	54
L_{wA} Outlet	80	58	64	69	72	76	72	64	57
L_{wA} Surrounding	58	43	48	56	46	49	44	40	34
With LDK 55									
L_{wA} Inlet	65	58	53	59	57	58	57	51	46
L_{wA} Outlet	69	58	55	60	59	64	62	55	49
Measurement point: 1,08 m³/s; 233 Pa									



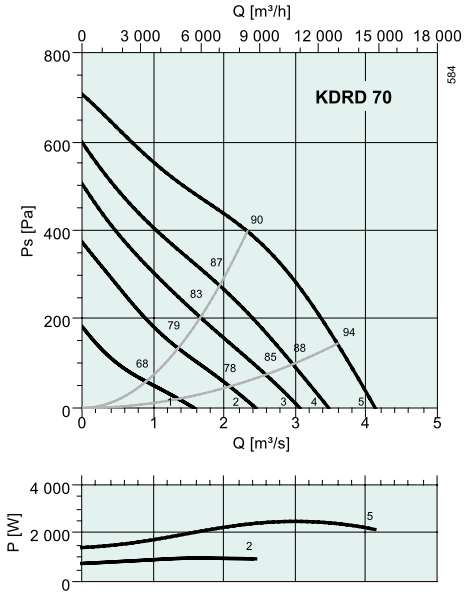
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	76	56	61	69	71	70	68	61	54
L_{wA} Outlet	80	59	65	69	74	77	73	65	57
L_{wA} Surrounding	62	57	48	59	51	50	47	44	44
With LDK 55									
L_{wA} Inlet	66	56	52	60	58	58	58	52	46
L_{wA} Outlet	70	59	56	60	61	65	63	56	49
Measurement point: 0,944 m³/s; 273 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	78	56	65	71	72	71	70	64	65
L_{wA} Outlet	86	55	67	74	78	83	79	73	75
L_{wA} Surrounding	68	36	53	63	60	64	58	50	54
With LDK 65									
L_{wA} Inlet	69	56	59	64	58	58	61	56	58
L_{wA} Outlet	76	55	61	67	64	70	70	65	68
Measurement point: 1,98 m³/s; 244 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	79	62	70	72	72	72	71	64	57
L_{wA} Outlet	84	62	68	70	78	81	77	69	61
L_{wA} Surrounding	60	40	47	58	50	50	49	37	27
With LDK 65									
L_{wA} Inlet	70	62	64	65	58	59	62	56	50
L_{wA} Outlet	73	62	62	63	64	68	68	61	54
Measurement point: 1,3 m³/s; 332 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	84	75	74	77	77	78	76	69	65
L_{wA} Outlet	89	74	76	79	82	85	80	73	67
L_{wA} Surrounding	69	44	54	63	62	64	60	54	49
With LDK 70									
L_{wA} Inlet	77	75	69	70	58	54	53	54	55
L_{wA} Outlet	78	74	71	72	63	61	57	58	57
Measurement point: 2,33 m³/s; 398 Pa									



100°C

IE2
2009/640/EG

MUB/T

- Motor outside of the air stream
- Integral cold conductors
- Low sound level
- Maintenance-free and reliable
- Pre-assembled isolator as standard

All MUB/T fans have impellers with backward curved blades, manufactured from aluminium, and IEC standard motors with efficiency class IE2 for all 400V three phase motors from 0.75 kW. Motors are outside the air stream. The casing consists of an aluminium frame with fiberglass reinforced plastic corners and double skin, galvanised steel panels with 20 mm mineral wool insulation. Panels are removable, allowing flexible ventilation solutions and including a quicklock access door. The MUB bottom panel is shaped as a grease tray and incorporates a premounted drain plug. An isolator switch is mounted on the casing. Motor protection by cold conductors or thermal contact, to be connected to an external motor protection device. Standard execution, seen in airflow direction: service door left, top outlet.

NB! Outlet spigot to be ordered as an accessory.



ELECTRICAL ACCESSORIES



FRQ p. 325



S-ET/STDT p. 341-342



RTRE p. 320



REU p. 320



RTRD/RTRDU p. 321



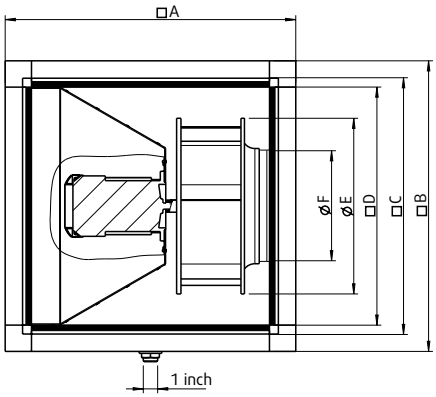
U-EK230E p. 340

TECHNICAL DATA

MUB/T		042 400DV	042 400E4	042 450D4-IE2	042 450E4	042 500D4-IE2	062 560D4-IE2	062 630D4-IE2
Art no.		33655	33656	33657	33658	33622	33659	33660
Voltage/Frequency	V/50 Hz	400 3~	230 1~	400 3~	230 1~	400 3~	400 3~	400 3~
Power at shaft	W	370	370	750	750	1500	2200	4000
Current	A	1.4	2.1	1.78	5.3	3.39	4.2	8.12
Max air flow	m3/s	1.13	1.11	1.72	1.68	2.23	3.25	4.12
R.p.m.	min-1	1370	1370	1400	1430	1400	1445	1450
Max temp. of transported air	°C	100	100	100	100	100	100	100
Sound pressure level at 3 m	dB(A)	47	47	49	50	53	55	67
Weight	kg	47	62	64	62	68	132	137
Insulation class, motor		F	F	F	F	F	F	F
Enclosure class, motor		IP 54	IP 54	IP 55	IP 54	IP 55	IP 55	IP 55
Capacitor	µF	–	12	–	30	–	–	–
Motor protection		STDT 16	S-ET 10	U-EK 230E	S-ET 10	U-EK 230E	U-EK 230E	U-EK 230E
Speed control, five-step		RTRD 2	RTRE 3	FRQ5(S)-4A	RTRE 7	FRQ5(S)-4A	FRQ5(S)-10A	FRQ5(S)-10A
Speed control, five step high/low	Transformer	RTRDU 2	REU 3*	–	REU 7*	–		–
Speed control, stepless		–	–	FRQ(S)-4A	–	FRQ(S)-4A	FRQ(S)-10A	FRQ(S)-10A
Speed control, electronic		–	–	–	–	–	FXDM 7	FXDM 13
Wiring diagram p. 391-400		13b	21	13b Y	21	13b Y	13b Y	13b D

* + S-ET 10

DIMENSIONS



MUB/T	□A	□B	□C	□D	øE	F
MUB 042 400	670	670	590	548	404	253
MUB 042 450	670	670	590	548	454	286
MUB 042 500	670	670	590	548	504	321
MUB 062 560	800	800	720	678	564	361
MUB 062 630	800	800	720	678	635	407

VENTILATION ACCESSORIES


FGV p. 370


SRKG p. 370


UGS p. 370


WSD p. 370

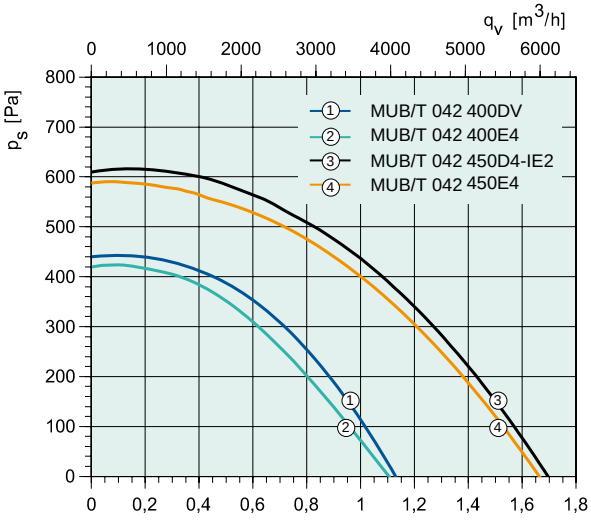

WSG p. 370

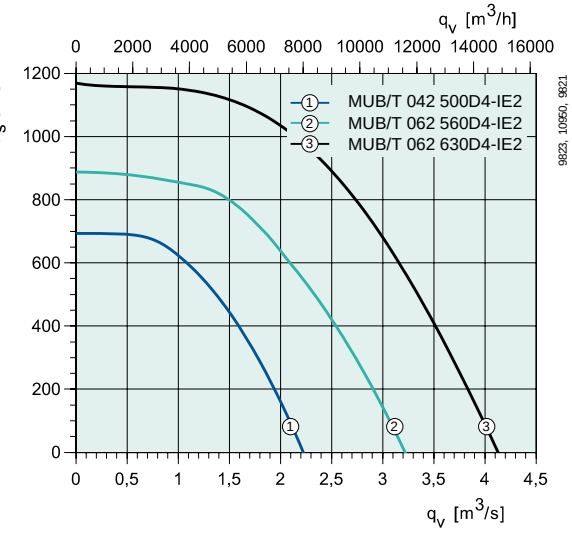

CCM inlet p. 375


CCM outlet p. 375

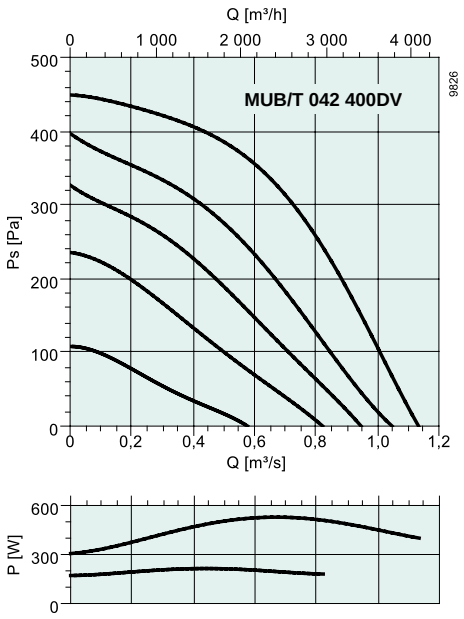

CCMI outlet p. 375

QUICK SELECTION



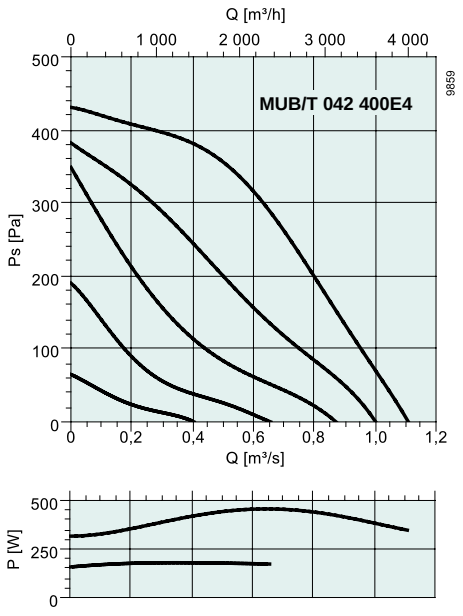


PERFORMANCE



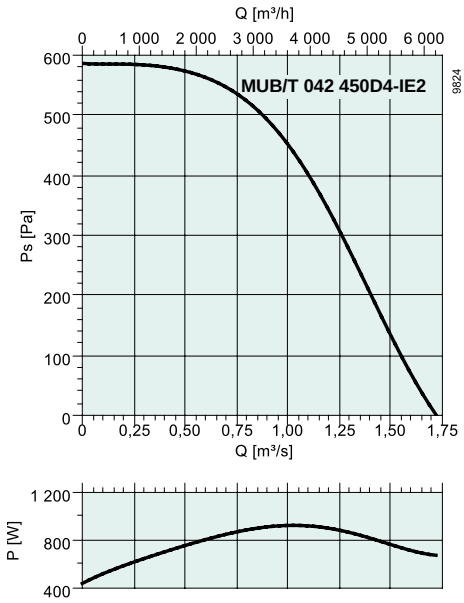
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	70	57	59	63	65	64	61	56	51
L_{wA} Outlet	72	59	61	65	67	66	63	58	51
L_{wA} Surrounding	54	41	43	47	49	48	45	40	33

Measurement point: 0,6 m^3/s; 385 Pa



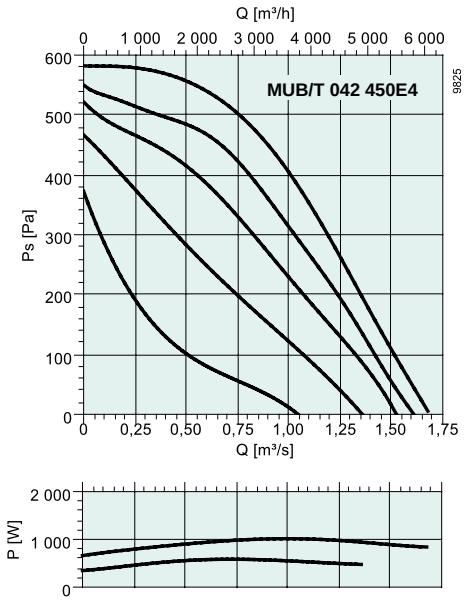
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	70	57	59	63	65	64	61	56	49
L_{wA} Outlet	72	59	61	65	67	66	63	58	51
L_{wA} Surrounding	54	41	43	47	59	48	45	40	33

Measurement point: 0,59 m^3/s; 380 Pa



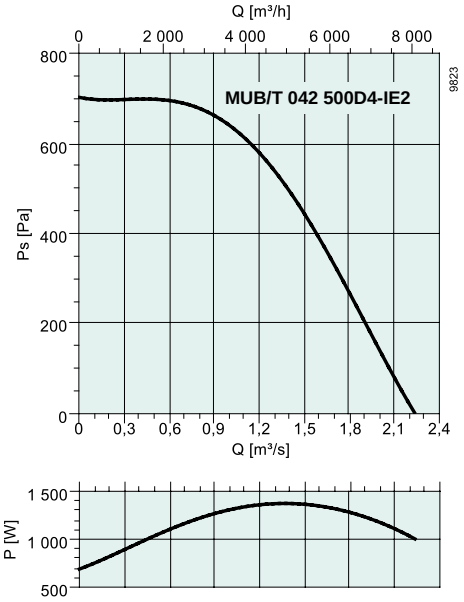
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	71	58	60	64	66	65	62	47	50
L_{wA} Outlet	73	60	62	66	68	67	64	59	52
L_{wA} Surrounding	56	43	45	49	51	50	47	42	35

Measurement point: 0,8 m^3/s; 400 Pa



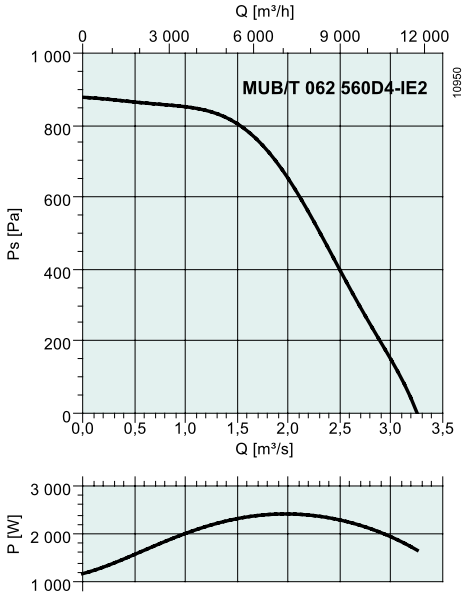
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	72	59	61	65	67	66	63	48	51
L_{wA} Outlet	74	61	63	67	69	68	65	60	53
L_{wA} Surrounding	57	44	46	50	52	51	48	43	36

Measurement point: 0,88 m^3/s; 470 Pa



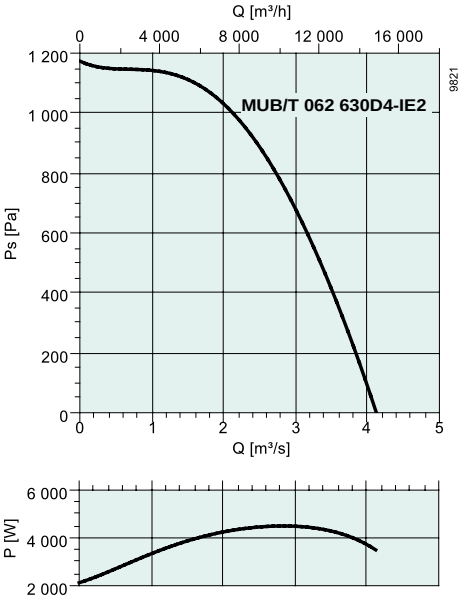
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	75	62	64	68	70	69	66	61	54
L_{wA} Outlet	77	64	66	70	72	71	68	63	56
L_{wA} Surrounding	60	47	49	53	55	54	51	46	39

Measurement point: 1,26 m^3/s; 470 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	78	65	67	71	73	72	69	64	57
L_{wA} Outlet	80	67	69	73	75	74	71	66	59
L_{wA} Surrounding	63	50	51	56	58	57	54	59	42

Measurement point: 2,25 m^3/s; 565 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	86	73	75	79	81	80	77	72	65
L_{wA} Outlet	88	78	77	81	83	82	79	74	67
L_{wA} Surrounding	75	62	64	68	70	69	61	66	54

Measurement point: 1,95 m^3/s; 911 Pa



120°C 200°C IE2 2009/640/EG Green Ventilation sileo

General

Systemair roof fans have been developed for the use in effective exhaust air systems. Ranges DVS/DVSI/DHS/DVN/DVNI/DVC are equipped with a sea water resistant aluminium casing. The integrated bird screen is manufactured from galvanized and powder coated steel. The impellers are manufactured either from compound material or from aluminium.

Range TFSR/TFSK has a casing manufactured from galvanized steel, powder coated in black. The units are supplied with cord and plug.

Systemair range

Systemair roof fans are available for vertical discharge (ranges DVS, DVSI, DVC, DVN and DVNI up to size 900) and for horizontal discharge (ranges TFSR/TFSK and DHS up to size 710). The vertical discharge units are also available with sound insulated casing, having a 50 mm insulation (density 60 kg/m^3).

All of Systemair roof fans are equipped with self-cleaning impellers with backward curved blades. A comprehensive range of easy to install accessories is available.

Motors

Systemair roof fans DVS/DVSI/DHS and TFSR/TFSK are equipped with external rotor motors, speed controllable by voltage. DVN is driven by IEC standard motors in efficiency class IE2 as per guideline 2009/640/EC. DVEX have ATEX-certified external rotor motors (see Explosion proof fans page 188-223). DVC is equipped with electronically commutated EC-motor, either with automatic speed control by pressure (integrated pressure sensor) or with manual speed control by an external 0-10V signal. Most of the roof fans are equipped with thermal contacts or cold conductors for motor protection. DVS/DHS/DVN from size 355 have to be connected to an external motor protection unit.

TFSR/TFSK EC 124

Roof fan with EC-motor, swing out: up to 0.39 m³/s, 1 phase.



TFSR/TFSK 126

Roof fans, swing out: up to 0.39 m³/s, backward curved impeller, 1 phase.



DHA sileo 130

Supply air roof fan: up to 4.4 m³/s, 1 and 3 phase, axial impeller.



DVC/DVCI 132

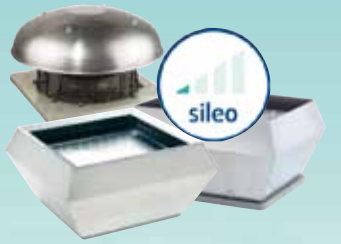
Roof fan with EC-motor: up to 3.8 m³/s, 1 and 3 phase. DVCI insulated version.



DHS/DVS/DVSI sileo 138

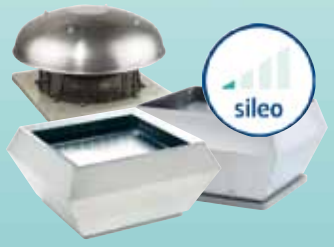
Roof fans: up to 4.00 m³/s, 1 and 3 phase. DVSI insulated version.

New generation of backward curved "sileo" impellers with extremely low noise level from size 400 up to 630.



DHS/DVS/DVSI 146

Roof fans: up to 4.00 m³/s, backward curved impeller, 1 and 3 phase. DVSI insulated version.



DVN/DVNI 152

Roof fans: up to 8.75 m³/s, backward curved impeller, 1 and 3 phase. DVNI insulated version.



DVV 158

Roof fans: up to 15.20 m³/s, backward curved impeller, 3 phase. DVVI insulated version.



ZRS 164

Flue gas roof fans: up to 0.14 m³/s, 1 phase.





TFSR/TFSK EC

- High efficiency EC-motors
- 100% speed controllable
- Swing-out

The TFSR EC and TFSK EC roof mounted fans are driven by EC motors and intended for use as extract fans in smaller premises such as self contained flats and apartments as well as storage areas, smaller work-rooms etc. EC-technology is intelligent technology, using integral electronic control to ensure that the motor always runs at optimal load and guarantees that the energy utilized effectively is many times higher for EC motors compared with AC motors.

The fans are delivered with a pre-wired potentiometer (0-10V) that allows you to easily find the desired working point. The isolation switch is integrated and there are several alternative roof curbs available as accessories. The tilting mechanism simplifies cleaning and maintenance. To protect the motor from overheating, the fans have integrated thermal contact with automatic reset.

TFSR EC comes with circular connection whilst the TFSK EC is provided with a square connection. The horizontal discharge creates smaller internal pressure losses and prevents accumulation of ice on the roof. The protection guard prevents unintentional contact with the impeller. Both models are delivered with a connection box.

TFSR is delivered with a spigot connection if the installation requires direct duct connection. TFSR 125-160 are delivered with a ø160 spigot and TFSR 200-315 with a ø200. The spigot is not pre-assembled to the fan.

ELECTRICAL ACCESSORIES



MTP 10
p. 341



CXE/AV
p. 323

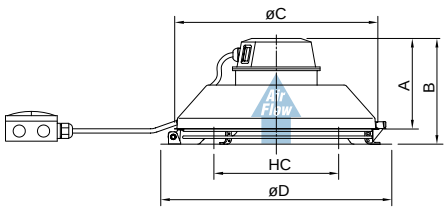


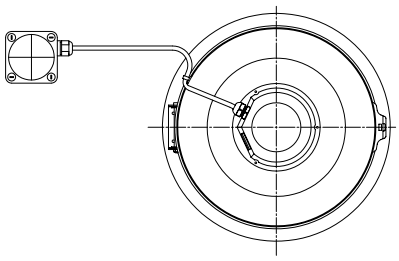
EC-vent
p. 329-330

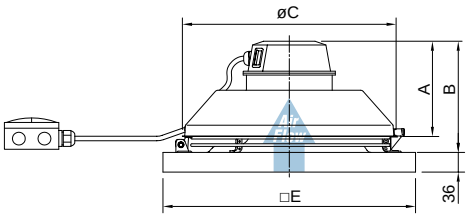
TECHNICAL DATA

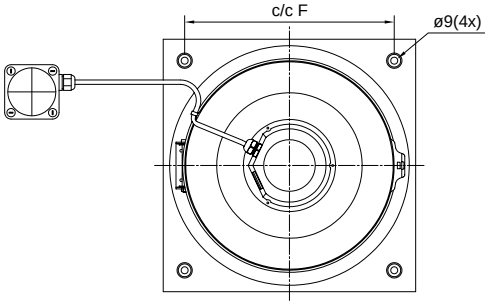
TFSR/TFSK		160 EC	200 EC				
Art no		1226/1223	1227/1224				
Voltage/Frequency	V/50/60 Hz	230 1~	230 1~				
Power	W	81.5	74.6				
Current	A	0.64	0.587				
Max air flow	m^3/s	0.161	0.216				
R.p.m.	min-1	3162	2501				
Max temp. of transported air	°C	45	45				
" when speed controlled	°C	45	45				
Sound pressure level at 4m/10 m	dB(A)	43	43				
Weight	kg	4.2/4.6	5.4/6.2				
Insulation class, motor		B	B				
Enclosure class, motor		IP 44	IP 44				
Speed control, electronic		MTP 10	MTP 10				
Wiring diagram p. 391-400		41	41				

DIMENSIONS









TFSR	A	B	C	D	HC
160 EC	147	172	334	380	205
200 EC	150	187	364	439	250

HC= Hole diameter for fixing, ø6x4

TFSK	A	B	øC	□E	c/cF
160 EC	147	172	334	421	330
200 EC	150	187	364	421	330

VENTILATION ACCESSORIES



TOB p. 372

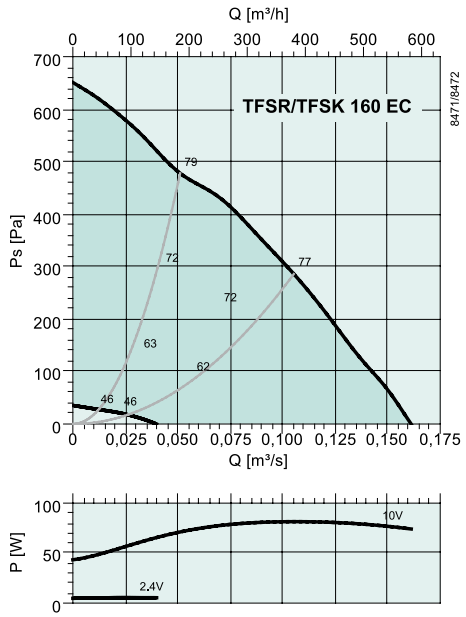


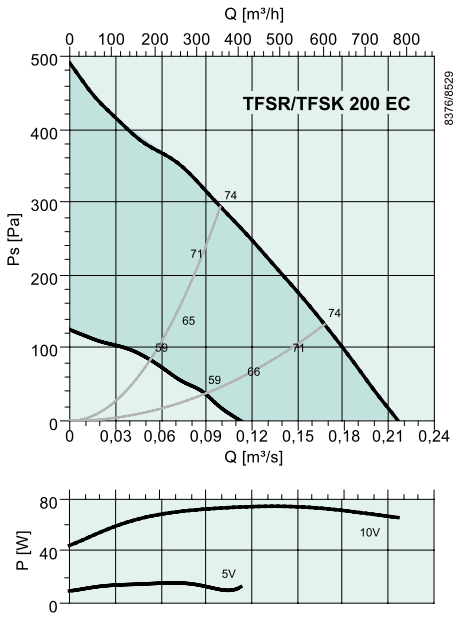
LDC p. 348



RSK p. 355

PERFORMANCE





dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	79	52	77	72	70	69	66	62	50
L_{wA} Outlet	74	37	61	58	68	70	68	63	54
Measurement point: 0,0511 m^3/s; 478 Pa									

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	74	49	66	66	68	68	61	57	46
L_{wA} Outlet	74	27	61	62	69	69	67	61	49
Measurement point: 0,0992 m^3/s; 294 Pa									



TFSR/TFSK

The TFSR/TFSK roof fans are fitted with a single-inlet centrifugal fan with backward-curved blades and external rotor motors. The motors can be tilted outwards to facilitate inspection and service. They have integral on/off switch and are supplied with 1 m cable.

TFSR has circular connection. Cable for fast connection to the mains e.g. via the connection box on the roof curb TOB or TOS. TFSR is delivered with a spigot connection if the installation requires direct duct connection. TFSR 125-160 are delivered with a ø160 spigot and TFSR 200-315 with a ø200. The spigot is not pre-assembled to the fan.

TFSK has square connection, the cable is easily connected to our standard roof curbs TG, FDS and SSD. These fans are suitable for exhaust-air ventilation systems, e.g. single and multiple dwellings, offices and day nurseries. To protect the motors from overheating, all motors have an integral thermal contact with automatic reset. The fans are manufactured in powder-coated, galvanized sheet steel and are available in standard powder coat black finish.

ELECTRICAL ACCESSORIES



RE p. 320

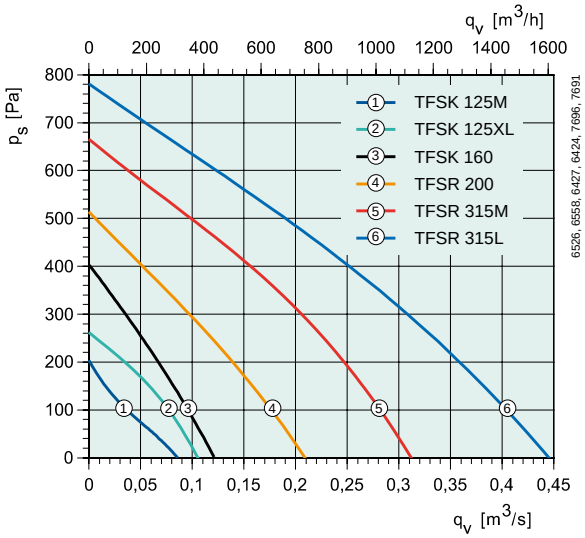


REU p. 320



REE p. 321

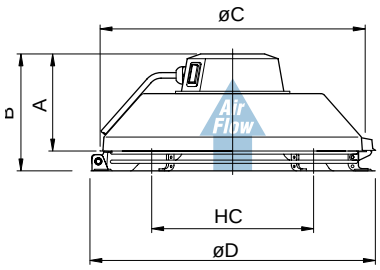
QUICK SELECTION

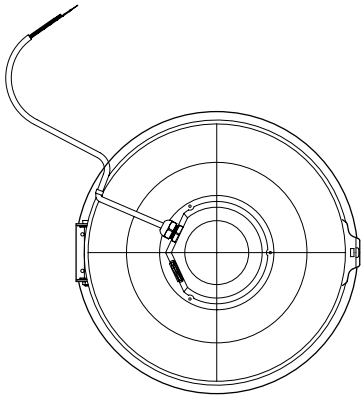


TECHNICAL DATA

TFSR/TFSK		125 M	125 XL	160	200	315 M	315 L
Art no.		1330/1344	1332/1346	1333/1348	1334/1349	1336/1350	1343/1352
TFSK 125M, 160, 200, 315M are suitable for 60Hz							
Voltage/Frequency	V/50 Hz	230 1~	230 1~	230 1~	230 1~	230 1~	50 Hz 230 1~
Power	W	24.8	53.9	58.3	108	195	329
Current	A	0.13	0.26	0.26	0.47	0.87	1.43
Max air flow	m^3/s	0.086	0.106	0.121	0.208	0.313	0.444
R.p.m.	min^{-1}	1965	2531	2461	2537	2628	2401
Max temp. of transported air	°C	70	40	70	62	47	42
" when speed controlled	°C	70	40	70	62	47	38
Sound pressure level at 4m/10m	dB(A)	23	33	36	40	46	53
Weight	kg	2.5	2.5/3.3	3.3	4.2	8.0/9.7	9.1/10.7
Insulation class, motor		B	F	B	B	F	F
Enclosure class, motor		IP 44	IP 44	IP 44	IP 44	IP 44	IP 44
Capacitor	µF	1.5	1.5	2	3	5	8
Motor protection		Aut. th. cont.	Aut. th. cont.	Aut. th. cont.	Aut. th. cont.	Aut. th. cont.	Aut. th. cont.
Speed control, five step	Transf.	RE 1,5	RE 1,5	RE 1,5	RE 1,5	RE 1,5	RE 1,5
Speed control, five step high/low	Transf.	REU 1,5	REU 1,5	REU 1,5	REU 1,5	REU 1,5	REU 1,5
Speed control, stepless	Thyristor	REE 1	REE 1	REE 1	REE 1	REE 1	REE 2
Wiring diagram p. 391-400		29	29	29	29	29	29

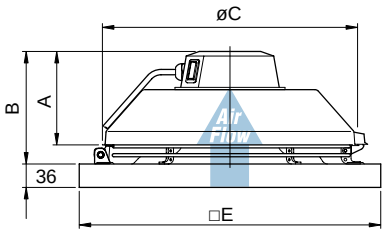
DIMENSIONS

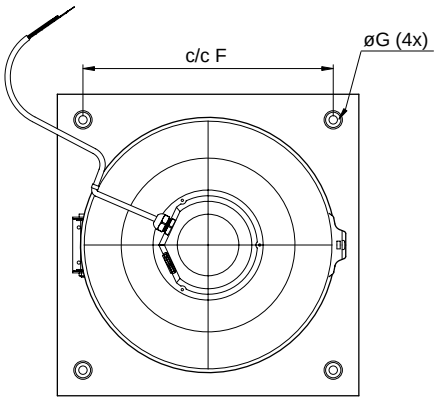




TFSR	A	B	C	D	HC
125 M/XL	119	144	284	315	205
160	120	145	334	380	205
200	123	160	364	439	250
315 M/L	160	206	404	485	250

HC= Hole diameter for fixing, ø6x4





TFSK	A	B	øC	□E	c/cF	øG
125 M/XL	119	144	284	321	245	9
160	120	145	334	421	330	9
200	123	160	364	421	330	9
315 M/L	160	206	404	521	450	11

VENTILATION ACCESSORIES


TOB p. 372


TG p. 373

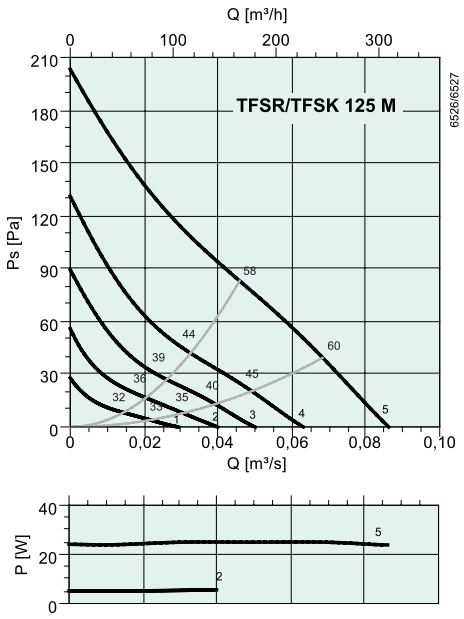

LDC p. 348


RSK p. 355

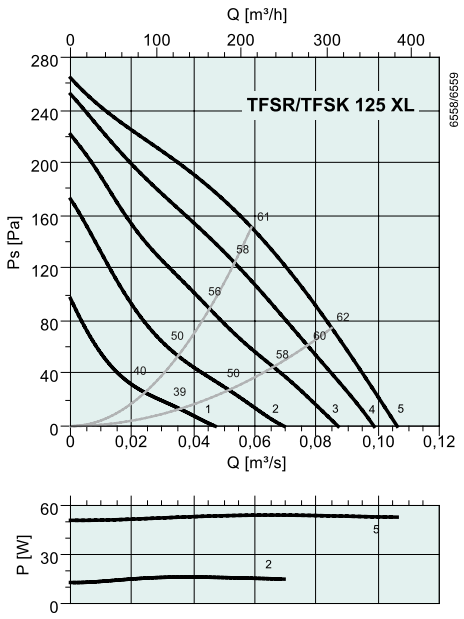

FDS p. 374


SSD p. 374

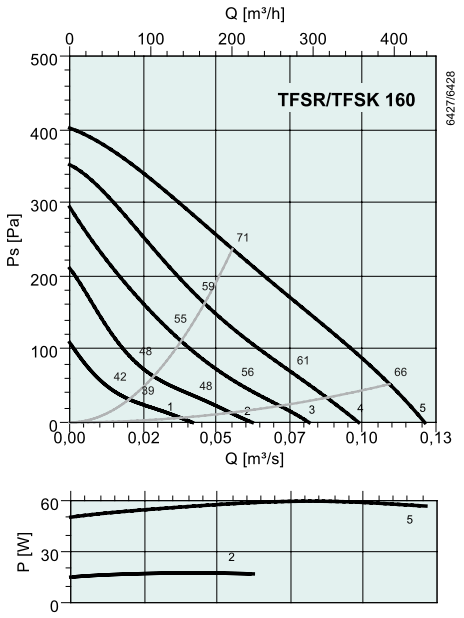
PERFORMANCE



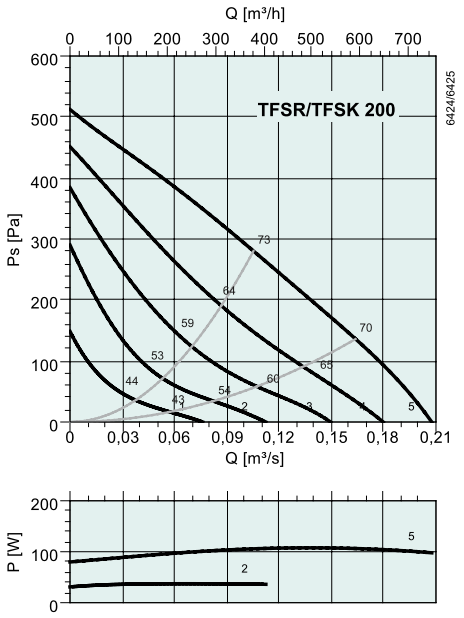
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	58	38	50	52	51	50	49	32	23
L_{wA} Outlet	54	20	41	45	47	50	49	37	25
Measurement point: 0,0458 m³/s; 83,1 Pa									



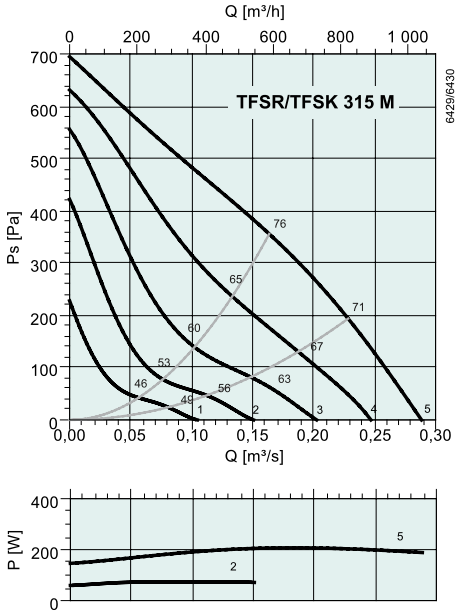
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	68	47	60	63	58	62	57	49	37
L_{wA} Outlet	64	27	46	51	53	60	60	50	37
Measurement point: 0,0589 m³/s; 151 Pa									



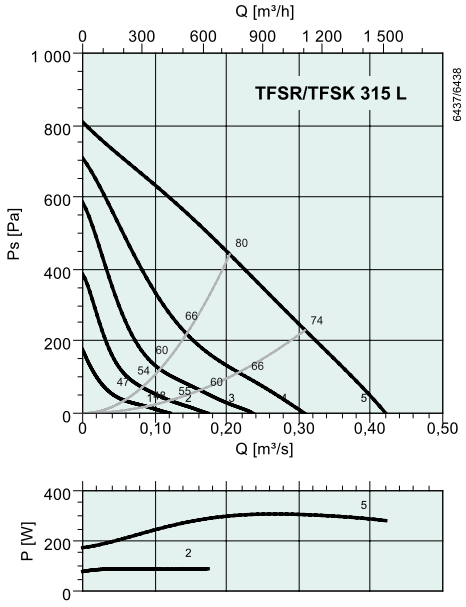
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	68	50	63	63	61	61	58	49	38
L_{wA} Outlet	67	26	53	55	58	62	62	54	48
Measurement point: 0,0556 m³/s; 237 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	71	50	62	64	64	66	63	56	47
L_{wA} Outlet	71	31	52	56	61	67	67	61	49
Measurement point: 0,105 m³/s; 280 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	74	49	65	64	70	69	62	57	46
L_{wA} Outlet	77	29	57	61	71	73	70	60	48
Measurement point: 0,176 m^3/s; 367 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	78	51	70	68	75	71	67	63	54
L_{wA} Outlet	84	37	62	65	82	79	73	64	57
Measurement point: 0,219 m^3/s; 454 Pa									



DHA sileo

- Roof fan for supply air
- Casing and base frame manufactured from galvanized steel, powder coated RAL 7010; cowl manufactured from seawater resistant aluminium.
- With external rotor motors, speed controllable by reducing voltage with thyristor or transformer. Three phase version to can be switched between D/Y connection for two speeds.
- Motor protection via integral thermal contacts with external leads for connection to a motor protection switch.
- Inlet protection guard
- Size 400: The axial impeller is manufactured from black high efficiency composite material.
- Size 500-630: The axial impeller is manufactured from pressure die cast aluminium and is powder coated in black.

ELECTRICAL ACCESSORIES



S-ET/STDT p. 341-342



RTRE p. 320



REU p. 320



RTRD p. 321



RTRDU p. 321



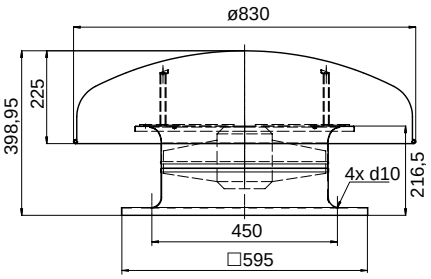
REE p. 321



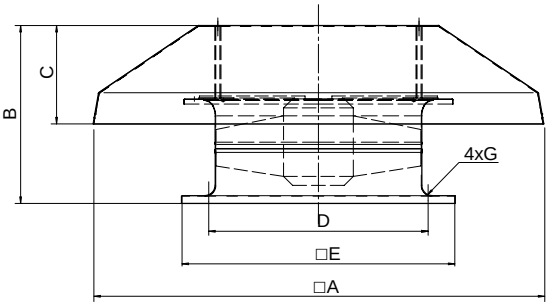
S-DT2 SKT p. 340

DIMENSIONS

DHA 400



DHA 500/630



DHA	□A	B	C	D	□E	G
500	1100	434	240	535	665*	4xd12
630	1282	481.5	240	750	939*	4xd14

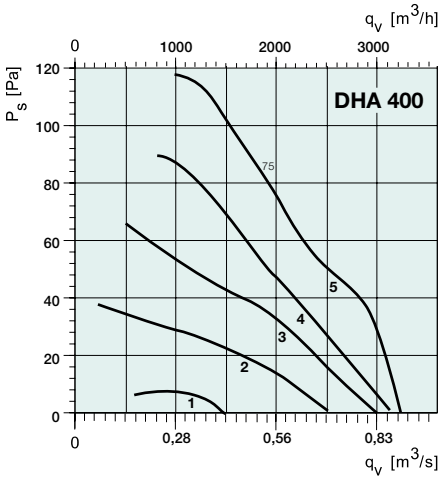
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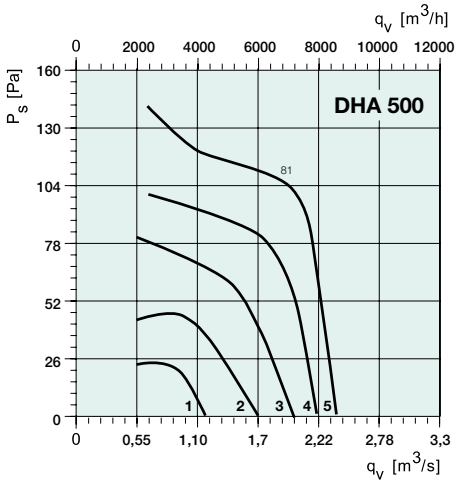
TECHNICAL DATA

DHA sileo		400DV	400E4	500DV	500E4	630DV	630DS	630E6
Art no.		34501	34500	34503	34502	31492	34505	34504
Voltage/Frequency	V/50/60 Hz	400 3~	230 1~	400 3~	230 1~	400 3~	400 3~	230 1~
Power	W	230	240	770	750	1900	630	730
Current	A	0.44	1.1	1.7	3.35	3.2	1.25	3.4
Max air flow	m^3/s	0.9	0.9	2.3	2.3	4.44	2.8	2.7
R.p.m.	min-1	1370	1350	1300	1230	1320	900	910
Max temp. of transported air	°C	70	65	70	70	60	70	70
Sound pressure level at 4 m/10 m	dB(A)	40	40	50	50	67/59	43	50
Weight	kg	18	18	35	35	39	51	51
Insulation class, motor		F	F	F	F	F	F	F
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	IP54	IP 54	IP 54
Capacitor	µF	–	5	–	16	–	–	16
Motor protection		STDT 16	S-ET 10	STDT 16	S-ET 10	STDT 16	STDT 16	S-ET 10
Speed control, five step	Transformer	RTRD 2	RTRE 1.5	RTRD 2	RTRE 5	RTRD 4	RTRD 2	RTRE 3
Speed control, five step high/low	Transformer	RTRDU 2	REU 1.5**	RTRDU 2	REU 5**	RTRDU 4	RTRDU 2	REU 3**
Speed control, two step, 400V D/Y		S-DT2 SKT	–	S-DT2 SKT	–	S-DT2 SKT	S-DT2 SKT	–
Speed control, stepless	Thyristor	–	REE 1**	–	REE 4**	–	–	–
Wiring diagram p. 391-400		18	6a	18	6a	18	18	6a

** + S-ET 10

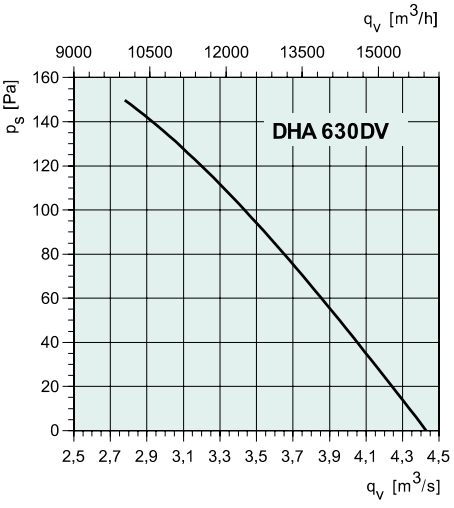
PERFORMANCE

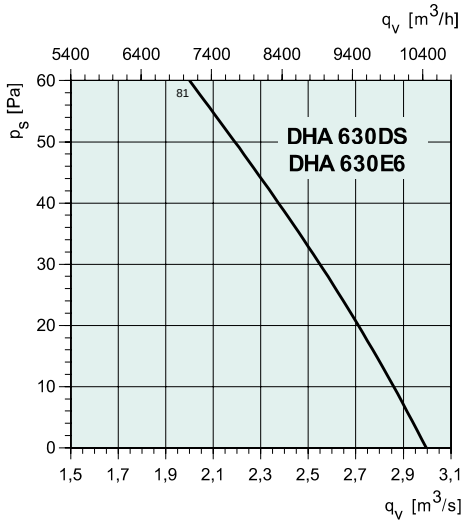




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
400DV									
L_{wA} Inlet	69	49	57	58	61	63	63	58	50
L_{wA} Outlet	69	47	56	60	61	65	63	58	48
Measurement point: 0.678 m³/s; 95.8 Pa									
400E4									
L_{wA} Inlet	68	48	56	59	60	63	62	57	50
L_{wA} Outlet	69	46	56	60	61	65	63	57	48
Measurement point: 0.693 m³/s; 90.4 Pa									

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
500DV									
L_{wA} Inlet	71	43	53	55	60	66	67	62	53
L_{wA} Outlet	70	45	53	59	62	65	66	61	52
Measurement point: 1,76 m³/s; 122 Pa									
500E4									
L_{wA} Inlet	72	45	59	59	60	67	69	62	51
L_{wA} Outlet	72	45	60	60	61	67	68	61	51
Measurement point: 1.61 m³/s; 123 Pa									





dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
630DV									
L_{wA} Inlet/Outlet	90	81	82	83	83	82	80	76	72
Measurement point: 2,4 m³/s; 150 Pa									
630DS/E6									
L_{wA} Inlet/Outlet	81	72	73	74	74	73	71	67	63
Measurement point: 2,0 m³/s; 60 Pa									

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
630DV									
L_{wA} Inlet	71	50	54	58	63	67	66	60	53
L_{wA} Outlet	71	50	54	58	63	67	65	60	52
Measurement point: 1.8 m³/s; 111 Pa									
630DS/E6									
L_{wA} Inlet	73	48	55	65	65	68	68	61	53
L_{wA} Outlet	74	49	56	67	68	70	65	60	53
Measurement point: 1.96 m³/s; 102 Pa									

VENTILATION ACCESSORIES



FDS p. 374



DVC/DVCI

- 100% speed controllable
- Integrated motor protection
- Low noise level
- Safe and maintenance free operation
- Energy-saving

The DVC roof fans are driven by EC-external rotor motors, so called energy saving motors with high efficiency. The input voltage for single phase units can vary between 200 and 277V, for three phase units between 380 and 480V. All motors are suitable for 50Hz and 60Hz and from size 355 up to 630 suspended on effective vibration dampers.

Motor protection is integrated in the electronics of the motor, no additional external motor protection device is needed. The DVC-P versions have integrated pressure sensors and the electronics are programmed for a pressure constant operation. Two potentiometers in the electronics allow for 2 set values (day/night), one additional contact for an external setting. Casing from seawater-resistant aluminum. Backward curved impellers manufactured from polyamide PA 6 for size 190 and 315. From 355 up to 630 impellers manufactured from seawater resistant aluminium.

ELECTRICAL ACCESSORIES



REV p. 340



MTP 10 p. 341

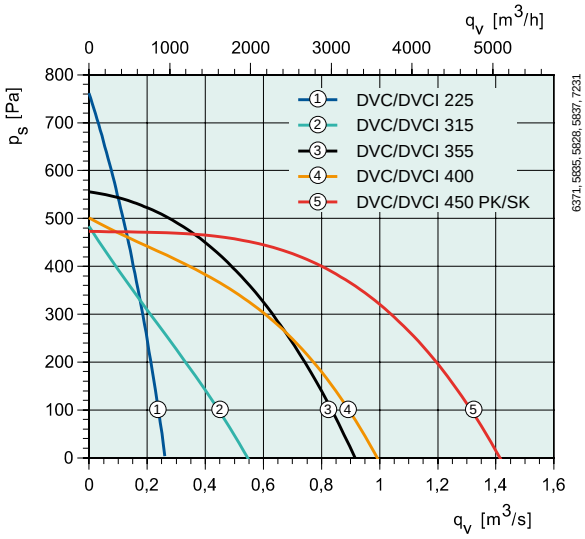


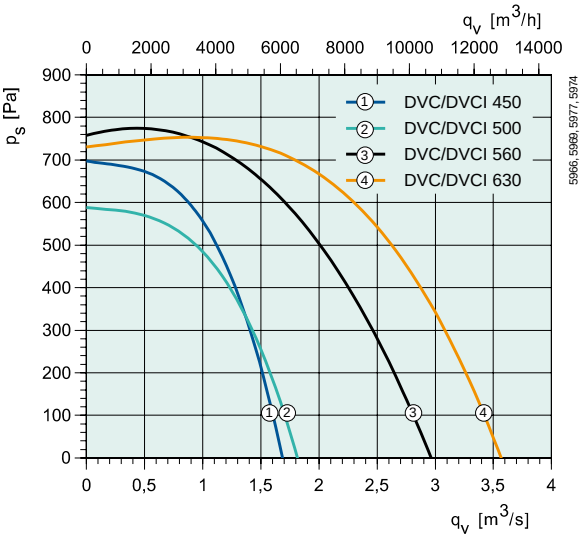
MTV 1/010 p. 341



EC-vent p. 329-330

QUICK SELECTION

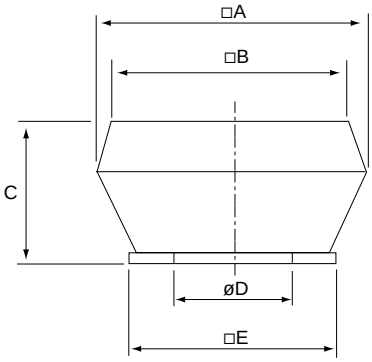


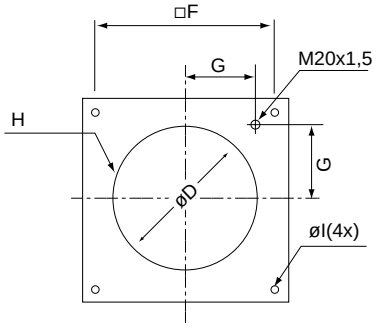


TECHNICAL DATA

DVC/DVCI		225-P/225-S	315-P/315-S	355-P/355-S	400-P/400-S	450-PK/450-SK
Art no. DVC-P/DVC-S	Tech. data is relating to DVC-S	30690/30667	30634/30619	30635/30620	30682/30622	31327/31427
Art no. DVC-P+REV/DVC-S +REV		30691/30725	30684/30585	30692/30621	30685/30623	–
Art no. DVCI-P/DVCI-S		30701/30693	30702/30694	30703/30695	30704/30696	33195/32744
Art no. DVC-P+REV/DVCI-S +REV		30717/30709	30718/30710	30719/30711	30720/30712	–
Voltage/Frequency	V/50/60 Hz	230 1~	230 1~	230 1~	230 1~	230 1~
Fan power consumption (P1)	W	166	173	378	381	614
Current	A	1.17	1.18	2.31	2.30	2.79
Max air flow	m³/s	0.261	0.546	0.918	1.00	1.43
R.p.m.	min-1	3278	1867	1657	1348	1300
Max temp. of transported air	°C	60	60	60	60	60
" when speed controlled	°C	60	60	60	60	60
Sound pressure level at 4 m/10 m, DVC	dB(A)	58/51	47/39	50/42	49/41	53/45
Sound pressure level at 4 m/10 m, DVCI	dB(A)	53/45	41/33	46/38	43/35	40/32
Weight, DVC/DVCI	kg	8/13	11/16	25/30	29/34	45/38
Insulation class, motor		B	B	B	B	B
Enclosure class, motor		IP 44	IP 44	IP 44	IP 44	IP 54
Speed control, electronic		MTP 10	MTP 10	MTP 10	MTP 10	MTP 10
Wiring diagram p. 391-400		23b/24	23b/24	23b/24	23b/24	28/25

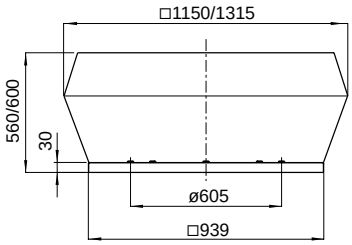
DIMENSIONS

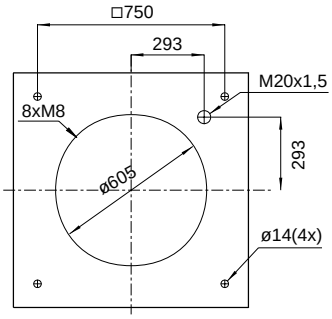




DVC/DVCI	□A	□B	C	øD	□E	□F	G	H	øI
190-225	370/497	295	170/179	213	335	245	105	6xM6	10(4x)
315	560/690	470	330	285	435	330	146	6xM6	10(4x)
355-400	720/874	618	390/439	438	595	450	200	6xM8	12(4x)
450-500	900/968	730/748	465/479	438	665	535	237	6xM8	12(4x)

DVC 560-630





VENTILATION ACCESSORIES


SSD p. 374


FDS p. 374


ASK p. 380


VKS p. 380

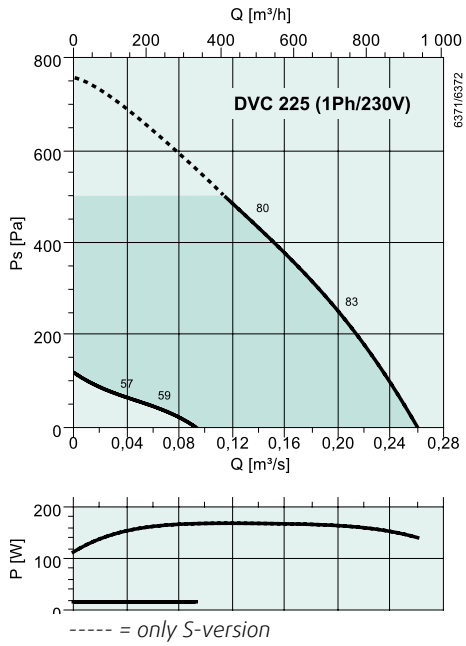

ASS p. 381


ASF p. 375

Roof fans

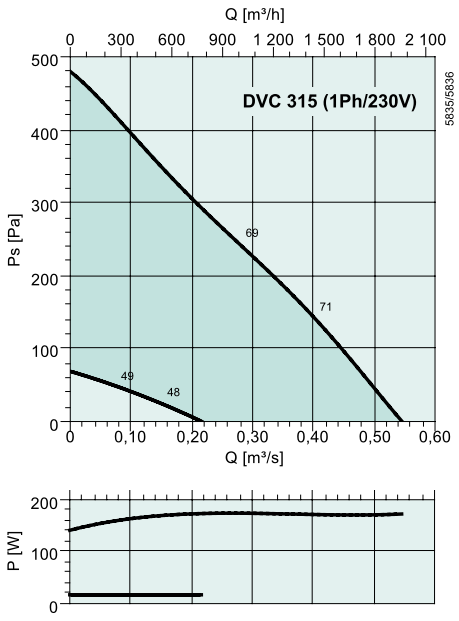
DVC		450-P/450-S	500-P/500-S	560-P/560-S	630-P/630-S	
Art no. DVC-P/DVC-S	Tech. data is relating to DVC-S	30683/30626	30679/30628	30680/30630	30681/30632	
Art no. DVC-P + REV/DVC-S + REV		30686/30627	30687/30629	30688/30631	30689/30633	
Art no. DVCI-P/DVCI-S		30705/30697	30706/30698	30707/30699	30708/30700	
Art no. DVCI-P + REV/DVCI-S + REV		30721/30713	30722/30714	30723/30715	30724/30716	
Voltage/Frequency	V/50/60 Hz	400 3~	400 3~	400 3~	400 3~	
Power	W	1048	984	1873	2444	
Current	A	1.79	1.66	2.88	3.72	
Max air flow	m^3/s	1.70	1.84	2.99	3.59	
R.p.m.	min-1	1558	1339	1359	1209	
Max temp. of transported air	°C	60	60	60	60	
" when speed controlled	°C	60	60	60	60	
Sound pressure level at 4/10 m, DVC	dB(A)	51/48	55/47	63/55	64/56	
Sound pressure level at 4/10 m, DVCI	dB(A)	50/42	51/43	55/47	57/49	
Weight, DVC/DVCI	kg	45/43	49/57	58/70	85/65	
Insulation class, motor		B	B	F	F	
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	
Speed control, electronic		MTP 10	MTP 10	MTP 10	MTP 10	
Wiring diagram p. 391-400		26/27	26/27	26/27	26/27	

PERFORMANCE

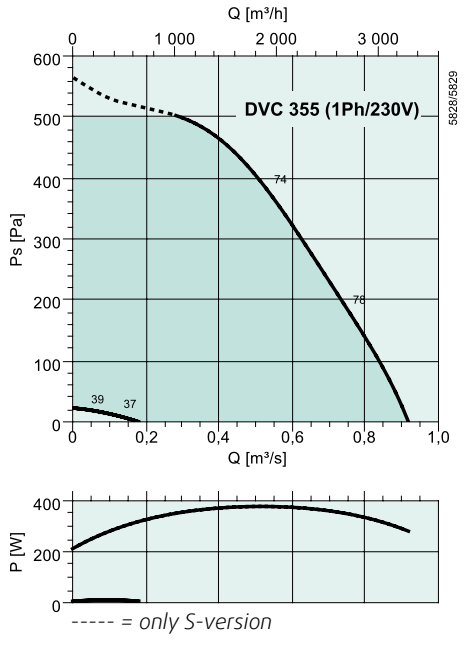


----- = only S-version

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	78	44	58	64	74	72	72	70	60
L_{wA} Surrounding	82	45	58	62	77	74	77	73	63
With SSD									
L_{wA} Inlet	70	41	59	63	65	64	61	56	49
Measurement point: 0,13 m³/s; 448 Pa									

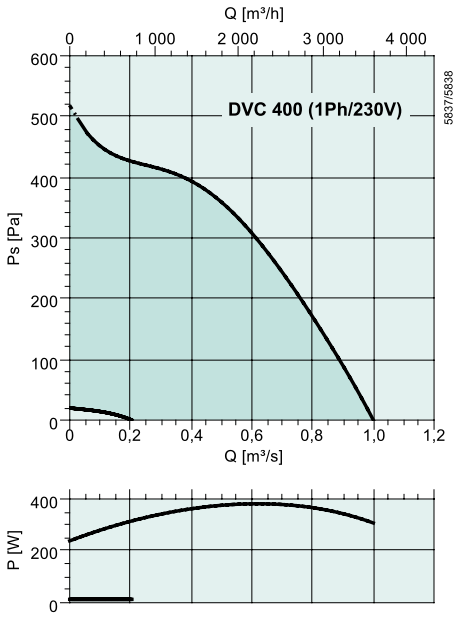


dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	67	41	56	59	63	59	55	54	49
L_{wA} Surrounding	70	42	57	60	67	64	59	56	49
With SSD									
L_{wA} Inlet	60	31	49	53	55	54	51	46	39
Measurement point: 0,28 m³/s; 243 Pa									

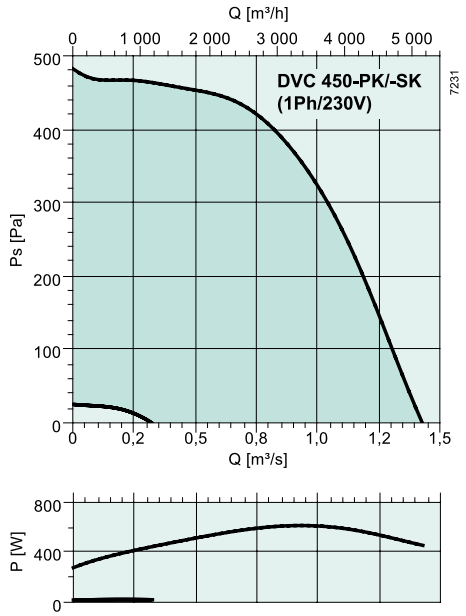


----- = only S-version

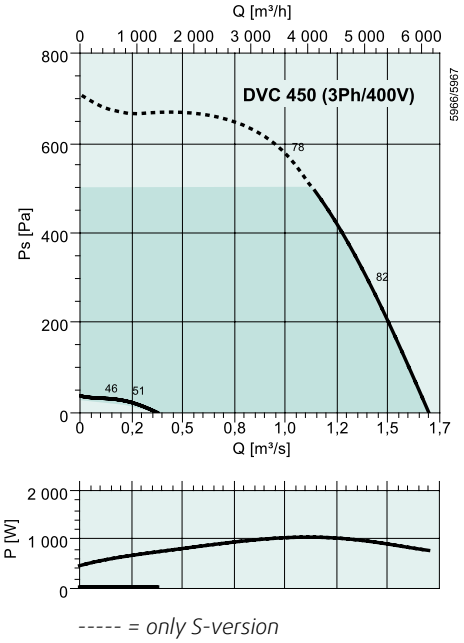
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	71	37	65	62	65	63	62	60	56
L_{wA} Surrounding	73	38	60	66	68	67	65	62	56
With SSD									
L_{wA} Inlet	64	35	53	57	59	58	55	50	43
Measurement point: 0,54 m³/s; 378 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	70	40	59	67	67	60	59	60	59
L_{wA} Outlet	72	40	56	67	67	64	62	61	56
With SSD									
L_{wA} Inlet	63	34	52	56	58	57	54	49	42
Measurement point: 0,748 m³/s; 210 Pa									

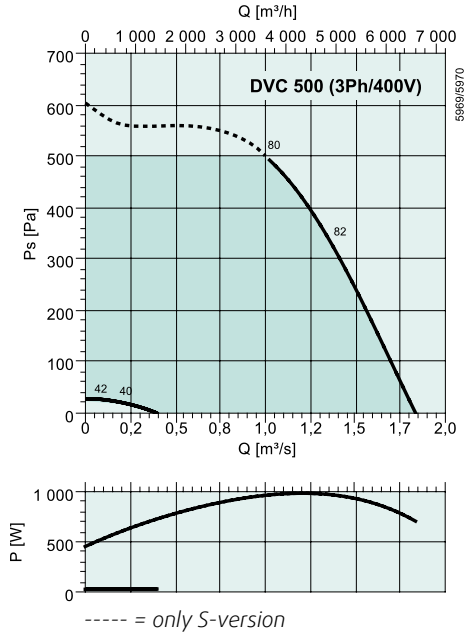


dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	74	61	63	67	69	68	65	60	53
L_{wA} Surrounding	76	63	65	69	71	70	67	62	55
With SSD									
L_{wA} Inlet	64	58	58	58	56	48	40	38	36
Measurement point: 0,56 m³/s; 450 Pa									



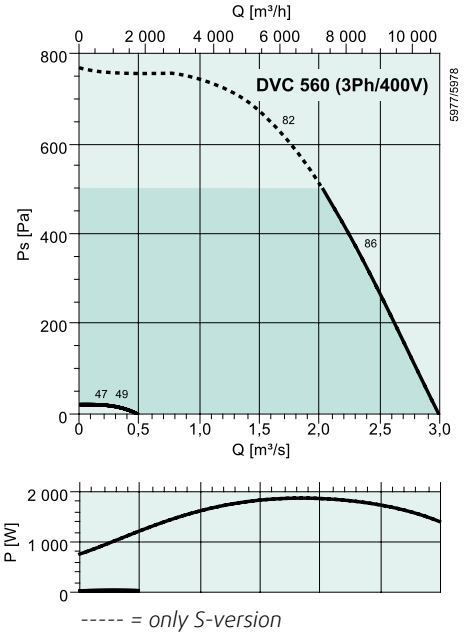
----- = only S-version

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	77	43	63	70	70	65	67	71	69
L_{wA} Surrounding	78	47	64	71	73	70	69	71	68
With SSD									
L_{wA} Inlet	70	41	59	63	65	64	61	56	49
Measurement point: 1,01 m³/s; 566 Pa									



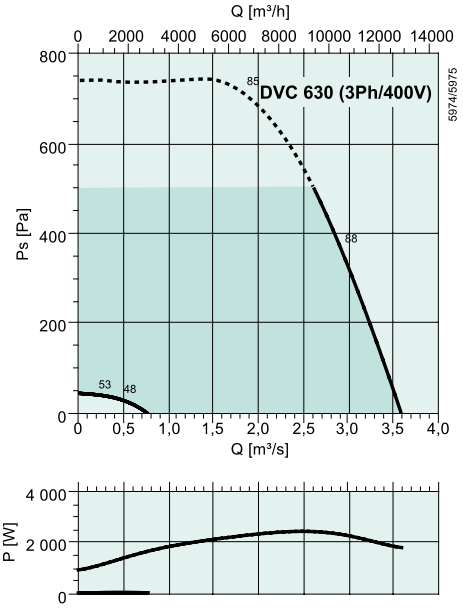
----- = only S-version

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	77	40	64	75	69	66	65	64	61
L_{wA} Surrounding	78	42	63	72	73	70	68	67	61
With SSD									
L_{wA} Inlet	70	41	59	63	65	64	61	56	49
Measurement point: 0,99 m³/s; 503 Pa									



----- = only S-version

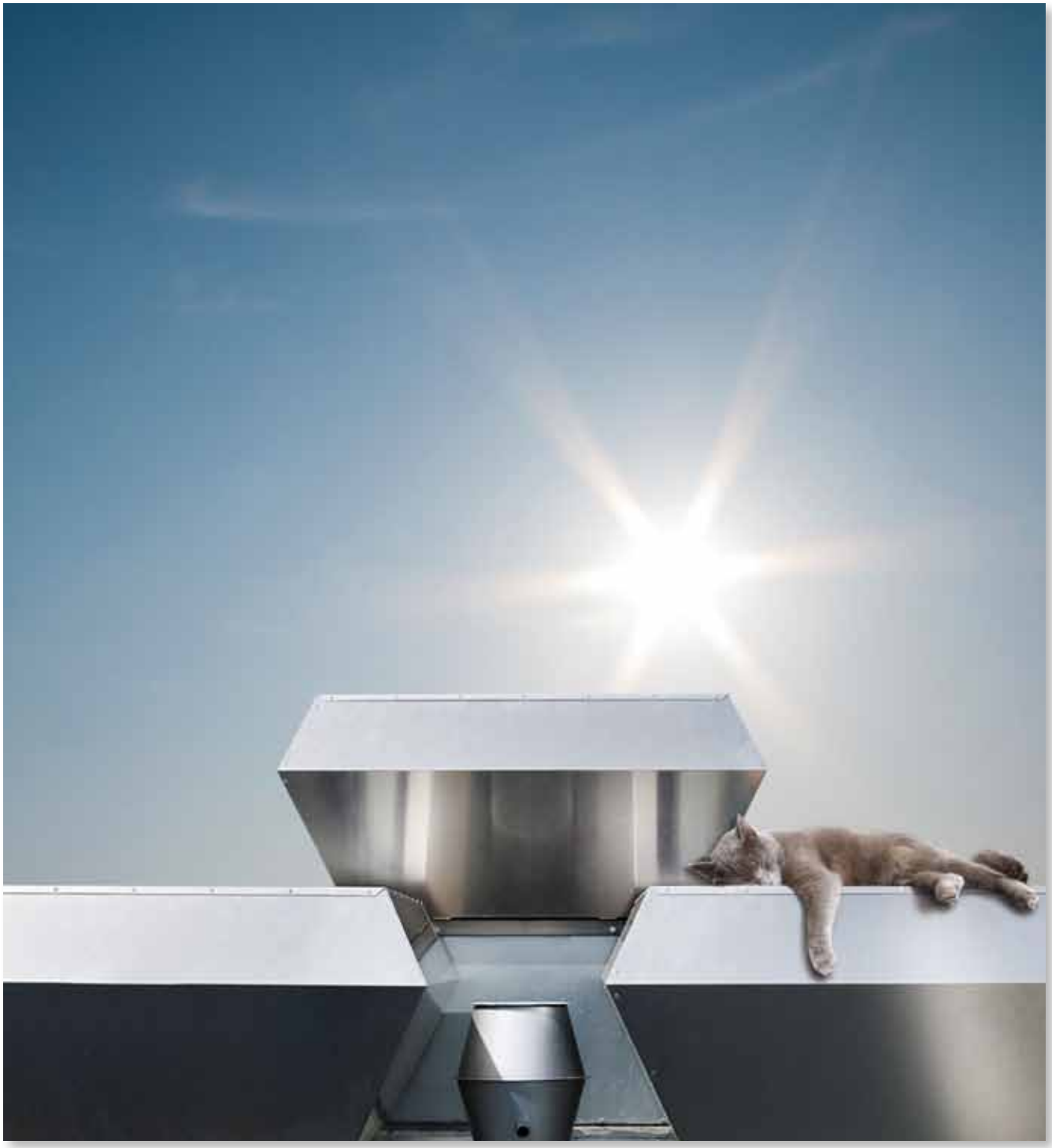
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	81	48	70	71	73	69	75	77	69
L_{wA} Surrounding	86	53	74	78	80	77	78	80	71
With SSD									
L_{wA} Inlet	75	46	64	68	70	69	66	61	54
Measurement point: 1,66 m³/s; 630 Pa									



----- = *only S-version*

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	82	47	74	78	75	69	71	74	67
L_{wA} Surrounding	87	52	77	77	81	78	78	80	70
With SSD									
L_{wA} Inlet	76	47	65	69	71	70	67	62	55
Measurement point: 1,83 m^3/s; 713 Pa									

Sileo version of roof fans DHS, DVS, DVSI



A completely new generation of modern Systemair roof fans which were developed and built consistently according to the company's set target: low noise level, high performance. Especially suited to all uses and areas of application sensitive to noise. You can see and hear the result: a reduction in sound of up to 50 % at the same system performance and an increased level of efficiency compared to its predecessors.



DHS with horizontal outlet.
DVS with vertical outlet.
DVSI has a 50 mm mineral wool insulation for lower noise levels.

DHS/DVS/DVSI sileo

- Available from sizes 400 up to 630
- High efficiency
- Speed-controllable
- Integral thermal contacts
- Excellent sound level
- Extensive range of accessories
- Maintenance-free and reliable

The DVS/DHS/DVSI sileo, in sizes from 400 up to 630, is well suited for applications requiring high air volumes at medium pressure and very low noise levels. These models have 3D profiled impellers with backward curved blades and external rotor motors. All motors are speed controllable by voltage. For speed controlling of the DVS/DHS/DVSI sileo roof fans with a frequency converter,an all pole sine filter is required. The motors are suspended on effective vibration dampers.
DVS/DHS/DVSI ...E4 / E6: 1~ motor
DVS/DHS/DVSI ...DV / DS: 3~ with Y/D-connection for 2-speeds

To protect the motors from overheating the sileo range motors are equipped with thermal contacts with external leads for connection to a motor protection device. The casing is made from aluminum and the base frame from hot-dip galvanized steel. Suitable for coastal applications. The impellers of the sileo types are manufactured from high-performance composite material with highly efficient 3D fan blade profile technology.

sileo

ELECTRICAL ACCESSORIES


S-ET/STDT
p. 341-342


RTRE p. 320


RTRD/RTRDU
p. 321


REU p. 320


REE p. 321


S2S 160
p. 340


S-DT2 SKT
p. 340

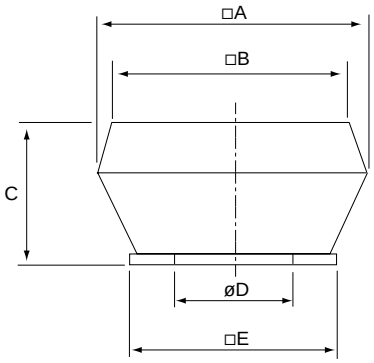
TECHNICAL DATA

DHS/DVS/DVSI		400DS	400DV	400E4	400E6	450DV	450E4	450E6	499DV
Art no. DHS		33348	33347	33349	33350	33351	33352	33353	33354
Art no. DVS; tech. data is relating to DVS		33316	33315	33317	33318	33319	33320	33321	33322
Art no. DVSI		33332	33331	33333	33334	33335	33336	33337	33338
Voltage/Frequency	V/50 Hz	400 3~	400 3~	230 1~	230 1~	400 3~	230 1~	230 1~	400 3~
Power	W	129	209	466	169	667	665	241	907
Current	A	0.255	0.564	2.25	0.84	1.32	2.93	1.05	1.7
Max air flow	m3/s	0.684	1.11	1.1	0.739	1.44	1.4	0.979	1.82
R.p.m.	min-1	797	1436	1324	890	1238	1259	863	1125
Max temp. of transported air	°C	60	60	60	60	60	60	60	60
" when speed controlled	°C	60	60	60	60	60	60	60	60
Sound pressure level DVS*	dB(A)	33/25	46/38	46/38	37/29	49/41	49/41	40/32	51/43
Weight	kg	25/25/31	27/28/33	27/29/33	27/27/33	39/39/45	39/41/45	39/39/45	43/42/47
Insulation class, motor		F	F	F	F	F	F	F	F
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
Capacitor	µF	–	–	10	5	–	16	8	–
Wiring diagram p. 391-400		18	18	6	6	18	6	6	18

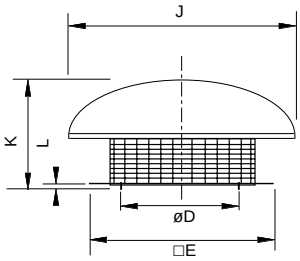
* at 4/10 m. DHS +2 dB, DVSI -9 dB

DIMENSIONS

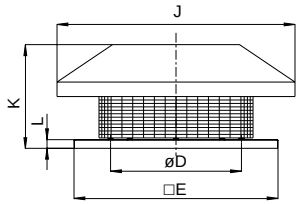
DVS/DVSI



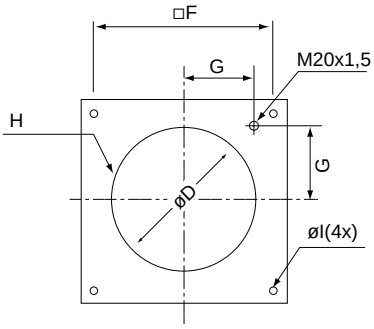
DHS 400-499



DHS 560-630



DHS/DVS/DVSI bottom view



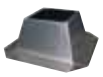
DHS sileo	□A	□B	C	øD	□E	□F	G	H	øI	øJ	K	L
400E4/E6/DV/DS	–	–	–	438	595	450	200	6xM8	12	720	330	30
450E4/499DV/500DV/DS/E6	–	–	–	438	665	535	237	6xM8	12	830	490	30
560DV/DS/630DV/DS	–	–	–	605	939	750	293	8xM8	14	1100	535	30

DVS sileo	□A	□B	C	øD	□E	□F	G	H	øI	J	K	L
400E4/E6/DV/DS	720	618	390	438	595	450	200	6xM8	12	–	–	–
450E4/499DV/500DV/DS/E6	900	730	465	438	665	535	237	6xM8	12	–	–	–
560DV/DS/630DV/DS	1150	–	560	605	939	750	293	8xM8	14	–	–	–

DVSI sileo	□A	□B	C	øD	□E	□F	G	H	øI	J	K	L
400E4/E6/DV/DS	874	618	439	438	595	450	200	6xM8	12	–	–	–
450E4/499DV/500DV/DS/E6	968	748	479	438	665	535	237	6xM8	12	–	–	–
560DV/DS/630DV/DS	1315	–	600	605	939	750	293	8xM8	14	–	–	–

VENTILATION ACCESSORIES


SSD p. 374


FDS p. 374

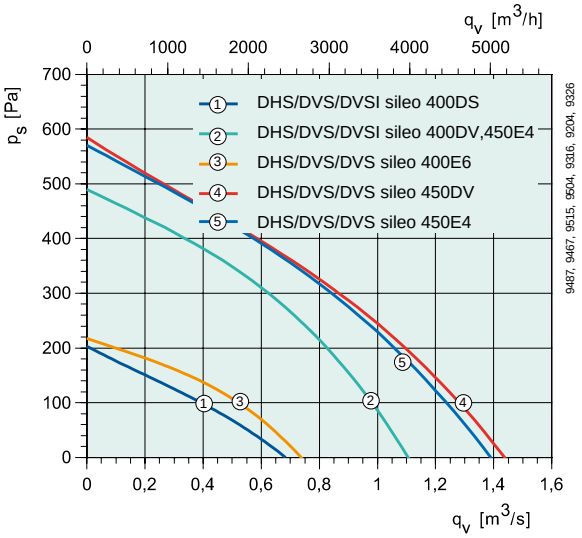

ASK p. 380

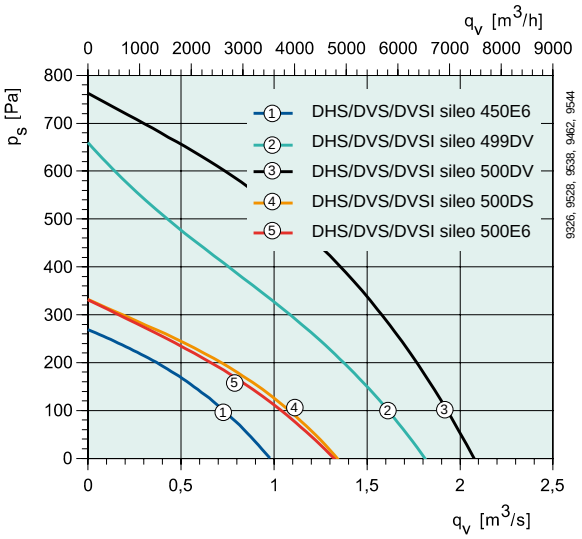

VKS p. 380

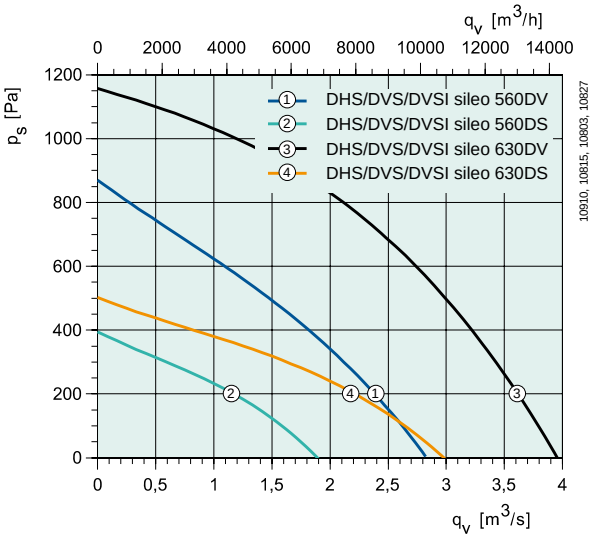

ASS p. 381


ASF p. 375

QUICK SELECTION







DHS/DVS/DVSI		500DV	500DS	500E6	560DV	560DS	630DV	630DS
Art no. DHS		33356	33357	33358	33359	33360	33361	33362
Art no. DVS Tech. data is relating to DVS		33324	33325	33326	33327	33328	33329	33330
Art no. DVSI		33340	33341	33342	33343	33344	33345	33346
Voltage/Frequency	V/50 Hz	400 3~	400 3~	230 1~	400 3~	400 3~	400 3~	400 3~
Power	W	1241	428	380	1767	597	3870	1110
Current	A	2.24	0.931	1.67	3.29	1.03	6.47	2.2
Max air flow	m³/s	2.08	1.34	1.32	2.82	1.91	3.98	3.00
R.p.m.	min⁻¹	1337	860	841	1195	820	1361	846
Max temp. of transported air	°C	60	60	60	55	40	50	60
" when speed controlled	°C	60	60	60	55	40	50	60
Sound pressure level DVS*	dB(A)	53/45	42/34	40/32	54/46	52/44	68/60	56/48
Weight	kg	41/46/57	41/49/57	41/41/57	58/58/70	47/47/59	85/85/99	65/65/79
Insulation class, motor		F	F	F	F	F	F	F
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
Capacitor	µF	–	–	12	–	–	–	–
Wiring diagram p. 391-400		18	18	6	18	18	18	18

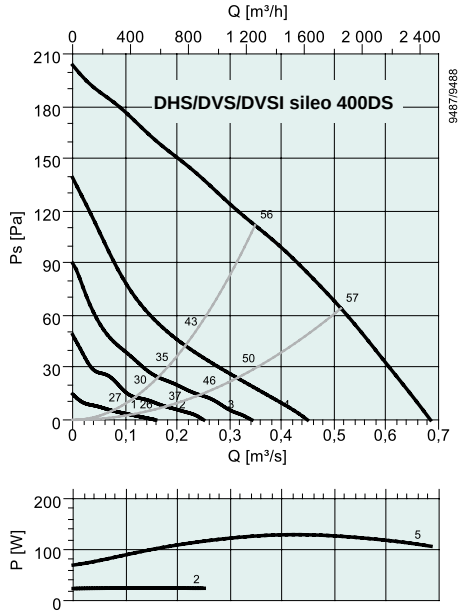
* at 4/10 m. DHS +2 dB, DVSI -9 dB

SPEED CONTROL

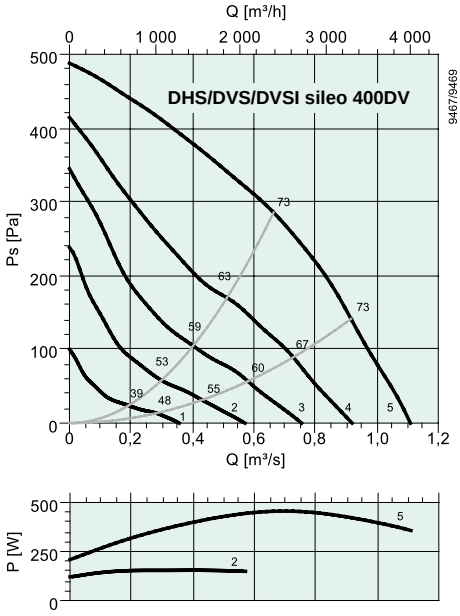
DHS/DVS/DVSI sileo	*Transformer* Five step	*Transformer* Five step high/low	*Electronic* Two step	*Thyristor* Stepless
400E4, 450E6, 500E6	RTRE 3	REU 3*	–	REE 2
400E6	RTRE 1.5	REU 1.5*	–	REE 1
450E4	RTRE 5	REU 5*	–	REE 4
400DV/DS, 499DV, 500DS, 560DS	RTRD 2	RTRDU 2*	S-DT2SKT	–
500DV, 560DV	RTRD 4	RTRDU 4*	S-DT2SKT	–
630DV	RTRD 14	–	S-DT2SKT	–

+ motor protection S-ET 10/STDT 16

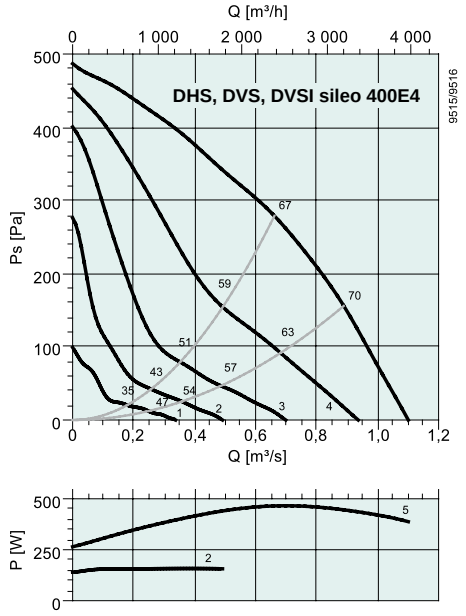
PERFORMANCE



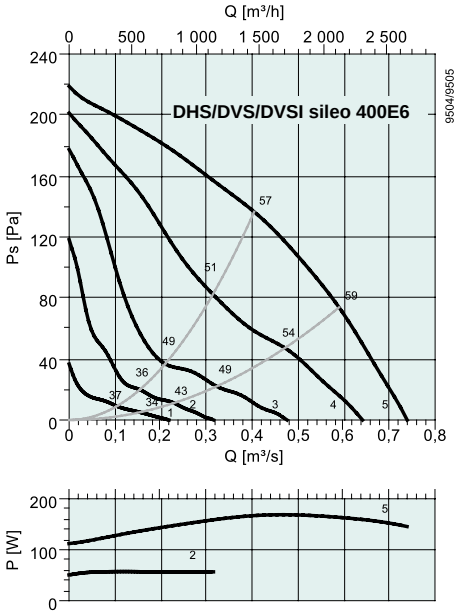
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	56	45	49	48	50	47	42	42	27
L_{wA} Surrounding	56	35	43	53	49	48	43	43	28
DVSI									
L_{wA} Surrounding	47	26	34	44	40	39	34	34	19
With SSD									
L_{wA} Inlet	45	35	39	38	40	37	32	32	17
Measurement point: 0,349 m³/s; 112 Pa									



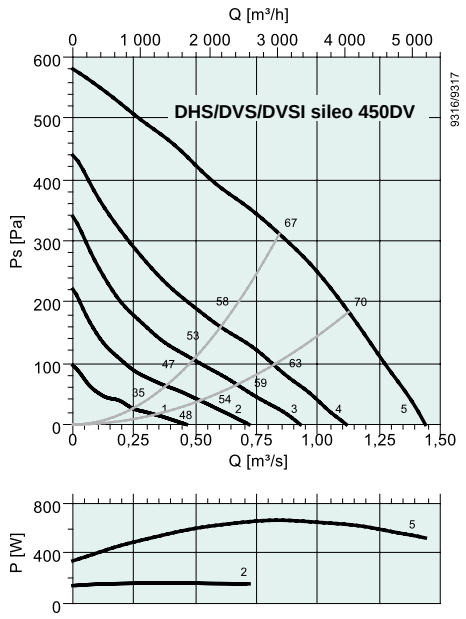
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	73	49	69	68	64	58	55	50	48
L_{wA} Surrounding	73	50	71	65	65	63	58	52	50
DVSI									
L_{wA} Surrounding	64	41	62	56	56	54	49	43	41
With SSD									
L_{wA} Inlet	62	39	59	58	54	48	45	40	38
Measurement point: 0,66 m³/s; 286 Pa									



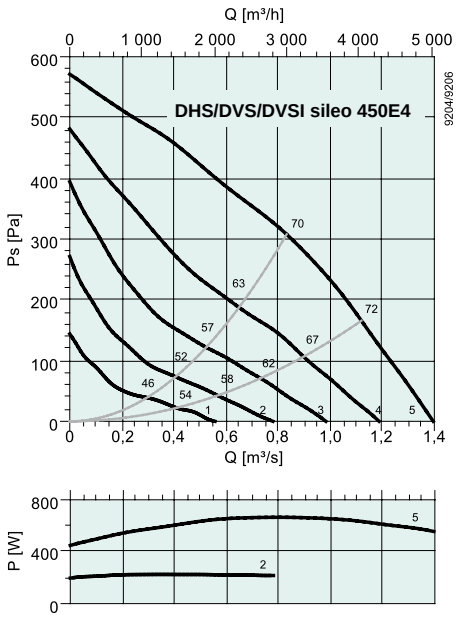
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	67	37	59	63	62	57	55	51	52
L_{wA} Surrounding	69	38	58	62	64	62	58	53	51
DVSI									
L_{wA} Surrounding	60	29	49	53	55	53	49	44	42
With SSD									
L_{wA} Inlet	57	27	49	53	52	47	45	41	42
Measurement point: 0,662 m³/s; 279 Pa									



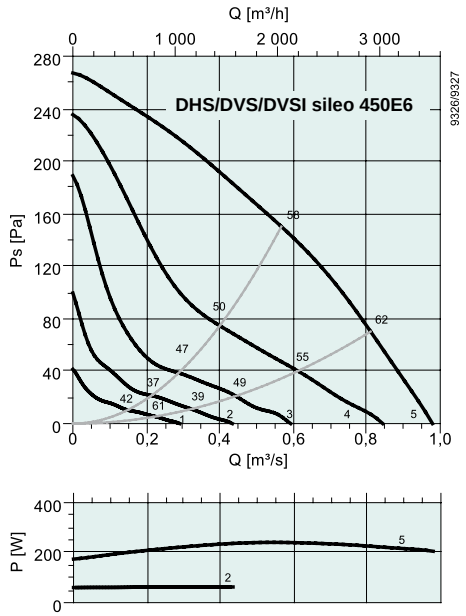
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	57	37	51	51	53	46	42	40	29
L_{wA} Surrounding	61	45	54	55	55	52	47	44	34
DVSI									
L_{wA} Surrounding	52	36	45	46	46	43	38	35	25
With SSD									
L_{wA} Inlet	47	27	41	41	43	36	32	30	19
Measurement point: 0,404 m³/s; 137 Pa									



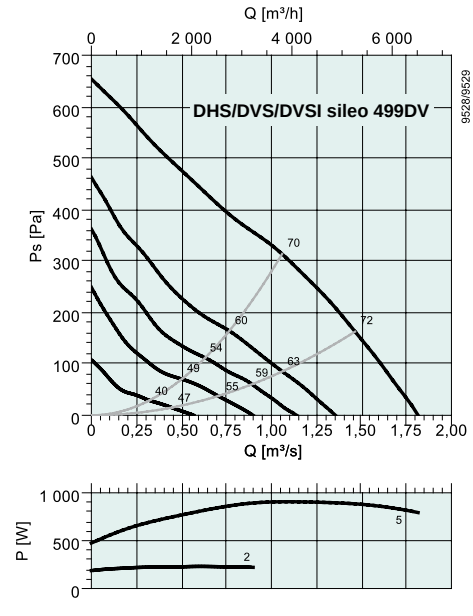
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	67	41	58	61	62	58	56	53	53
L_{wA} Surrounding	71	41	56	63	67	65	60	55	52
DVSI									
L_{wA} Surrounding	62	32	47	54	58	56	51	46	43
With SSD									
L_{wA} Inlet	57	31	48	51	52	48	46	43	43
Measurement point: 0,843 m³/s; 311 Pa									



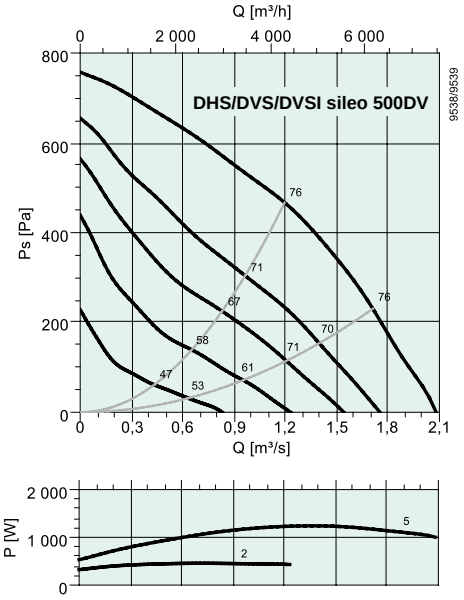
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	70	43	57	65	64	61	59	57	54
L_{wA} Surrounding	73	48	59	68	68	67	62	56	51
DVSI									
L_{wA} Surrounding	64	39	50	59	59	58	53	47	42
With SSD									
L_{wA} Inlet	60	33	47	55	54	51	49	47	44
Measurement point: 0,833 m³/s; 308 Pa									



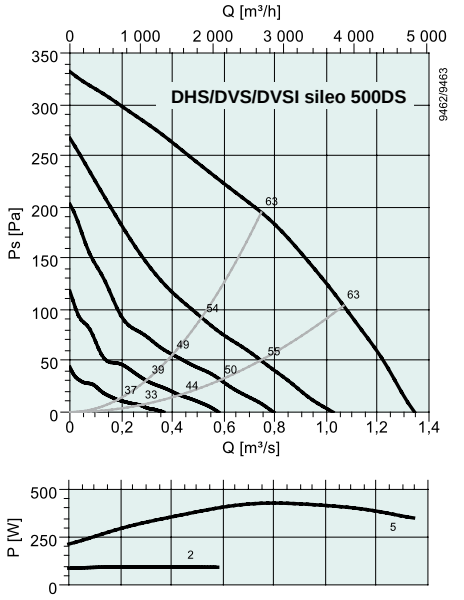
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	58	38	46	54	54	49	47	45	36
L_{wA} Surrounding	63	39	50	59	60	55	50	45	34
DVSI									
L_{wA} Surrounding	54	30	41	50	51	46	41	36	25
With SSD									
L_{wA} Inlet	48	28	36	44	44	39	37	35	26
Measurement point: 0,568 m³/s; 150 Pa									



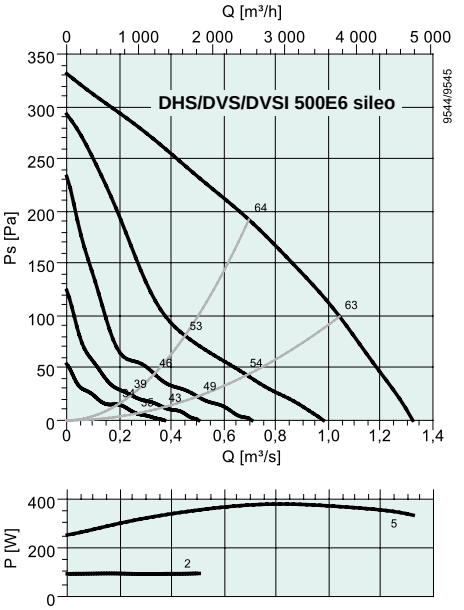
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	70	43	60	65	67	59	58	54	52
L_{wA} Surrounding	73	49	61	67	69	67	62	55	50
DVSI									
L_{wA} Surrounding	64	40	51	60	61	56	51	46	35
With SSD									
L_{wA} Inlet	58	38	46	54	54	49	47	45	35
Measurement point: 1,06 m³/s; 314 Pa									



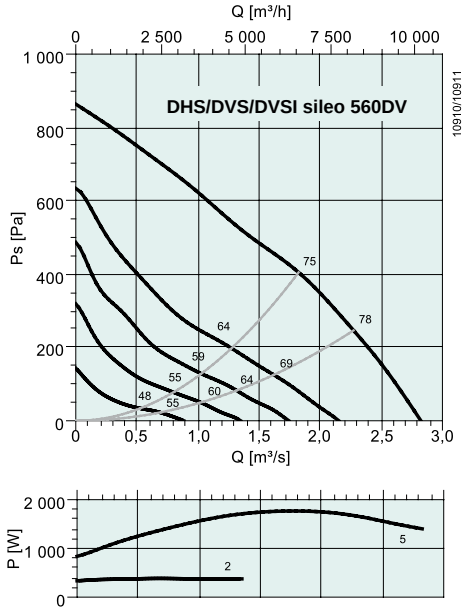
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	76	48	62	73	69	66	62	58	56
L_{wA} Surrounding	77	47	64	69	73	71	67	61	57
DVSI									
L_{wA} Surrounding	73	52	64	67	67	65	61	58	57
With SSD									
L_{wA} Inlet	71	50	62	65	65	63	59	56	55
Measurement point: 1,2 m³/s; 467 Pa									



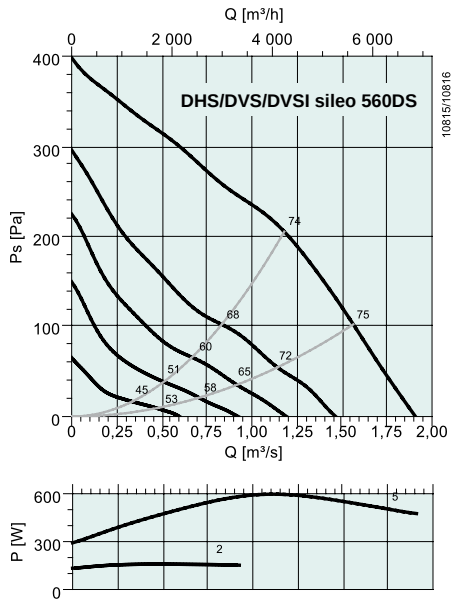
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	63	47	56	58	57	52	50	47	39
L_{wA} Surrounding	65	42	51	61	60	57	53	49	41
DVSI									
L_{wA} Surrounding	62	45	52	59	55	53	44	39	35
With SSD									
L_{wA} Inlet	60	43	50	57	53	51	42	37	33
Measurement point: 0,746 m³/s; 195 Pa									



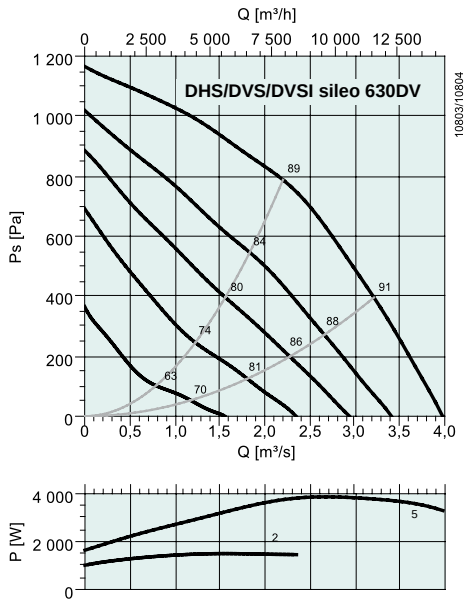
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	64	43	56	59	59	52	49	45	39
L_{wA} Surrounding	63	42	49	58	59	56	51	45	38
DVSI									
L_{wA} Surrounding	59	43	51	55	53	49	42	37	31
With SSD									
L_{wA} Inlet	51	41	49	53	51	47	40	35	29
Measurement point: 0,696 m³/s; 192 Pa									



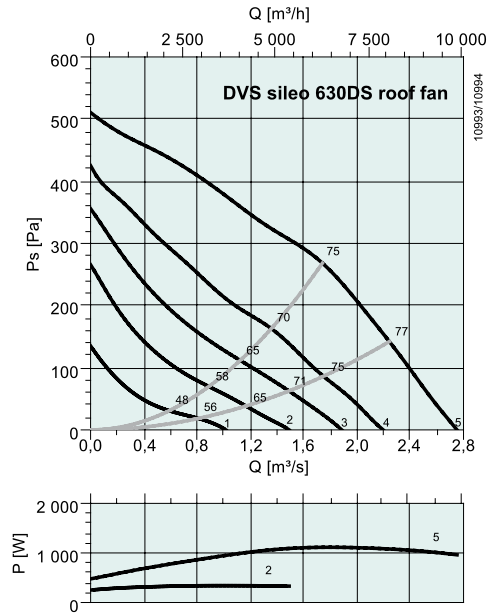
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	74	45	63	67	69	68	65	60	53
L_{wA} Surrounding	76	47	65	69	71	70	67	62	55
DVSI									
L_{wA} Surrounding	67	60	60	62	60	54	47	45	39
With SSD									
L_{wA} Inlet	65	59	58	59	58	51	44	41	40
Measurement point: 1,82 m³/s; 405 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	64	35	53	57	59	58	55	50	43
L_{wA} Surrounding	66	37	55	59	61	60	57	52	45
DVSI									
L_{wA} Surrounding	57	50	50	53	50	45	37	35	28
With SSD									
L_{wA} Inlet	55	44	43	45	43	37	29	26	25
Measurement point: 1.18 m³/s; 205 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	83	54	72	76	78	77	74	69	62
L_{wA} Surrounding	85	56	74	78	80	79	76	71	64
DVSI									
L_{wA} Surrounding	76	69	69	71	69	63	56	54	48
With SSD									
L_{wA} Inlet	74	68	67	68	67	60	53	50	49
Measurement point: 2.2 m³/s; 788 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	67	38	56	60	62	61	58	53	46
L_{wA} Surrounding	69	40	58	62	64	63	60	55	48
DVSI									
L_{wA} Surrounding	60	53	53	56	53	48	40	38	31
With SSD									
L_{wA} Inlet	58	52	51	53	51	45	37	34	32
Measurement point: 1.74 m³/s; 268 Pa									



DHS/DVS/DVSI

- Speed-controllable
- Integral thermal contacts
- Low sound level
- Maintenance-free and reliable

The DVS/DHS/DVSI models have impellers with backward curved blades and external rotor motors. All motors are speed controllable by voltage. Frequency inverters must have an allpole sine filter. The motors are suspended on effective vibration dampers.

DVS/DHS/DVSI...EZ/EV/ES: 1~ motor with connection for 2-speeds
DVS/DHS/DVSI...E4:1-speed motor
DVS/DHS/DVSI...DV/DS:3~ with Y/D-connection for 2-speeds

To protect the motors from overheating the DVS/DHS/DVSI up to size 311 have integral thermal contacts, from size 355 with external leads for connection to a motor protection device. The casing is made from seawater resistant aluminum. Suitable for coastal applications. The impellers are manufactured from high-performance composite material. DVS with outlet vertical DHS with outlet horizontal DVSI with 50 mm mineral wool insulation for low noise level.

ELECTRICAL ACCESSORIES


S-ET/STDT p. 341-342


RTRE p. 320


RTRD/RTRDU p. 321


REU p. 320


REE p. 321


S2S 160 p. 340


S-DT2 SKT p. 340

SPEED CONTROL

DHS/DVS/DVSI	Transformer Five step	Transformer Five step high/low	Electronic Two step	Thyristor Stepless
190EZ-311ES	RE 1.5	REU 1.5	S2S 160	REE 1
355E4	RTRE 1.5	REU 1.5*	–	REE 2
355DV	RTRD 2	RTRDU 2*	S-DT2SKT	–
710DS	RTRD 7	RTRDU 7*	S-DT2SKT	–

+ motor protection S-ET 10/STDT 16

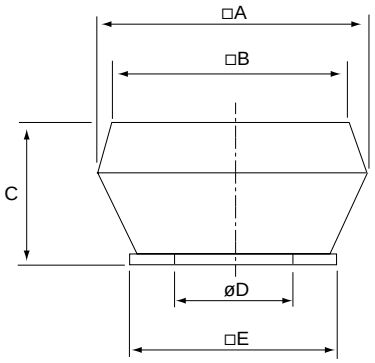
TECHNICAL DATA

DHS/DVS/DVSI		190EZ	225EZ	225EV	310EV	310ES	311EV	311ES	355E4	355DV	710DS	710D6-L
Art no. DHS		5712	5713	5714	5703	5704	5705	5715	5706	5707	5729	33181
Art no. DVS Tech. data is relating to DVS		5730	5731	5732	5733	5734	5735	5736	5737	5710	5752	33177
Art no. DVSI		30273	30275	30274	2347	2350	2352	2381	2356	2354	2378	33179
Voltage/Frequency	V/50 Hz	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~	400 3~	400 3~	Y400 3~
Power	W	80	113	48	116	70	135	100	279	249	2475	2562
Current	A	0.36	0.5	0.227	0.53	0.30	0.6	0.38	1.22	0.58	4.0	4.86
Max air flow	m3/s	0.155	0.228	0.142	0.406	0.369	0.46	0.439	0.773	0.779	4.58	4.12
R.p.m.	min-1	2240	2590	1422	1365	1000	1365	940	1401	1350	883	941
Max temp. of transported air	°C	40	40	40	40	40	40	40	40	40	40	40
" when speed controlled	°C	40	40	40	40	40	40	40	40	40	40	
Sound pressure level DVS*	dB(A)	48/40	49/41	41/33	44/36	37/29	45/37	38/30	47/39	47/39	58/50	65/57
Weight	kg	5/5/12	6/6/14	6/6/14	13/13/19	13/13/19	13/13/20	13/13/16	25/25/38	25/25/37	88/88/104	88/88/104
Insulation class, motor		B	B	B	B	B	B	B	B	B	F	F
Enclosure class, motor		IP 44	IP 44	IP 44	IP 44	IP 44	IP 44	IP 44	IP 44	IP 44	IP 54	IP 54
Capacitor	µF	2	3	2	4	1.5	5	2	8	–	–	–
Wiring diagram p. 391-400		20	20	20	20	20	20	20	5	16	18	18 Y

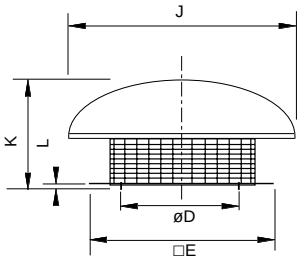
* at 4/10 m. DHS +2 dB, DVSI -9 dB

DIMENSIONS

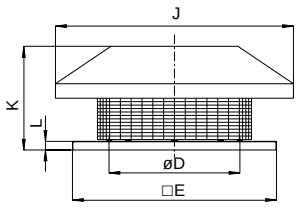
DVS/DVSI



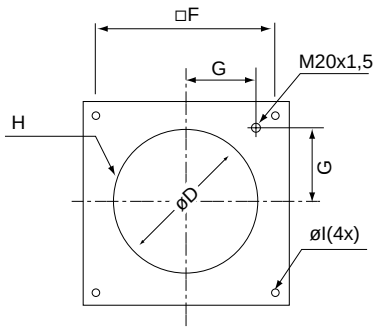
DHS 190-355



DHS 710



DHS/DVS/DVSI bottom view

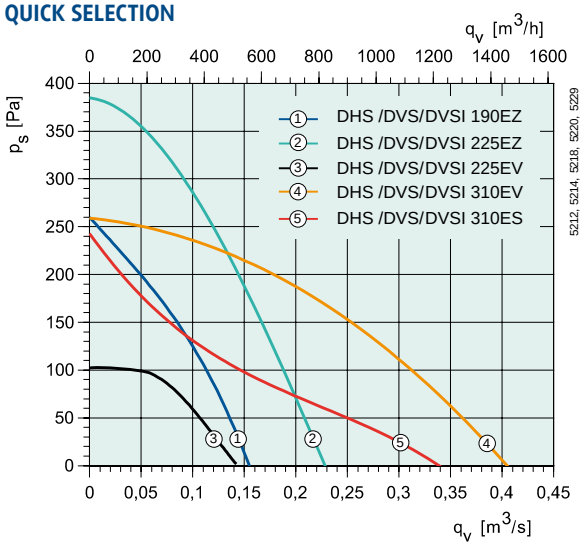


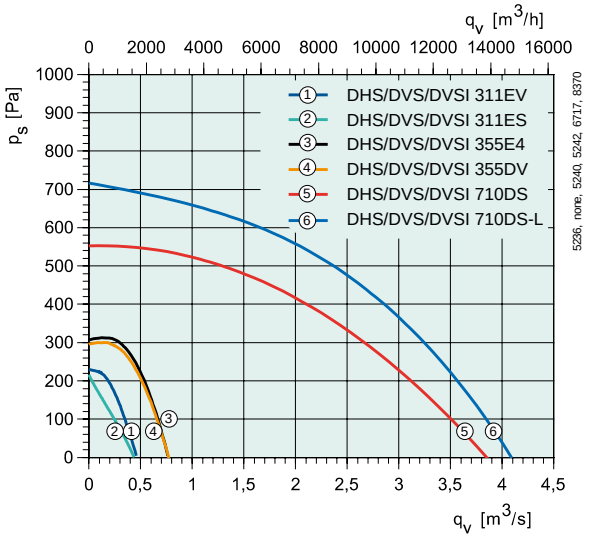
DHS	□A	□B	C	øD	□E	□F	G	H	øI	J	K	L
190EZ, 225EZ/EV	–	–	–	213	335	245	105	6xM6	10	ø417	150	30
310EV/ES, 311EV/ES	–	–	–	285	435	330	146	6xM6	10	ø540	250	30
355E4/DV	–	–	–	438	595	450	200	6xM8	12	ø720	330	30
710DS	–	–	–	647	1035	840	320	8xM8	14	□1282	580	40

DVS	□A	□B	C	øD	□E	□F	G	H	øI	J	K	L
190EZ, 225EZ/EV	370	295	170	213	335	245	105	6xM6	10	–	–	–
310EV/ES, 311EV/ES	560	470	330	285	435	330	146	6xM6	10	–	–	–
355E4/DV	720	618	390	438	595	450	200	6xM8	12	–	–	–
710DS	1350	–	660	647	1035	840	320	8xM8	14	–	–	–

DVSI	□A	□B	C	øD	□E	□F	G	H	øI	J	K	L
190EZ, 225EZ/EV	497	295	179	213	335	245	105	6xM6	10	_	–	–
310EV/ES, 311EV/ES	690	470	369	285	435	330	146	6xM6	10	–	–	–
355E4/DV	874	618	439	438	595	450	200	6xM8	12	–	–	–
710DS	1483	–	729	674	1035	840	320	8xM8	14	–	–	–

QUICK SELECTION

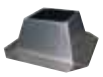




VENTILATION ACCESSORIES



SSD p. 374



FDS p. 374



ASK p. 380



VKS p. 380

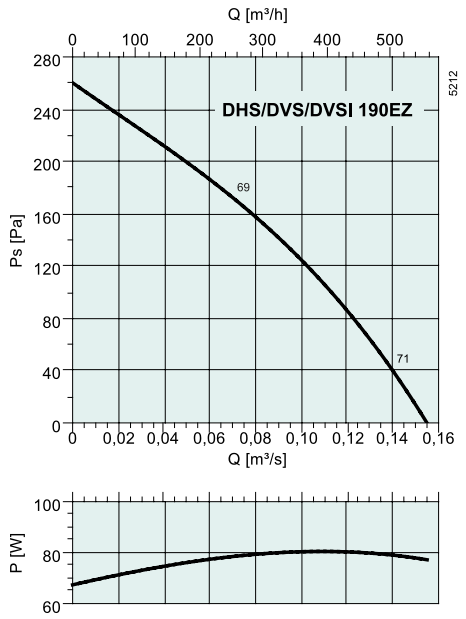


ASS p. 381

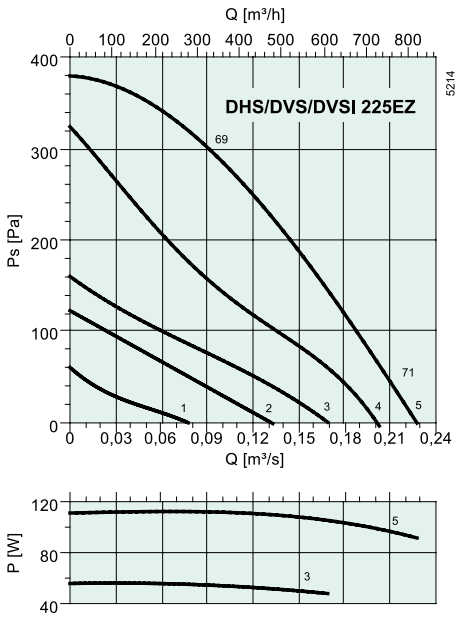


ASF p. 375

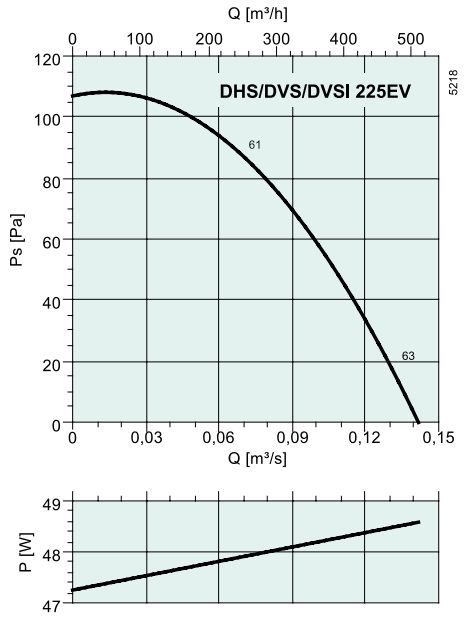
PERFORMANCE



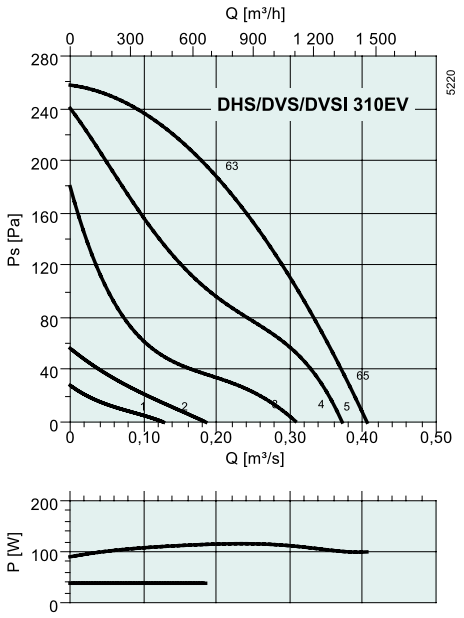
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	71	42	60	64	66	65	62	57	50
L_{wA} Surrounding	72	43	61	65	67	66	63	58	51
DVSI									
L_{wA} Surrounding	67	54	56	60	62	61	58	53	46
With SSD									
L_{wA} Inlet	60	40	55	56	55	46	42	37	32
Measurement point: 0,07 m³/s; 172 Pa									



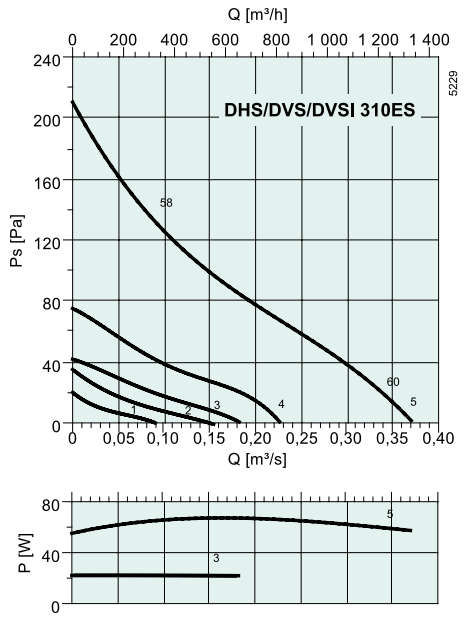
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	71	42	60	64	66	65	62	57	50
L_{wA} Surrounding	72	43	61	65	67	66	63	58	51
DVSI									
L_{wA} Surrounding	67	54	56	60	62	61	58	53	46
With SSD									
L_{wA} Inlet	60	40	55	56	55	46	42	37	32
Measurement point: 0,14 m³/s; 240 Pa									



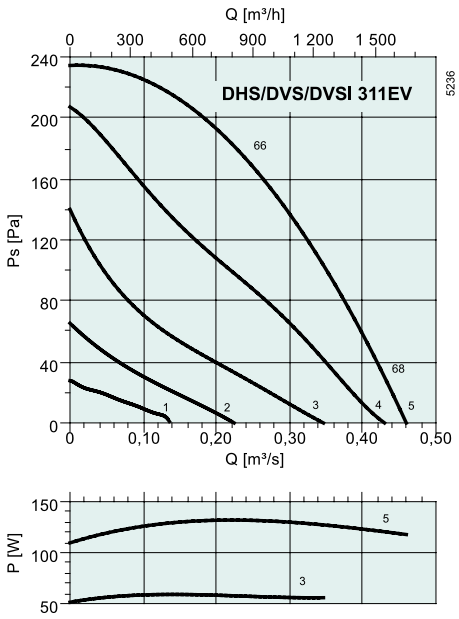
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	63	34	52	56	58	57	54	49	42
L_{wA} Surrounding	64	35	53	57	59	58	55	50	43
DVSI									
L_{wA} Surrounding	58	51	51	53	51	45	38	36	30
With SSD									
L_{wA} Inlet	52	32	47	48	47	38	34	29	24
Measurement point: 0,07 m³/s; 87 Pa									



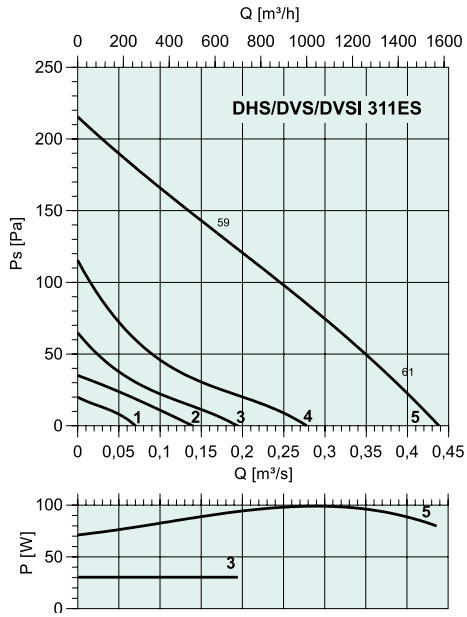
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	65	52	54	58	60	59	56	51	44
L_{wA} Surrounding	67	54	56	60	62	61	58	53	46
DVSI									
L_{wA} Surrounding	58	51	51	53	51	45	38	36	30
With SSD									
L_{wA} Inlet	55	49	49	50	48	41	35	31	29
Measurement point: 0,14 m³/s; 220 Pa									



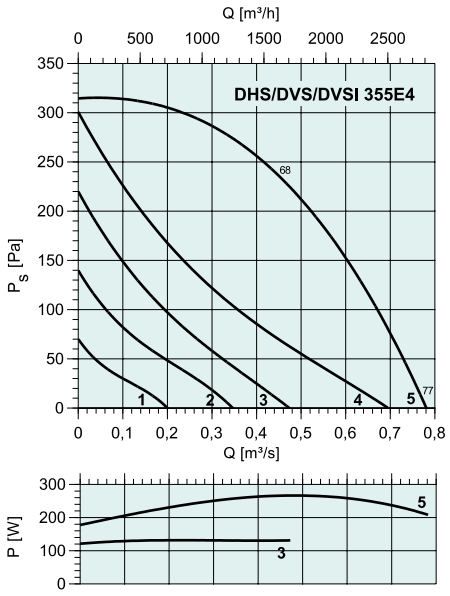
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	58	45	47	53	53	53	49	44	36
L_{wA} Surrounding	60	47	49	54	55	55	51	46	38
DVSI									
L_{wA} Surrounding	51	44	44	47	44	39	31	29	22
With SSD									
L_{wA} Inlet	49	42	42	44	41	35	28	24	21
Measurement point: 0,15 m³/s; 84 Pa									



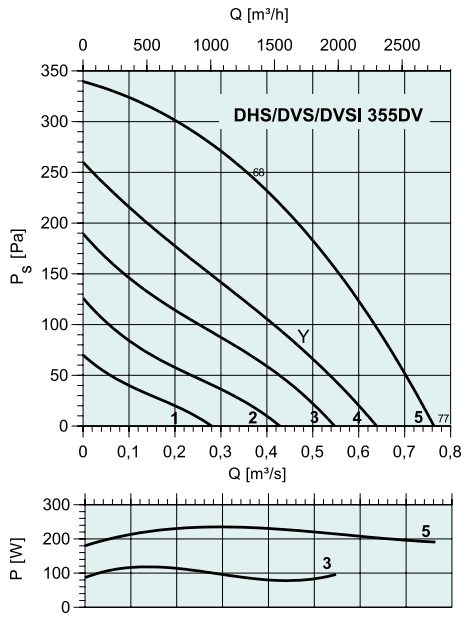
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	66	53	55	59	61	60	57	52	45
L_{wA} Surrounding	68	55	57	61	63	62	59	54	47
DVSI									
L_{wA} Surrounding	59	52	52	54	52	46	39	37	31
With SSD									
L_{wA} Inlet	56	50	50	51	49	42	36	32	30
Measurement point: 0,28 m³/s; 169 Pa									



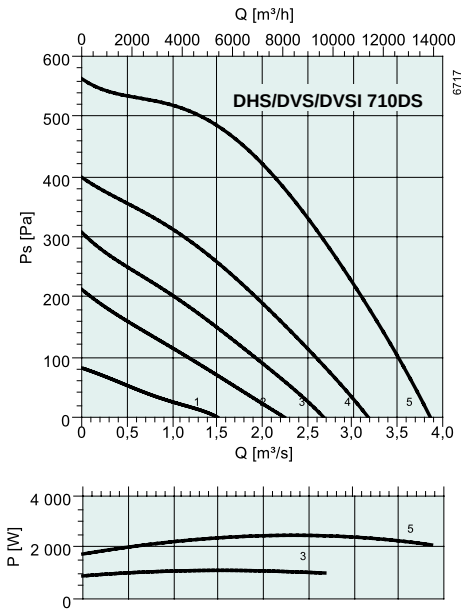
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	59	46	48	53	54	54	50	45	37
L_{wA} Surrounding	61	48	50	55	56	56	52	47	39
DVSI									
L_{wA} Surrounding	52	45	45	48	45	40	32	30	23
With SSD									
L_{wA} Inlet	50	43	48	45	42	36	29	25	22
Measurement point: 0,17 m³/s; 137 Pa									



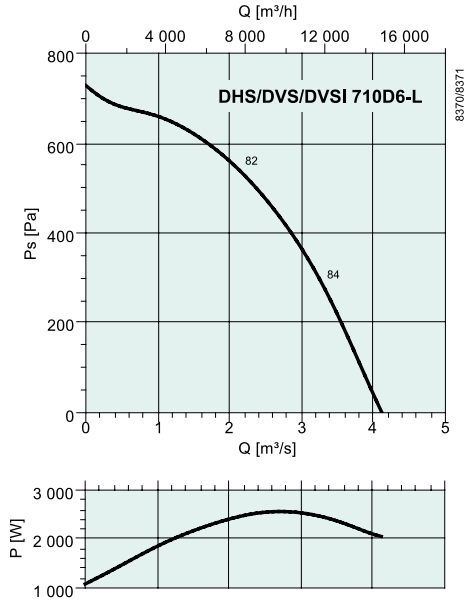
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	68	55	57	61	63	62	59	54	47
L_{wA} Surrounding	70	57	59	63	65	64	61	56	49
DVSI									
L_{wA} Surrounding	61	54	54	55	54	48	41	39	33
With SSD									
L_{wA} Inlet	58	52	52	53	49	43	37	38	32
Measurement point: 0,45 m³/s; 240 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	68	55	57	61	63	62	59	54	47
L_{wA} Surrounding	70	57	59	63	65	64	61	56	49
DVSI									
L_{wA} Surrounding	61	54	54	56	54	48	41	39	33
With SSD									
L_{wA} Inlet	58	52	52	53	49	43	37	38	32
Measurement point: 0,45 m³/s; 240 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	79	66	68	73	74	74	70	65	57
L_{wA} Surrounding	81	68	70	75	76	76	72	67	59
DVSI									
L_{wA} Surrounding	72	65	65	68	65	60	52	50	43
With SSD									
L_{wA} Inlet	69	63	62	65	60	54	45	42	46
Measurement point: 2,1 m³/s; 402 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	82	66	73	75	75	78	78	75	65
L_{wA} Surrounding	88	62	69	75	81	83	83	78	68
DVSI									
L_{wA} Surrounding	79	59	70	71	73	71	69	68	61
With SSD									
L_{wA} Inlet	72	63	67	67	61	58	53	52	54
Measurement point: 2,1 m³/s; 537 Pa									

Reference



North side



South side

Project: Matrix
Type of Building: Commercial office building
City/Country: Pune, India
Products/Solution: Jet Fans, Axial Fans, Roof Fans, Inline Fans (K)
Motorized Fire Dampers with Actuators, Grilles, Louvres, Diffusers, VCD's.w



DVN/DVNI

The casing and impeller with backward-curved blades is manufactured from seawater resistant aluminum. The base frame and the integrated protection guard consist of powder-coated galvanised steel.

The motor is suspended on effective vibration dampers. The motors are speed-controllable via transformer or frequency converter. To protect the motor from overheating the fan has integral thermal contacts or PTC with external leads for connection to a motor protection device.

The DVNI version has a 50 mm mineral wool insulation for lower sound level.

ELECTRICAL ACCESSORIES


S-ET/STDT
p. 341-342


REU p. 320

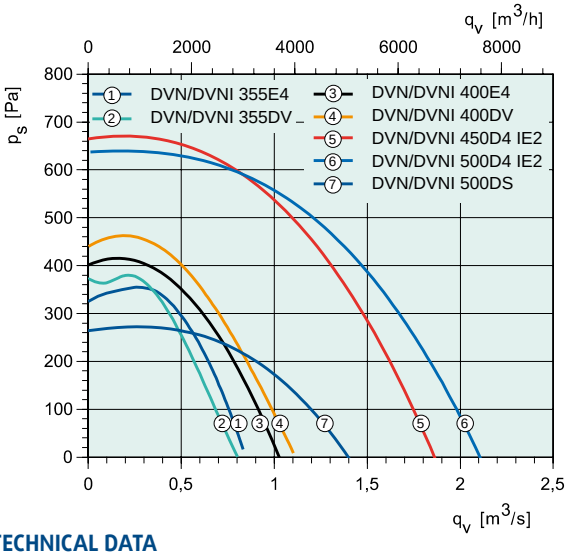

RTRDU
p. 321

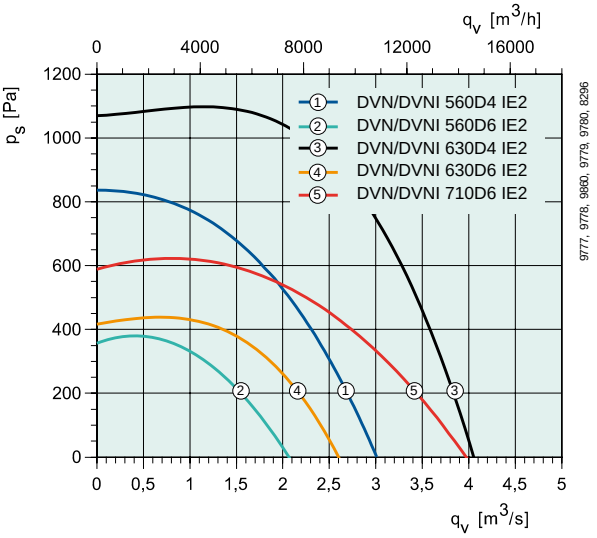

FXDM p. 324


S-DT2 SKT
p. 340


FRQ p. 325

QUICK SELECTIONS



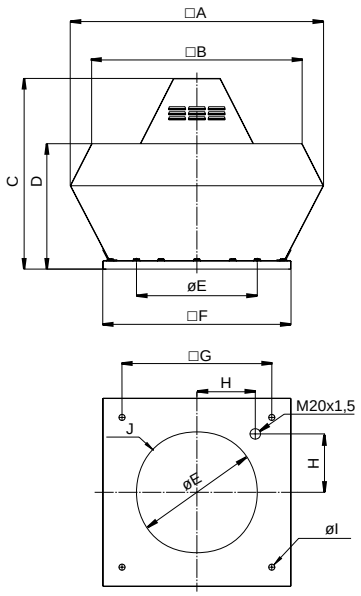


TECHNICAL DATA

DVN/DVNI		355E4	355DV	400E4	400DV	450D4 IE2	500D4 IE2	500DS
Art no. DVN Tech. data is relating to DVN		30301	30278	2630	2631	32184	32185	9852
Art no. DVNI		30446	30313	3909	3396	33462	33463	9857
Voltage/Frequency	V/50 Hz	230 1~	400 3~	230 1~	400 3~	400 Y 3~	400 Y 3~	400 3~
Power at shaft	W	370	370	370	370	750	1500	550
Current	A	1.49	1.20	2.00	1.37	1.78	3.39	1.86
Max air flow	m³/s	0.846	0.839	1.00	1.1	1.85	2.12	1.41
R.p.m.	min-1	1408	1420	1420	1442	1390	1400	936
Max temp. of transported air	°C	120	120	120	120	120	120	120
Sound pressure level at 4 m/10 m*	dB(A)	49/41	50/42	52/44	52/44	53/45	56/48	47/39
Weight	kg	27/33	26/42	33/39	33/43	38/46	49/57	48/55
Insulation class, motor		F	F	F	F	F	F	F
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	IP 55	IP 55	IP 54
Capacitor	µF	12	–	12	–	–	–	–
Motor protection		S-ET 10	STDT 16	S-ET 10	STDT 16	U-EK230E		STDT 16
Speed control, five-step		RTRE 3	RTRD 2	RTRE 3	RTRD 2	FRQ5(S)-4A	FRQ5(S)-4A	RTRD 2
Speed control, five step high/low	Transformer	REU 3**	RTRDU 2	REU 3**	RTRDU 2	–	–	RTRDU 2
Speed control, two step		–	S-DT2SKT	–	S-DT2SKT	–	–	S-DT2SKT
Speed control, stepless		–	FXDM	–	FXDM	FRQ(S)-4A	FRQ(S)-4A	FXDM
Wiring diagram p. 391-400		21	17	21	17	13 b Y	13 b Y	20

* DVNI -9 dB, ** + S-ET 10

DIMENSIONS



DVN	□A	□B	C	D	øE	□F	□G	H	øI	J
355-400	720	618	600	390	438	595	450	200	12(4x)	6xM8
450-500	900	730	675	465	438	665	535	237	12(4x)	6xM8
560-630	1150	955	900	560	605	939	750	293	14(4x)	8xM8
710	1350	1178	936	660	674	1035	840	320	14(4x)	8xM8

DVNI	□A	□B	C	D	øE	□F	□G	H	øI	J
355-400	874	648	600	439	438	595	450	200	12(4x)	6xM8
450-500	970	730	675	479	438	665	535	237	12(4x)	6xM8
560-630	1315	1035	900	600	605	939	750	293	14(4x)	8xM8
710	1483	1165	936	729	674	1035	840	320	14(4x)	8xM8

VENTILATION ACCESSORIES


SSD p. 374


FDS p. 374


ASK p. 380


VKS p. 380

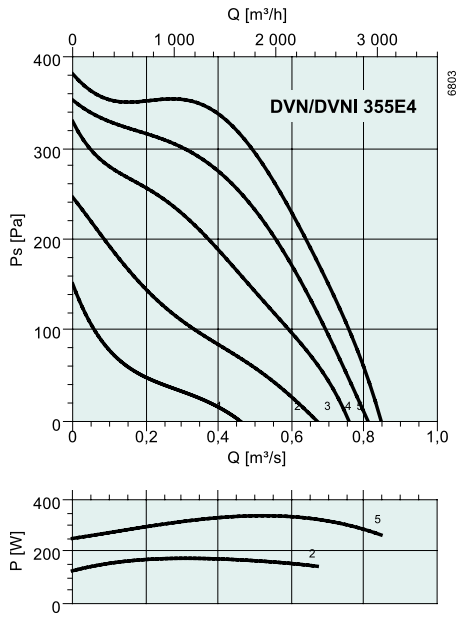

VKM p. 380


ASS p. 381

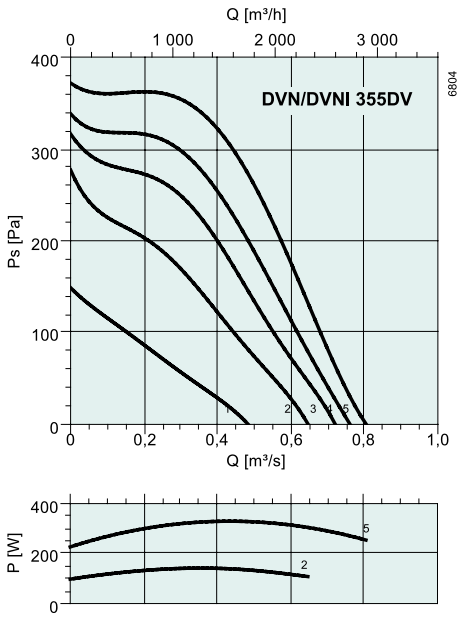

ASF p. 375

DVN/DVNI		560D4 IE2	560D6 IE2	630D4 IE2	630D6 IE2	710D6 IE2	
Art no. DVN, Techn. data is relating to DVN		32187	32188	33554	32189	33555	
Art no. DVNI		33465	33466	33468	33467	33469	
Voltage/Frequency	V/50 Hz	400 Y 3~	400 Y 3~	400 D 3~	400 Y 3~	400 Y 3~	
Power at shaft	W	2200	750	4000	1500	2200	
Current	A	4.64	1.98	8.12	3.61	5.1	
Max air flow	m3/s	3.00	2.08	4.07	2.60	4.01	
R.p.m.	min-1	1420	905	1450	940	945	
Max temp. of transported air	°C	120	120	120	120	120	
Sound pressure level at 4/10 m	dB(A)	64/56	49/41	66/58	52/45	58/50	
Weight	kg	58/70	57/69	65/79	65/79	210/102	
Insulation class, motor		F	F	F	F	F	
Enclosure class, motor		IP 55	IP 55	IP 55	IP 55	IP 55	
Motor protection		U-EK230E	U-EK230E	U-EK230E	U-EK230E	U-EK230E	
Speed control, five-step		FRQ5(S)-10A	FRQ5(S)-4A	FRQ5(S)-10A	FRQ5(S)-4A	FRQ5(S)-10A	
Speed control, stepless		FRQ(S)-10A	FRQ(S)-4A	FRQ(S)-10A	FRQ(S)-4A	FRQ(S)-10A	
Wiring diagram p. 391-400		13 b Y	13 b Y	13b D	13 b Y	13 b Y	

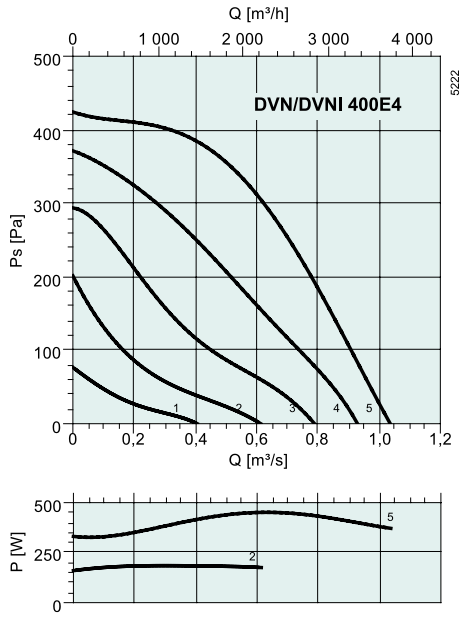
PERFORMANCE



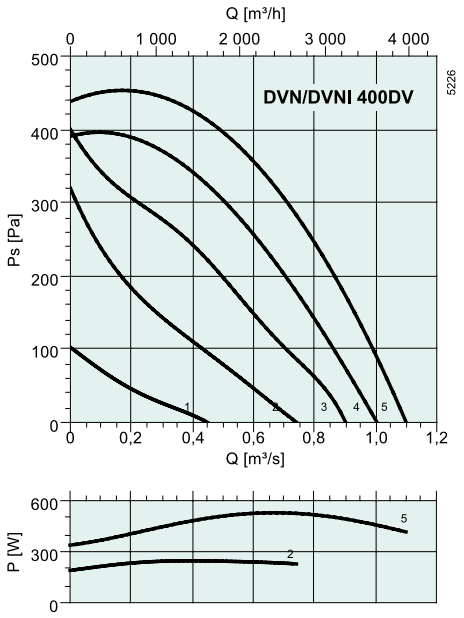
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	70	41	59	63	65	64	61	56	49
L_{wA} Surrounding	72	43	61	65	67	66	63	58	51
DVNI									
L_{wA} Surrounding	63	34	52	56	58	57	54	49	42
With SSD 355/400									
L_{wA} Inlet	60	31	49	53	55	54	51	46	39
Measurement point: 0,45 m³/s; 315 Pa									



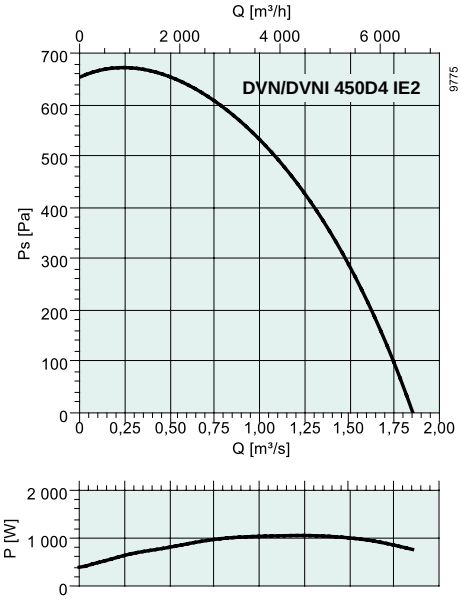
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	70	41	59	63	65	64	61	56	49
L_{wA} Surrounding	72	43	61	65	67	66	63	58	51
DVNI									
L_{wA} Surrounding	63	34	52	56	58	57	54	49	42
With SSD 355/400									
L_{wA} Inlet	60	31	49	53	55	54	51	46	39
Measurement point: 0,45 m³/s; 315 Pa									



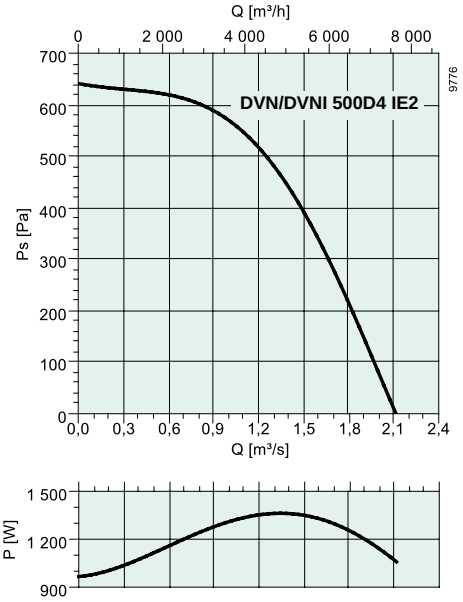
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	73	60	62	66	68	67	64	59	52
L_{wA} Surrounding	75	62	64	68	70	69	66	61	54
DVNI									
L_{wA} Surrounding	66	59	59	61	60	56	47	45	39
With SSD 355/400									
L_{wA} Inlet	63	57	57	58	54	48	42	43	37
Measurement point: 0,69 m³/s; 249 Pa									



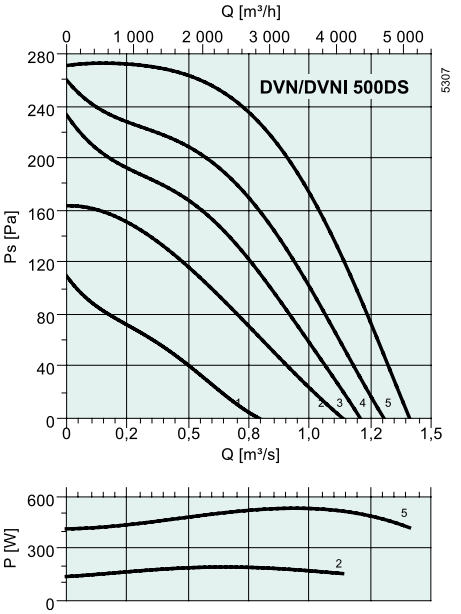
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	73	60	62	66	68	67	64	59	52
L_{wA} Surrounding	75	62	64	68	70	69	66	61	54
DVNI									
L_{wA} Surrounding	66	59	59	61	60	56	47	45	39
With SSD 355/400									
L_{wA} Inlet	63	57	57	58	54	48	42	43	37
Measurement point: 0,74 m³/s; 285 Pa									



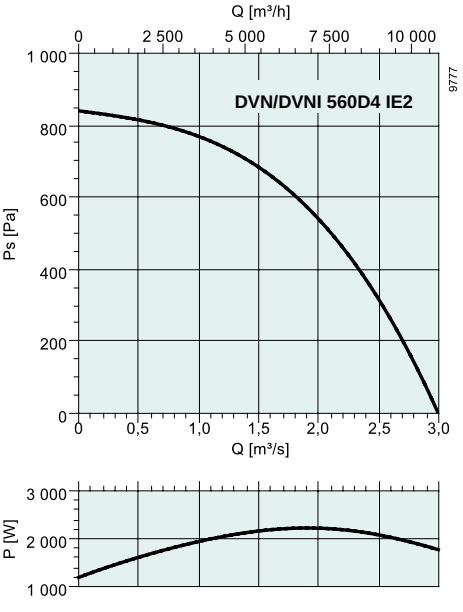
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	74	61	63	67	69	68	65	60	53
L_{wA} Surrounding	76	63	65	69	71	70	67	62	55
DVNI									
L_{wA} Surrounding	67	60	60	62	60	54	47	45	39
With SSD 450/ 499/500									
L_{wA} Inlet	64	56	56	57	53	47	41	42	36
Measurement point: 1,11 m^3/s; 489 Pa									



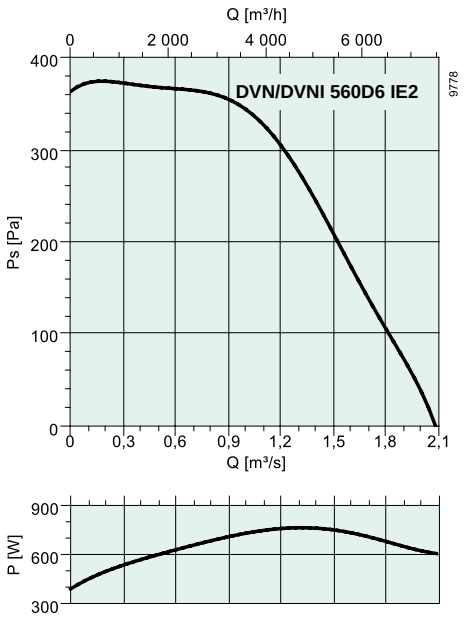
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	78	65	67	71	73	72	69	64	57
L_{wA} Surrounding	80	67	69	73	75	74	71	66	59
DVNI									
L_{wA} Surrounding	71	64	64	66	64	58	51	49	43
With SSD 450/ 499/500									
L_{wA} Inlet	68	62	62	62	60	52	44	42	40
Measurement point: 1,50 m^3/s; 400 Pa									



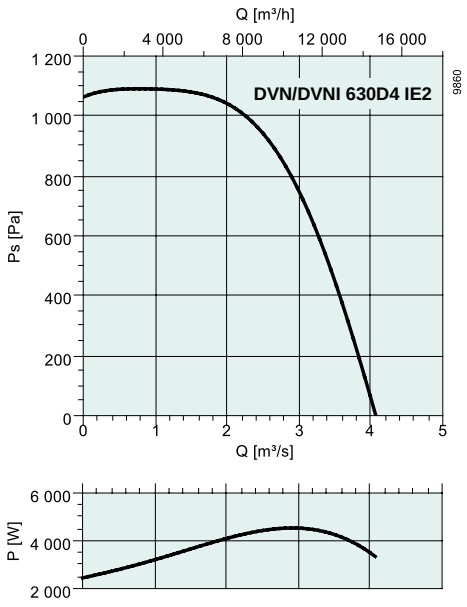
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	68	55	57	62	63	63	59	54	46
L_{wA} Surrounding	70	57	59	64	65	65	61	56	48
DVNI									
L_{wA} Surrounding	61	54	54	57	54	49	41	39	32
With SSD 450/ 499/500									
L_{wA} Inlet	58	52	52	53	50	43	34	32	29
Measurement point: 0,69 m^3/s; 250 Pa									



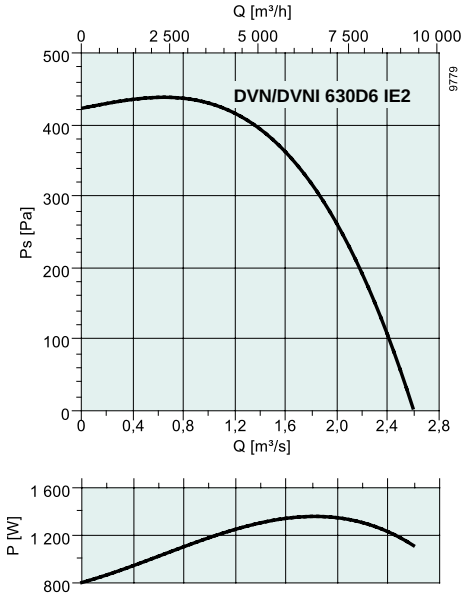
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	79	66	68	72	74	73	70	65	58
L_{wA} Surrounding	86	73	75	79	81	80	77	72	65
DVNI									
L_{wA} Surrounding	77	70	70	72	70	64	57	55	49
With SSD 560/630									
L_{wA} Inlet	70	64	63	64	63	56	49	46	45
Measurement point: 1,5 m^3/s; 701 Pa									



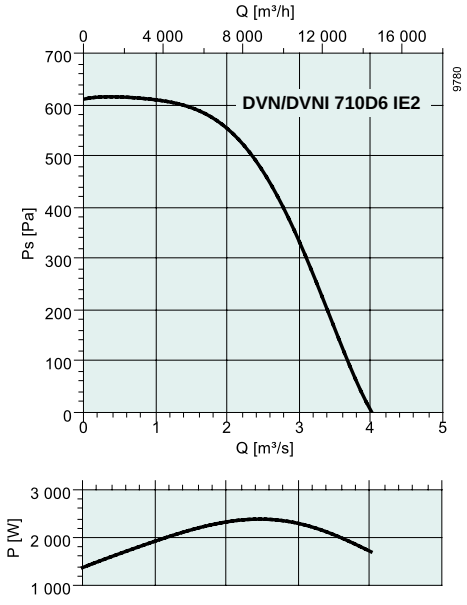
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{WA} Inlet	70	57	59	64	65	65	61	56	48
L_{WA} Surrounding	72	59	61	66	67	67	63	58	50
DVNI									
L_{WA} Surrounding	63	56	56	59	56	53	44	42	34
With SSD 560/630									
L_{WA} Inlet	61	55	54	56	54	48	40	37	35
Measurement point: 1,1 m³/s; 340 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{WA} Inlet	87	74	76	80	82	81	78	73	66
L_{WA} Surrounding	89	76	78	82	84	83	80	75	68
DVNI									
L_{WA} Surrounding	80	73	73	75	73	69	61	59	52
With SSD 560/630									
L_{WA} Inlet	78	72	71	72	71	64	57	54	53
Measurement point: 3,06 m³/s; 600 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{WA} Inlet	74	61	63	68	69	69	65	60	52
L_{WA} Surrounding	76	63	65	70	71	71	67	62	54
DVNI									
L_{WA} Surrounding	67	60	60	63	60	57	48	46	38
With SSD 560/630									
L_{WA} Inlet	65	59	58	60	58	52	44	41	39
Measurement point: 3,06 m³/s; 600 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{WA} Inlet	79	66	68	73	74	74	70	65	57
L_{WA} Surrounding	81	68	70	75	76	76	72	67	59
DVNI									
L_{WA} Surrounding	72	65	65	67	65	62	53	51	44
With SSD 710									
L_{WA} Inlet	69	63	62	65	60	54	45	42	41
Measurement point: 2.93 m³/s; 400 Pa									

Reference



Project: Staatstheater Darmstadt
Type of Building: The theatre in Darmstadt is one of the biggest theatres in Germany. It was built in the 1970s and refurbished in 2002 and 2006 for about 90 million Euros.
City/Country: Darmstadt/Germany
Products/Solution:
- *11 smoke extract medium pressure axial fans, type HA 500*
- *1 smoke extract medium pressure axial fan, type AXC 500 B*
- *8 smoke extract roof fans DVV 800*
- *Roof fans DVS/DVN.*



DVV

- Motor outside of the air stream
- Max temperature of transported air 120°C
- Vertical exhaust
- Suitable for coastal applications
- Wide range of accessories

The octagonal casing is manufactured from seawater resistant aluminium (4 pole 1000-M and P from aluzinc steel sheet). The base frame is manufactured from galvanized steel. The impeller with backward-curved blades is also manufactured from galvanised steel.

The fan is equipped with IEC standard motors, according to 2009/640/EC guideline and IEC 60034-30, with protection class IP 54, insulation class F. Single speed or two speed Dahlander connected (4-8,6-12 pole) or with separate windings (6-8,4-6,8-12 pole). Motor cooling with fresh air via air duct. Thermal motor protection (PTC or thermal contact built-in) on request, in IE2 motors serial PTC built-in. For frequency controlled single speed units up to 0,55 kW PTC must be ordered (since IE1 motors built-in). Sizes 800 and 1000 with on/off switch, other sizes equipped with terminal box, on/off switch on request.

The DVV fans can be factory fitted with sound attenuators at the outlet (DVVI).

Sound attenuators are also available as HSDV accessories.

ELECTRICAL ACCESSORIES



REV DVV p. 340

120°C

IE2 2009/640/EG

Note: article numbers in tables refer to items without PTC or thermal contact, with exception of items with IE2 motors, where PTC is serial built-in.

Data related to motor and weight of delivered items can slightly vary from catalogue data.

TECHNICAL DATA

DVV 120°C		400D4-6	450D4 IE2	450D4-6	560D4-6	560 D4 IE2	630 D4-K IE2	630 D4-6-K	630 D4 IE2
Art no.		3506	95139	3530	3554	95140	95141	3582	95142
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~
Power at shaft	kW	0.55/0.18	1.1	1.1/0.37	1.7/1.2	1.5	3.0	3.0/0.9	5.5
Current	A	1.7/0.8	2.6	3/1.4	4.6/3.7	3.5	6.6	6.9/3.3	11.6
Starting current	A	6.8/2.4	12.5	10.8/5.9	23.9/13.3	20.3	36.7	38.0/13	95
Max air flow	m3/s	1.17/0.778	2.01	2.01/1.35	2.64/1.81	2.64	3.5	3.5/2.28	5.36
R.p.m.	min-1	1420/940	1435	1420/950	1450/940	1420	1400	1450/975	1455
Max temp. of transported air	°C	120	120	120	120	120	120	120	120
Sound pressure level at 4 m	dB(A)	62/53	66	66/55	69/60	69	71	71/61	75
Sound pressure level at 10 m	dB(A)	52/43	56	56/46	59/52	59	63	63/53	69
Weight	kg	52/45	65	68	75	69	109	118	124
Insulation class, motor		F	F	F	F	F	F	F	F
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 55	IP 54
Wiring diagram p. 391-400		15a	15c	15a	15a	15c	15c	15a	13b D

DVV 120°C		630D4-6	630D6 IE2	800D4-K IE2	800D6-K	800D4-8-K	800D6 IE2	800D6-8	800D4-M IE2	800D4-6-M
Art no.		3586	95143	95144	95145	3630	95146	3644	95148	30040
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~
Power at shaft	kW	5.5/1.7	2.2	9.5	2.2	9.0/2.4	5.5	5.7/2.4	15	15.0/5.0
Current	A	12/4.5	5.5	18	5.5	18.5/5.5	12.6	12.3/6.2	29.8	33/13.5
Starting current	A	81.6/20.3	25.3	121	25.3	114/24	76	62.8/21.7	265	198/76
Max air flow	m3/s	5.36/3.36	3.36	7.08	5	7.08/3.92	7.08	7.08/5.28	9.58	9.58/6.22
R.p.m.	min-1	1460/970	935	1445	935	1420/720	960	960/720	1470	1465/980
Max temp. of transported air	°C	120	120	120	120	120	120	120	120	120
Sound pressure level at 4 m	dB(A)	75/64	64	76	66	76/55	72	72/66	80	80/70
Sound pressure level at 10 m	dB(A)	69/58	58	70	60	70/48	64	64/57	72	72/62
Weight	kg	124	114	224	159	243	179	190	265	353
Insulation class, motor		F	F	F	F	F	F	F	F	F
Enclosure class, motor		IP 55	IP 54	IP 55	IP 54	IP 55	IP 55	IP 54	IP 55	IP 55
Wiring diagram p. 391-400		15a	15c	13b D	15c	14a	13b D	15a	13b D	15a

VENTILATION ACCESSORIES


ASFV p. 384


ASK/F p. 380


ASSV p. 383


SSV p. 382


SSVE p. 377


FDV p. 381


FDVE p. 382


VKV/F p. 383

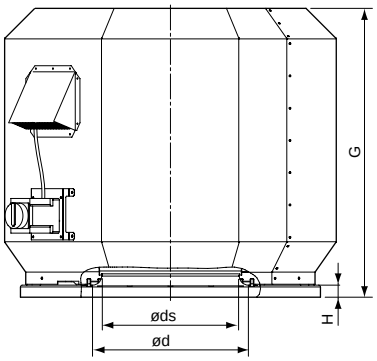

VKVM p. 384

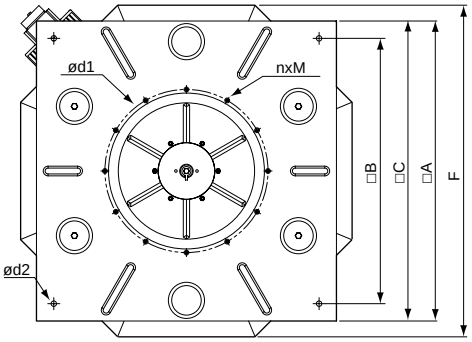
Roof fans

DVV 120°C		800D4-8-M	800D4-P IE2	800D4-6-P	800D4-8-P	1000D6 IE2	1000D6-8	1000D8
Art no.		30044	95149	30052	30056	95147	3663	3669
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~
Power at shaft	kW	16.2/3.7	18.5	18.5/7.0	18.5/4.5	11	11.0/5.0	5.5
Current	A	36/13	35	36/19	40/15	22	22/15	12.5
Starting current	A	290/64	280	244/110	335/75	156	154/82.5	63.8
Max air flow	m3/s	9.58/4.79	10.8	10.8/7.25	10.8/5.42	12,4	12.4/9.44	9.44
R.p.m.	min-1	1470/735	1465	1460/985	1470/735	955	970/730	710
Max temp. of transported air	°C	120	120	120	120	120	120	120
Sound pressure level at 4 m	dB(A)	80/65	83	83/71	83/65	74	74/66	66
Sound pressure level at 10 m	dB(A)	72/57	75	75/64	75/57	66	66/58	58
Weight	kg	355	353	335	369	333	400	310
Insulation class, motor		F	F	F	F	F	F	F
Enclosure class, motor		IP 55	IP 55	IP 55	IP 55	IP 55	IP 55	IP 55
Wiring diagram p. 391-400		14a	13b D	15a	14a	13b D	15a	13a D

DVV 120°C		1000D4-M IE2	1000D4-6-M	1000D4-8-M	1000D6-M IE2	1000D4-P IE2	1000D4-6-P	1000D6-P IE2	1000 D4-8-P
Art no.		95151	32288	32289	95152	95150	31265	95212	31269
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~
Power at shaft	kW	22	22.0/9.0	22.0/5.5	7.5	28	28.0/8.0	8.5	28.0/7.0
Current	A	42	49/23	45/17	15.7	56	53.5/18	18	51/20
Starting current	A	340	299/110	338/85	112	420	360/120	126	400/80
Max air flow	m3/s	14.2	14.2/9.42	14.2/7.08	9.42	15.2	15.2/10.1	10.1	15.2/7.56
R.p.m.	min-1	1470	1460/985	1470/730	970	1470	1470/980	965	1470/730
Max temp. of transported air	°C	120	120	120	120	120	120	120	120
Sound pressure level at 4 m	dB(A)	89	89/77	89/70	77	90	90/78	78	90/71
Sound pressure level at 10 m	dB(A)	79	79/67	79/60	67	79	79/67	67	79/60
Weight	kg	469	495	495	313	495	595	313	595
Insulation class, motor		F	F	F	F	F	F	F	F
Enclosure class, motor		IP 55	IP 55	IP 55	IP 55	IP 55	IP 54	IP 54	IP 55
Wiring diagram p. 391-400		13b D	15a	14a	13b D	13b D	15a	13b D	14a

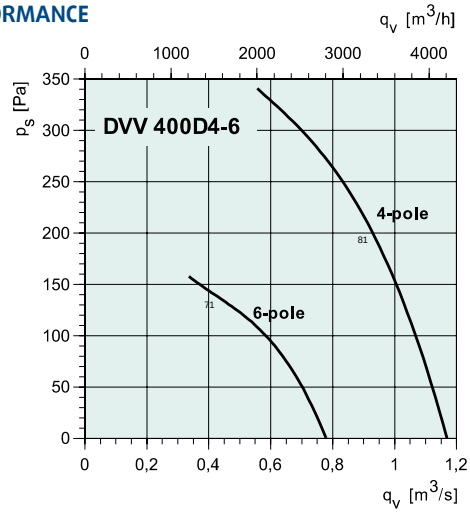
DIMENSIONS



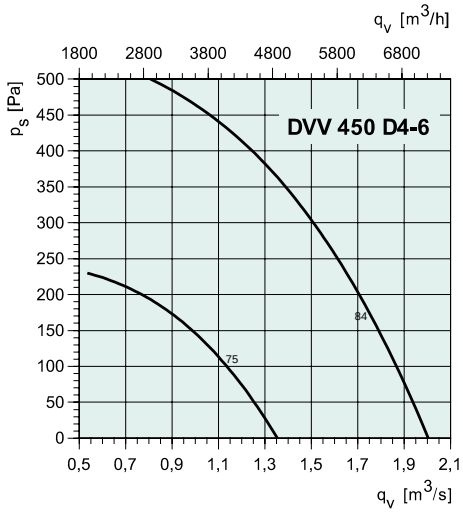


DVV	□A	□B	□C	ød	ød1	ød2	ødd	F	G	H	nxM
400	560	460	557	315	356	14	284	635	630	40	8xM8
450	710	600	706	355	395	14	324	808	700	20	8xM8
560	710	600	706	400	438	14	364	808	750	20	12xM8
630	995	880	990	500	541	18	452	1100	958	40	12xM8
800	995	880	990	630	674	18	566	1272	1165	40	16xM10
800-M, P	995	880	990	630	674	18	566	1350	1280	40	16xM10
1000	1160	1040	1154	710	751	18	710	1500	1350	70	16xM10
1000D4-M, P	1160	1040	1154	710	751	18	710	1500	1479	70	16xM10

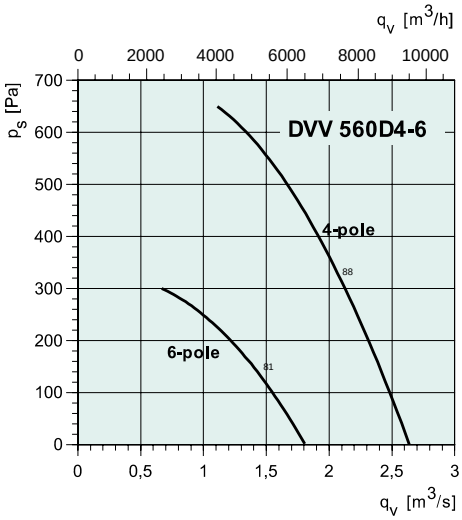
PERFORMANCE



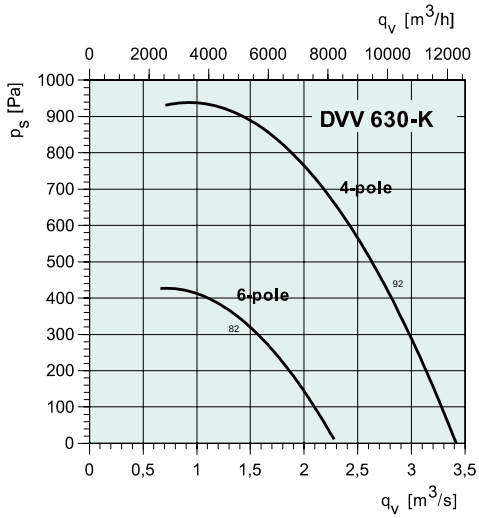
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	81	54	66	74	75	74	72	69	61
L_{wA} Surrounding	83	56	68	76	77	76	74	71	63
Measurement point: 0,9 m³/s; 200 Pa									
6-pole									
L_{wA} Inlet	71	48	57	63	67	62	60	58	46
L_{wA} Surrounding	73	50	59	65	69	64	62	60	48
Measurement point: 0,4 m³/s; 140 Pa									



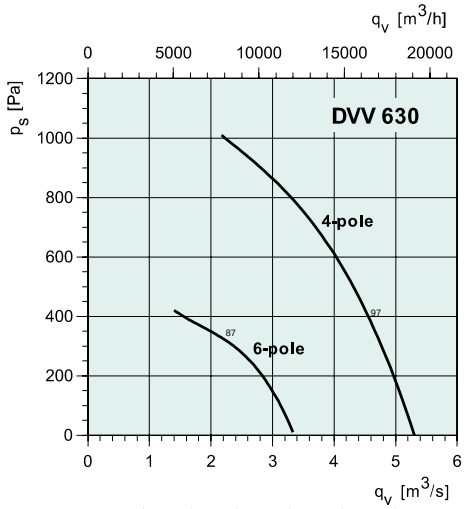
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	84	57	69	77	78	77	75	72	64
L_{wA} Surrounding	86	59	71	79	80	79	77	74	66
Measurement point: 1,7 m³/s; 200 Pa									
6-pole									
L_{wA} Inlet	75	52	61	67	71	66	64	62	50
L_{wA} Surrounding	76	53	62	68	72	67	65	63	51
Measurement point: 1,15 m³/s; 100 Pa									



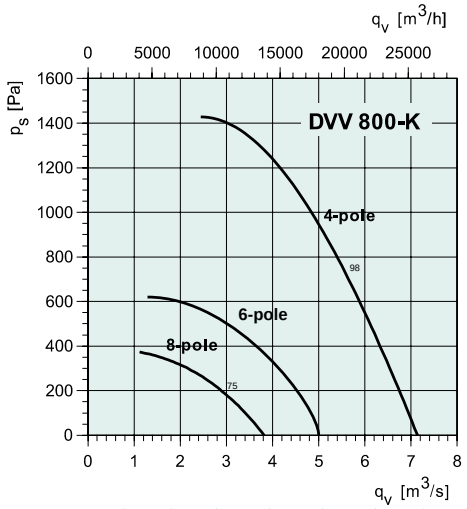
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	88	61	73	81	82	81	79	76	68
L_{wA} Surrounding	90	63	75	83	84	83	81	78	70
Measurement point: 2,1 m³/s; 310 Pa									
6-pole									
L_{wA} Inlet	81	58	67	73	77	72	70	68	56
L_{wA} Surrounding	83	60	69	75	79	74	72	70	58
Measurement point: 1,5 m³/s; 125 Pa									



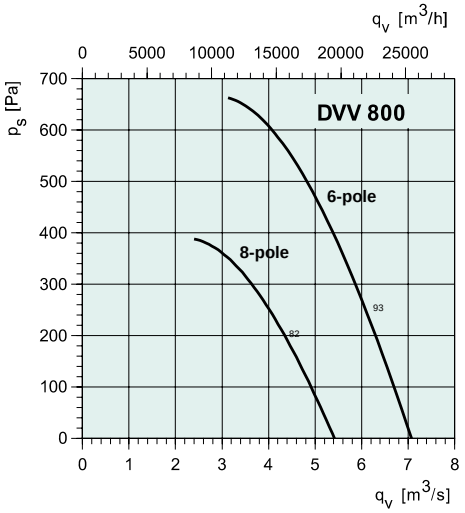
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	92	65	77	85	86	85	83	80	72
L_{wA} Surrounding	94	67	79	87	88	87	85	82	74
Measurement point: 2,8 m³/s; 400 Pa									
6-pole									
L_{wA} Inlet	82	58	69	71	78	73	72	68	55
L_{wA} Surrounding	84	60	71	73	80	75	74	70	57
Measurement point: 1,38 m³/s; 350 Pa									



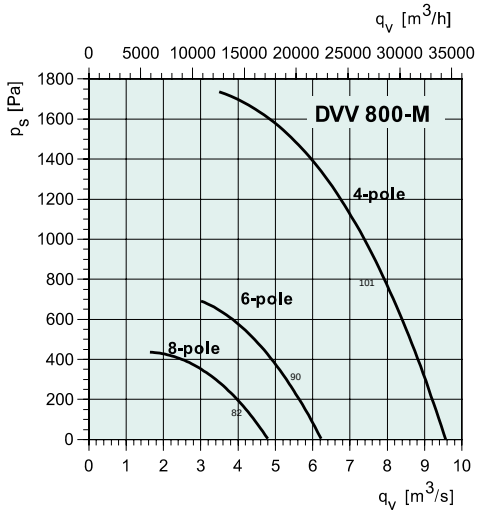
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	97	68	79	91	90	92	87	81	72
L_{wA} Surrounding	98	68	87	88	91	91	91	89	79
Measurement point: 4,58 m³/s; 370 Pa									
6-pole									
L_{wA} Inlet	87	64	73	79	83	78	76	74	62
L_{wA} Surrounding	88	65	74	80	84	79	77	75	63
Measurement point: 2,3 m³/s; 290 Pa									



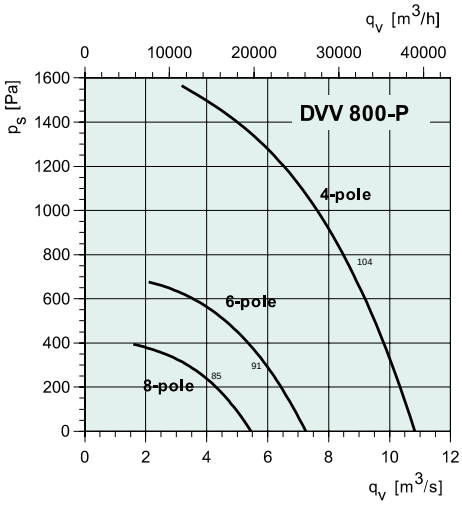
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	98	71	83	91	92	91	89	86	78
L_{wA} Surrounding	99	72	84	92	93	92	90	87	79
Measurement point: 5,6 m³/s; 700 Pa									
6-pole									
L_{wA} Inlet	84	60	71	73	80	75	74	70	57
L_{wA} Surrounding	86	62	73	75	82	77	76	72	59
Measurement point: 4,0 m³/s; 280 Pa									
8-pole									
L_{wA} Inlet	75	58	64	66	70	68	68	60	49
L_{wA} Surrounding	77	60	66	68	72	70	70	62	51
Measurement point: 3,1 m³/s; 150 Pa									



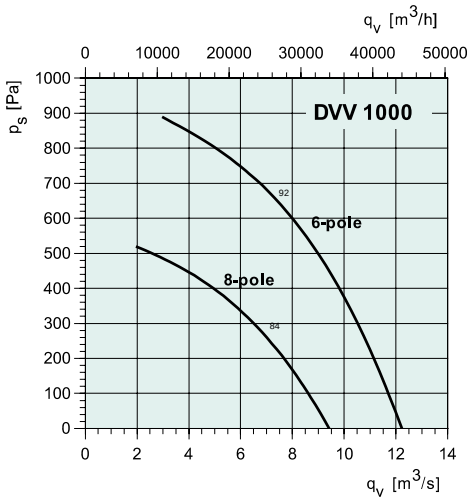
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
6-pole									
L_{wA} Inlet	93	70	79	85	89	84	82	80	68
L_{wA} Surrounding	95	72	81	87	91	86	84	82	70
Measurement point: 6,1 m³/s; 250 Pa									
8-pole									
L_{wA} Inlet	82	64	70	73	77	74	74	69	58
L_{wA} Surrounding	84	66	72	75	79	76	76	71	60
Measurement point: 4,3 m³/s; 200 Pa									



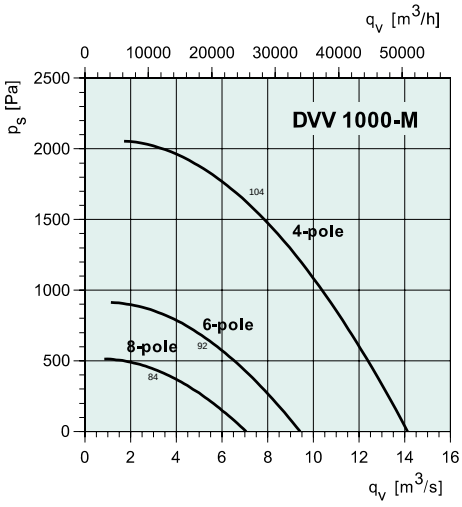
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	101	74	86	94	95	94	92	89	81
L_{wA} Surrounding	103	76	88	96	97	96	94	91	83
Measurement point: 8,1 m³/s; 740 Pa									
6-pole									
L_{wA} Inlet	90	67	78	80	87	82	81	77	64
L_{wA} Surrounding	92	69	80	82	89	84	83	79	66
Measurement point: 5,5 m³/s; 250 Pa									
8-pole									
L_{wA} Inlet	82	65	71	73	77	75	75	67	56
L_{wA} Surrounding	84	67	73	75	79	77	77	69	58
Measurement point: 4,2 m³/s; 150 Pa									



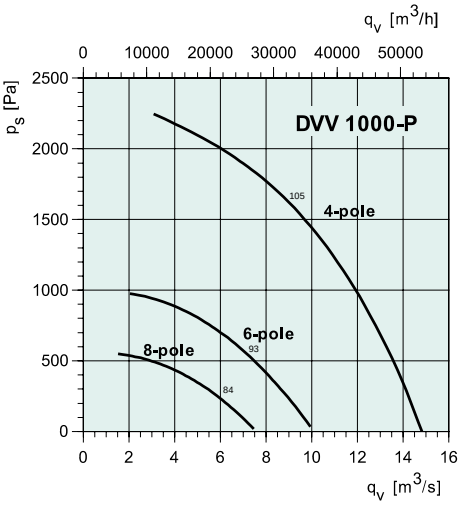
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	104	77	89	97	98	97	95	92	84
L_{wA} Surrounding	106	79	91	99	100	99	97	94	86
Measurement point: 8,6 m³/s; 740 Pa									
6-pole									
L_{wA} Inlet	91	67	78	80	87	82	81	77	64
L_{wA} Surrounding	93	69	80	82	89	84	83	79	66
Measurement point: 5,6 m³/s; 330 Pa									
8-pole									
L_{wA} Inlet	85	68	74	76	80	78	78	70	59
L_{wA} Surrounding	87	70	76	78	82	80	80	72	61
Measurement point: 4,3 m³/s; 200 Pa									



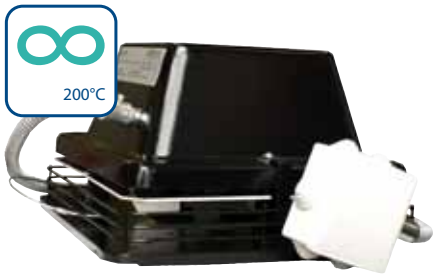
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
6-pole									
L_{wA} Inlet	92	69	78	84	88	83	81	79	67
L_{wA} Surrounding	94	71	80	86	90	85	83	81	69
Measurement point: 6,94 m³/s; 650 Pa									
8-pole									
L_{wA} Inlet	84	66	72	75	79	76	76	71	60
L_{wA} Surrounding	86	68	74	77	81	78	78	73	62
Measurement point: 6,11 m³/s; 310 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	104	82	91	97	100	96	94	92	80
L_{wA} Surrounding	109	87	96	102	105	101	99	97	85
Measurement point: 7,3 m³/s; 1600 Pa									
6-pole									
L_{wA} Inlet	92	75	81	83	87	85	85	80	69
L_{wA} Surrounding	97	80	86	88	92	90	90	85	74
Measurement point: 4,8 m³/s; 700 Pa									
8-pole									
L_{wA} Inlet	84	66	72	75	79	76	76	71	60
L_{wA} Surrounding	91	73	79	82	86	83	83	78	67
Measurement point: 3,1 m³/s; 430 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	105	82	91	97	101	96	94	92	80
L_{wA} Surrounding	110	87	96	102	106	101	99	97	85
Measurement point: 9,2 m³/s; 1580 Pa									
6-pole									
L_{wA} Inlet	93	75	81	84	88	85	85	80	69
L_{wA} Surrounding	98	80	86	89	93	90	90	85	74
Measurement point: 7,1 m³/s; 560 Pa									
8-pole									
L_{wA} Inlet	84	66	72	75	79	76	76	71	60
L_{wA} Surrounding	91	73	79	82	86	83	83	78	67
Measurement point: 6,1 m³/s; 220 Pa									



ZRS

Fans are supplied with 1 m armoured cable and a junction box. Steel cables are provided to give extra support for the fan during chimney sweeping and similar operations.

The flue-gas fans have a casing of cast aluminium alloy. The ZRS 170 impeller is made of silumin alloy, while the ZRS 180 impeller is made of stainless steel.

The ZRS 170 is suitable for smaller fireplaces with an aperture of less than 0.35 m², and the ZRS 180 is intended for fireplaces with an aperture between 0.35 and 0.80 m².

Systemair flue-gas fans counteract drafts caused by stoves, ovens and open fireplaces. Flue-gas fans are positioned on the top of the chimney and fixed with four adjustable locating rods which are inserted down the chimney. This means that no fixing into the chimney itself is required. The fan is a discreet and compact unit with a low profile.

ELECTRICAL ACCESSORIES



REU p. 320

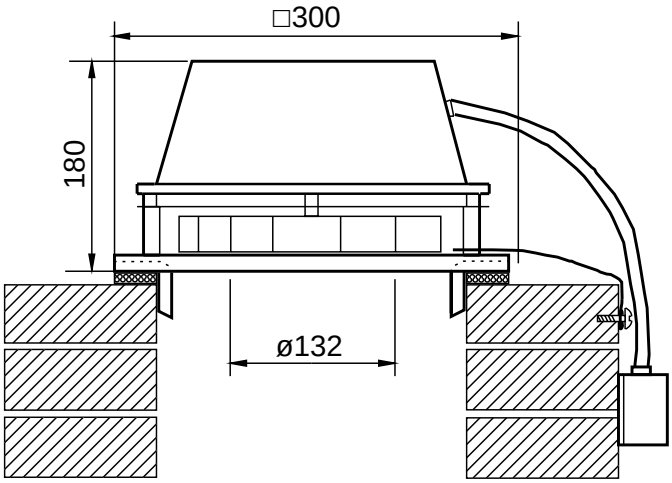


REE p. 321



RE p. 320

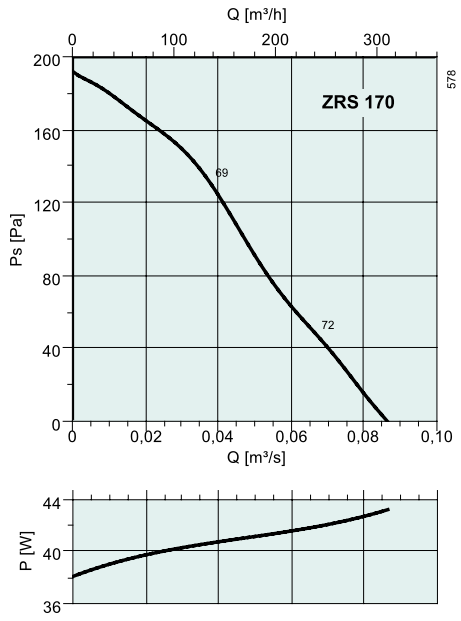
DIMENSIONS



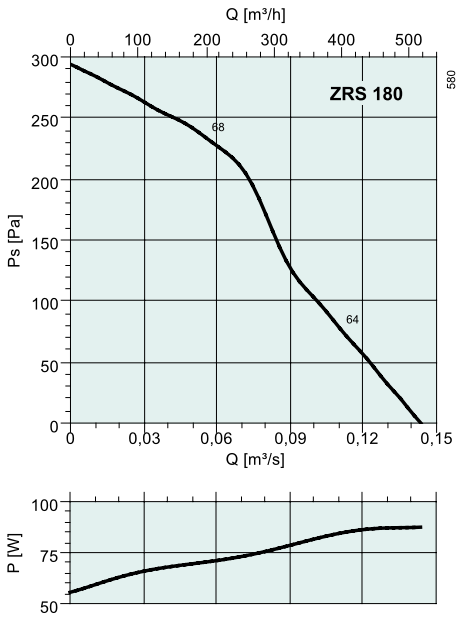
TECHNICAL DATA

ZRS		170	180				
Art no.		1665	1667				
Voltage/Frequency	V/50 Hz	230 1~	230 1~				
Power	W	42.9	55.5				
Current	A	0.19	0.26				
Max air flow	m3/s	0.0861	0.144				
R.p.m.	min-1	2566	2746				
Max temp. of transported air	°C	200	200				
" when speed controlled	°C	200	200				
Sound pressure level at 10 m	dB(A)	37	41				
Weight	kg	7.6	8.6				
Insulation class, motor		F	F				
Enclosure class, motor		IP 44	IP 44				
Capacitor	µF	1.5	2				
Speed control, five step	Transformer	RE 1,5	RE 1,5				
Speed control, stepless	Thyristor	REE 1	REE 1				
Wiring diagram p. 391-400		2	2				

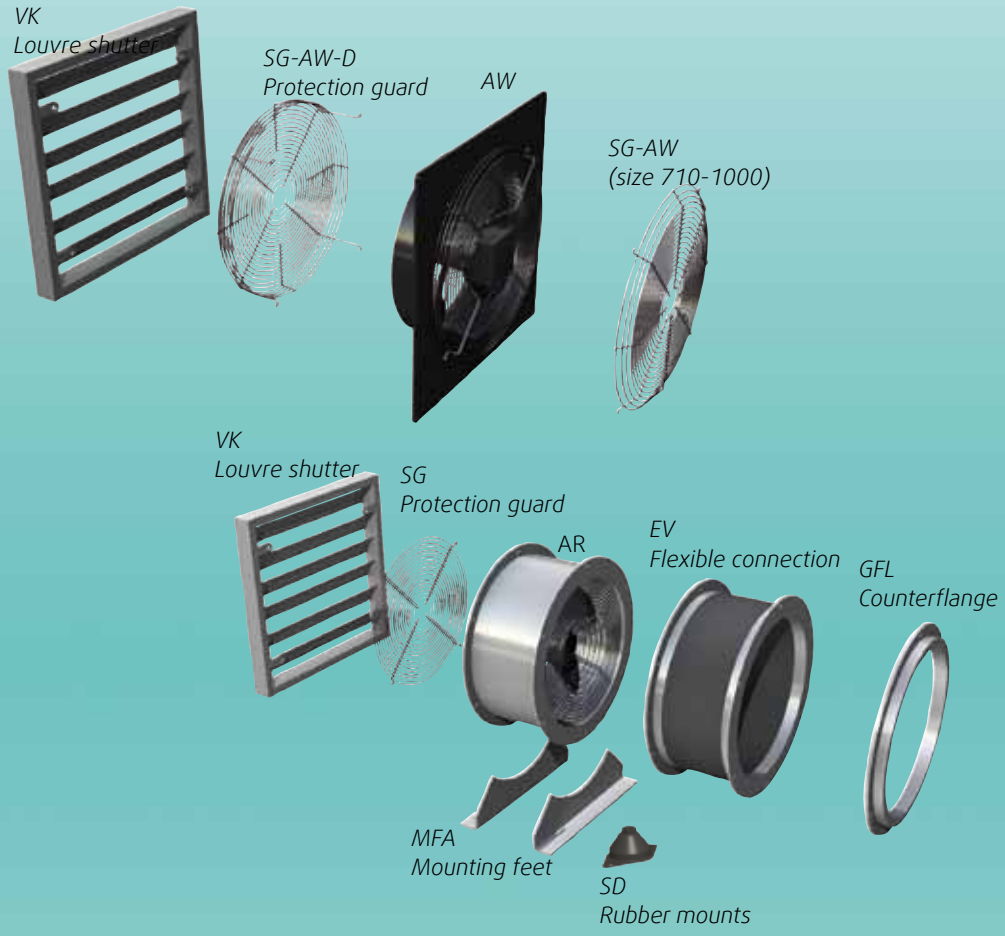
PERFORMANCE

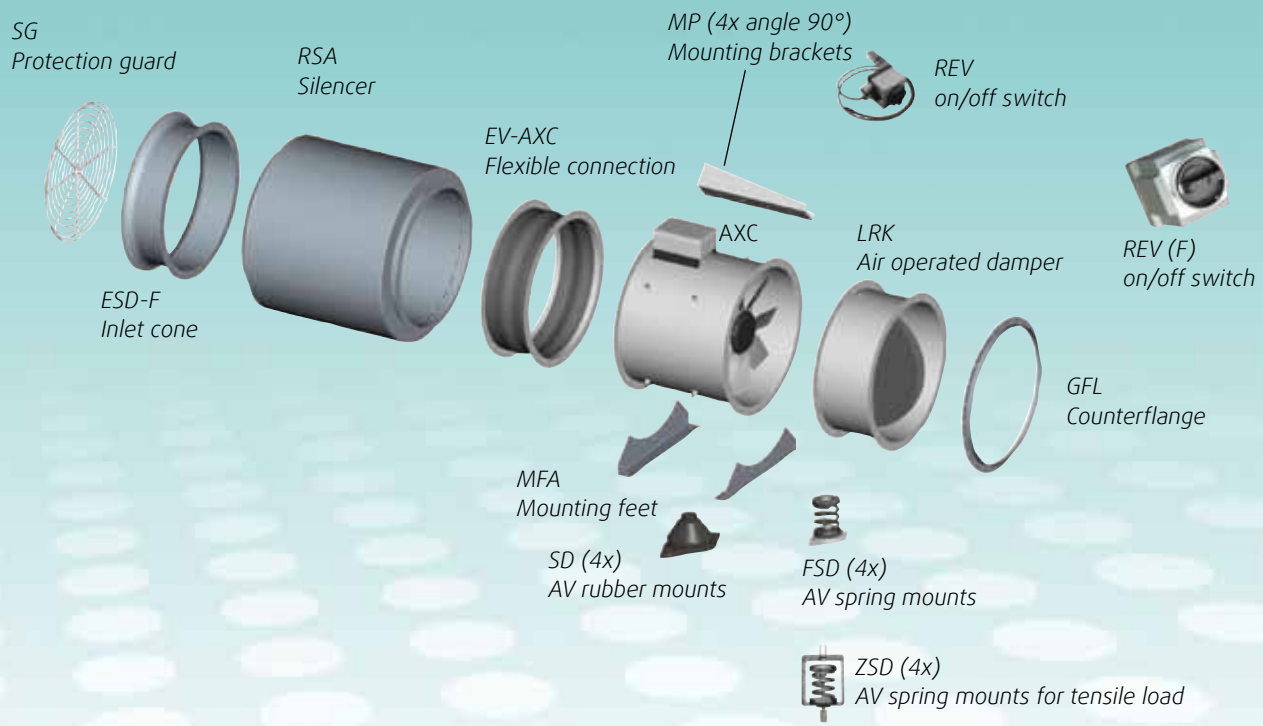


dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	72	54	66	66	67	58	55	46	37
L_{wA} Surrounding	68	38	64	59	60	61	57	51	41
Measurement point: 0,0672 m^3/s; 47 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	64	44	47	60	58	58	54	48	47
L_{wA} Surrounding	72	42	50	68	62	66	62	58	55
Measurement point: 0,111 m^3/s; 75 Pa									


VK
Louvre shutter
SG-AW-D
Protection guard
AW
SG-AW
(size 710-1000)
VK
Louvre shutter
SG
Protection guard
AR
EV
Flexible connection
GFL
Counterflange
MFA
Mounting feet
SD
Rubber mounts


SG
Protection guard
RSA
Silencer
MP (4x angle 90°)
Mounting brackets
REV
on/off switch
EV-AXC
Flexible connection
AXC
LRK
Air operated damper
REV (F)
on/off switch
ESD-F
Inlet cone
GFL
Counterflange
MFA
Mounting feet
SD (4x)
AV rubber mounts
FSD (4x)
AV spring mounts
ZSD (4x)
AV spring mounts for tensile load

AW sileo 168

Axial wall fans: up to 9.70 m³/s, axial impeller, 1 and 3 phase.



AR sileo. 170

Axial duct fans: up to 9.70 m³/s, axial impeller, 1 and 3 phase.



AXC 180

Axial fans: up to 19.16 m³/s, axial impeller, 3 phase.



AXCBF 186

Thermo axial fans: up to 5.5 m³/s, axial impeller, 3 phase.



Jet fans 190



General

Systemair axial fans have been developed for the installation in effective supply and exhaust air systems.

Ranges AR and AW are designed for the use in low pressure systems. Sizes 200 up to 450 are equipped with an impeller made from black coloured high efficiency composite material. From size 450 up to 1000 the AR/AW series are equipped with profiled, pressure die-cast aluminium blades. The long casings for ducted installation as well as the wall plates for wall mounting are manufactured from galvanized, powder coated steel.

The AXC range is designed for the use in medium/high pressure systems. Especially for industrial buildings the AXC range offers a wide area of applications. AXC is equipped with profiled aluminium blades, hot dip galvanized casing.

A comprehensive range of accessories is available.

Systemair range

The Systemair AR axial fan casings are designed for duct mounting, the AW fan casings for direct wall mounting. From sizes 200 up to 1000 mm.

Due to adjustable fan blades and different motor options the Systemair AXC axial fans can be selected to match the exact duty points required for a project. Available from sizes 315 to 2000 mm.

Motors

The Systemair AR/AW range is equipped with external rotor motors, speed controllable by voltage. All external rotor motors have thermal contacts embedded in the motor windings. The TK-leads have to be connected to an external motor protection unit. Systemair also offers a range of explosion proof ATEX axial fans, (see chapter EX-fans).

AXC is equipped with IEC standard motors, in IE2 according to the latest EN-standards with PTC thermistors for thermal motor protection. PTC thermistors have to be connected to an external motor protection unit.



AW sileo

- Speed controllable by voltage reduction, plus option of 2-step operation by D/Y switching for 400V versions
- Inlet protection guard up to size 630, for bigger sizes as accessory
- Safe and maintenance free operation
- Electric connection via terminal box mounted on the motor
- Single phase fans are supplied with capacitor

Axial fans of the AW sileo range do have a bionic shape of the fan blade, which reduces the noise level and increases the efficiency of the fan. AW sileo fans are driven by external rotor motors. The AW range is equipped with a square wall plate, galvanized steel and powder coated in black (RAL9005). The protection guard at the inlet side is powder coated in black. The axial impeller is manufactured either from pressure die cast aluminum, powder coated in black, or from high efficiency composite material.

The impeller is balanced dynamically in two levels in accordance with DIN ISO 1940 part 1, quality G6.3.

The motors are equipped with thermal contacts for motor protection, with leads to be connected to a motor protection unit, for example Systemair unit S-ET.

ELECTRICAL ACCESSORIES


S-ET/STDT
p. 341-342


RTRE/REU
p. 320


RE
p. 320

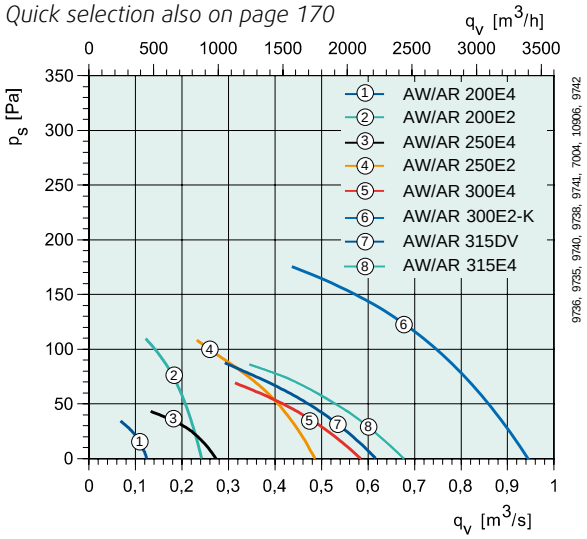

REE
p. 321

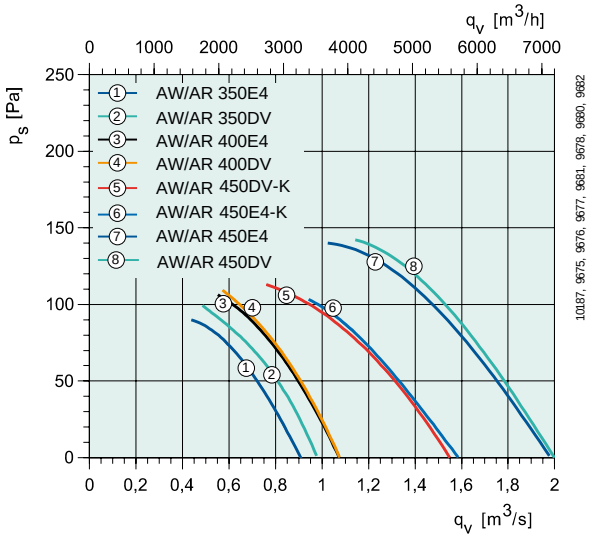

RTRD/RTRDU
p. 321


S-DT2 SKT
p. 340

Quick selection

Quick selection also on page 170



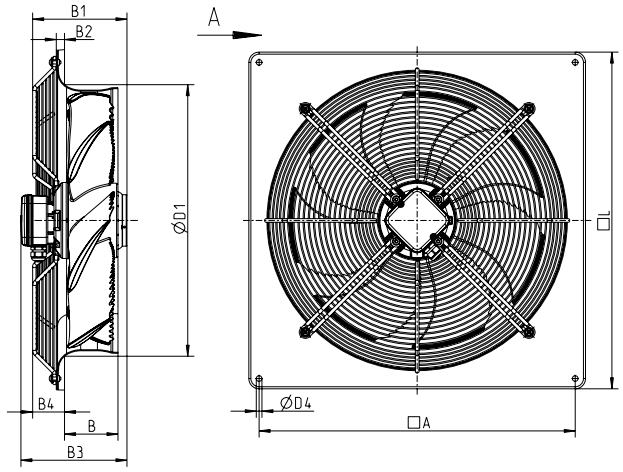


TECHNICAL DATA

AW sileo		200 E4	200 E2	250 E4	250 E2	300 E4	300 E2-K	315 DV	315 E4	350 E4	350 DV	400 E4	400 DV	450 DV-K	450 E4-K	450 E4
Art no.		34115	34114	34117	34116	34119	5801	34120	34121	34123	34122	34125	34124	34127	34129	34128
Voltage/Frequency	V/50 Hz	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~	400 3~	230 1~	230 1~	400 3~	230 1~	400 3~	400 3~	230 1~	230 1~
Power	W	30	80	50	140	100	309	120	160	170	190	240	230	350	390	550
Current	A	0.15	0.38	0.24	0.59	0.41	1.35	0.616	0.67	0.75	0.4	1.1	0.44	0.64	1.75	2.5
Max air flow	m³/s	0.124	0.242	0.273	0.486	0.584	0.948	0.39	0.677	0.91	0.976	1.07	1.08	1.55	1.59	1.98
R.p.m.	min-1	1425	2550	1370	2240	1330	2730	1450	1300	1260	1390	1350	1370	1250	1290	1320
Max temp. of transported air	°C	70	60	55	70	60	50	70	50	60	70	65	70	70	65	70
" when speed controlled	°C	70	60	55	70	60	50	70	50	60	70	65	70	70	65	70
Sound pressure level at 1 m	dB(A)	46	59	52	64	56	72	62	59	62	64	64	64	66	65	66
Weight	kg	3.2	3.2	4	4.2	5.9	6.6	6.8	6.7	7.5	7.6	8.7	8.7	10.1	10.1	16.2
Insulation class, motor		F	F	F	F	F	B	F	F	F	F	F	F	F	F	F
Enclosure class, motor		IP 44	IP 44	IP 44	IP 44	IP 44	IP 44	IP 54	IP 44	IP 44	IP 54	IP 54	IP 54	IP 44	IP 44	IP 54
Capacitor	µF	1	1.5	1.5	3.5	3	8	–	5	5	–	5	–	–	7	14
Wiring diagram p. 391-400		49	49	49	49	49	5	18	49	49	18	6a	18	18	6a	6a

Impeller material: put comp. in no. 1 to 14
put alu in no. 15 and full next page

DIMENSIONS



AW	□A	B	B1	B2	B3	B4	øD1	øD4	□L
AW 200	260	46	92	6	142	30	210	7	312
AW 250E2	320	50	102	6	152	30	264	7	370
AW 250E4	320	50	97	6	147	30	264	7	370
AW 300E2	380	65	111	12	171	46	330	9	430
AW 300E4	380	69	103	11	165	28	326	9	430
AW 315DV	380	69	118	11	182	19	330	9	430
AW 315E4	380	63	132	11	173	48	349	9	430
AW 350DV	435	68	119	12	182	22	388	9	485
AW 350E4	435	68	132	12	173	49	390	9	485
AW 400	490	88	146	12	182	54	420	9	540
AW 450DV	535	96	171	14	206	47	480	11	575
AW 450DV-K	535	96	148	14	186	40	480	11	575
AW 450E4	535	96	191	14	226	47	480	11	575
AW 450E4-K	535	96	148	14	186	40	480	11	575
AW 500	615	104	204	16	226	62	531	11	655
AW 560	675	119	215	16	227	96	589	11	725
AW 630	750	130	207	20	225	52	664	11	805
AW 710DV	810	150	272	20	272	37	763	14,5	850
AW 710DS	810	150	246	20	246	37	763	14,5	850
AW 710E6	810	150	246	20	246	37	763	14,5	850
AW 800DS	910	193	284	17	284	34	869	14,5	970
AW 910DS	1010	220	293	20	293	40	922	14,5	1070
AW 1000DS	1110	220	323	20	323	40	1016	14,5	1170
AW 1000DS-L	1110	220	400	20	400	47,5	1067	14,5	1170

AW	Motor protection	Transformer	Thyristor
200E2	S-ET	RTRE 1.5/REU 1.5	REE 1
200E4	S-ET	RTRE 1.5/REU 1.5	REE1
250E2	S-ET	RTRE 1.5/REU 1.5	REE 1
250E4	S-ET	RTRE 1.5/REU 1.5	REE 1
300E2	S-ET	RTRE 1.5/REU 1.5	REE 1
300E4	S-ET	RTRE 1.5/REU 1.5	REE 1
315DV	STDT	RTRD 2/RTRDU 2	-
315E4	S-ET	RTRE 1,5/REU 1,5	REE 1
350DV	STDT	RTRD 2/RTRDU 2	-
350E4	S-ET	RTRE 1,5/REU 1,5	REE 1
400DV	STDT	RTRD 2/RTRDU 2	-
400E4	S-ET	RTRE 1,5/REU 1,5	REE 2
450DV-K	STDT	RTRD 2/RTRDU 2	-
450E4	S-ET	RTRE 3/REU 3	REE 4
450E4-K	S-ET	RTRE 3/REU 3	REE 2
500DV	STDT	RTRD 2/RTRDU 2	-
500E4	S-ET	RTRE 5/REU 5	REE 4
560DV	STDT	RTRD 4/RTRDU 4	–
560E4	S-ET	RTRE 7/REU 7	–
630D4-2	STDT	RTRD 4, RTRDU 4	–
630DS	STDT	RTRD 2, RTRDU 2	–
630E6	S-ET	RTRE 5/REU 5	REE 4
710DV	STDT	RTRD 7/RTRDU 7	–
710DS	STDT	RTRD 4/RTRDU 4	-
710E6	S-ET	RTRE 5/REU 5	REE 4
800DS	STDT	RTRD 4/RTRDU 4	–
910DS	STDT	RTRD 7/RTRDU 7	
1000DS	STDT	RTRD 7/RTRDU 7	–
1000DS-L	STDT	RTRD 14	–

VENTILATION ACCESSORIES



VK p. 356



SG AW p. 385



SG AW-D p. 386

AW sileo		450 DV	500 E4	500 DV	560 DV	560 E4	630 E6	630 DS	630 DV	710 E6	710 DS	710 DV	800 DS	910 DS	1000 DS	1000 DS-L
Art no.		34126	34132	34131	34134	5816	34139	34138	5818	34142	34141	34140	34143	34157	34144	4309
Voltage/Frequency	V/50 Hz	400 3~	230 1~	400 3~	400 3~	230 1~	230 1~	400 3~	400 3~	230 1~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~
Power	W	540	750	770	1044	1449	730	630	1950	950	1000	2600	1600	1950	2700	5701
Current	A	1.1	3.35	1.7	2.2	6.49	3.4	1.25	3.41	4.4	2.5	4.9	3.6	4.4	5.3	10.30
Max air flow	m³/s	2.0	2.48	2.54	3.15	3.72	3.1	3.12	4.94	3.86	4.05	6.27	6.33	7.66	10.1	13.40
R.p.m.	min-1	1350	1230	1300	1280	1287	910	900	1353	850	910	1330	920	880	820	891
Max temp. of transported air	°C	70	70	70	70	50	70	70	60	65	70	60	70	70	70	60
" when speed controlled	°C	70	70	70	70	50	70	70	60	65	70	60	70	70	70	60
Sound pressure level at 1 m	dB(A)	67	68	67	74	77	67	64	80	67	66	76	73	72	72	91
Weight	kg	14.6	20.1	20.1	23.5	31.7	27	24.5	34.2	35.1	35.1	36.9	53	58.1	69.5	84
Insulation class, motor		F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
Capacitor	µF	–	16	–	–	30	16	–	–	16	–	–	–	–	–	–
Wiring diagram p. 391-400		18	6a	18	18	6a	6a	18	18	6a	18	18	18	18	18	18



AR sileo

- Speed controllable by voltage reduction, plus option of 2-step operation by D/Y switching for 400V versions
- Inlet protection guard up to size 630, for bigger sizes as accessory
- Safe and maintenance free operation
- Electric connection via terminal box supplied with the fan
- Single phase fans are supplied with capacitor

Axial fans of the AR sileo range do have a bionic shape of the fan blade, which reduces the noise level and increases the efficiency of the fan. AR sileo fans are driven by external rotor motors. The AR range is equipped with a short casing and flanges according to Eurovent 1/2, galvanized steel and powder coated in black (RAL9005). The protection guard at the inlet side is powder coated in black. The axial impeller is manufactured either from pressure die cast aluminum, powder coated in black, or from high efficiency composite material.

The impeller is balanced dynamically in two levels in accordance with DIN ISO 1940 part 1, quality G6.3.

The motors are equipped with thermal contacts for motor protection, with leads to be connected to a motor protection unit, for example Systemair unit S-ET.

ELECTRICAL ACCESSORIES



S-ET/STDT
p. 341-342



RTRE p. 320



REU p. 320



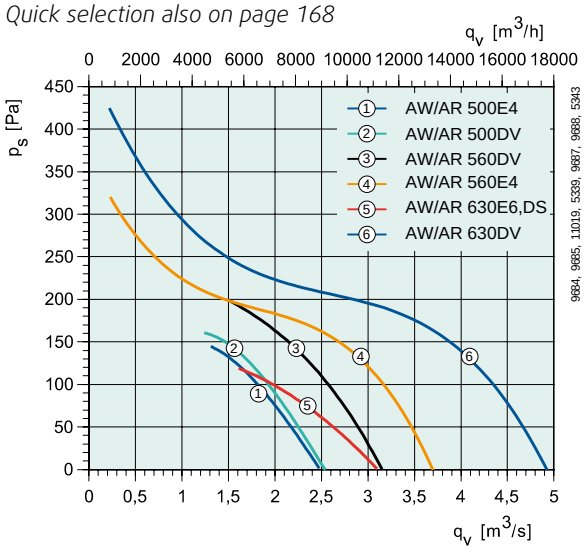
REE p. 321

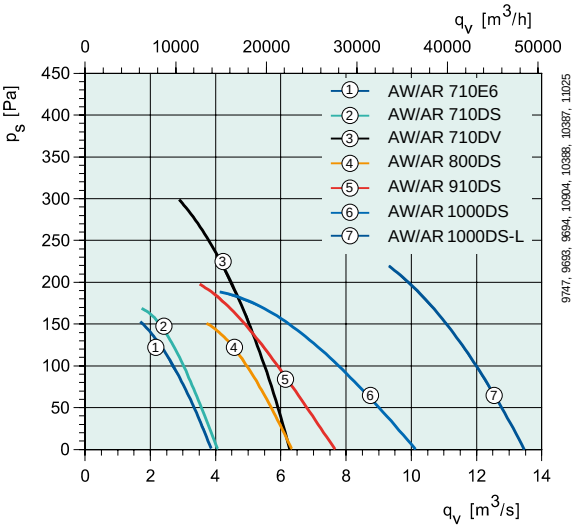


RTRD/RTRDU
p. 321

QUICK SELECTION

Quick selection also on page 168



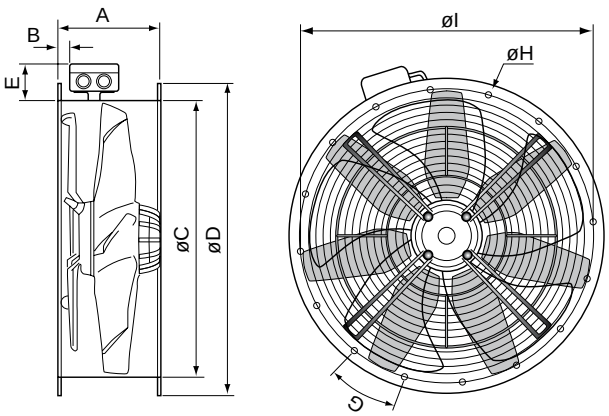


TECHNICAL DATA

AR sileo		200 E4	200 E2	250 E4	250 E2	300 E4	300 E2-K	315 DV	315 E4	350 E4	350 DV	400 E4	400 DV	450 DV-K	450 E4-K	450 E4
Art no.		34458	34457	34460	34459	34462	5772	34464	34463	34465	34466	34468	34470	34474	34472	34471
Voltage/Frequency	V/50 Hz	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~	400 3~	230 1~	230 1~	400 3~	230 1~	400 3~	400 3~	230 1~	230 1~
Power	W	30	80	50	140	100	309	120	160	170	190	240	230	350	390	550
Current	A	0.15	0.38	0.24	0.59	0.41	1.35	0.616	0.67	0.75	0.4	1.1	0.44	0.64	1.75	2.5
Max air flow	m3/s	0.124	0.242	0.273	0.486	0.584	0.948	0.39	0.677	0.91	0.976	1.07	1.08	1.55	1.59	1.98
R.p.m.	min-1	1425	2550	1370	2240	1330	2730	1450	1300	1260	1390	1350	1370	1250	1290	1320
Max temp. of transported air	°C	70	60	55	70	60	50	70	50	60	70	65	70	70	65	70
" when speed controlled	°C	70	60	55	70	60	50	70	50	60	70	65	70	70	65	70
Sound pressure level at 1 m	dB(A)	46	59	52	64	56	72	62	59	62	64	64	64	66	65	66
Weight	kg	3.2	3.2	4	4.2	5.9	6.6	6.8	6.7	7.5	7.6	8.7	8.7	10.1	10.1	16.2
Insulation class, motor		F	F	F	F	F	B	F	F	F	F	F	F	F	F	F
Enclosure class, motor		IP 44	IP 44	IP 44	IP 44	IP 44	IP 44	IP 54	IP 44	IP 44	IP 54	IP 54	IP 54	IP 44	IP 44	IP 54
Capacitor	µF	1	1.5	1.5	3.5	3	8	–	5	5	–	5	–	–	7	14
Wiring diagram p. 391-400		49	49	49	49	49	5	18	49	49	18	6a	18	18	6a	6a

Impeller material: put comp. in no. 1 to 14
put alu in no. 15 and full next page

DIMENSIONS



AR	A	B	øC	øD	E	G	H	øI
200	85	–	204	255	–	4x90°	10	225
250	95	–	254	306	–	4x90°	10	280
300-315	130	–	319	382	–	8x45°	10	355
350	135	–	356	421	–	8x45°	10	395
400	155	–	400	466	–	8x45°	12	450
450DV	160	25	451	515	72	8x45°	12	500
450DV-K	160	–	451	515	–	8x45°	12	500
450E4	175	25	451	515	72	8x45°	12	500
450E4-K	160	–	451	515	–	8x45°	12	500
500	174	6	503	567	72	12x30°	12	560
560	210	–	559	636	72	12x30°	12	620
630	220	–	634	709	72	12x30°	12	690
710	260	33	711	785	72	16x22.5°	12	770
800	280	33	797	875	72	16x22.5°	12	860
910	330	–	914	1005	73	16x22.5°	15	970
1000DS	376	44.5	1001	1085	63	16x22.5°	15	1070
1000DS-L	330	44.5	1003	1079	63	16x22.5°	15	1070

Dimension subject to change

AR	Motor protection	Transformer	Thyristor
200E2	S-ET	RTRE 1.5/REU 1.5	REE 1
200E4	S-ET	RTRE 1.5/REU 1.5	REE1
250E2	S-ET	RTRE 1.5/REU 1.5	REE 1
250E4	S-ET	RTRE 1.5/REU 1.5	REE 1
300E2	S-ET	RTRE 1.5/REU 1.5	REE 1
300E4	S-ET	RTRE 1.5/REU 1.5	REE 1
315DV	STDT	RTRD 2/RTRDU 2	-
315E4	S-ET	RTRE 1,5/REU 1,5	REE 1
350DV	STDT	RTRD 2/RTRDU 2	-
350E4	S-ET	RTRE 1,5/REU 1,5	REE 1
400DV	STDT	RTRD 2/RTRDU 2	-
400E4	S-ET	RTRE 1,5/REU 1,5	REE 2
450DV-K	STDT	RTRD 2/RTRDU 2	-
450E4	S-ET	RTRE 3/REU 3	REE 4
450E4-K	S-ET	RTRE 3/REU 3	REE 2
500DV	STDT	RTRD 2/RTRDU 2	-
500E4	S-ET	RTRE 5/REU 5	REE 4
560DV	STDT	RTRD 4/RTRDU 4	–
560E4	S-ET	RTRE 7/REU 7	–
630D4-2	STDT	RTRD 4, RTRDU 4	–
630DS	STDT	RTRD 2, RTRDU 2	–
630E6	S-ET	RTRE 5/REU 5	REE 4
710DV	STDT	RTRD 7/RTRDU 7	–
710DS	STDT	RTRD 4/RTRDU 4	-
710E6	S-ET	RTRE 5/REU 5	REE 4
800DS	STDT	RTRD 4/RTRDU 4	–
910DS	STDT	RTRD 7/RTRDU 7	
1000DS	STDT	RTRD 7/RTRDU 7	–
1000DS-L	STDT	RTRD 14	–

VENTILATION ACCESSORIES



VK p. 356



SG AR p. 385



EV-AR p. 387



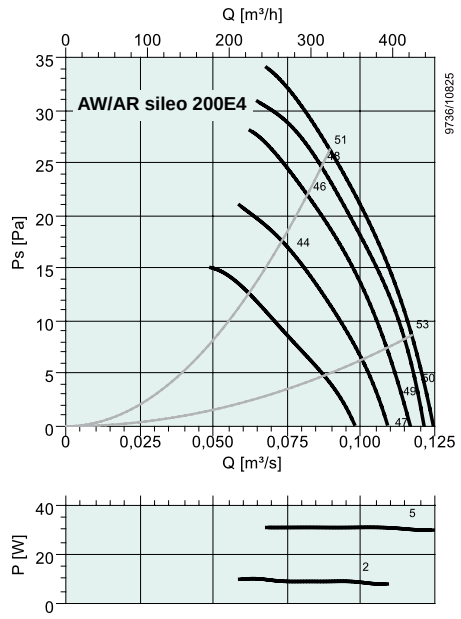
GFL-AR p. 389



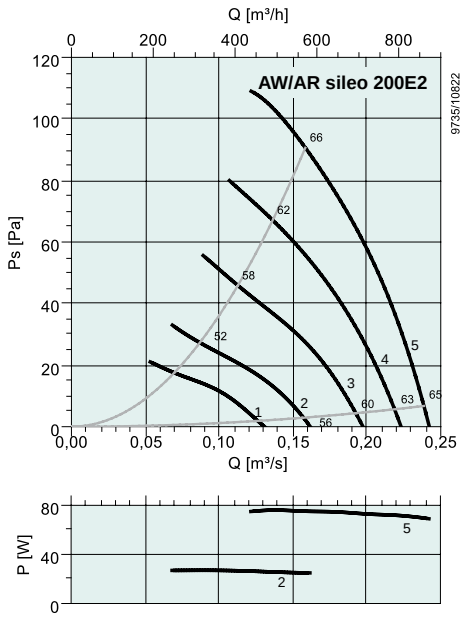
MFA-AR p. 386

AR sileo		450 DV	500 E4	500 DV	560 DV-2	560 E4	630 E6	630 DS	630 DV	710 E6	710 DS	710 DV	800 DS	910 DS	1000 DS	1000 D6-2
Art no.		34473	34475	34476	5789	5790	34479	34481	5792	34482	34484	34483	34485	34486	34487	4308
Voltage/Frequency	V/50 Hz	400 3~	230 1~	400 3~	400 3~	230 1~	230 1~	400 3~	400 3~	230 1~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~
Power	W	540	750	770	993	1449	730	630	1950	950	1000	2600	1600	1950	2700	5701
Current	A	1.1	3.35	1.7	1.8	6.49	3.4	1.25	3.41	4.4	2.5	4.9	3.6	4.4	5.3	10.30
Max air flow	m3/s	2.0	2.48	2.54	3.43	3.72	3.1	3.12	4.94	3.86	4.05	6.27	6.33	7.66	10.1	13.40
R.p.m.	min-1	1350	1230	1300	1216	1287	910	900	1353	850	910	1330	920	880	820	891
Max temp. of transported air	°C	70	70	70	60	50	70	70	60	65	70	60	70	70	70	60
" when speed controlled	°C	70	70	70	60	50	70	70	60	65	70	60	70	70	70	60
Sound pressure level at 1 m	dB(A)	67	68	67	74	77	67	64	80	67	66	76	73	72	72	91
Weight	kg	14.6	20.1	20.1	23.5	31.7	27	24.5	34.2	35.1	35.1	36.9	53	58.1	69.5	84
Insulation class, motor		F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
Capacitor	µF	–	16	–	–	30	16	–	–	16	–	–	–	–	–	–
Wiring diagram p. 391-400		49	49	49	16	6a	49	49	18	49	49	49	49	49	49	16

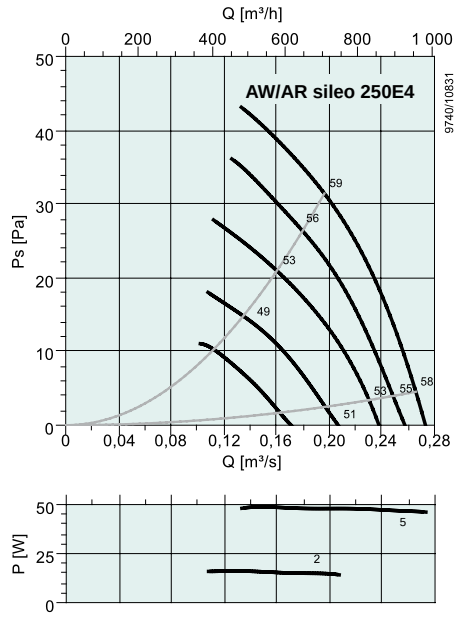
PERFORMANCE



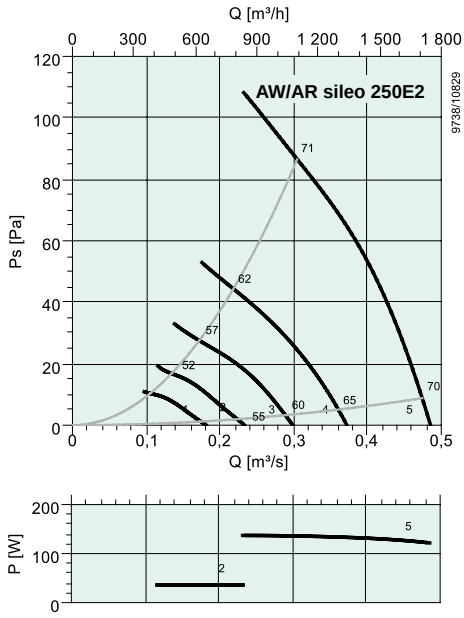
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	51	28	39	40	43	47	44	40	30
L_{wA} Outlet	51	26	38	41	43	47	44	40	29
Measurement point: 0,0894 m³/s; 26,2 Pa									



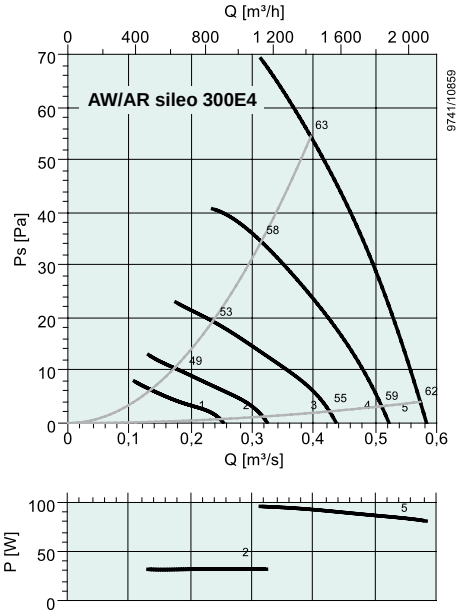
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	66	36	47	54	56	58	61	59	53
L_{wA} Outlet	65	34	46	54	56	58	61	59	52
Measurement point: 0,158 m³/s; 90,6 Pa									



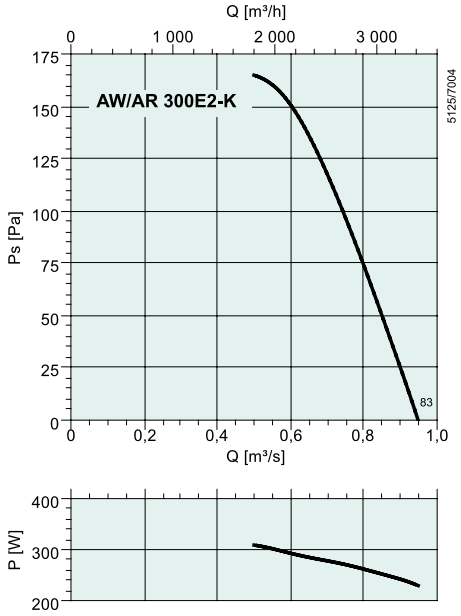
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	59	30	46	48	51	53	54	50	40
L_{wA} Outlet	59	29	47	47	50	53	54	49	39
Measurement point: 0.196 m³/s; 31,4 Pa									



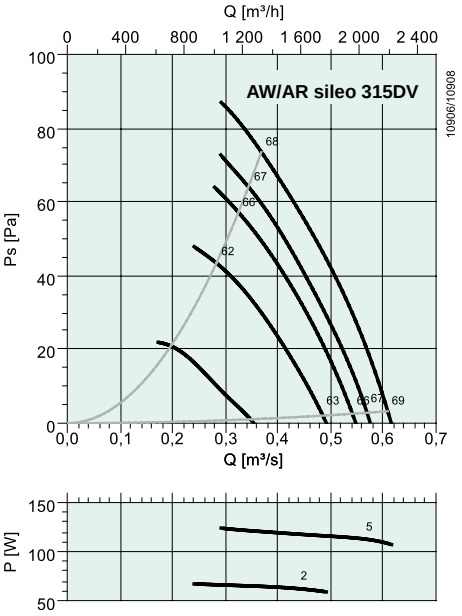
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	71	39	50	59	62	64	67	64	55
L_{wA} Outlet	71	37	50	60	62	65	67	63	54
Measurement point: 0,305 m³/s; 86,5 Pa									



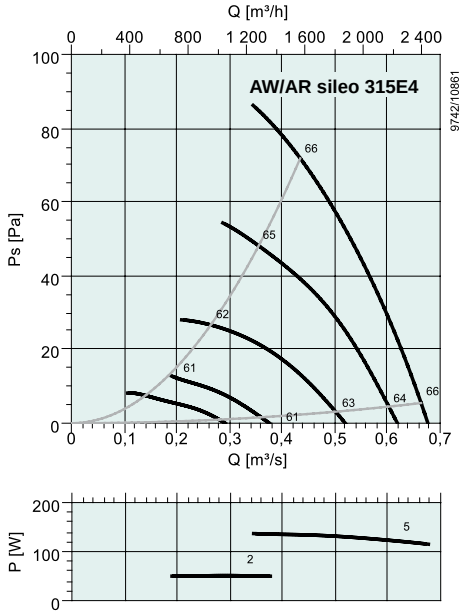
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	63	39	48	51	54	55	59	54	42
L_{wA} Outlet	62	37	48	52	53	55	59	53	41
Measurement point: 0,395 m³/s; 54,4 Pa									



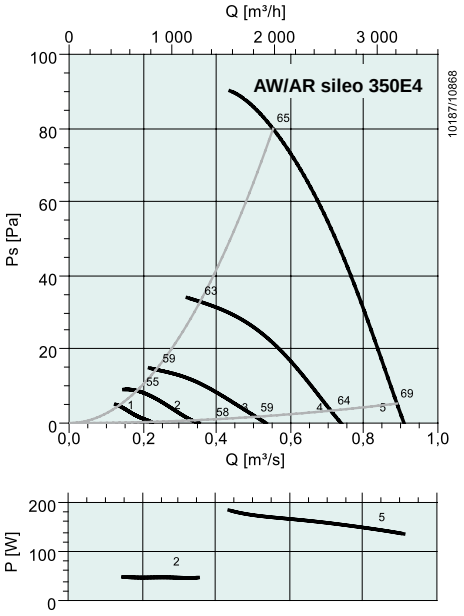
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet/Outlet	79	70	71	72	72	71	69	65	61
Measurement point: 0,6 m3/s; 150 Pa									



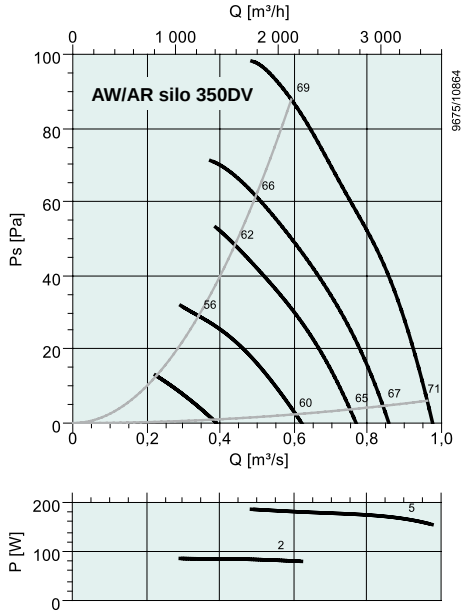
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	68	49	54	53	57	62	64	61	52
L_{wA} Outlet	68	47	53	55	58	62	64	61	50
Measurement point: 0,368 m³/s; 73,5 Pa									



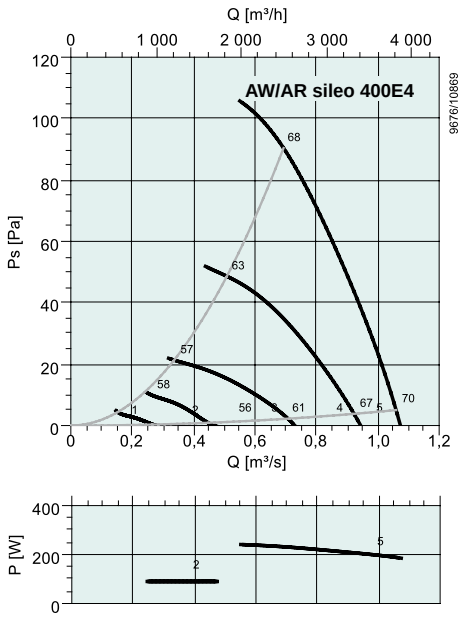
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	66	39	55	58	59	60	60	54	44
L_{wA} Outlet	66	39	55	58	58	60	60	54	44
Measurement point: 0,434 m³/s; 71,8 Pa									



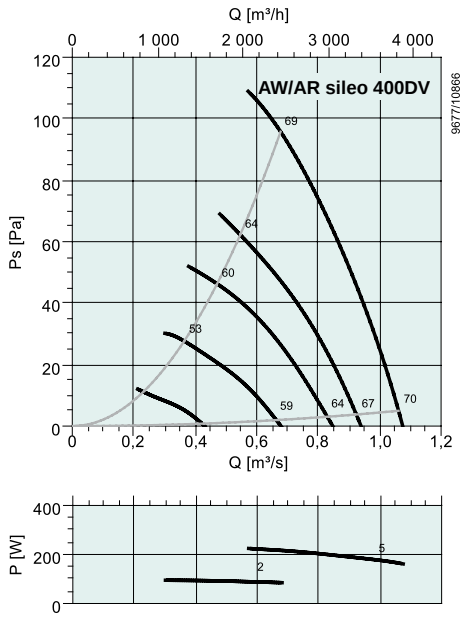
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	65	40	52	53	60	58	60	54	46
L_{wA} lOutlet	65	39	51	55	58	58	60	53	45
Measurement point: 0,553 m³/s; 79,8 Pa									



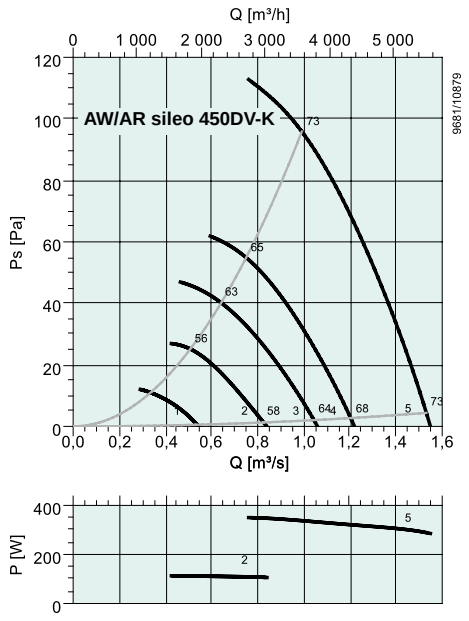
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	69	50	53	55	61	64	65	60	53
L_{wA} Outlet	70	49	52	56	62	64	65	60	51
Measurement point: 0,593 m³/s; 87,8 Pa									



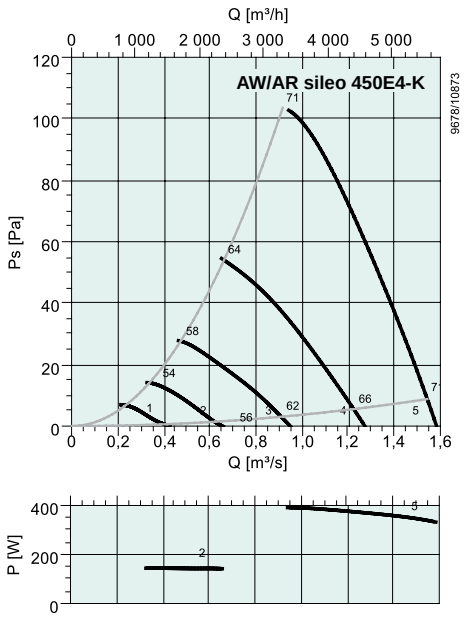
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	68	48	56	59	60	63	62	57	50
L_{wA} Outlet	69	46	56	60	61	65	63	57	48
Measurement point: 0,693 m³/s; 90,4 Pa									



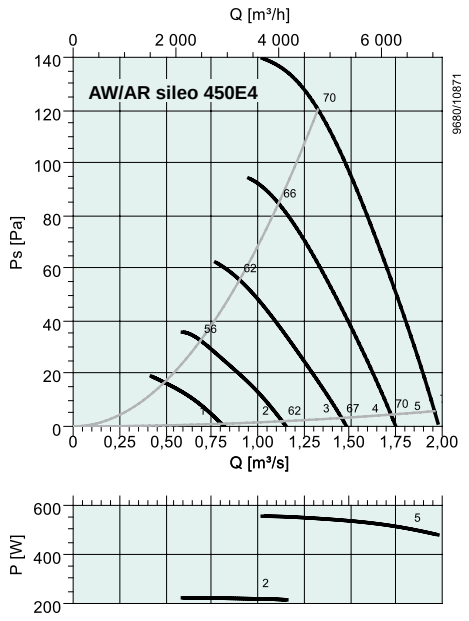
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	69	49	57	58	61	63	63	58	50
L_{wA} Outlet	69	47	56	60	61	65	63	58	48
Measurement point: 0,678 m³/s; 95,8 Pa									



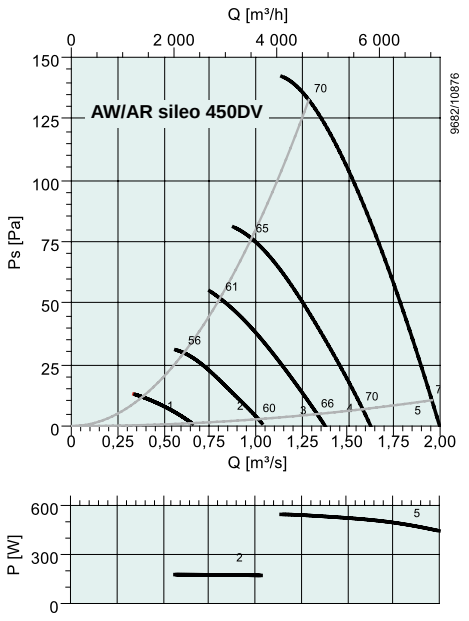
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	73	52	64	64	65	67	67	62	54
L_{wA} Outlet	73	50	63	64	66	67	66	61	52
Measurement point: 0,991 m³/s; 95,9 Pa									



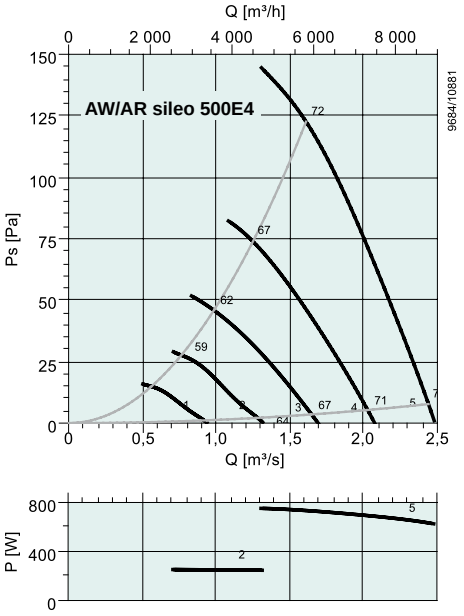
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	71	53	61	62	64	65	64	60	51
L_{wA} Outlet	71	51	60	63	64	66	65	59	52
Measurement point: 0,916 m³/s; 104 Pa									



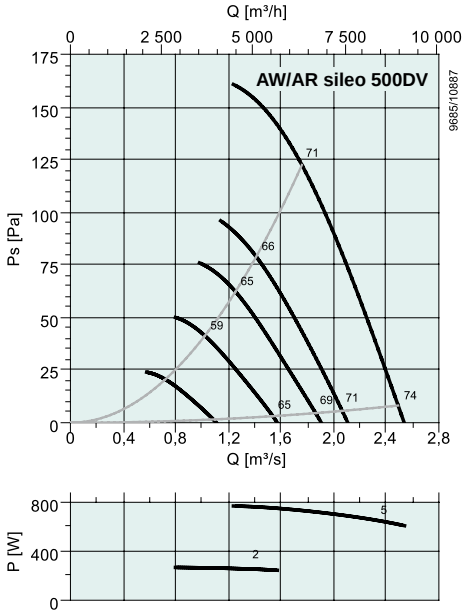
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	70	42	53	63	61	64	64	60	52
L_{wA} Outlet	69	46	54	62	62	63	63	59	51
Measurement point: 1,33 m³/s; 120 Pa									



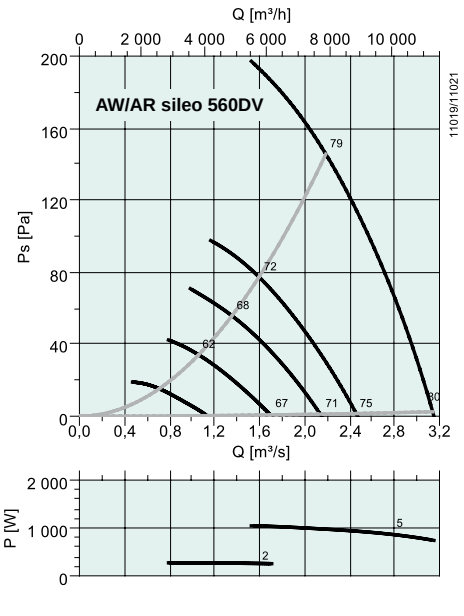
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	70	47	54	57	62	65	65	60	52
L_{wA} Outlet	70	49	55	59	63	65	65	60	51
Measurement point: 1,29 m³/s; 133 Pa									



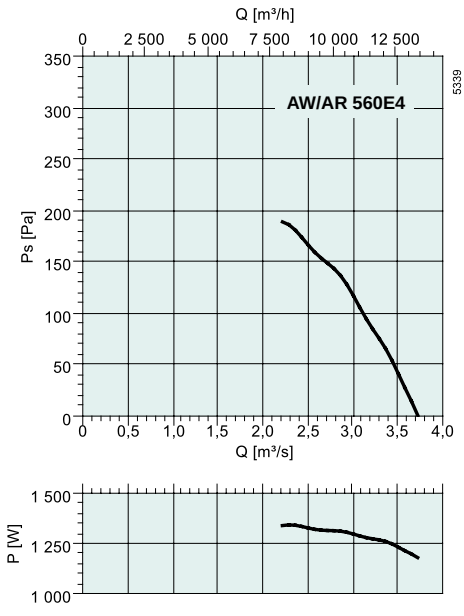
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	72	45	59	59	60	67	69	62	51
L_{wA} Outlet	72	45	60	60	61	67	68	61	51
Measurement point: 1,61 m³/s; 123 Pa									



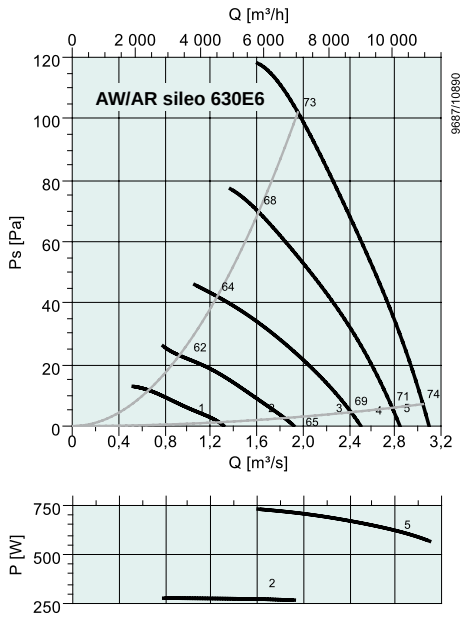
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	71	43	53	55	60	66	67	62	53
L_{wA} Outlet	70	45	53	59	62	65	66	61	52
Measurement point: 1,76 m³/s; 122 Pa									



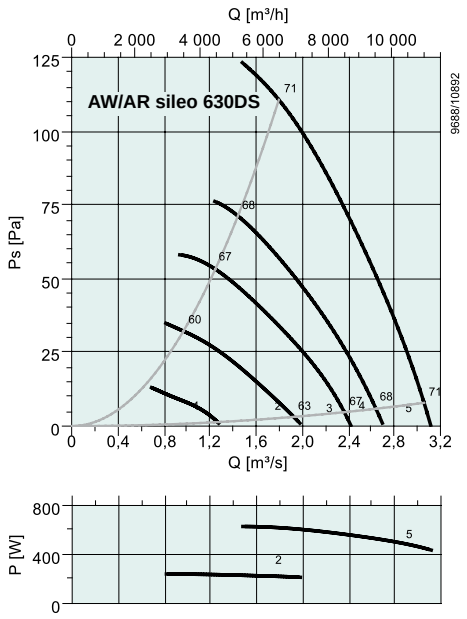
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet/Outlet	80	41	63	66	71	74	75	72	64
Measurement point: 2,19 m³/s; 146 Pa									



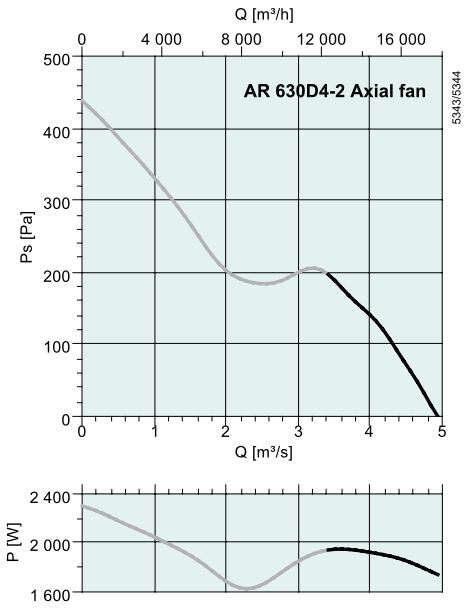
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet/Outlet	83	46	68	69	72	77	78	76	67
Measurement point: 2,22 m³/s; 186 Pa									



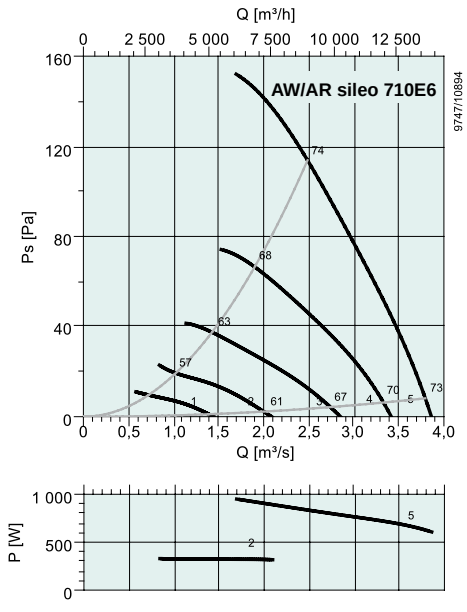
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{WA} Inlet	73	48	55	65	65	68	68	61	53
L_{WA} Outlet	74	49	56	67	68	70	65	60	53
Measurement point: 1,96 m³/s; 102 Pa									



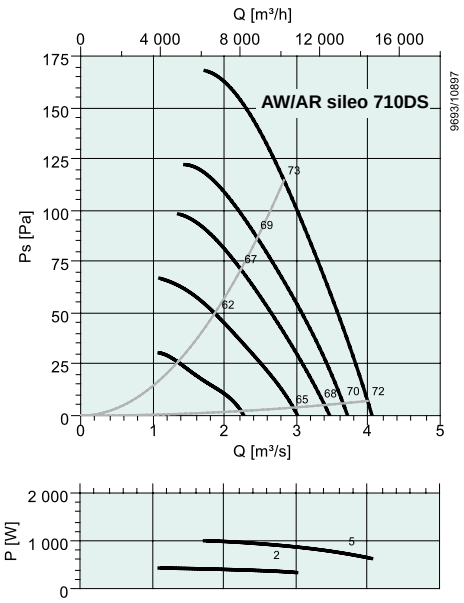
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{WA} Inlet	71	50	54	58	63	67	66	60	53
L_{WA} Outlet	71	50	54	58	63	67	65	60	52
Measurement point: 1,8 m³/s; 111 Pa									



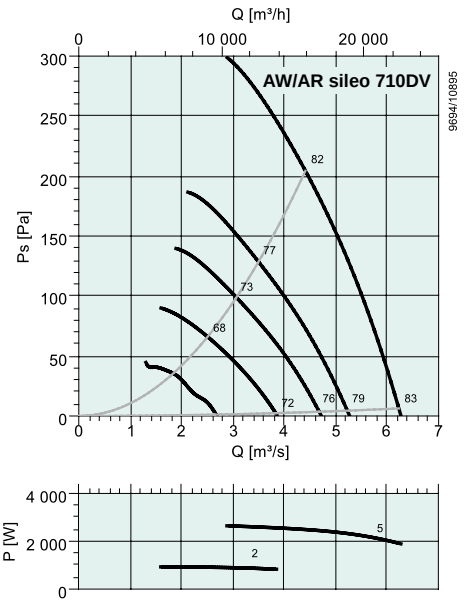
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{WA} Inlet/Outlet	86	54	65	73	79	81	80	76	70
Measurement point: 4,8 m³/s; 31 Pa									



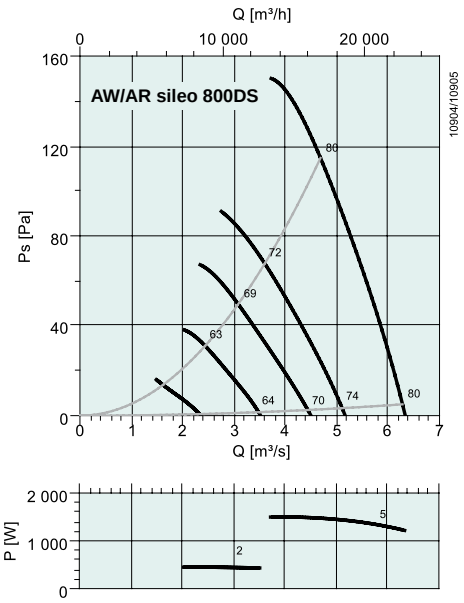
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{WA} Inlet	74	52	62	65	67	70	68	62	57
L_{WA} Outlet	74	52	62	65	67	70	65	61	55
Measurement point: 2,49 m³/s; 114 Pa									



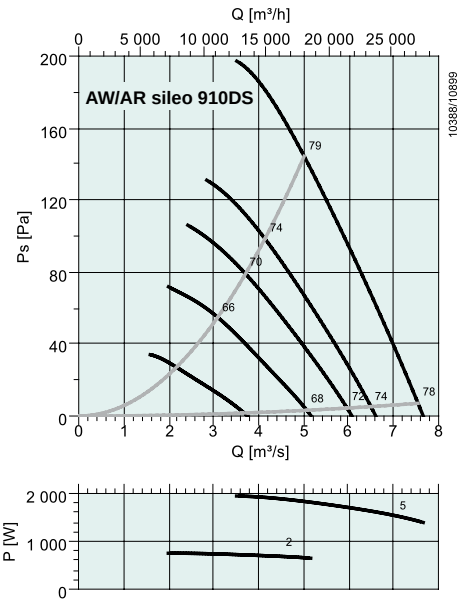
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	73	45	55	61	65	69	67	61	52
L_{wA} Outlet	72	46	55	61	65	68	64	59	52
Measurement point: 2,83 m³/s; 115 Pa									



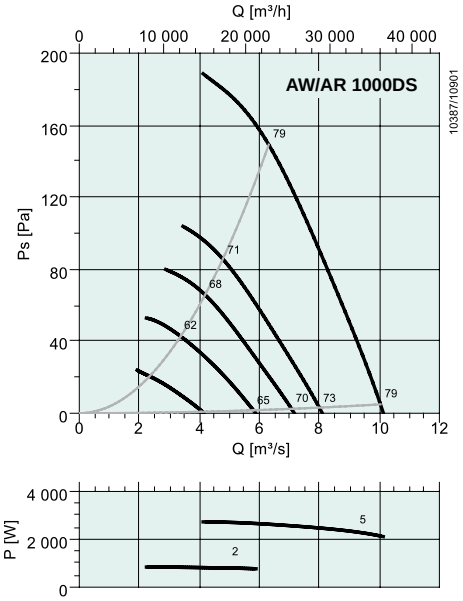
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	82	51	64	67	72	77	77	73	66
L_{wA} Outlet	81	52	64	69	73	76	75	72	66
Measurement point: 4,41 m³/s; 204 Pa									

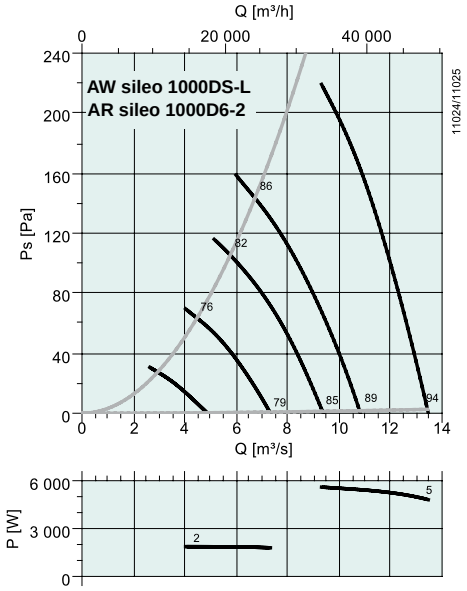


dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	80	50	63	70	73	75	73	68	62
L_{wA} Outlet	80	50	63	70	73	75	73	69	62
Measurement point: 4,68 m³/s; 115 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	79	56	62	72	73	73	71	69	61
L_{wA} Outlet	79	57	62	71	74	73	70	68	60
Measurement point: 5,01 m³/s; 144 Pa									





dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	79	58	63	71	72	74	72	68	64
L_{wA} Outlet	79	58	63	71	73	74	70	67	64
Measurement point: 6,5 m³/s; 150 Pa									

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	92	34	54	74	82	87	88	86	76
L_{wA} Outlet	93	36	57	75	83	88	88	87	78
Measurement point: 8.71 m³/s; 241 Pa									



AXC

- Aerofoil impeller with adjustable pitch angle for maximum efficiency.
- Die cast aluminium hub and blades.
- Long casing, hot dip galvanized steel, to DIN EN ISO 1461.
- Spun flanges for high rigidity, according to Eurovent 1/2
- Terminal box in IP65 mounted at the outside of the casing for easy wiring.
- Three-phase motors IP55, insulation class F, in accordance with EN 60034-5/IEC 85 and IEC 60034-30.
- Suitable for operating temperatures of up to 55°C
- Inspection hole to verify correct direction of rotation
- Truly reversible version AXR on request
- 60 Hz range available
- Inspection hole to verify correct direction of rotation.

The Systemair AXC range of long cased medium pressure axial fans is available in sizes from 315 up to 2000 mm impeller diameter. The adjustable pitch angle setting offers a wide performance and maximum flexibility to match precisely individual airflow requirements. This catalogue gives an overview up to size 1250. Other sizes and configurations are available from our selection software. The AXC axial fans have been performance tested in accordance with DIN ISO 5801, DIN 24163 and AMCA 210-99 on the Systemair fan test rig. The IE2 three phase motors are equipped with PTC thermistors for optimum motor protection. The motor is speed controllable by frequency converter.

ELECTRICAL ACCESSORIES

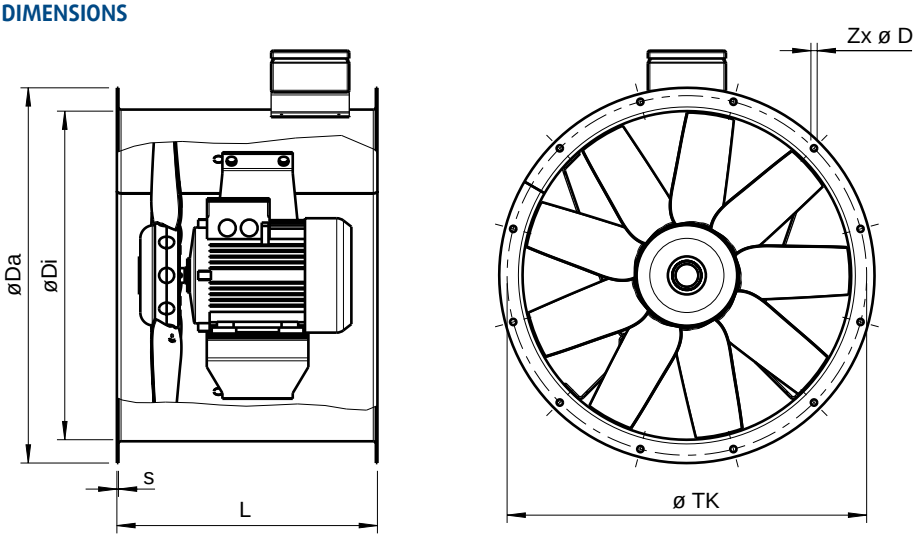


REV p. 340



FRQ p. 325

DIMENSIONS



	øDi	øDa	øTK	Z x D	L	s
AXC 315	315	395	355	8x10	375	2,5
AXC 355	355	435	395	8x10	375	2,5
AXC 400	400	480	450	8x12	450	2,5
AXC 450	450	530	500	8x12	500	2,5
AXC 500	500	590	560	12x12	540	3
AXC 560	560	650	620	12x12	500/750	3
AXC 630	630	720	690	12x12	500/750	3
AXC 710	710	800	770	16x12	500/700/800	3
AXC 800	800	890	860	16x12	500/700	3
AXC 900	900	1005	970	16x15	640/850	4
AXC 1000	1000	1105	1070	16x15	640/850	4
AXC 1120	1120	1260	1190	20x15	700/1000	4
AXC 1250	1250	1390	1320	20x15	850/1050	5

Length depending on motor size

Axial Fans AXC

High efficiency impellers

The AXC die cast aerofoil aluminium impellers can be offered with full or fractional solidities, maximum efficiencies can be obtained. Different impeller/hub configurations allow high pressure drops. AXR impellers are truly reversible.

Sturdy casing

AXC/AXR axial fan casings are heavy gauge, hot dip galvanized, with spun flanges for high rigidity. Long cased execution as standard stock range. Also available with short casing and with an acoustically insulated box.

Motors

The built-in motors are equipped with PTC thermistors for optimum motor protection. Single or two speed motors. Speed controllable by frequency converter.
Efficiency class IE2 as per 2009/640/EC guidelines.

Multi stage fans

For higher pressure drops two stage fans are offered. Two fans in series increase the available static pressure drop.



Two stage fan

Quality

Systemair is ISO 9001 approved. The Systemair quality is regularly monitored by TÜV Süd.

Warranty

Systemair offers a three year warranty on all AXC fan models. The Systemair warranty conditions apply.

Performance curves and technical details for the required fan duties are available from our selection software, which can be downloaded or used online from our homepage You can, of course, also order it directly from our customer support.

VENTILATION ACCESSORIES


ESD-F p. 388


EV-AXC p. 387


FSD p. 386


GFL-AXC p. 389


LRK(F) p. 385


MFA-AXC p. 386


RSA p. 384


SD p. 385


MP p. 387

SG p. 357

Axial fans

Acoustic data of the AXC series

The human ear perceives tones and intensity based on sound pressure levels. To consider this fact frequency weighting curves were established. In technical acoustics the A-weighting is most common. The level values in the diagrams are A-weighted. They correspond to the sound power levels of a fan emitted on pressure side in a duct.

According to EN 25136 = L_{W4} in dB(A).

The catalogue values can be expected, if the flow conditions of the fan correspond to those which are adequate according to standard when installing the fan. When inadequately installed or operated incorrectly, the fan can produce much more noise than necessary for the ventilation task.

The fan sound level which is emitted into the duct is important for the selection of the right duct silencers. The efficiency of silencers depends on the frequency. A division of the frequency into bands with the width of an octave is sufficient in ventilation technology.

The following example shows how to calculate a spectrum from the total sound power level.

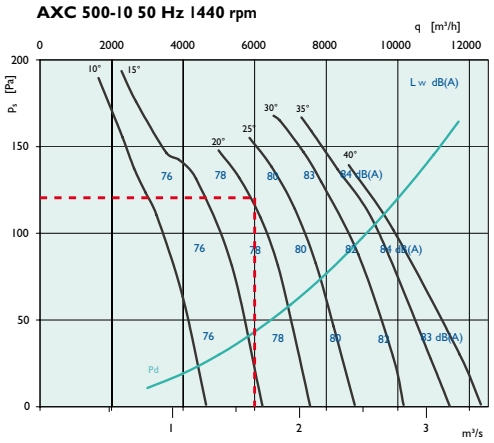
Table 1 shows the correction values in the different frequencies of the mid octave band.

Example

Calculation of an octave band for:
Operating point 6000 m^3/h at 115 Pa static
Fan model: AXC 500-10 50 Hz 1440 rpm

Result

The calculation gives a duct emission level L_{W4} of 78 dB(A).
$L_{WA\ oct} = L_{WA4} - L_{correction}$

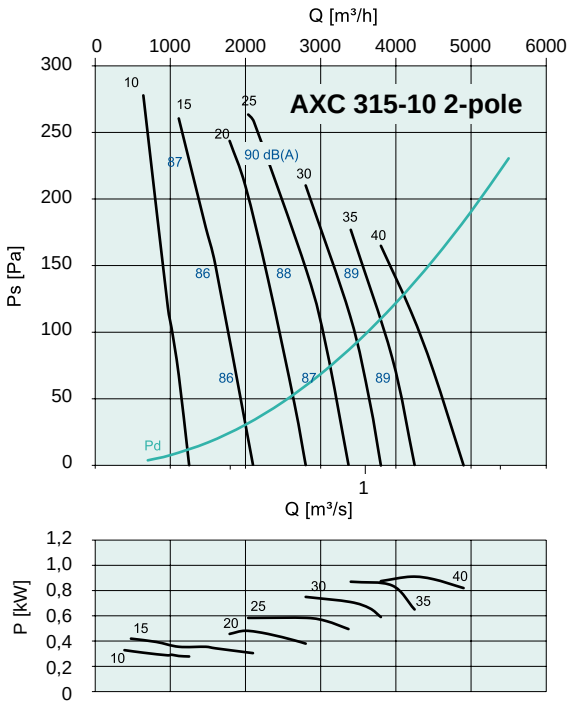


Mid octave band frequency	Hz	63	125	250	500	1k	2k	4k	8k
$L_{correction}$	dB	7	7	6	7	10	14	18	23

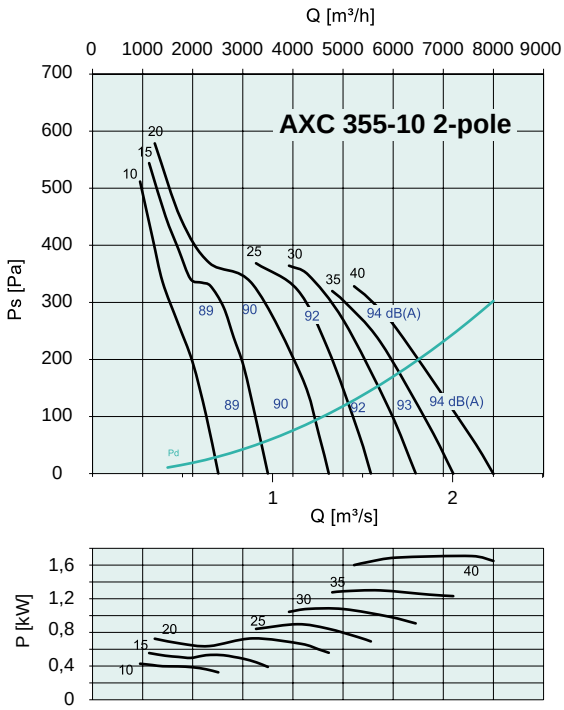
Table 1: Correction values dependent on the frequency

Mid octave band frequency	Hz	63	125	250	500	1k	2k	4k	8k
$L_{w\ oct}$	dB(A)	72	72	73	72	69	65	61	56

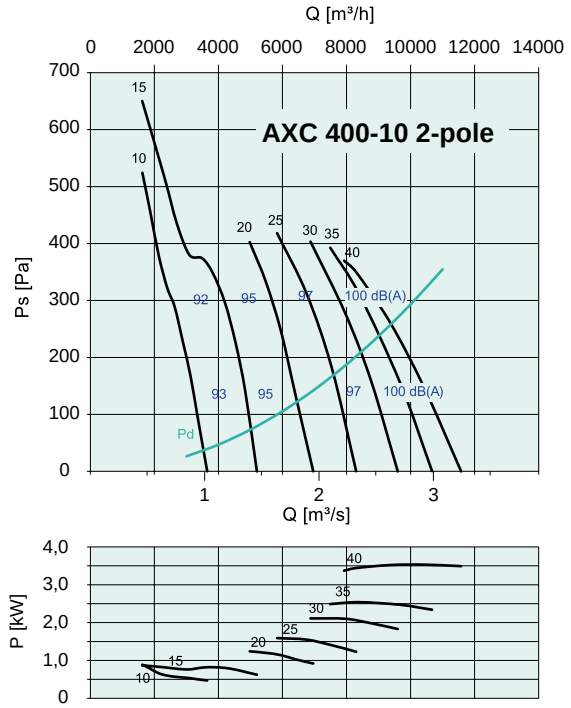
Table 2: Level values of the fan in the octave band



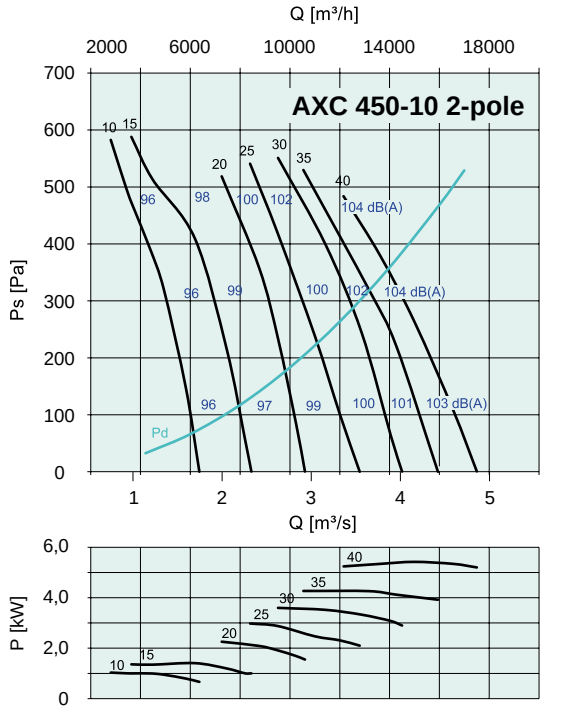
Item no	Model
CAX3152001	AXC 315-10-2 (0.75 kW)
CAX3152002	AXC 315-10-2 (1.1 kW)
CAX3152003	AXC 315-10-2 (1.5 kW)



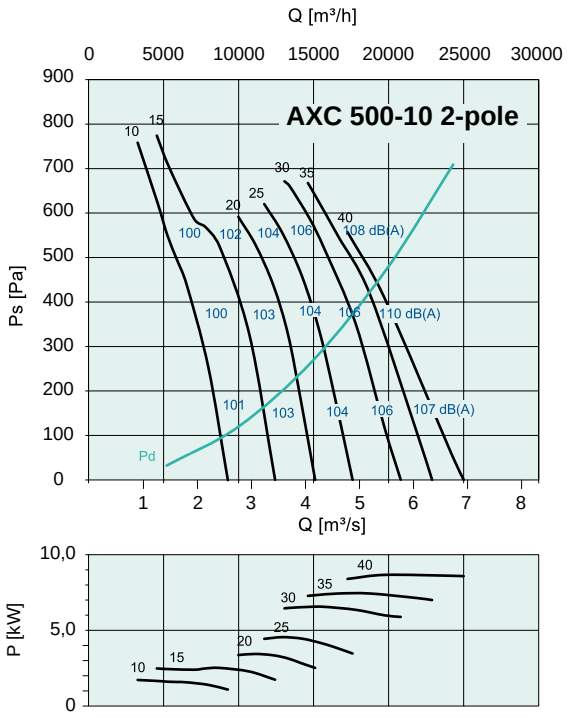
Item no	Model
CAX3552001	AXC 355-10-2 (0.75 kW)
CAX3552002	AXC 355-10-2 (1.1 kW)
CAX3552003	AXC 355-10-2 (1.5 kW)
CAX3552004	AXC 355-10-2 (2.2 kW)



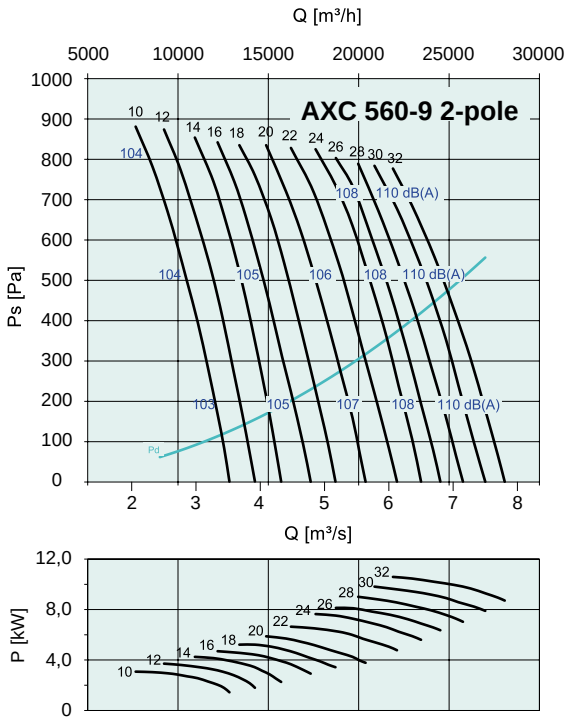
Item no	Model
CAX4002001	AXC 400-10-2 (0.75 kW)
CAX4002002	AXC 400-10-2 (1.1 kW)
CAX4002003	AXC 400-10-2 (1.5 kW)
CAX4002004	AXC 400-10-2 (2.2 kW)
CAX4002005	AXC 400-10-2 (3.0 kW)



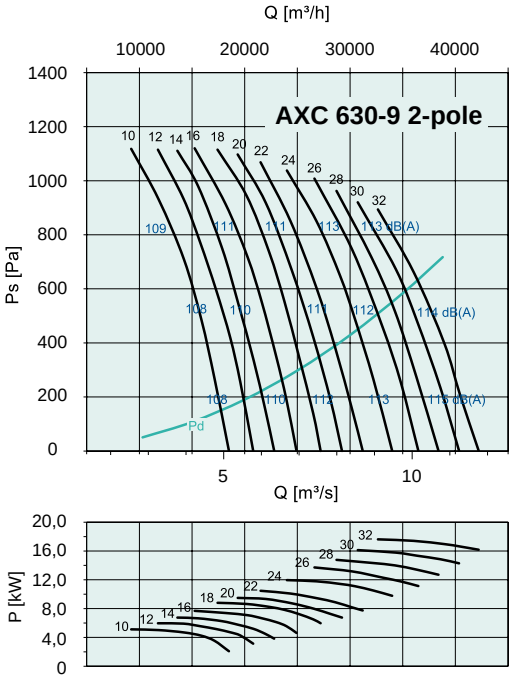
Item no	Model
CAX4502001	AXC 450-10-2 (1.1 kW)
CAX4502002	AXC 450-10-2 (1.5 kW)
CAX4502003	AXC 450-10-2 (2.2 kW)
CAX4502004	AXC 450-10-2 (3.0 kW)
CAX4502005	AXC 450-10-2 (4.0 kW)



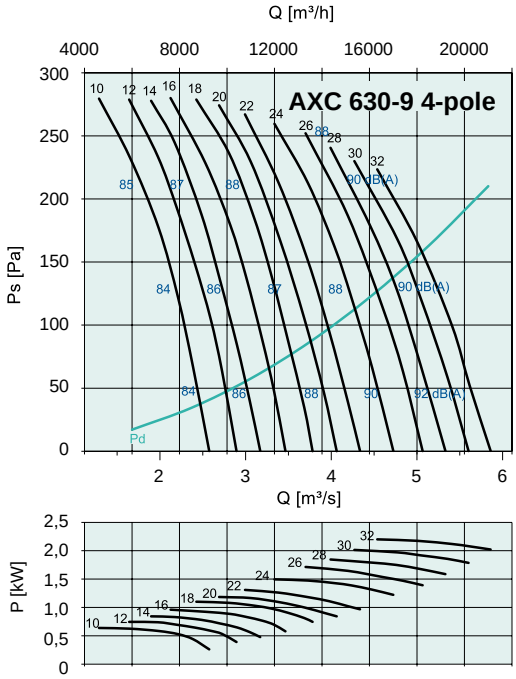
Item no	Model
CAX5002001	AXC 500-10-2 (1.1 kW)
CAX5002002	AXC 500-10-2 (1.5 kW)
CAX5002003	AXC 500-10-2 (2.2 kW)
CAX5002004	AXC 500-10-2 (3.0 kW)
CAX5002005	AXC 500-10-2 (4.0 kW)



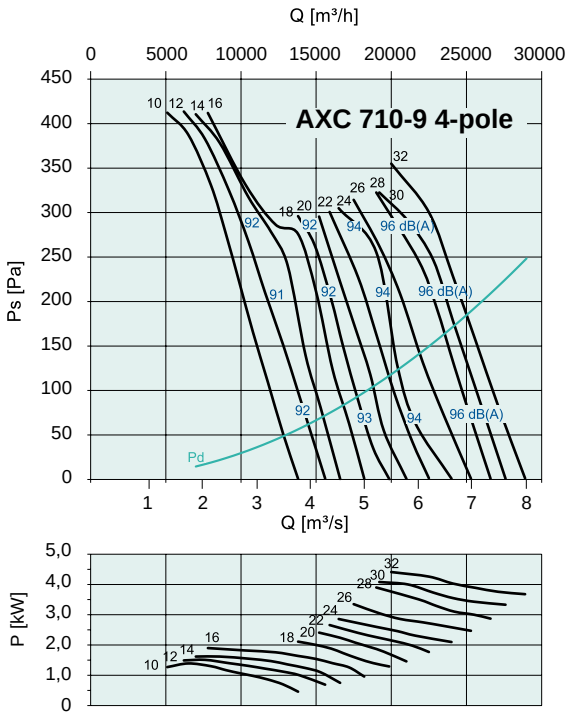
Item no	Model
CAX5602019	AXC 560-9-2 (1.1 kW)
CAX5602020	AXC 560-9-2 (1.5 kW)
CAX5602021	AXC 560-9-2 (2.2 kW)
CAX5602022	AXC 560-9-2 (3.0 kW)
CAX5602023	AXC 560-9-2 (4.0 kW)
CAX5602024	AXC 560-9-2 (5.5 kW)
CAX5602025	AXC 560-9-2 (7.5 kW)
CAX5602026	AXC 560-9-2 (11 kW)
CAX5602027	AXC 560-9-2 (15 kW)



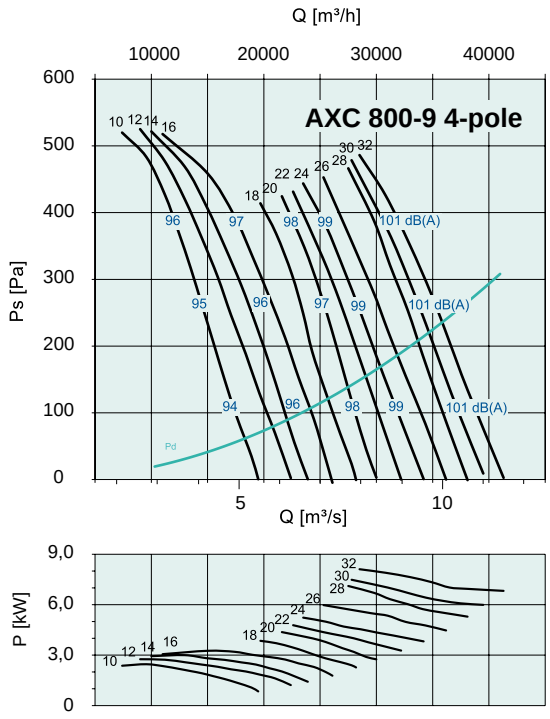
Item no	Model
CAX6302017	AXC 630-9-2 (2.2 kW)
CAX6302018	AXC 630-9-2 (3 kW)
CAX6302019	AXC 630-9-2 (4 kW)
CAX6302020	AXC 630-9-2 (5.5 kW)
CAX6302021	AXC 630-9-2 (7.5 kW)
CAX6302022	AXC 630-9-2 (11 kW)
CAX6302023	AXC 630-9-2 (15 kW)
CAX6302024	AXC 630-9-2 (18.5 kW)



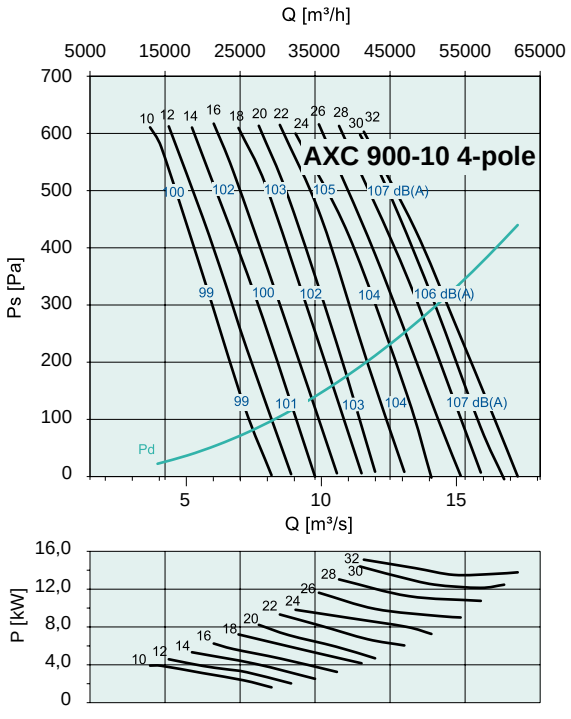
Item no	Model
CAX6304005	AXC 630-9-4 (2.2 kW)
CAX6304006	AXC 630-9-4 (3 kW)



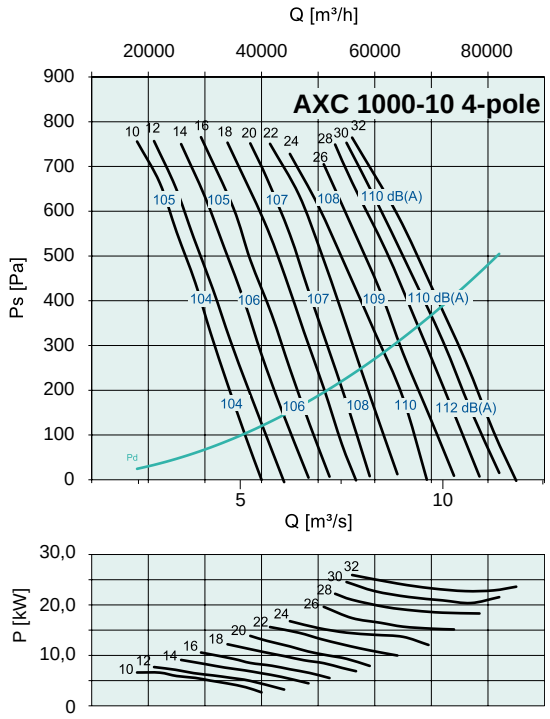
Item no	Model
CAX7104007	AXC 710-9-4 (2.2 kW)
CAX7104008	AXC 710-9-4 (3 kW)
CAX7104008	AXC 710-9-4 (4 kW)
CAX7104012	AXC 710-9-4 (5.5 kW)



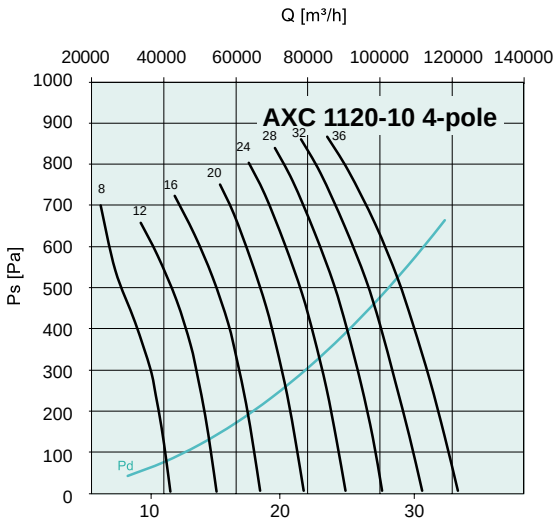
Item no	Model
CAX8004011	AXC 800-9-4 (2.2 kW)
CAX8004012	AXC 800-9-4 (3 kW)
CAX8004013	AXC 800-9-4 (4 kW)
CAX8004014	AXC 800-9-4 (5.5 kW)
CAX8004015	AXC 800-9-4 (7.5 kW)

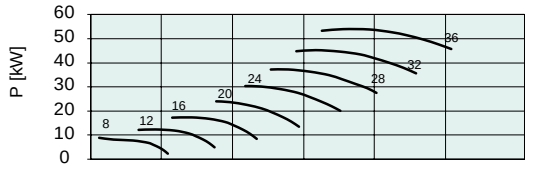


Item no	Model
CAX9004008	AXC 900-10-4 (2.2 kW)
CAX9004009	AXC 900-10-4 (3 kW)
CAX9004010	AXC 900-10-4 (4 kW)
CAX9004011	AXC 900-10-4 (5.5 kW)
CAX9004012	AXC 900-10-4 (7.5 kW)
CAX9004013	AXC 900-10-4 (11 kW)
CAX9004014	AXC 900-10-4 (15 kW)

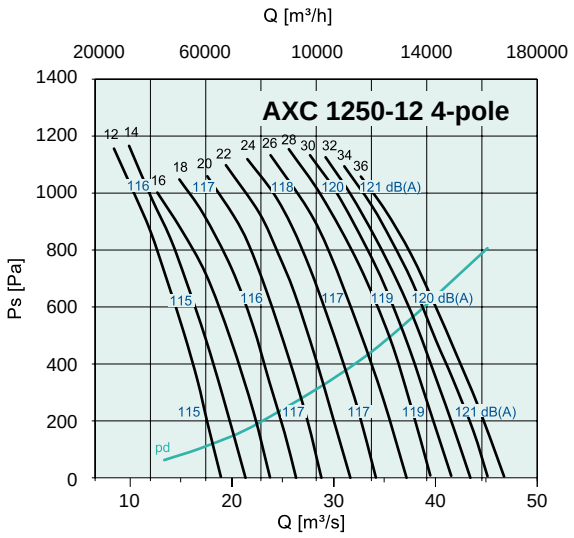


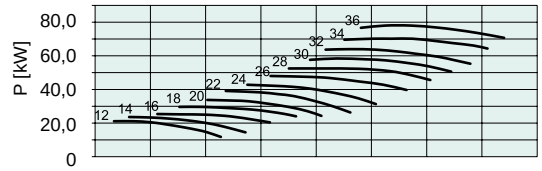
Item no	Model
CAX10004007	AXC 1000-10-4 (4 kW)
CAX10004008	AXC 1000-10-4 (5.5 kW)
CAX1000409	AXC 1000-10-4 (7.7 kW)
CAX10004010	AXC 1000-10-4 (11 kW)
CAX10004011	AXC 1000-10-4 (15 kW)
CAX10004012	AXC 1000-10-4 (18.5 kW)
CAX10004013	AXC 1000-10-4 (22 kW)
CAX10004014	AXC 1000-10-4 (30 kW)





Item no	Model
CAX11204006	AXC 1120-10-4 (5.5 kW)
CAX11204007	AXC 1120-10-4 (7.5 kW)
CAX11204008	AXC 1120-10-4 (11 kW)
CAX11204009	AXC 1120-10-4 (15 kW)
CAX11204010	AXC 1120-10-4 (18.5 kW)





Item no	Model
CAX12504007	AXC 1250-12-4 (11 kW)
CAX12504008	AXC 1250-12-4 (15 kW)
CAX12504009	AXC 1250-12-4 (18.5 kW)
CAX12504010	AXC 1250-12-4 (22 kW)
CAX12504011	AXC 1250-12-4 (30 kW)
CAX12504012	AXC 1250-12-4 (37 kW)
CAX12504013	AXC 1250-12-4 (45 kW)
CAX12504014	AXC 1250-12-4 (55 kW)

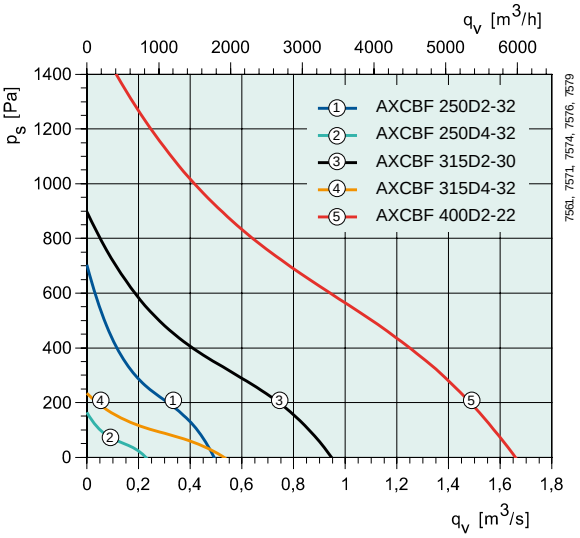


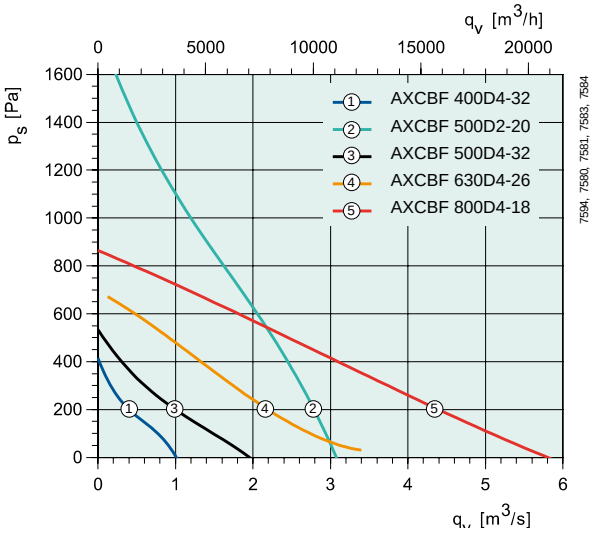
AXCBF

- Aerofoil impeller with adjustable pitch angle.
- Die cast aluminium hub and blades.
- Bifurcated casing, hot dip galvanized steel, to EN ISO 1461 flange holes according Eurovent 1/2.
- Three phase motors, IP55, insulation class F, in accordance with EN 60034-5, IEC 85.
- Terminal box mounted directly onto the IE2 motor
- Suitable for operating temperatures of up to 200°C continuously
- Inspection hole to verify correct direction of rotation.

The Systemair AXCBF range of bifurcated medium pressure axial fans has been developed for applications with an atmosphere which would either require special motors or reduce the lifetime of a standard motor. The motors of AXCBF are outside of the airstream. Available in sizes from 250 up to 800 mm impeller diameter. AXCBF bifurcated axial fan casings are heavy gauge, hot dip galvanized. The motor compartment allows easy access to the motor terminal box for wiring. Three phase B3 foot mounted motors, totally enclosed and fan cooled. The three phase motors are equipped with PTC thermistors for optimum motor protection.

QUICK SELECTION

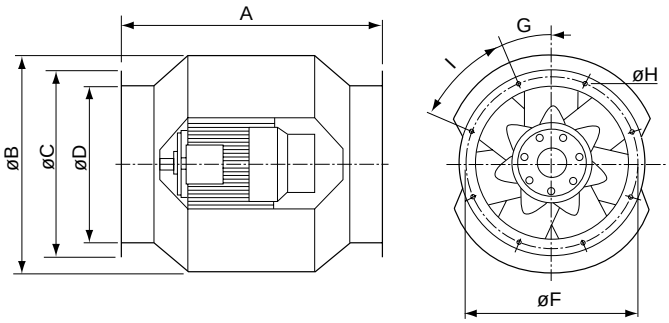




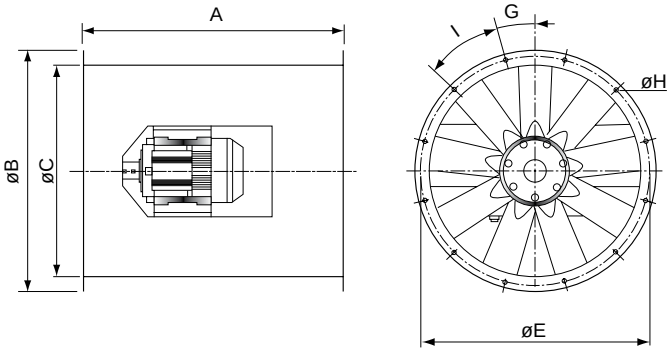
TECHNICAL DATA

AXCBF		250D4-32	250D2-32	315D4-32	315D2-30 IE2	400D4-32
Art no.		32458	32456	32462	34146	32483
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~
Power	kW	0.25	0.37	0.25	0.75	0.55
Rated current	A	0.80	1.0	0.8	1.68	1.5
Max air flow	m3/s	0.23	0.49	0.54	0.951	1.00
R.p.m.	min-1	1400	2690	1390	2875	1370
Max temp. of transported air	°C	200	200	200	200	200
Weight	kg	30	30	32	35	42
Insulation class, motor		F	F	F	F	F
Enclosure class, motor		IP 55	IP 55	IP 55	IP 55	IP 55
Wiring diagram p. 391-400		13b	13b	13b	13b	13b

DIMENSIONS



AXCBF	A	øB	øC	øD	øF	G	øH	I
250	535	448	328	250	302	22.5°	10	8x45°
315	535	452	385	315	355	22.5°	10	8x45°
400	625	585	480	400	450	22.5°	10	8x45°
500 long version	710	695	590	500	560	15°	12	12x30°
500 short version	660	695	590	500	560	15°	12	12x30°



AXCBF	A	øB	øC	øE	G	øH	I
630	790	728	630	690	15°	12	12x30°
800	880	890	800	860	11.25°	12	16x22,5°

VENTILATION ACCESSORIES



LRK(F) p. 385



MFA-AXCBF p. 388



ESD-F p. 388



EVH p. 388



FSD p. 386



GFL-AR/AXC p. 389



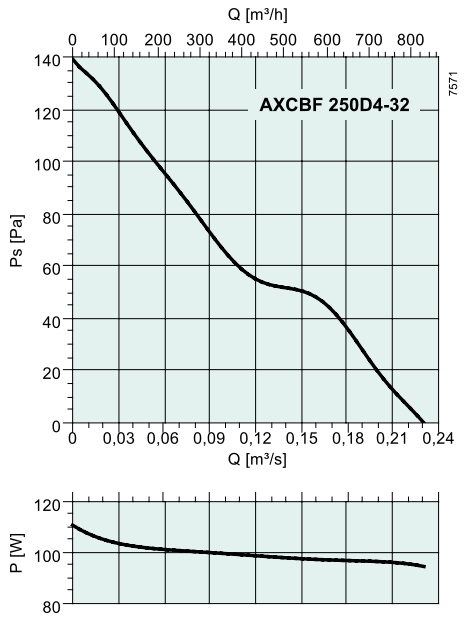
SG AR/AXC p. 385

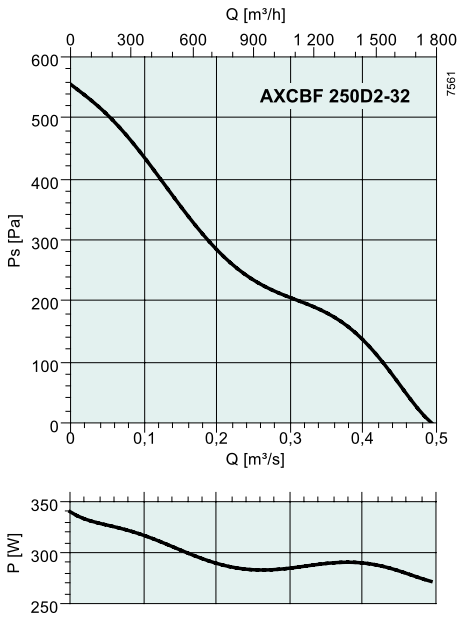
Note: Accessories LRK, ESD-F and SG not available for size 250

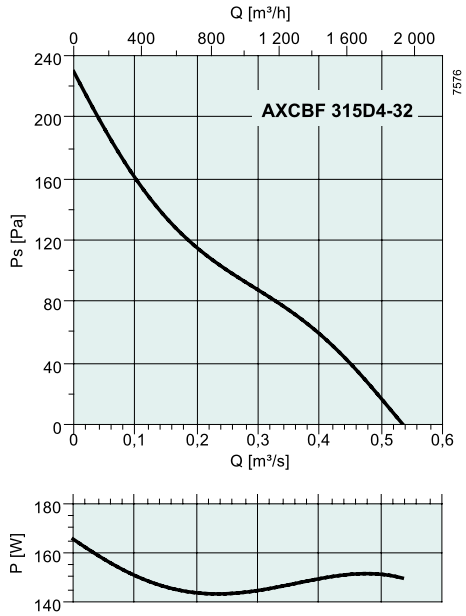
AXCBF		400D2-22 IE2	500D2-20 IE2	500D4-32 IE2	630D4-26 IE2	800D4-18 IE2
Art no.		34147	34148	34152	34155	34156
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~
Power	kW	2.20	4.00	1.10	2.20	4.00
Current	A	4.48	7.64	2.53	4.64	8.12
Max air flow	m3/s	1.65	3.06	1.91	3.44	5.63
R.p.m.	min-1	2890	2914	1445	1440	1445
Max temp. of transported air	°C	200	200	200	200	200
Weight	kg	49	87	66	106	155
Insulation class, motor		F	F	F	F	F
Enclosure class, motor		IP 55	IP 55	IP 55	IP 55	IP 55
Wiring diagram p. 391-400		13b	13b	13b	13b	13b

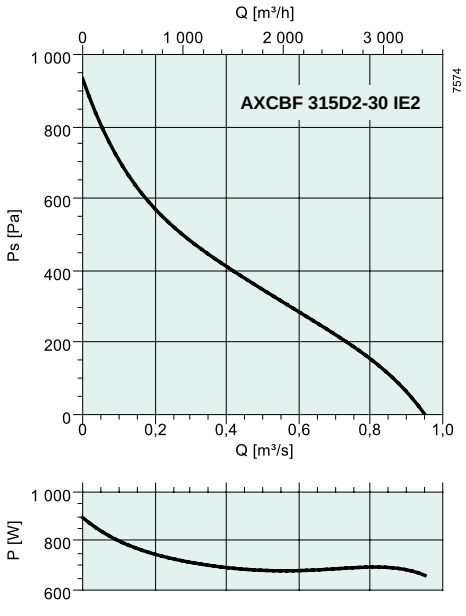
34148 = long version 34152 = short version

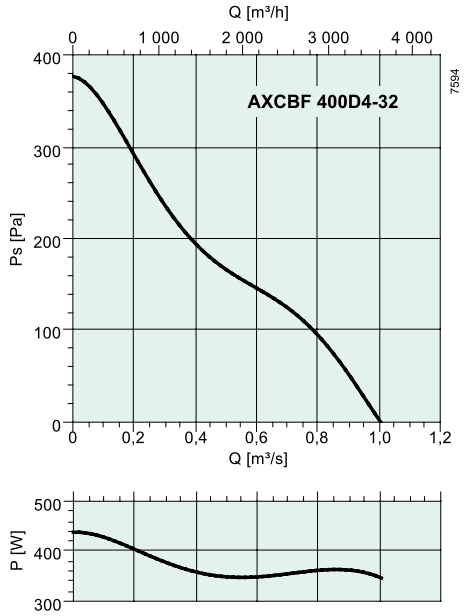
PERFORMANCE

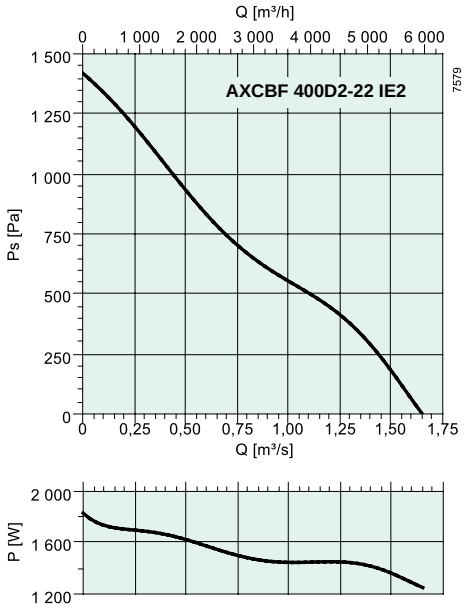


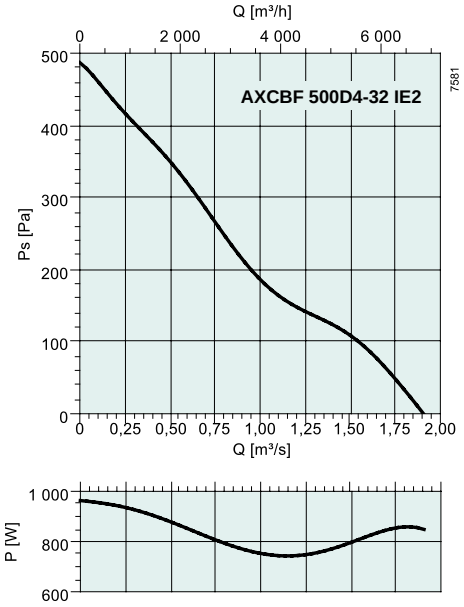


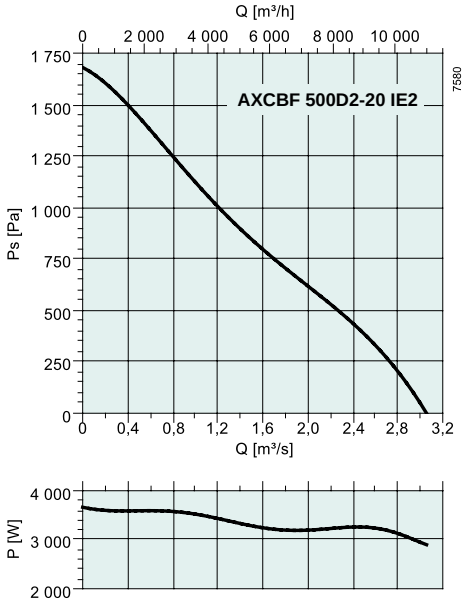


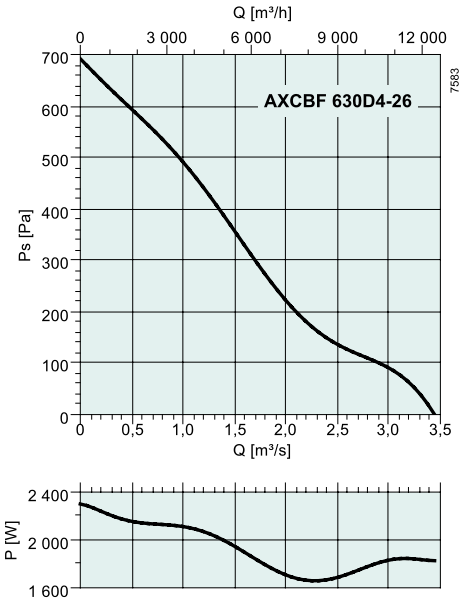


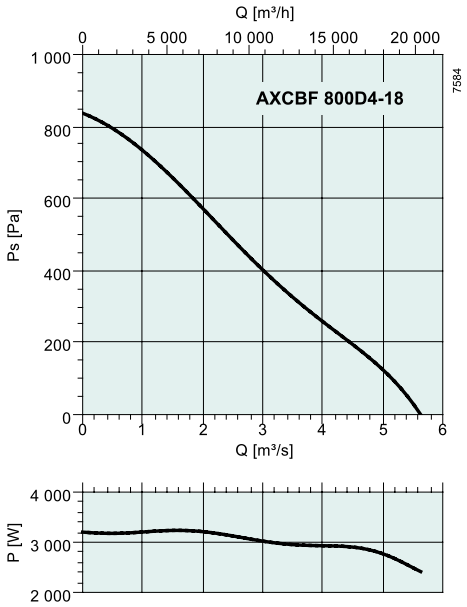





Q [m³/h]
0
2 000
4 000
6 000
500
400
300
200
100
0
Ps [Pa]
AXCBF 500D4-32 IE2
7581
0
0,25
0,50
0,75
1,00
1,25
1,50
1,75
2,00
Q [m³/s]
1 000
800
600
P [W]


Q [m³/h]
0
2 000
4 000
6 000
8 000
10 000
1 750
1 500
1 250
1 000
750
500
250
0
Ps [Pa]
AXCBF 500D2-20 IE2
7580
0
0,4
0,8
1,2
1,6
2,0
2,4
2,8
3,2
Q [m³/s]
4 000
3 000
2 000
P [W]


Q [m³/h]
0
3 000
6 000
9 000
12 000
700
600
500
400
300
200
100
0
Ps [Pa]
AXCBF 630D4-26
7583
0
0,5
1,0
1,5
2,0
2,5
3,0
3,5
Q [m³/s]
2 400
2 000
1 600
P [W]


Q [m³/h]
0
5 000
10 000
15 000
20 000
1 000
800
600
400
200
0
Ps [Pa]
AXCBF 800D4-18
7584
0
1
2
3
4
5
6
Q [m³/s]
4 000
3 000
2 000
P [W]

Jet fans

Green ventilation

Contemporary ventilation for underground car parks

Underground car park ventilation without compromise:

Systemair's Green Ventilation jet fan system is the contemporary solution for energy efficiency and high safety standard requirements.

The result is setting standards: **80% energy saving in Green Ventilation mode***, combined with a guaranteed safety promise of a worldwide acting system partner.
The Green Ventilation jet fan system combines low operation cost and competitive initial investment by complying with legal requirements.



All Systemair products and systems, marked with the Green Ventilation label, meet highest requirements for energy and economic efficiency.

Components

The Green Ventilation jet fan system replaces the duct system of a car park. According to the ventilation concept, it may include exhaust fans as well as potential supply fans .

In addition to jet fans, Systemair offers axial supply fans (AXC series) as well as temperature resistant exhaust fans as axial or roof fans (AXC (B), AXC (F) or DVV series) according to EN 12101-3.

Systemair is able to supply all necessary dampers, flaps and other ventilation elements.

Application examples and planning

With an optimal planning, the Green Ventilation fan system avoids "dead" spaces in the garage. Systemair jet fans are used for everyday demand ventilation as well as smoke extraction in case of fire in underground car parks and closed parking garages.

An effective system requires good planning, beginning with physical values such as the underground car park's dimensions, its occupancy, its usage profile and taking peak loads in consideration.

The dimensioning of the ventilation is normally based on the air change rate (depending on air pollution) or an air volume load which is multiplied with the amount of parking places.

**CO mode compared with nominal fan power of car park exhaust ventilation*



Advantages and benefits of Systemair Green Ventilation jet fan systems

For investors

- Reduction of investment cost, because bulky and complex duct systems can be omitted. This is a great advantage in particular for renovation projects.
- The flexible positioning of the jet fans enables the creation of modern and aesthetic buildings.
- The whole design of the underground car park gets optically more attractivity, there is no line-of-sight obstruction coming from the ductwork.

For planners

- More flexible fan positioning, in particular for redesign or renovation of parking decks.
- Faster design of complete systems, because no complex duct system is needed inside the car park.
- Possibility to have functional demonstration of the installation by the Systemair CFD analysis and by a warm smoke test.

For installers

- Easy and fast fan installation to the car park ceiling - therefore less mounting work.
- Less points of contact with other crafts, because the fans can be installed at the end.
- Flexible fan positioning.

For users

- The Green Ventilation jet fan system provides an 80% reduced energy consumption. This leads to considerably reduced operational cost. The center-piece is an intelligent control unit for highest energy efficiency of demand controlled ventilation.
- Furthermore, no resistance for the duct system in the car park has to be overcome. Selective ventilation for specific areas in the underground car park. CO (carbon monoxide) car exhaust sensors make sure that only really needed fans will be activated. This, again, helps to lower the running cost.
- In comparison to conventional systems, the concentration of pollutants is lower, providing a better air quality. The air moves constantly all over the activated car park area which allows better air mixture.
- Jet fan ventilation systems for smoke extraction avoid cost-intensive secondary damages: building ceilings are exposed to lower heat, smoke will be quickly exhausted out of the building.
- Optimised safety in case of fire. Faster smoke and heat extraction, smoke spreading is avoided and a better smoke control is possible to facilitate the work of fire-services.



Customized solutions

System description

Driveway, ramp or other fresh air openings can supply natural fresh air. The supply air is designed to guarantee an almost laminar air flow. If no natural supply air can be provided, a supply air fan is needed.

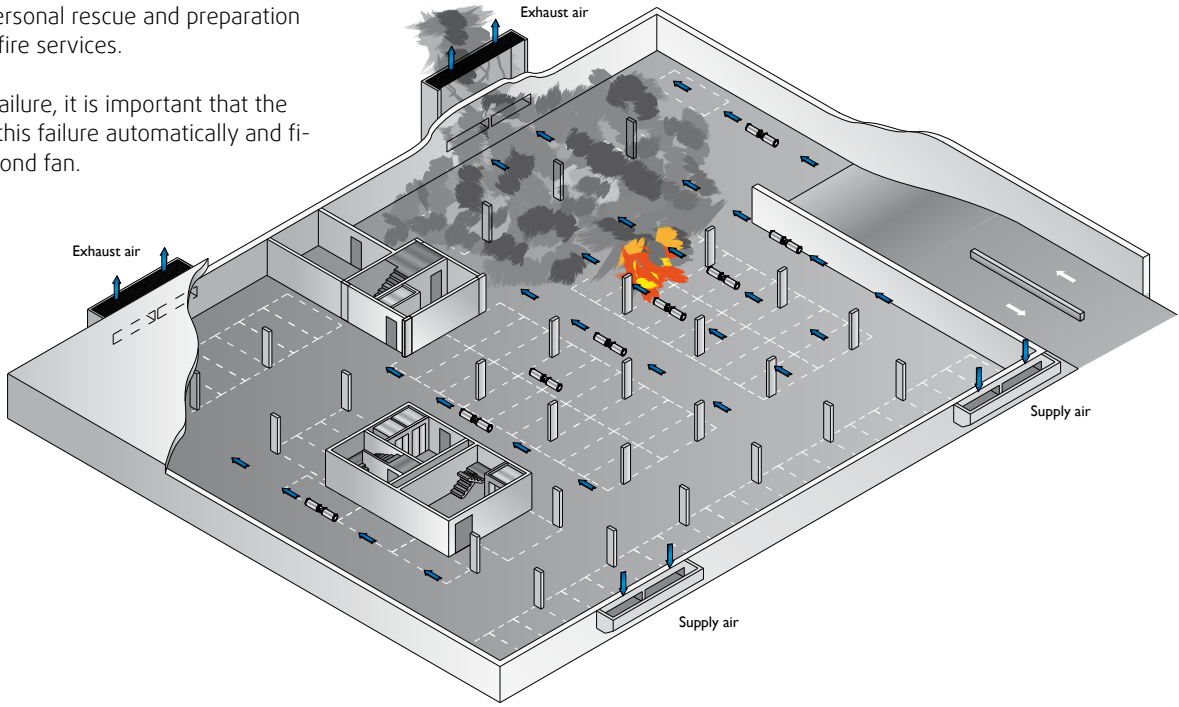
The Green Ventilation jet fan system supports the natural air flow between supply and exhaust air and helps accelerate the airflow in areas where it is too low to guarantee a sufficient air change all over the car park. According to safety regulations, virtual smoke sectors are created by aerodynamic loads in case of fire. This allows the design of wide and spacious car parks which normally need to be separated by gates or other installation elements. This always includes the aspect of efficiency and energy efficiency without losing sight of investment costs.

A project-related switching matrix ensures that legal requirements are observed and individual safety objectives are followed.

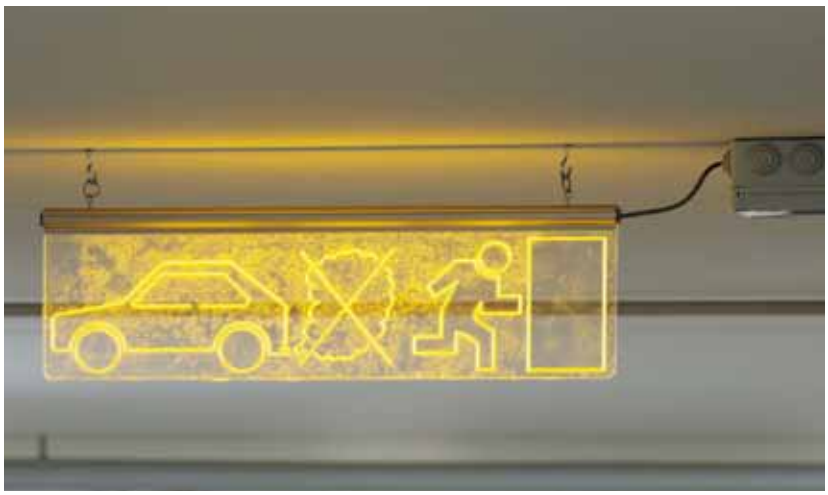
These are e.g. maximum CO and smoke gas concentration, required sight distances for personal rescue and preparation of fire-fighting operations by fire services.

In case of an exhaust air fan failure, it is important that the control detects and indicates this failure automatically and finally switches over to the second fan.

Different versions of axial, radial and roof fans are available, for standard temperature up to temperature class F600 (600 °C/120 min.).
An optimised operation is provided by the project designed Green Ventilation control system. It analyses measurements of CO exhaust sensors and/or fire/smoke detectors and controls single, virtual smoke and CO zones according to the requirements. Jet fans in not affected smoke and CO zones are controlled according to the stored control matrix. The system will be designed in accordance with the requirements given in the specifications. Complete documentation can be found within the control cabinet.





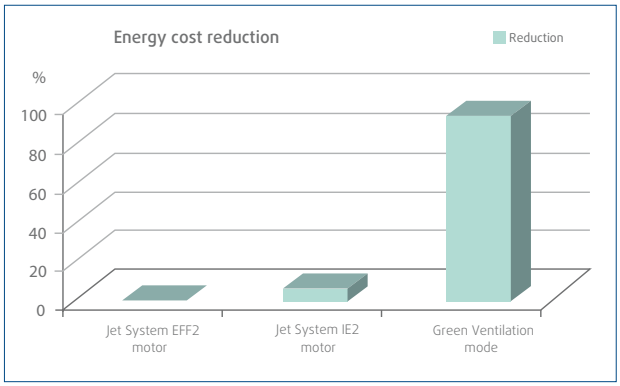


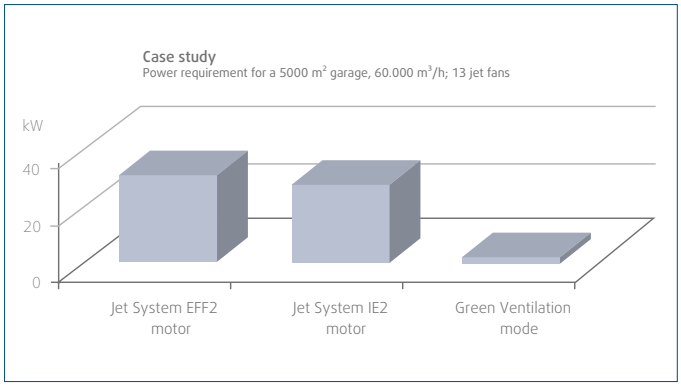
The space required by different ventilation systems has a direct impact on the investment cost of a project. Jet fans do only punctually reduce the available ceiling height and need often many other installation systems like electric wiring and water pipes less than 0.5% ceiling surface. The extra ceiling space can be used for technical appliances and/or allows to reduce the ceiling height during the planning stage already. Another advantage is a higher safety of an active system which, depending on the fire location, reacts in accordance with the defined fire scenario matrix and offers best possible protection to human beings and buildings.

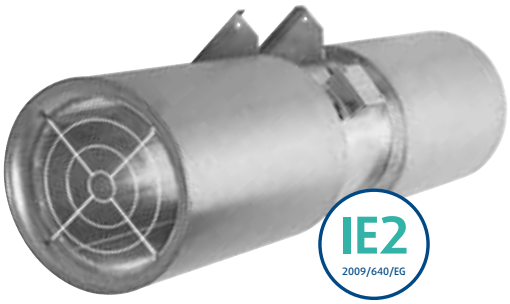
Systemair remains your partner from the car park's planning to the commissioning and designs Green Ventilation garage exhaust systems according to your requirements.

Green Ventilation and smoke extraction function
Many systems provide an opportunity either to save energy or to extract smoke out of your garage. But why should you choose the one or the other?

Systemair educated smoke extraction car park systems in energy saving.







Jet Fan AJR-TR

- Dual use: For daily ventilation and smoke extraction in case of fire F300 (300°C/120 min.); F400 (400°/120 min.)
- Symmetrical blades; 100% reversible with low sound level
- Motors IP54, insulation class H (smoke extract); Motors IP55, insulation class F (CO-exhaust), according to EN 60045-5/IEC 85
- 60 Hz range available
- Tested inspection switch optional
- Casing manufactured from galvanized steel
- Certified to EN 12101-3, CE-certification by TÜV Süd

ELECTRICAL ACCESSORIES



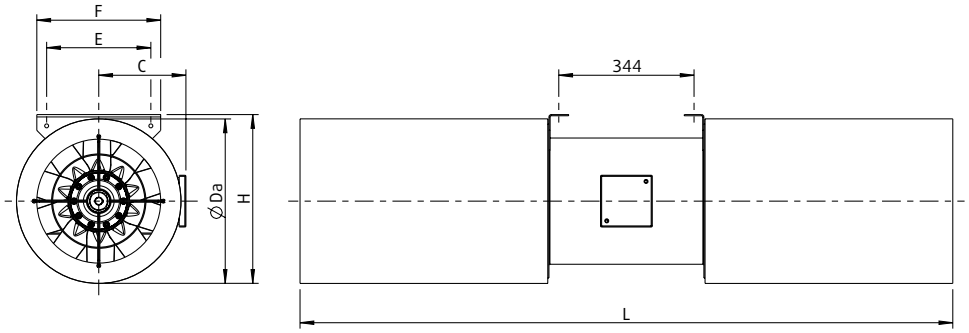
FRQ p. 325

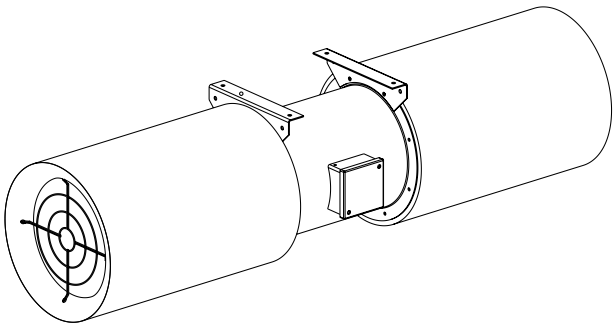
Technical data

Jet fan AJR-TR 400V/50Hz	Thrust	Air volume	Motor rated power	Motor rated current	Speed	Sound level 3 m, from center of casing	Weight	Temperature
	N	m^3/h	kW	A	rpm	LpA dB	kg	
AJR 315-2-TR	22	4400	0,75	1,8	2900	60	50	55°C
AJR 315-2/4-TR	22/6	4400/2200	0,75/0,17	1,74/0,63	2860/1420	60/45	52	55°C
AJR 355-2-TR	37	6400	1,5	3,3	2840	66	65	55°C
AJR 355-2/4-TR	37/9	6400/3200	1,4/0,3	3,13/1,11	2880/1440	66/51	67	55°C
AJR 400-2-TR	55	8700	1,5	3,3	2840	72	83	55°C
AJR 400-2/4-TR	55/14	8700/4350	1,9/0,4	4,18/1,47	2885/1435	72/57	85	55°C
AJR 315-2 (B)-TR	22	4400	0,75	1,65	2880	60	50	300°C/120 Min.
AJR 315-2/4 (B)-TR	22/6	4400/2200	0,75/0,12	1,8/0,4	2880/1440	60/45	52	300°C/120 Min.
AJR 355-2 (B)-TR	37	6400	1,5	3,6	2880	66	65	300°C/120 Min.
AJR 355-2/4 (B)-TR	37/9	6400/3200	1,5/0,25	3,6/0,7	2880/1440	66/51	67	300°C/120 Min.
AJR 400-2 (B)-TR	55	8700	1,5	3,6	2880	72	83	300°C/120 Min.
AJR 400-2/4 (B)-TR	55/14	8700/4350	1,5/0,25	3,6/0,7	2880/1440	72/57	85	300°C/120 Min.

400°C/2h versions on request

Dimensions





Size	øDa	H	E	C	F	L
315	419	430	265	235	315	1660
355	459	497	305	255	355	1820
400	504	558	350	280	400	2000

All dimensions in mm.



Jet Fan AJ8

- Dual use: For daily ventilation and smoke extraction in case of fire F300 (300°C/120 min.) and F400 (400°C/120min).
- Aerodynamical impellers for maximum thrust and with low sound level (reversible impellers on request)
- Motors IP54, insulation class H (smoke extract); Motors IP55, insulation class F (CO-exhaust), according to EN 60045-5/IEC 85
- Tested inspection switch optional
- Shapely, low design-casing
- Casing manufactured from galvanized steel
- Removable fan module also after installation for easy maintenance
- Certified to EN 12101-3, CE-certification by TÜV Süd

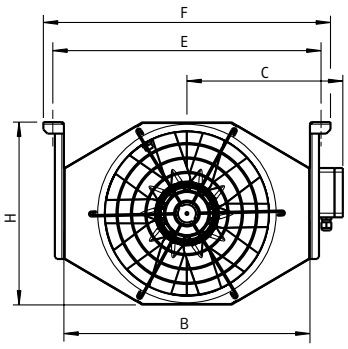
Technical data

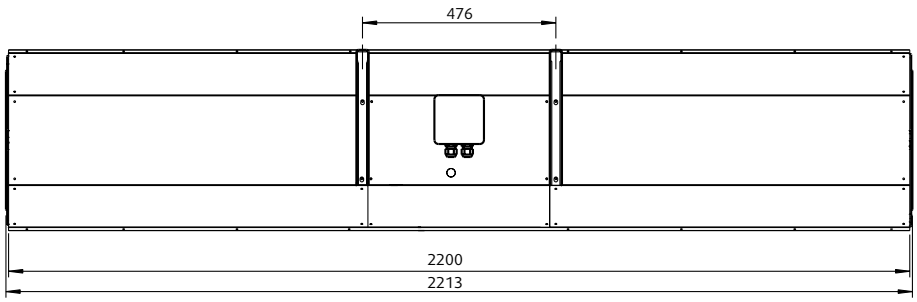
Jet fan AJ8 400V/50Hz	Thrust	Air volume	Motor rated power	Motor rated current	Speed	Sound level 3 m, from center of casing	Weight	Temperature
	N	m^3/h	kW	A	rpm	LpA dB	kg	
AJ8 315-2	23	4400	0,75	1,99	2900	62	82	55°C
AJ8 315-2/4	23/6	4400/2200	0,75/0,17	2,14/0,75	2860/1420	62 / 47	84	55°C
AJ8 355-2	37	6300	1,1	2,5	2900	69	88	55°C
AJ8 355-2/4	37/9	6300/3150	1,4/0,3	3,13/1,11	2880/1430	69 / 54	90	55°C
AJ8 400-2	55	7700	1,5	3,3	2840	73	97	55°C
AJ8 400-2/4	55/11	7700/3850	1,9/0,4	4,18/1,47	2885/1435	73 / 58	99	55°C
AJ8 315-2 (B)	23	4400	0,75	1,8	2900	62	82	300°C/120 Min.
AJ8 315-2/4 (B)	23/6	4400/2200	0,75/0,15	1,6/0,4	2880/1450	62 / 47	84	300°C/120 Min.
AJ8 355-2 (B)	37	6300	1,1	2,5	2870	69	88	300°C/120 Min.
AJ8 355-2/4 (B)	37/9	6300/3150	1,3/0,25	3,1/0,68	2905/1460	69 / 54	90	300°C/120 Min.
AJ8 400-2 (B)	55	8700	1,5	3,2	2870	73	97	300°C/120 Min.
AJ8 400-2/4 (B)	55/11	8700/4350	1,8/0,37	3,9/0,95	2880/1455	73 / 58	99	300°C/120 Min.

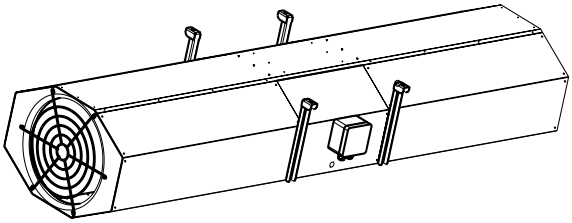
Air volume related to air density 1,2 kg/m^3

400°C/2h versions on request

Dimensions







Size	H	B	C	E	F
315	365	550	355	635	650
355	395	550	355	635	650
400	445	600	380	684	700

All dimensions in mm.



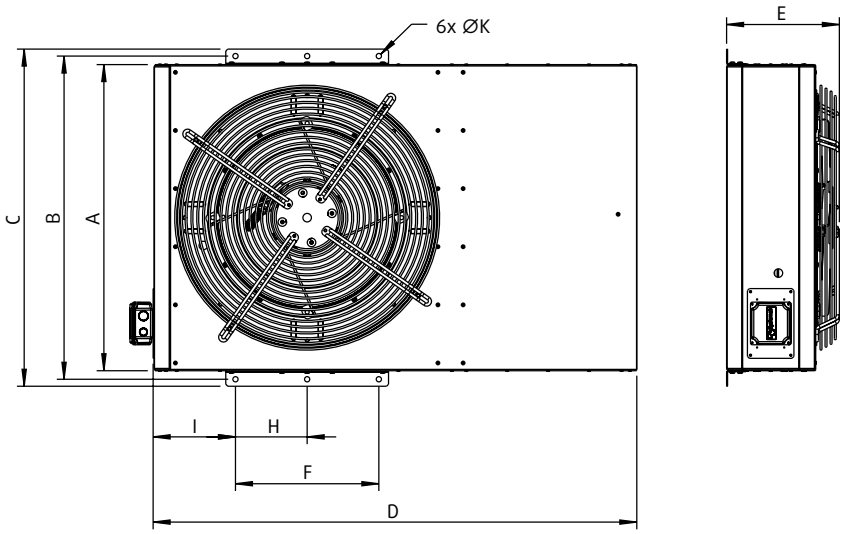
Jet Fan IV

- Dual use: For daily ventilation and smoke extraction in case of fire F300 (300°C/120 min.); F400 (400°/120 min.) on request
- Aerodynamical centrifugal impeller for maximum thrust and with low sound level
- Motors IP54, insulation class H (smoke extract); motors IP55, insulation class F (CO-exhaust), according to EN 60045-5/IEC 85
- Tested inspection switch optional
- Compact design for low ceiling heights
- Casing manufactured from galvanized steel
- Integrated deflector (exhaust direction adjustable)
- Certified to EN 12101-3
- CE-certification by TÜV Süd

Technical data

Centrifugal Jet fan IV		50-4 (B)	50-4/6 (B)	50-4/8 (B)	85-4 (B)	85-4/6 (B)	85-4/8 (B)
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~
Motor rated power	kW	1,5	1,5/0,7	1,5/0,25	2,2	2,2/0,75	2,2/0,37
Current	A	3,4	3,5/1,9	3,8/1,15	4,7	4,9/2,6	5,2/1,6
Thrust	N	52	52/20	52/14	85	85/28	85/22
Max. air volume	m^3/h	6196	6196/4190	6138/3100	9950	9950/5875	9950/5098
R.p.m.	min-1	1435	1445/955	1430/715	1435	1450/965	1425/715
Max. temp. of transported air	°C	55	55	55	55	55	55
Max. temp. of transported air 120 min.	°C	300	300	300	300	300	300
Sound pressure level at 3 m	dB (A)	73	73/56	73/52	78	78/66	78/62
Weight	kg	105	102	105	140	141	142
Insulation class, motor		H	H	H	H	H	H
Enclosure class, motor	IP	55	55	55	55	55	55

Dimensions



Size	A	B	C	D	E	F	H	I	6xøK
IV 50	790	834	870	1248	300	370	185	210	13,5
IV 85	1140	1184	1220	1900	340	420	210	230	13,5

All dimensions in mm.







Our control at your service!

Systemair control systems

Every building has individual requirements for ventilation and smoke extraction concepts. Safety and efficiency are not in contradiction.

In case of a fire, the control disregards energy consumption. It is important to guarantee the safety of the people and the building, to enable the personal rescue and assist the fire brigade and other action forces in their work, which minimizes fire and smoke gas damages.

However, the systems generally run 24/24 and 365 days a year. Therefore each kilowatt of electrical energy used by the system counts for the operator or owner of the building.

Compared to conventional systems a Green Ventilation Car Park System considerably reduces the energy use.

For an optimal function, the control system has to be designed individually to meet all requirements of the project. Ideally, this must be done in line with all other crafts during basic conception and coordinated with the ventilation system of the building. Air quality requirements for desk spaces are different from those for underground car parks. Because of the duration of stay and other factors, harmful substances influence the human health. The factor time/duration of stay in the car park is responsible for different legal demands to average time values concerning CO exposure (half-hourly average value, quarter-hourly average value, ...). Therefore, you can specify some areas of your building with different air quality that allows to provide exhaust air from the air conditioning unit to other areas as supply air.

Normally, the windows of energy optimised, modern buildings are not permanently in a tilted position. In fact, air quality in modern buildings is monitored and can be changed when preset maximum values are achieved. Systemair implements this concept also for underground car parks. On demand, the parameters can be changed and customised by the user. All legal requirements can be accomplished.

The Systemair control system

The Systemair control system provides active motor protection during normal ventilation mode with single and group error messages (only for standard temperature version).

The control system includes fan control for ventilation and smoke extraction of underground car parks, equipped with supply and exhaust fans, jet fans and sensors.

Single- or double-speed fans and unidirectional or reversible fans can be controlled. Each jet fan can be separately switched on or off for maintenance and commissioning.

In normal ventilation mode, the control system works either in accordance with the CO alarm system, or the timer, or the BMS system data. The fan will run either in high or low speed in the selected flow direction.

In case of fire, the control system acts dependent on the fire alarm system. Virtual fire zones with different flow directions can be formed for smoke extraction. Being activated in the fire zone operate automatically in the selected speed and airflow direction. The built-in motor overload protection will be deactivated in the control cabinet. The fan permanently runs until mechanically demolished by the fire.

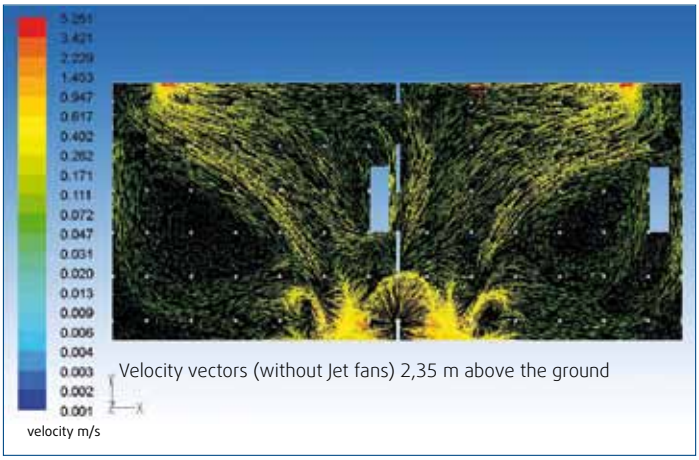
Safety requires individual planning

CFD simulations

A CFD simulation is needed to confirm that there is enough air movement in all areas of the car park to secure the required number of air exchanges, to confirm the proposed number of jet fans and to determine the location where the jet fans have to be installed.

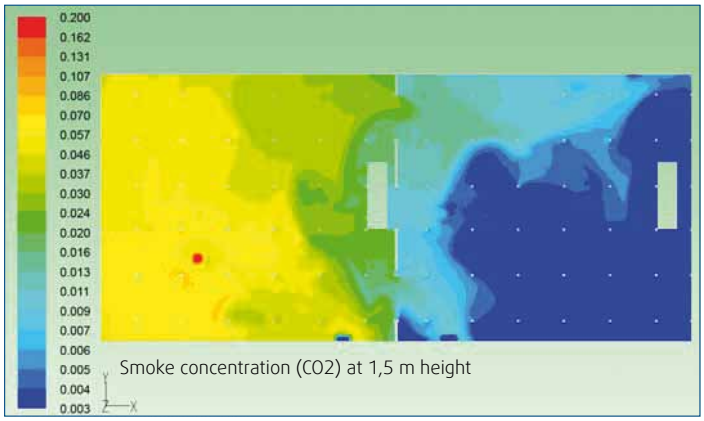
In order to be able to perform a CFD analysis, it is essential to have a 3-D model of the building site, giving all openings, slab height, surface of the ceiling (flat or with drop beams, dimensioning of the drop beams, etc.) and all other details required to carry out a simulation.

A CFD analysis is used to simulate the airflows, to ensure that the distribution of the air is sufficient to effectively ventilate the cark park under normal conditions as well as in emergency situations. Systemair offers this service meaning everything from one source and firsthand – truly tailored solutions.

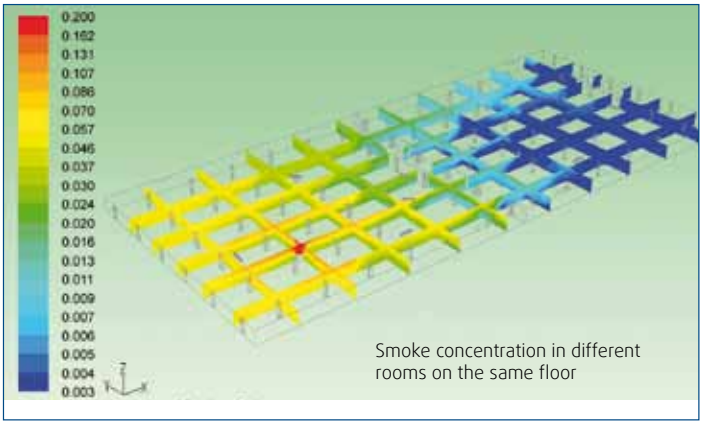


Velocity vectors (without Jet fans) 2,35 m above the ground

Smoke concentration 5 minutes after the fire has started



Smoke concentration (CO2) at 1,5 m height



Smoke concentration in different rooms on the same floor

Systemair as a system partner



Project handling

Electrical planning, commissioning, final approval test, handing over. Everyone knows the problems on the building site when ventilation crafts and electrical crafts meet with different requirements. Two crafts with different requirements for your team. Systemair helps you to handle the project successfully and on schedule. From the conception of the complete system with CFD analysis to the detailed technical planning of the ventilation system and the creation of cable lists and the delivery of components to the points of commissioning and supervised final approval test including warm smoke gas test. Thus, all planning phases and crafts are in our focus, we coordinate the interfaces and give you support according to your needs.

Commissioning

Systemair offers a smoke gas extraction test while commissioning your car park system. This simulates a case of emergency.



Smoke gas test preparation



Smoke gas test during commissioning

General

Systemair explosion proof fans have been developed to be used in effective supply and exhaust air systems allocated to category 2 (zone 1) and category 3 (zone 2) in explosion hazardous areas.

All fans are manufactured in accordance with ATEX guideline 94/9/EG certified for EC countries. Certificates can be downloaded from our homepage.

The fans are suitable for mounting in above mentioned explosion hazardous zones, for extraction of gases.

Systemair ranges

The materials used in Systemair EX fans are in accordance with DIN EN 60079.

The fans of series DVEX, DVV-Ex and RVK-Ex are equipped with self-cleaning impellers with backward curved blades. EX, KTEX and DKEX are equipped with impellers with forward curved blades. AW-EX is equipped with profiled steel axial impellers with additional painting.

The selection of an ATEX-fan

Below Systemair provides you with helpful information for the selection of a suitable fan. We want to point out that we as manufacturers are responsible only for the appearance and workmanship of the fan. The system user is responsible for the correct system design for a proper operation.

Pre-selection depends on the medium to be transported. Each medium has an individual ignition temperature. The fans supplied by Systemair comply with temperature classification T3, some units can also be used in T4. Regarding the ignition group units with external rotor motors, fans like DVEX, KTEX are suitable to transport gases with ignition group IIA and IIB. Fans like AXC-EX, AXCBF-EX are also suitable to transport gases with ignition group IIC.

The next step is the selection of the correct zone resp. category. Basically the correct zone or category can only be given by the user of the system, after having conducted an analyse regarding the occurrence of explosion hazardous gases or gas mixtures in the project. All Systemair explosion proof fans are in unit category II, allowing an application in zone 1 and zone 2.

In the industry, explosion hazardous areas are classified in zones. ATEX classifies the fans in categories, corresponding to the zones. Categories are independent from the substance causing the explosion hazard.

The classification in categories (or zones) is related to the temporal appearance (frequency of occurrence) of explosion hazardous atmosphere (gas/vapour/fog-air mixture in ignitable condition). The categories or zones do not define the concentration!

Category 1 (zone 0) covers areas, where there is a permanent or long lasting occurrence of explosion hazardous atmosphere (more than 1000h/year). Example: inside a fuel tank.
Category 2 (zone 1) covers areas, where there is a regular occurrence of explosion hazardous atmosphere (10-1000 h/year). Example: Filling machine
Category 3 (zone 2) covers areas, where there is a non-regular or short time appearance of explosion hazardous atmosphere (up to 10h/year). Example: defective gas pipe, accidents.

The categories show the occurrence of an explosion hazardous area as a probability. It is important to know: In all categories (zones) there is the same momentary hazard (same substance and same concentration) when explosion hazardous atmosphere occurs. Example: zone 0, empty and non-cleaned fuel tank, concentration 20Vol%; zone 2, leaked fuel, concentration 20Vol%. If an explosion hazardous atmosphere occurs, the hazard potential is the same in all zones!
The last decision has to be made regarding the ignition protection class. All Systemair explosion proof fans correspond to ignition protection class Ex e = increased safety. The following table shows possible ignition protection classes.

Motors

DVEX, AW-EX, KTEX, RVK and DKEX are equipped with speed controllable, certified external rotor motors in Ex e execution. EX is equipped with non speed controllable IEC motors, Exe execution. DVV-EX, AXC-EX and AXCBF-EX is equipped with either single or two speed motors in Ex d. This motor type can be speed controlled by frequency.

All DVEX, KTEX, DKEX, AW-EX and RVK EX fan motors are equipped with a cold conductor for motor protection. The motor protection has to be connected with a motor protection device, described in the certificate and also certified. Motors of series DVV-Ex and EX do not have a thermal motor protection. Those motors have to be supervised by a suitable over-current device.
The ignition temperature of the medium, but also the classification in explosion groups is important. Both classifications have to be considered when selecting a suitable fan.

Group (IEC)	Some examples of gas
group II A	acetone, ammonia, ethyl alcohol, fuel, benzene, methane, propane, carbon dioxide
group II B	ethylene, diethyl ether, town gas
group II C	hydrogen, carbon disulphide, acetylene.

Ignition protection classes

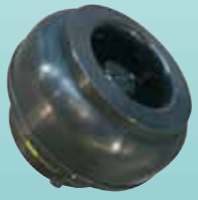
i	intrinsic safety
c*	constructional safety
d*	flameproof enclosure
e*	increased safety
p	pressurized
o	oil immersion
m	encapsulation
q	powder filling
nA*	non sparking

** in the Systemair range*

All Explosion proof fans according to (ATEX95 for EX Symbol) II 2G

RVK 315Y4 202

ATEX certified circular duct fan: 0.28 m³/s, backward curved impeller, 3 phase. Ex e, T1-T3, IIA and IIB, Zone 1 and 2.



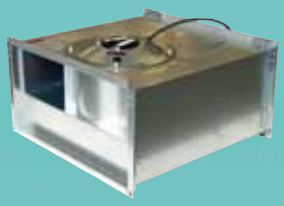
EX 204

ATEX certified centrifugal fans: up to 0.33 m³/s, forward curved impeller, 1-3 phase. Ex e, T1-T3, IIA and IIB, Zone 1 and 2



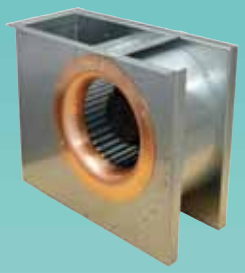
KTEX 208

ATEX certified rectangular fans: up to 1.375 m³/s, forward curved impeller, 3 phase. Ex e, T1-T3, IIA and IIB, Zone 1 and 2.



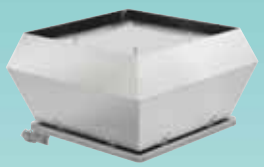
DKEX 212

ATEX certified centrifugal fans: up to -1.39 m³/s, forward curved impeller, 3 phase. Ex e, T1-T3, IIA and IIB, Zone 1 and 2.



DVEX 216

ATEX certified roof fan: 0.41-2.39 m³/s, backward curved impeller. Ex e, T1-T3, IIA and IIB, Zone 1 and 2.



DVV-EX 220

ATEX certified roof fan: up to 11.9 m³/s, backward curved impeller. Motor Ex d, T1-T4, IIA and IIB, Zone 1 and 2.



AW-EX 226

Axial wall fans: up to 3.19 m³/s, 3 phase. Ex e, T1-T4, IIA and IIB, Zone 1 and 2.



AXC-EX 230

ATEX certified axial fan, up to 12.36 m³/s, 3~ version. Motor Ex d, T1-T3, IIA, IIB and IIC, Zone 1 and 2.

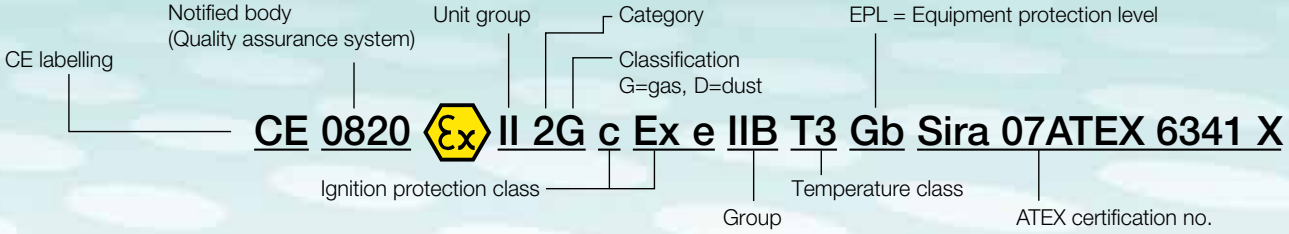


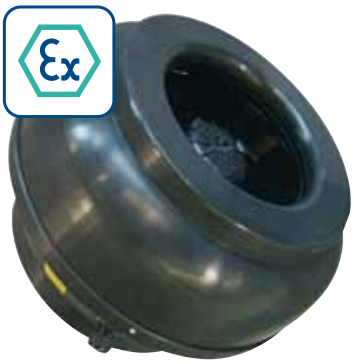
AXCBF-EX 234

ATEX certified axial fan, up to 5.88 m³/s, 3~ versions. Motor Ex d, T1-T3, IIA, IIB and IIC, Zone 1 and 2.



Labelling of an ATEX approved fan:





RVK 315Y4

- In accordance with ATEX directive 94-9 EC
- Speed controllable
- Can be installed in any position
- Motorprotection over cold conductor

The RVK fans are designed for installation in ducts. The fans have backward curved blades and external rotor motors.

The RVK 315 Y4 can be controlled by reducing voltage via 5-step controller in combination with the Systemair Standard tripping unit U-EK230E EX. The fans is supplied with flying leads.

The RVK 315Y4 fan complies with the ATEX regulation. The fans can be used for zone 1 and zone 2; Field of application II, for gases of groups IIA and IIB, temperature class T1, T2 and T3. The casing is made from conducting plastic. The fans are certified under the no ZELM 03 ATEX 0198x.

Improved safety in accordance with Ex e II T3.

Attention: Motor protection device U-EK230E EX must always be connected.

ELECTRICAL ACCESSORIES



U-EK 230E EX
p. 338



R-DK4 KT
p. 323



EX e
p. 339

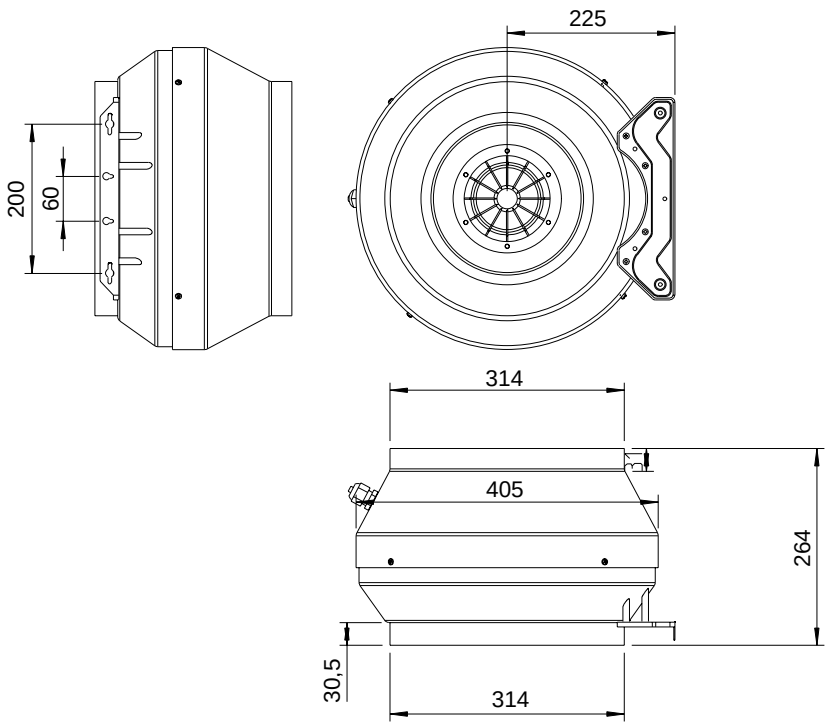
The explosion proof terminal box is supplied as an accessory to the RVK 315Y4, ordered seperately.



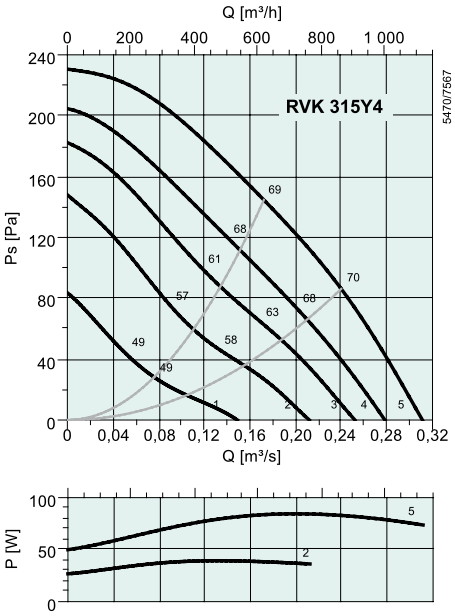
TECHNICAL DATA

RVK		315Y4				
Art no.		30271				
Voltage/Frequency	V/50 Hz	400 3~				
Power	W	90				
Current	A	0.25				
Max air flow	m^3/s	0.311				
R.p.m.	min^{-1}	1385				
Max temp. of transported air	°C	40				
" when speed controlled	°C	40				
Sound pressure level at 4/10 m	dB(A)	41.2				
Weight	kg	6.7				
Insulation class, motor		B				
Enclosure class, motor		IP 44				
Motor protection		U-EK230E EX				
Certificate		ZELM 03 ATEX 0198X				
Wiring diagram p. 391-400		43				

DIMENSIONS



PERFORMANCE

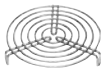


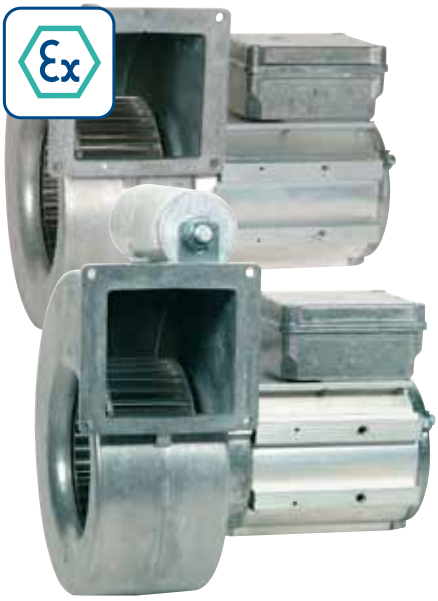
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{WA} Inlet	67	44	61	62	61	58	55	54	45
L_{WA} Outlet	68	49	61	62	60	60	57	55	45
L_{WA} Surrounding	48	18	27	36	44	44	39	34	25

Measurement point: 0,172 m³/s; 145 Pa

VENTILATION ACCESSORIES


FK p. 355


SG p. 357



EX

- Certified according to ATEX 95
- Suitable for use in battery-charging rooms, fume cupboards and similar environments
- Compact design

EX fans can be installed in any position, and their compact design makes them easy to install.

These fans are powered by specially manufactured EX motors, and have impellers with forward-curved blades. The fan casing is cast in silumin, and the impeller is manufactured from aluminium.

The single-phase fans have a capacitor enclosed in sand, which is approved for EX certification.

Explosion proof versions comply with EN 50014, EN 50017, EN 50019, EN 1127- and EN 13463-1. Improved safety in accordance with Ex e q IIB T3.

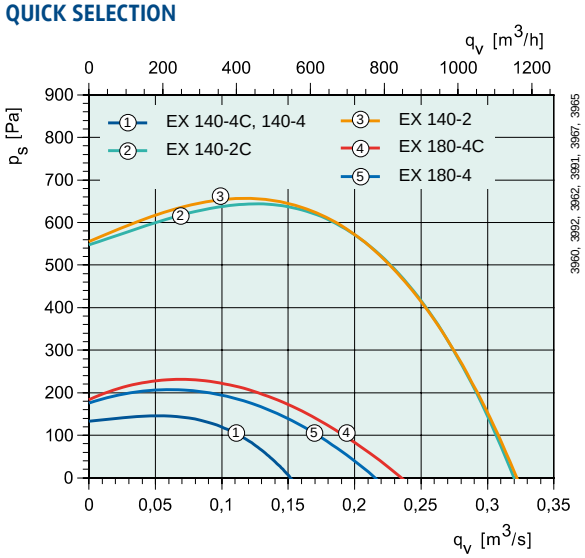
NOTE! EX 140-180 fans are not speed controllable. Motorprotection type MSEX, has to be used in accordance to ATEX certificate.

ELECTRICAL ACCESSORIES



MSEX p. 342

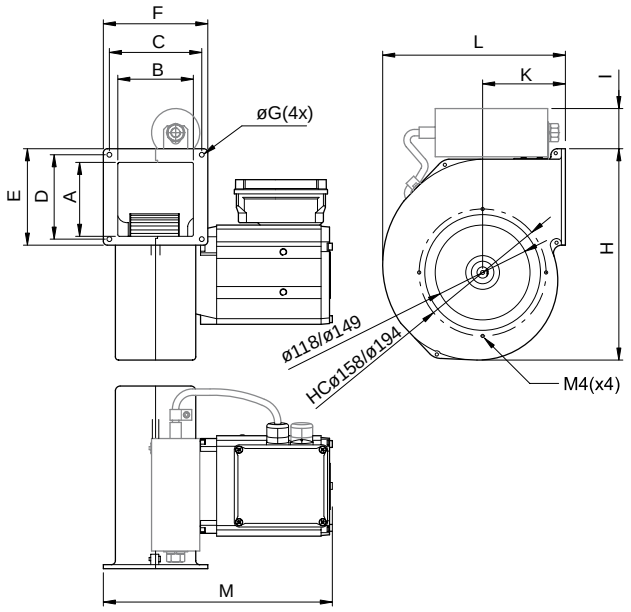
QUICK SELECTION



TECHNICAL DATA

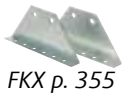
EX		140-4C	140-2C	140-4	140-2	180-4C	180-4
Art no.		1557	1559	1560	1562	1558	1561
Voltage/Frequency	V/50 Hz	230 1~	230 1~	400 3~	400 3~	230 1~	400 3~
Power	W	113	674	131	696	185	188
Current	A	0.63	3.00	0.38	1.28	0.91	0.43
Max air flow	m³/s	0.154	0.326	0.162	0.327	0.236	0.217
R.p.m.	min-1	1465	2885	1465	2890	1415	1435
Max temp. of transported air	°C	-20... +40	-20... +40	-20... +40	-20... +40	-20... +40	-20... +40
" when speed controlled	°C	-20... +40	-20... +40	-20... +40	-20... +40	-20... +40	-20... +40
Sound pressure level at 3 m	dB(A)	43	49	41	47	41	42
Weight	kg	8	9.8	7.3	9	8.3	7.5
Insulation class, motor		F	F	F	F	F	F
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
Capacitor		8	25	–	–	8	–
Motor protection		MSEX 0.4-0.63	MSEX 2.5-4.0	MSEX 0.25-0.4	MSEX 1.0-1.6	MSEX 0.63-1.0	MSEX 0.4-1.0
Certificate		SP 03ATEX3103X					
Wiring diagram p. 391-400		9	9	10	10	9	10

DIMENSIONS



EX	A	B	C	D	E	F	øG	H	I	K	L	M
140-2	92	94	115	105	120	130	6	261	–	103	226	285
140-2C	92	94	115	105	120	130	6	261	50	103	226	285
140-4	92	94	115	105	120	130	6	261	–	103	226	255
140-4C	92	94	115	105	120	130	6	261	50	103	226	255
180-4	109	86	110	120	140	125	7	294	–	120	261	255
180-4C	109	86	110	120	140	125	7	294	50	120	261	255

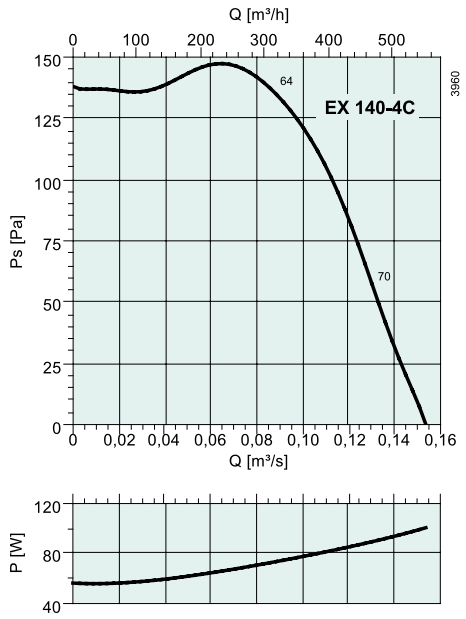
VENTILATION ACCESSORIES


FKX p. 355


IS p. 371

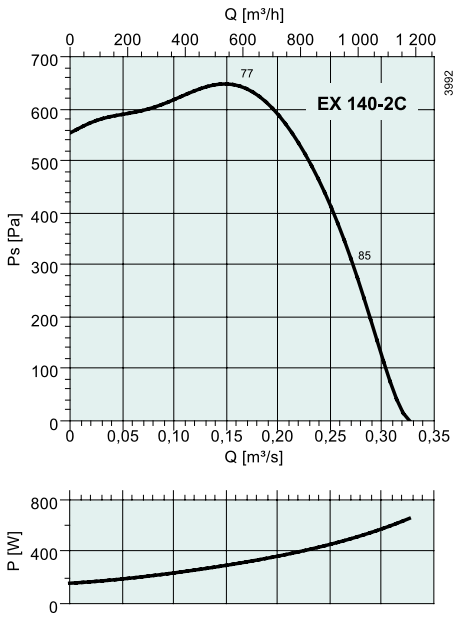

US p. 371

PERFORMANCE



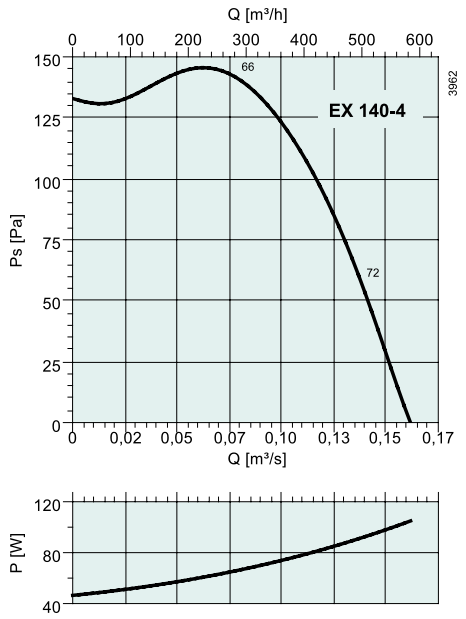
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	59	23	38	47	52	55	52	46	36
L_{wA} Outlet	67	45	54	60	63	61	55	49	42
L_{wA} Surrounding	50	19	22	31	43	43	46	41	32

Measurement point: 0,0878 m^3/s; 135 Pa



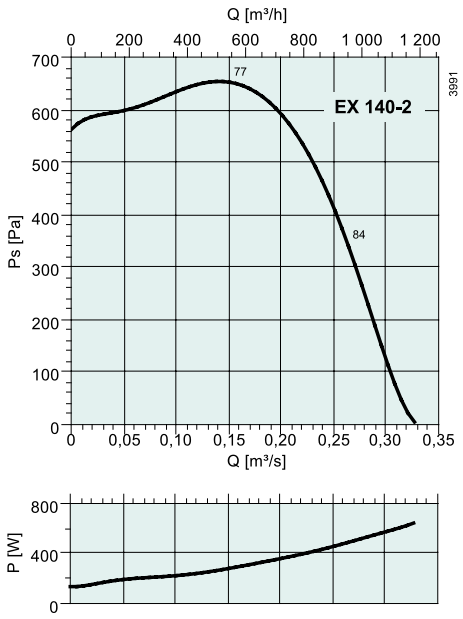
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	72	34	52	62	62	66	69	63	57
L_{wA} Outlet	79	63	66	72	73	72	73	65	61
L_{wA} Surrounding	56	22	34	42	50	48	52	47	43

Measurement point: 0,161 m^3/s; 645 Pa



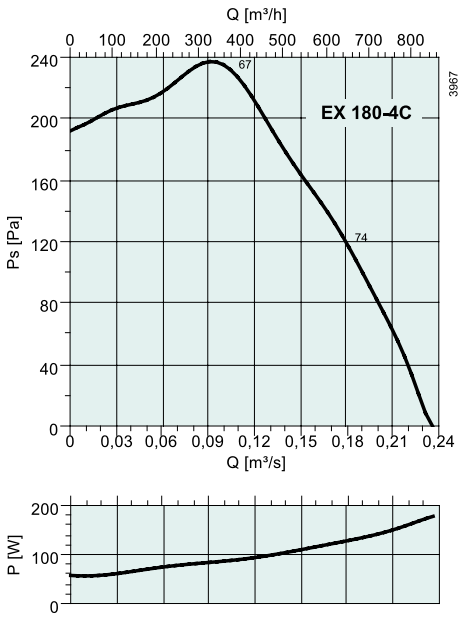
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	60	23	42	50	50	58	50	44	35
L_{wA} Outlet	65	43	57	58	59	59	52	46	39
L_{wA} Surrounding	48	13	23	37	40	43	43	41	32

Measurement point: 0,0786 m^3/s; 141 Pa



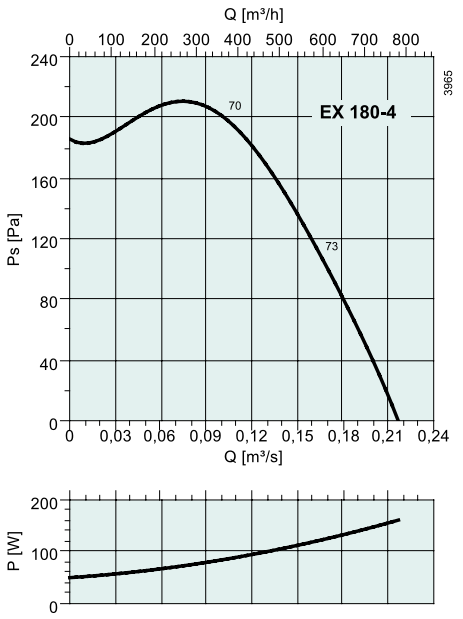
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	72	32	50	62	62	66	67	62	57
L_{wA} Outlet	78	63	67	72	73	71	70	63	59
L_{wA} Surrounding	54	21	31	42	47	47	50	46	42

Measurement point: 0,15 m^3/s; 653 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	62	24	41	52	54	58	54	50	45
L_{wA} Outlet	67	47	57	60	61	64	54	50	42
L_{wA} Surrounding	48	23	25	32	43	44	40	37	31

Measurement point: 0,104 m^3/s; 232 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	62	24	47	56	54	58	54	49	42
L_{wA} Outlet	70	52	63	65	63	61	54	48	42
L_{wA} Surrounding	49	13	30	36	43	45	42	37	29

Measurement point: 0,102 m^3/s; 200 Pa



KTEX

- In accordance with ATEX directive 94-9 EC
- Speed controllable
- Motor protection via cold conductor

KTEX fans can be installed in any position and are easy to connect using the DS flexible connections. These fans have impellers with forward-curved blades and external rotor motors. The casing is manufactured from galvanised sheet steel, with a copper inlet cone.

To protect the motor from overheating, these fans have cold conductor with external leads which must be connected to the U-EK230E EX motor protection relay.

Explosion proof versions comply with EN 50014, EN 50019, EN 1127-1 and EN 13463-1. Improved safety in accordance with Ex e IIB T3.

ELECTRICAL ACCESSORIES



U-EK 230E EX
p. 338



R-DK4 KT
p. 323



RTRD *p. 321*

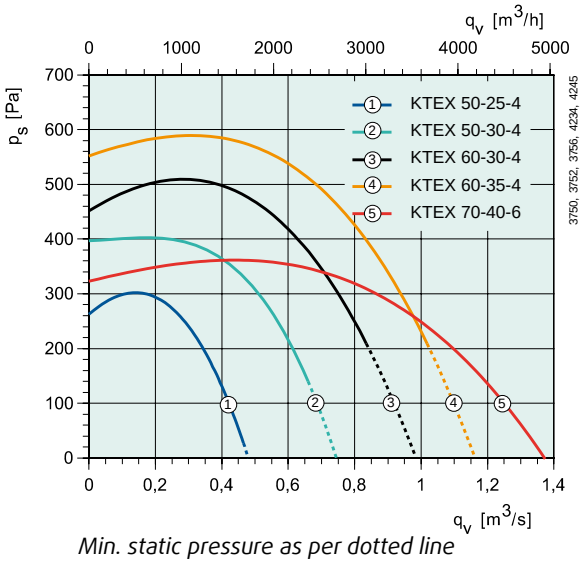


RTRDU
p. 321



Ex e-Terminal box 32A
p. 339

QUICK SELECTION

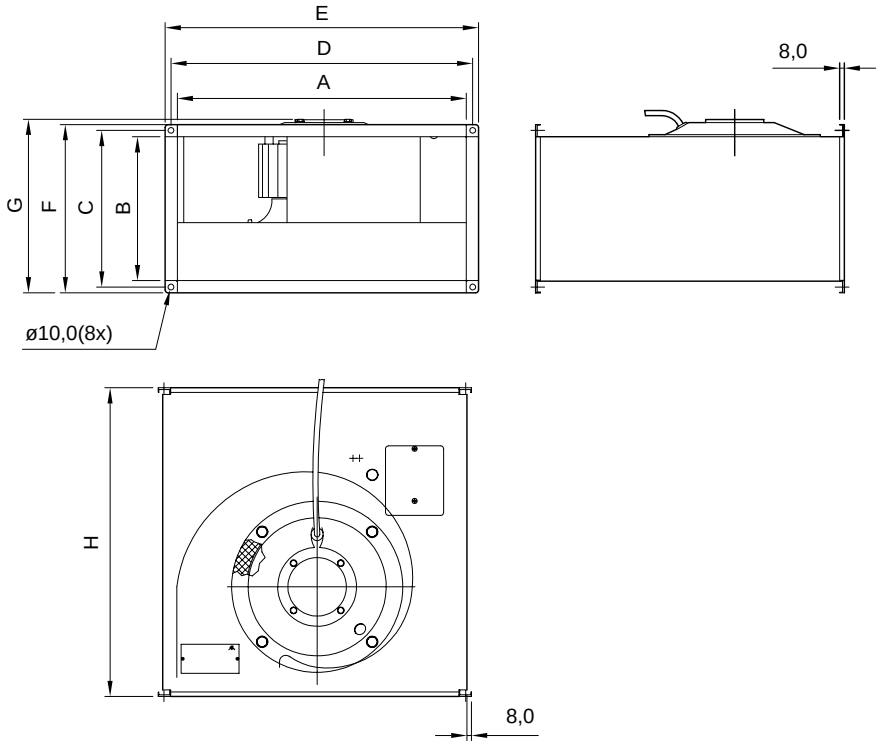


Min. static pressure as per dotted line

TECHNICAL DATA

KTEX		50-25-4	50-30-4	60-30-4	60-35-4	70-40-6
Art no.		1564	1566	1568	1570	1572
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~
Power	W	490	900	1300	2100	1800
Current	A	0.85	1.80	2.20	3.90	3.70
Max air flow	m^3/s	0.467	0.66	0.82	1.01	1.38
R.p.m.	min^{-1}	1290	1355	1330	1380	840
Max temp. of transported air	°C	-20... +40	-20... +40	-20... +40	-20... +40	-20... +40
" when speed controlled	°C	-20... +40	-20... +40	-20... +40	-20... +40	-20... +40
Sound pressure level at 3 m	dB(A)	57	58	58	62	55
Weight	kg	18	23.3	32	44	51
Insulation class, motor		F	F	F	F	F
Enclosure class, motor		IP 44	IP 44	IP 44	IP 44	IP 44
Motor protection		U-EK230E EX	U-EK230E EX	U-EK230E EX	U-EK230E EX	U-EK230E EX
Certificate		SP 04ATEX3105X	SP 03ATEX3103X	SP 04ATEX3107X	SP 04ATEX3109X	SP 04ATEX3111X
Speed control, five step	Transformer	RTRD 2*	RTRD 4*	RTRD 4*	RTRD 7*	RTRD 4*
Speed control, five step high/low	Transformer	RTRDU 2*	RTRDU 4*	RTRDU 4*	RTRDU 7*	RTRDU 4*
Wiring diagram p. 391-400		11	11	11	11	11
* + U-EK230E EX						

DIMENSIONS



KTEX	A	B	C	D	E	F	G	H
50-25-4	498	248	270	520	540	290	299	532
50-30-4	498	298	320	520	540	340	351	562
60-30-4	598	298	320	620	640	340	366	642
60-35-4	598	348	370	620	640	390	421	717
70-40-6	698	398	420	721	740	440	466	787

VENTILATION ACCESSORIES



DS-EX p. 363

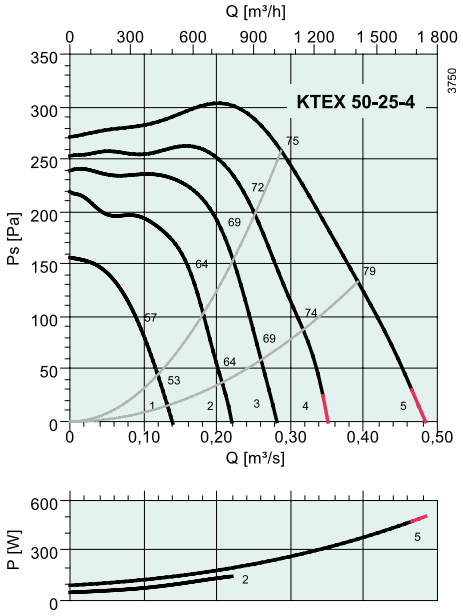


FFK p. 357



LDR p. 358

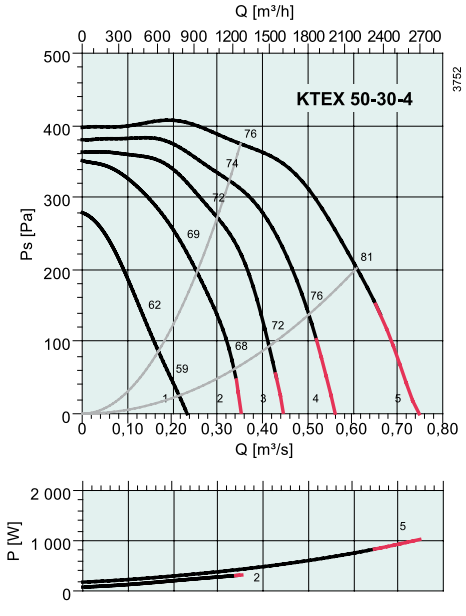
PERFORMANCE



Min. static pressure 85 Pa

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	72	55	66	66	61	62	63	61	58
L_{wA} Outlet	72	46	60	64	66	67	64	62	58
L_{wA} Surrounding	64	57	59	57	53	53	50	46	43
With LDR 50-25									
L_{wA} Inlet	60	55	56	51	36	37	43	46	46

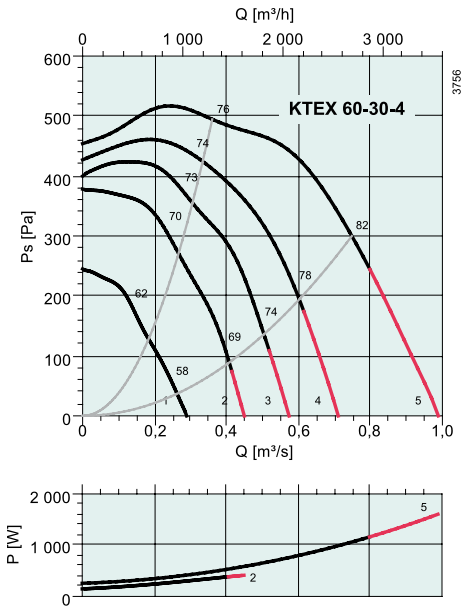
Measurement point: 0,288 m^3/s; 258 Pa



Min. static pressure 130 Pa

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	73	54	65	64	63	67	67	65	61
L_{wA} Outlet	79	48	62	67	70	74	71	70	65
L_{wA} Surrounding	65	54	56	61	55	58	53	49	46
With LDR 50-30									
L_{wA} Inlet	61	54	57	49	43	36	50	51	50

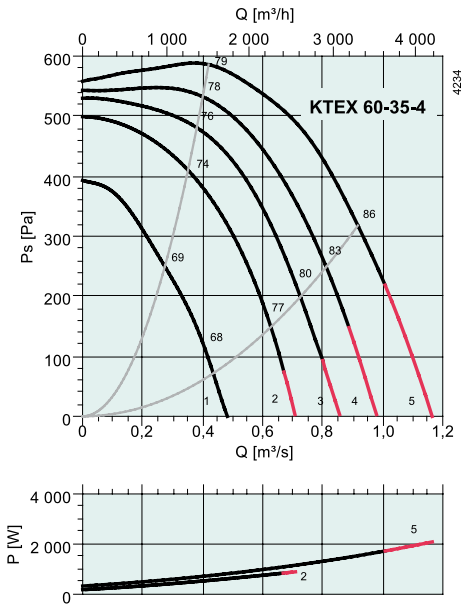
Measurement point: 0,351 m^3/s; 374 Pa



Min. static pressure 220 Pa

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	75	57	66	63	64	68	68	66	63
L_{wA} Outlet	89	60	70	75	80	84	83	82	77
L_{wA} Surrounding	65	55	60	57	55	56	56	51	47
With LDR 60-30									
L_{wA} Inlet	62	57	58	48	44	37	51	52	52

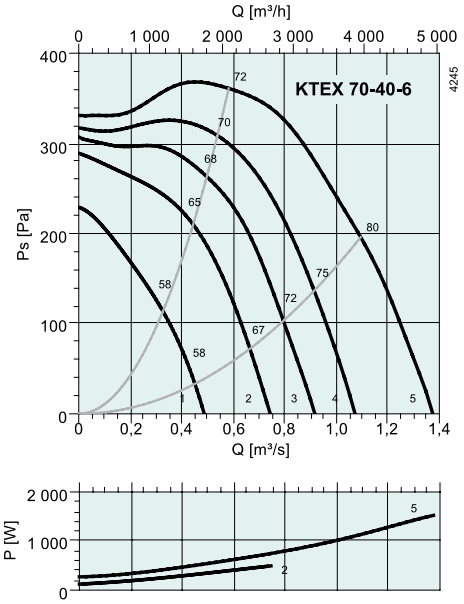
Measurement point: 0,36 m^3/s; 495 Pa



Min. static pressure 220 Pa

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	78	59	67	66	66	69	71	74	70
L_{wA} Outlet	85	54	68	71	77	78	77	80	75
L_{wA} Surrounding	69	49	64	59	57	60	60	62	57
With LDR 60-35									
L_{wA} Inlet	68	59	60	53	49	51	58	64	62

Measurement point: 0,42 m^3/s; 586 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	71	51	58	60	61	63	63	67	62
L_{wA} Outlet	77	52	59	65	71	69	68	71	66
L_{wA} Surrounding	62	42	54	54	54	54	52	54	50
With LDR 70-40									
L_{wA} Inlet	63	51	51	49	47	49	53	59	56

Measurement point: 0,582 m^3/s; 361 Pa



DKEX

- In accordance with ATEX directive 94-9 EC
- Suitable for use in battery-charging rooms, fume cupboards and similar environments
- Motor protection via cold conductor
- Speed-controllable

DKEX fans can be installed in any position, and their compact design makes them easy to install.

These fans have impellers with forward-curved blades and external rotor motors. The casing is manufactured from galvanised sheet steel with a copper inlet cone. To protect the motor from overheating, cold conductor are fitted with external leads which must be connected to the U-EK230E EX motor protection relay.

Explosion proof versions comply with EN 50014, 50019, EN 1127-1 and EN 13463-1. Improved safety in accordance with Ex e IIB T3.

ELECTRICAL ACCESSORIES



U-EK 230E EX
p. 338



R-DK4 KT
p. 323



RTRD p. 321

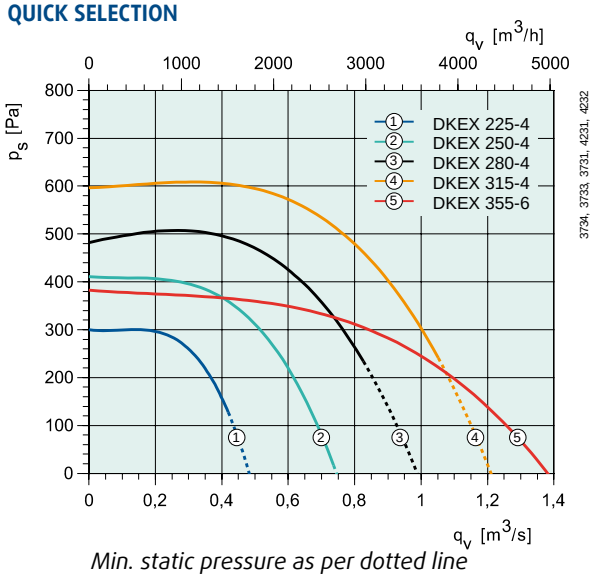


RTRDU p. 321



Ex e-Terminal box 32A
p. 339

QUICK SELECTION

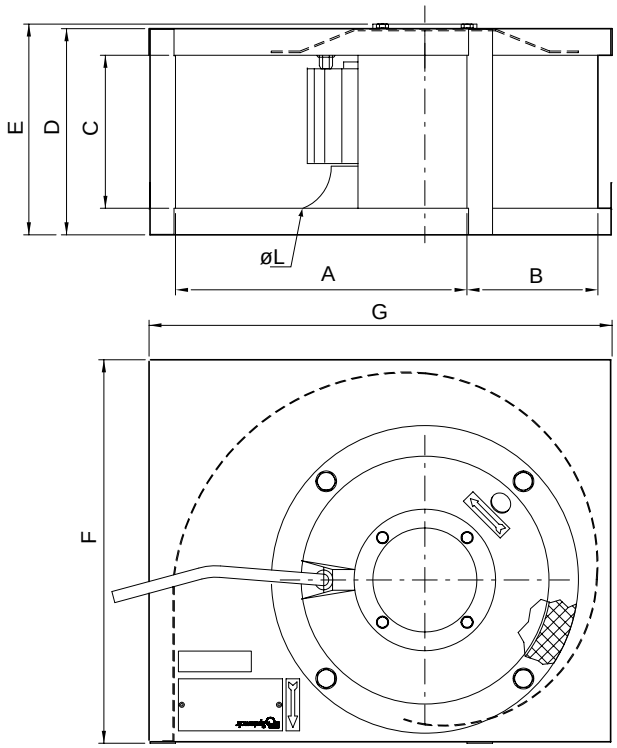


Min. static pressure as per dotted line

TECHNICAL DATA

DKEX		225-4	250-4	280-4	315-4	355-6
Art no.		3965	3966	3967	3968	3969
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~
Power	W	490	900	1300	2100	1800
Current	A	0.85	1.80	2.20	3.90	3.70
Max air flow	m^3/s	0.41	0.73	0.822	1.04	1.39
R.p.m.	min^{-1}	1305	1355	1330	1380	840
Max temp. of transported air	°C	-20... +40	-20... +40	-20... +40	-20... +40	-20... +40
" when speed controlled	°C	-20... +40	-20... +40	-20... +40	-20... +40	-20... +40
Sound pressure level at 3 m	dB(A)	54	59	61	64	58
Weight	kg	12.5	17.3	24.2	35.2	38.6
Insulation class, motor		F	F	F	F	F
Enclosure class, motor		IP 44	IP 44	IP 44	IP 44	IP 44
Motor protection		U-EK230E EX	U-EK230E EX	U-EK230E EX	U-EK230E EX	U-EK230E EX
Certificate		SP 04ATEX3106X	SP 03ATEX3104X	SP 04ATEX3108X	SP 04ATEX3110X	SP 04ATEX3112X
Speed control, five step	Transformer	RTRD 2*	RTRD 4*	RTRD 4*	RTRD 7*	RTRD 4*
Speed control, five step high/low	Transformer	RTRDU 2*	RTRDU 4*	RTRDU 4*	RTRDU 7*	RTRDU 4*
Wiring diagram p. 391-400		11	11	11	11	11
* + U-EK230E EX						

DIMENSIONS



DKEX	A	B	C	D	E	F	G
225-4	280	133	145	196	196	367	445
250-4	315	154	165	216	243	410	492
280-4	357	169	180	230	248	453	547
315-5	400	188	203	254	276	515	615
355-6	450	213	227	278	320	574	689

VENTILATION ACCESSORIES

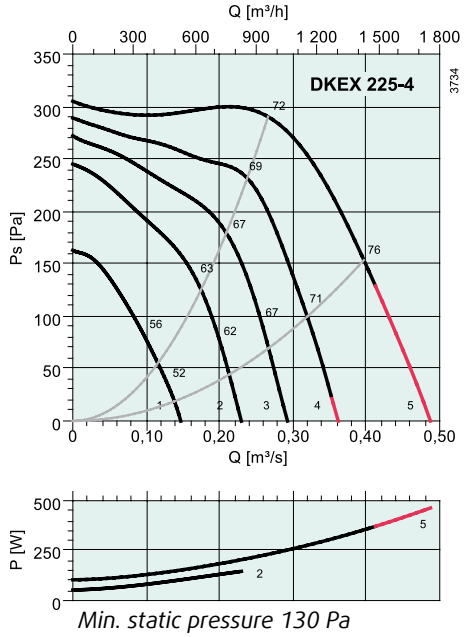


USE p. 371



ISE p. 371

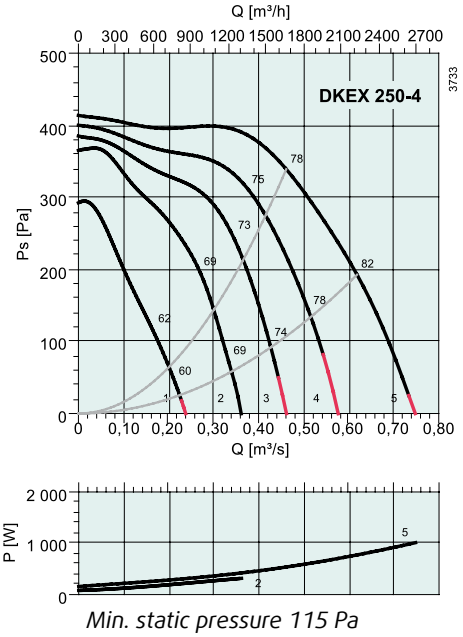
PERFORMANCE



Min. static pressure 130 Pa

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	71	46	55	63	60	65	65	62	57
L_{wA} Outlet	76	45	51	64	68	72	68	67	64
L_{wA} Surrounding	61	35	44	54	53	56	54	48	44

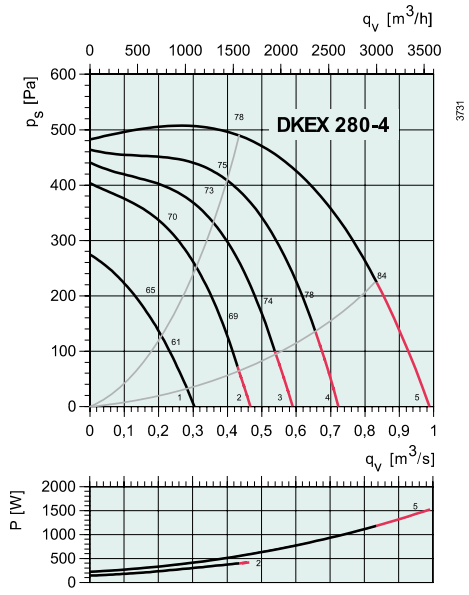
Measurement point: 0,266 m^3/s; 290 Pa



Min. static pressure 115 Pa

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	77	50	62	67	66	72	71	69	65
L_{wA} Outlet	77	48	53	65	68	72	70	69	64
L_{wA} Surrounding	66	41	43	58	55	62	59	56	48

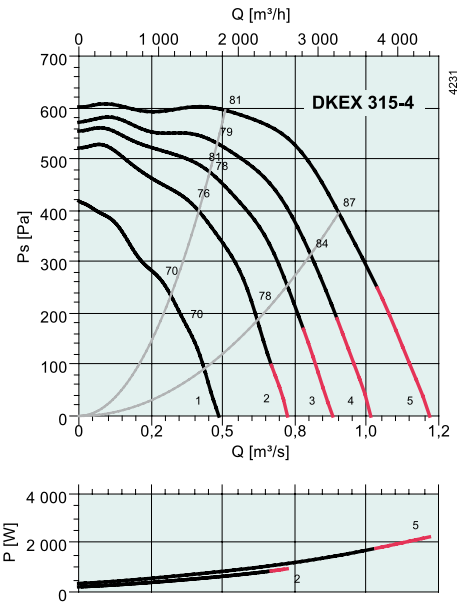
Measurement point: 0,461 m^3/s; 339 Pa



Min. static pressure 230 Pa

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	77	51	63	66	65	72	71	68	64
L_{wA} Outlet	79	49	57	67	71	73	72	71	66
L_{wA} Surrounding	68	48	52	59	55	63	62	58	57

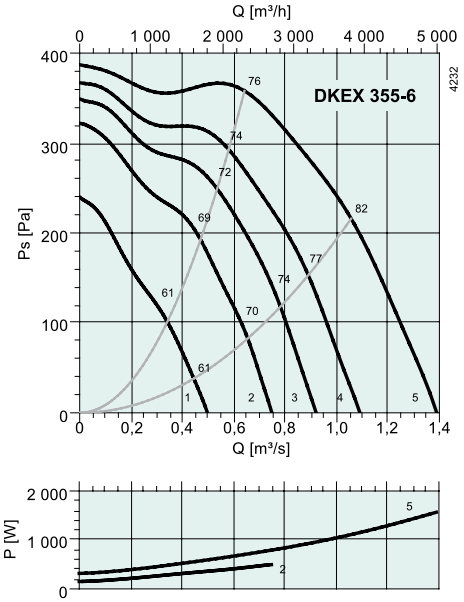
Measurement point: 0,411 m^3/s; 500 Pa



Min. static pressure 250 Pa

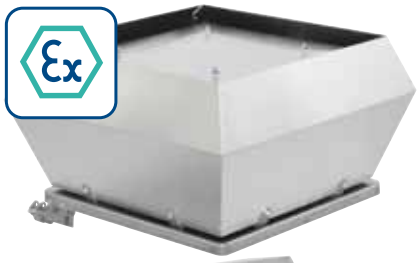
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	80	52	69	67	68	72	73	75	71
L_{wA} Outlet	83	51	65	71	76	75	74	78	72
L_{wA} Surrounding	71	48	52	58	59	65	64	66	60

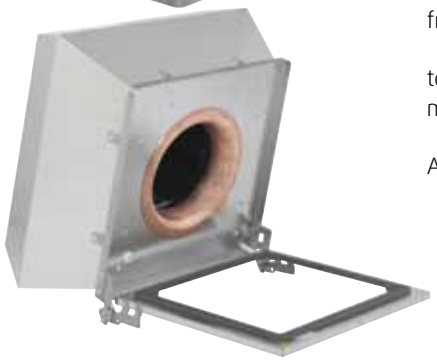
Measurement point: 0,509 m^3/s; 595 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	76	49	62	62	67	68	68	71	66
L_{wA} Outlet	78	47	60	65	71	70	69	74	68
L_{wA} Surrounding	65	37	47	53	59	59	58	59	51

Measurement point: 0,641 m^3/s; 358 Pa





DVEX

- In accordance with ATEX directive 94-9 EC
- Speed-controllable
- Motor protection via cold conductor

The DVEX models have impellers with backward-curved blades and external rotor motors. The casing is made from aluminium and the base frame from galvanised steel, with a copper inlet cone.

To protect the motor from overheating these fans have cold conductor with external leads which must be connected to the U-EK230E EX motor protection relay.

Improved safety in accordance with Ex e IIB T3. Certified according to ATEX.

ELECTRICAL ACCESSORIES



U-EK 230E EX
p. 338



R-DK4 KT
p. 323



RTRD p. 321

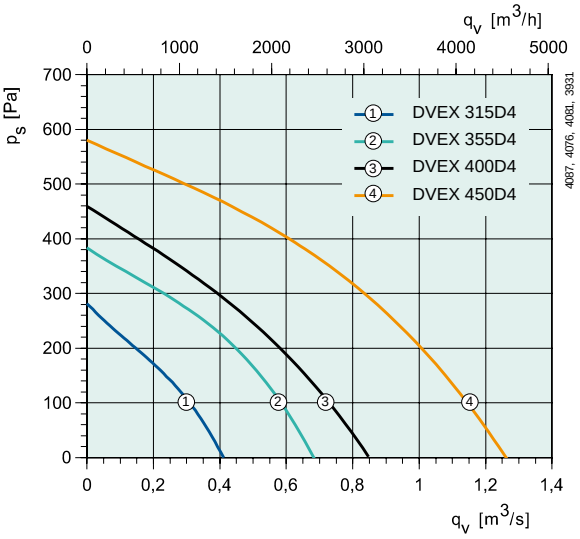


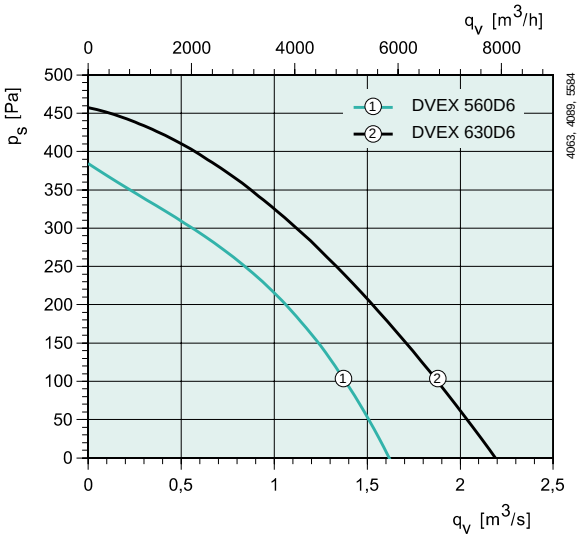
RTRDU p. 321



Ex e-Terminal box 32A
p. 339

QUICK SELECTION



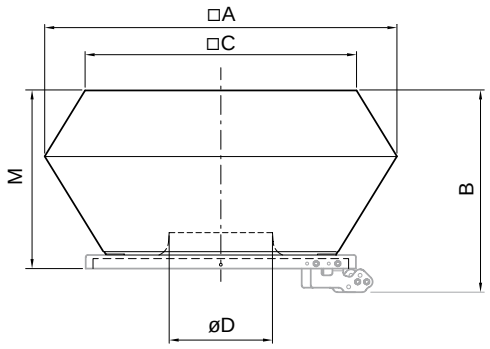


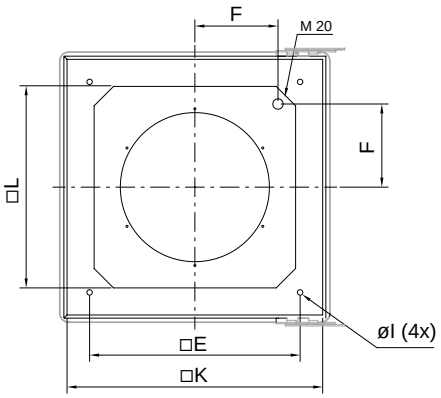
TECHNICAL DATA

DVEX		315D4	355D4	400D4	450D4
Art no		32813	32814	32815	32816
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~
Power	W	120	260	390	720
Current	A	0.23	0.47	0.76	1.42
Max air flow	m3/s	0.411	0.689	0.847	1.26
R.p.m.	min-1	1340	1340	1350	1360
Max temp. of transported air	°C	-20... +40	-20... +40	-20... +40	-20... +40
" when speed controlled	°C	-20... +40	-20... +40	-20... +40	-20... +40
Sound pressure level at 4/10 m	dB(A)	44/36	49/41	54/46	57/49
Weight	kg	18	28	29	40
Insulation class, motor		F	F	F	F
Enclosure class, motor		IP 44	IP 44	IP 44	IP 44
Motor protection		U-EK230E EX	U-EK230E EX	U-EK230E EX	U-EK230E EX
Certificate		SP 07ATEX3129X	SP 07ATEX3130X	SP 07ATEX3131X	SP 07ATEX3132X
Speed control, five step	Transformer	RTRD 2*	RTRD 2*	RTRD 2*	RTRD 2*
Speed control, five step high/low	Transformer	RTRDU 2*	RTRDU 2*	RTRDU 2*	RTRDU 2*
Wiring diagram p. 391-400		11	11	11	11

** + U-EK230E EX. NB! When using the RTRD or RTRDU together with an EX motor protection type U-EK230E EX, the two terminals in the transformer marked "TK" must be bridged.*

DIMENSIONS





DVEX	□A	B	□C	øD	□E	F	øI	□K	□L	M
315D4	560	382	470	192	330	146	12	406	304	330
355D4	720	442	618	226	450	199	12	566	466	390
400D4	720	442	618	255	450	199	12	566	466	390
450D4	900	517	730	289	535	237	12	636	490	465
560D6	1150	–	955	364	750	293	12	939	–	560
630D6	1150	–	955	410	750	293	12	939	–	560

Shadowed area not for sizes 560, 630

VENTILATION ACCESSORIES


ASF p. 375


ASK p. 380


ASS-EX p. 381


BTG p. 374


FDS p. 374


FTG p. 371


SSD p. 374

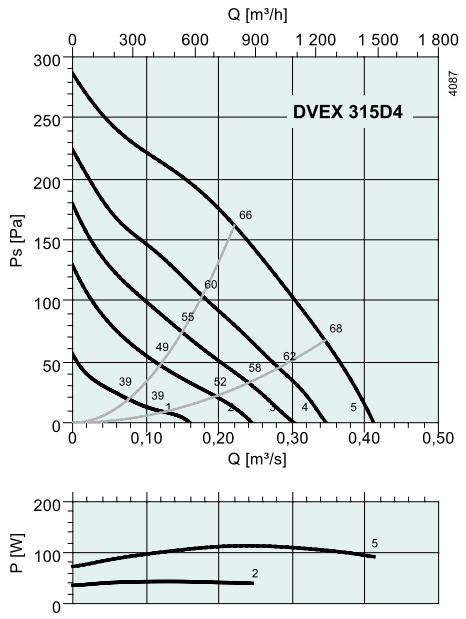

TDA p. 371


VKS-EX p. 380

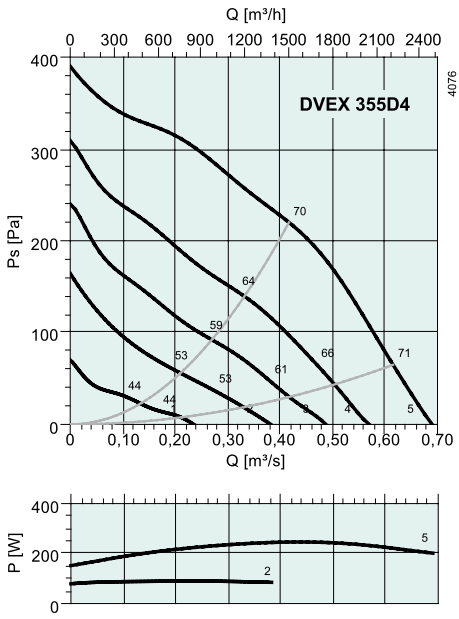
DVEX		560D6	630D6			
Art no		32818	32819			
Voltage/Frequency	V/50 Hz	400 3~	400 3~			
Power	W	620	1070			
Current	A	1.23	2.15			
Max air flow	m3/s	1.62	2.20			
R.p.m.	min-1	900	880			
Max temp. of transported air	°C	-20... +40	-20... +40			
" when speed controlled	°C	-20... +40	-20... +40			
Sound pressure level at 3 m	dB(A)	52/44	55/47			
Weight	kg	62	78			
Insulation class, motor		F	F			
Enclosure class, motor		IP 44	IP 44			
Motor protection		U-EK230E EX	U-EK230E EX			
Certificate		SP 07ATEX3134X	SP 07ATEX3135X			
Speed control, five step	Transformer	RTRD 2*	RTRD 4*			
Speed control, five step high/low	Transformer	RTRDU 2*	RTRDU 4*			
Wiring diagram p. 391-400		11	11			

** + U-EK230E EX. NB! When using the RTRD or RTRDU together with an EX motor protection type U-EK230E EX, the two terminals in the transformer marked "TK" must be briged.*

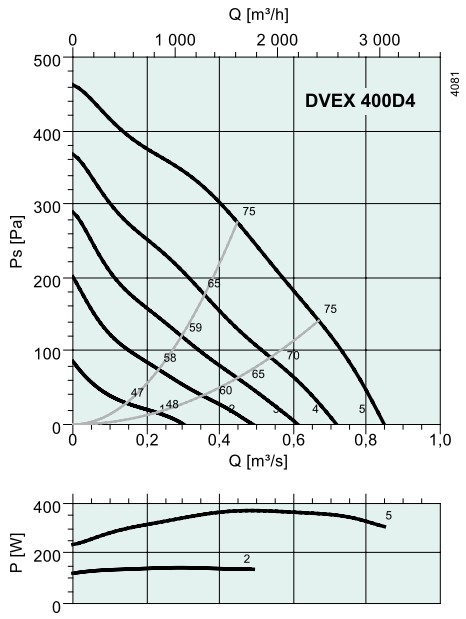
PERFORMANCE



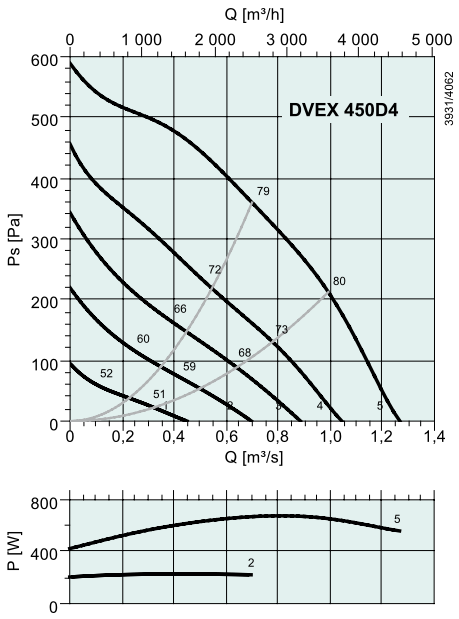
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	64	48	53	56	60	55	53	49	37
L_{wA} Outlet	67	48	53	56	63	63	59	52	40
Measurement point: 0,221 m³/s; 162 Pa									



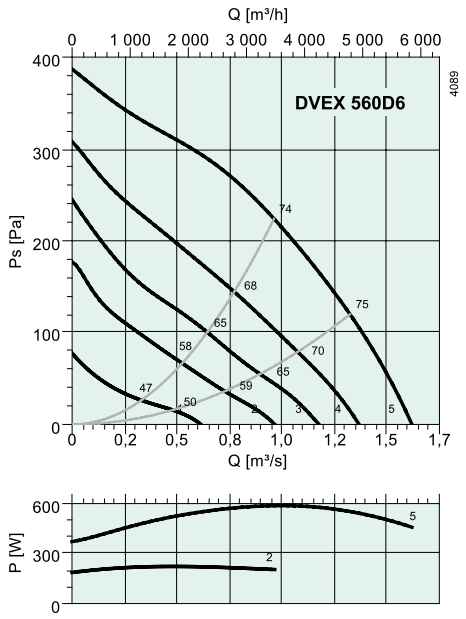
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	68	50	58	61	63	60	58	52	43
L_{wA} Outlet	72	51	58	64	67	67	63	55	48
With TG 540-800									
L_{wA} Inlet	61	50	55	55	54	48	50	47	38
Measurement point: 0,417 m³/s; 220 Pa									

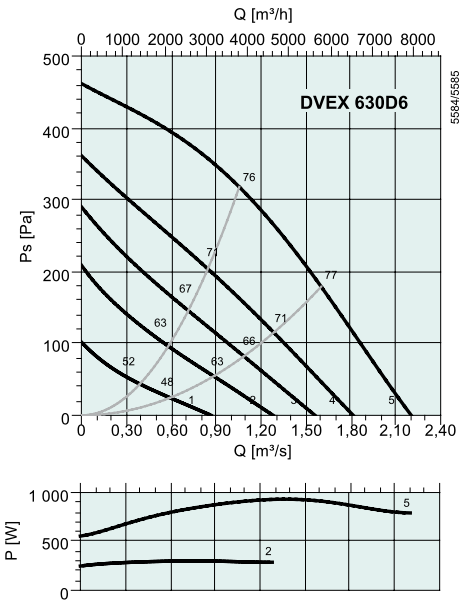


dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} In let	72	58	62	66	67	64	62	55	47
L_{wA} Outlet	77	57	62	69	72	72	67	59	50
With TG 640-800									
L_{wA} Inlet	67	57	60	62	60	55	56	51	43
Measurement point: 0,448 m³/s; 275 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	76	58	64	71	71	68	66	58	52
L_{wA} Outlet	80	58	67	74	75	75	70	62	53
With TG 640-800									
L_{wA} Inlet	71	57	62	67	64	59	60	54	48
Measurement point: 0,699 m³/s; 360 Pa									





dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	70	58	59	66	63	64	59	52	45
L_{wA} Outlet	75	57	61	69	71	70	63	57	55
With TG 940-1230									
L_{wA} Inlet	66	58	57	62	55	57	54	48	41
Measurement point: 0,962 m^3/s; 224 Pa									

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	73	53	64	69	66	64	61	60	54
L_{wA} Outlet	78	53	65	71	74	71	65	64	57
With TG 940-1230									
L_{wA} Inlet	68	53	62	65	58	57	56	56	50
Measurement point: 1,05 m^3/s; 318 Pa									



DVV-EX

- In accordance with ATEX directive 94-9 EC
- Speed-controllable via frequency converter

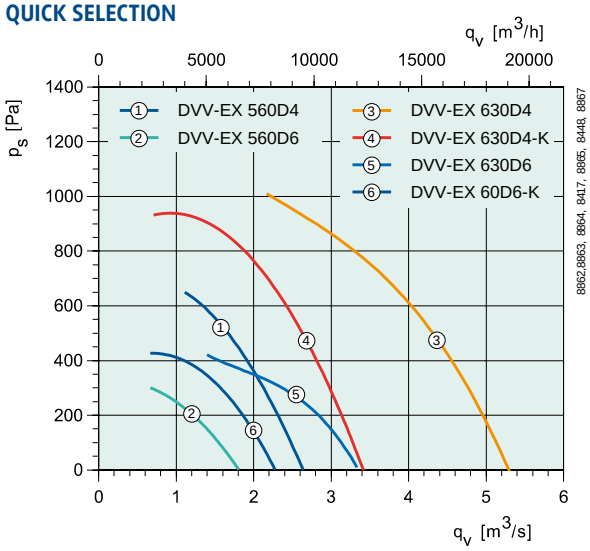
Roof fans DVV-Ex are designed to exhaust potentially explosive atmospheres (mixtures of air and inflammables such as gases and steam) from explosion hazardous areas. The DVV-Ex fans have impellers with backward-curved blades and IEC motor in explosion protection "flameproof enclosure", Ex d. The casing is manufactured from seawater-resistant aluminium and the base frame from galvanised steel, with a copper inlet cone. Suitable for exhaust from zones 1 or 2, field of application II, for gases of groups IIA and IIB and temperature classes T1 to T4. The fans are classified to category 2G. Terminal box in explosion protection "increased safety", Ex e is mounted on casing. To enable protection of motor from overheating these fans have serial built-in thermistors (PTC) with external leads (connection to U-EK230E EX motor protection relay as accessories possible). On request fan can be factory fitted with sound attenuator on outlet (as DVVI-Ex fan).

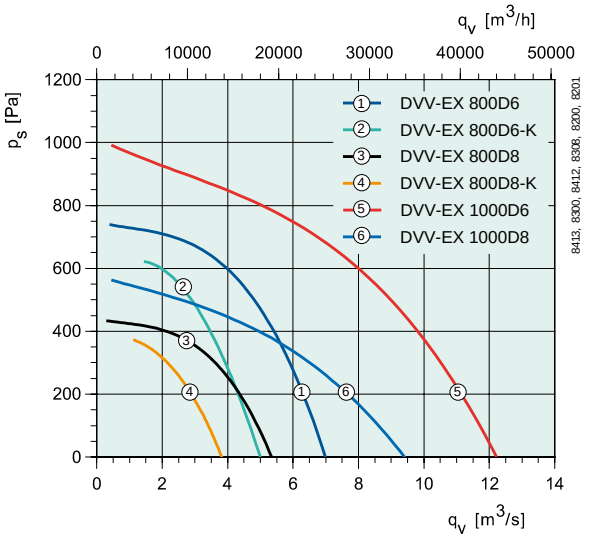
ELECTRICAL ACCESSORIES



U-EK 230E EX p. 338

QUICK SELECTION

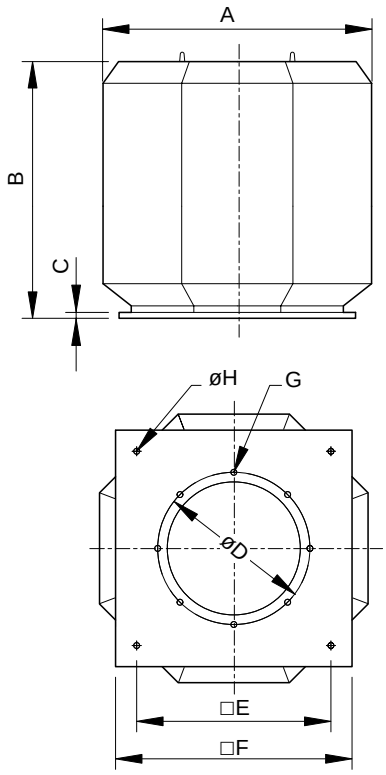




TECHNICAL DATA

DVV-EX		560D4	560D6	630D4	630D4-K	630D6	630D6-K
Art no		30841	30844	30852	30847	30854	30850
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~
Power	W	1500	750	5500	3000	2200	1100
Current	A	3.35	2.10	10.8	6.5	5.0	3.0
Starting current	A	17.4	7.80	55.1	32.5	30.5	12.3
Max air flow	m^3/s	2.64	1.81	5.36	3.5	3.36	2.28
R.p.m.	min^{-1}	1415	915	1435	1415	960	915
Max temp. of transported air	°C	40	40	40	40	40	40
" when speed controlled	°C	40	40	40	40	40	40
Sound pressure level at 4/10 m	dB(A)	69/61	60/52	75/69	71/63	64/58	61/53
Weight	kg	72	69	161	120	133	107
Insulation class, motor		F	F	F	F	F	F
Enclosure class, motor		IP 55 Ex d	IP 55 Ex d	IP 55 Ex d	IP 55 Ex d	IP 55 Ex d	IP 55 Ex d
Certificate		SIQ 06 ATEX 236X(PPC 00-31780)					
Wiring diagram p. 391-400		13b Y	13b Y	13b D	13b Y	13b Y	13b Y

DIMENSIONS



DVV-EX	A	B	C	øD	□E	□F	G	øH
560D4/D6	808	750	20	438	600	706	12XM8	14
630D4/D4-K/D6/D6-K	1100	958	40	541	880	990	12XM8	18
800D6/D6-K/D8/D8-K	1272	1175	40	674	880	990	16xM10	18
1000D6/D8	1500	1350	70	751	1040	1154	16xM10	18

VENTILATION ACCESSORIES


VKSV-EX p. 380


ASFV p. 384


ASSV-EX p. 383


FDVE/F p. 382

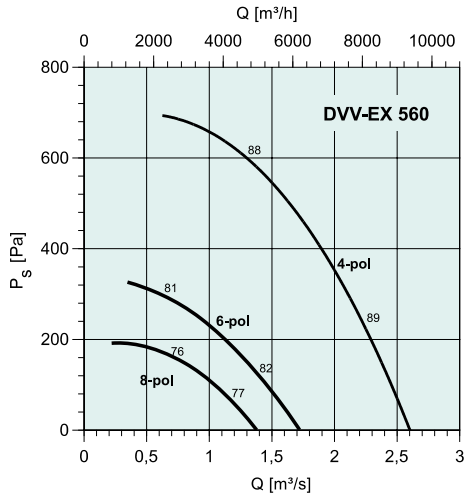

SSV/F p. 382

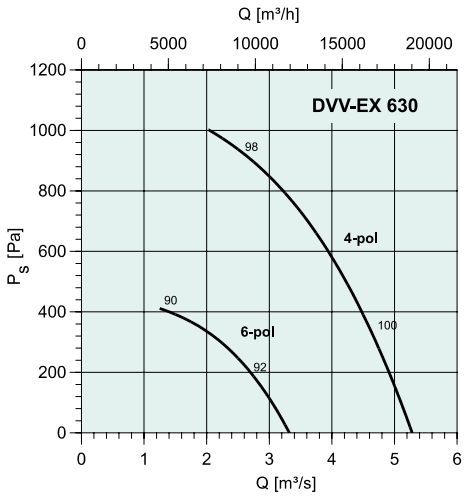

SSVE/F p. 377


ASK/F p. 380

DVV-EX		800D6	800D6-K	800D8	800D8-K	1000D6	1000D8	
Art no		30856	30859	30858	30861	30862	30863	
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	
Power	W	5500	2200	2200	1100	11 000	5500	
Current	A	11.80	5.0	5.5	3.25	23.5	13.4	
Starting current	A	72	30.5	23.7	12.4	141	64.3	
Max air flow	m^3/s	7.08	5.0	5.28	3.92	12.4	9.44	
R.p.m.	min^{-1}	955	960	710	695	965	715	
Max temp. of transported air	°C	40	40	40	40	40	40	
" when speed controlled	°C	40	40	40	40	40	40	
Sound pressure level at 4/10 m	dB(A)	72/66	66/60	66/57	59/53	73/66	66/58	
Weight	kg	205	171	189	157	370	348	
Insulation class, motor		F	F	F	F	F	F	
Enclosure class, motor		IP 55 Ex d	IP 55 Ex d	IP 55 Ex d	IP 55 Ex d	IP 55 Ex d	IP 55 Ex d	
Certificate		SIQ 06 ATEX 236X(PPC 00-31780)						
Wiring diagram p. 391-400		13b D	13b Y	13b Y	13b Y	13b D	13b D	

PERFORMANCE





DVV-EX 560D4									
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	88	61	73	81	82	81	79	76	68
L_{wA} Surrounding	90	63	75	83	84	83	81	78	70

Measurement point: 2,1m³/s; 310 Pa

DVV-EX 630D4									
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	97	68	79	91	90	92	87	81	72
L_{wA} Surrounding	98	68	87	88	91	91	91	89	79

Measurement point: 4,58 m³/s; 370 Pa

DVV-EX 560D6									
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	81	58	67	73	77	72	70	68	56
L_{wA} Surrounding	83	60	69	75	79	74	72	70	58

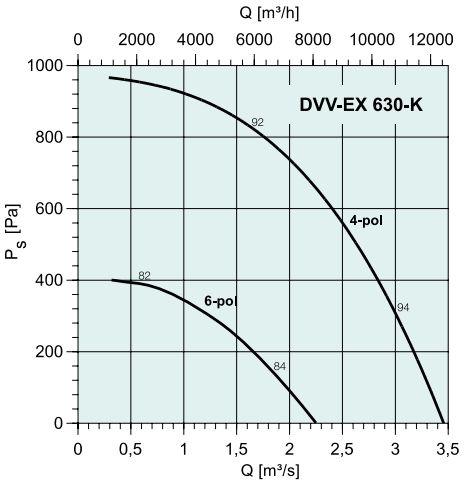
Measurement point: 1,50m³/s; 125 Pa

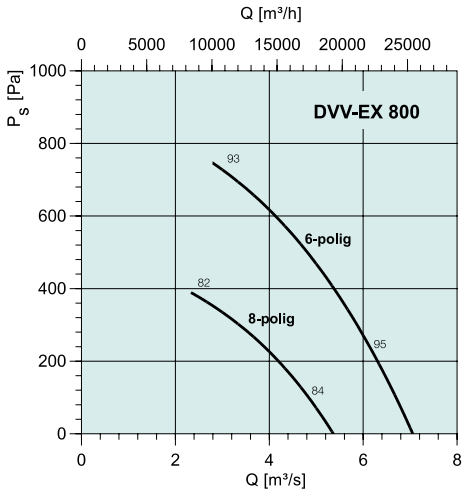
DVV-EX 630D6									
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	90	67	76	82	86	81	79	77	65
L_{wA} Surrounding	92	69	78	84	88	83	81	79	67

Measurement point: 2,3 m³/s; 290 Pa

DVV-EX 560D8									
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	76	58	64	67	71	68	68	63	52
L_{wA} Surrounding	78	60	66	69	73	70	70	65	54

Measurement point: 1,20 m³/s; 50 Pa





DVV-EX 630D4-K									
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	92	65	77	85	86	85	83	80	72
L_{wA} Surrounding	94	67	79	87	88	87	85	82	74

Measurement point: 2,80 m^3/s; 400 Pa

DVV-EX 800D6									
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	93	70	79	85	89	84	82	80	68
L_{wA} Surrounding	95	72	81	87	91	86	84	82	70

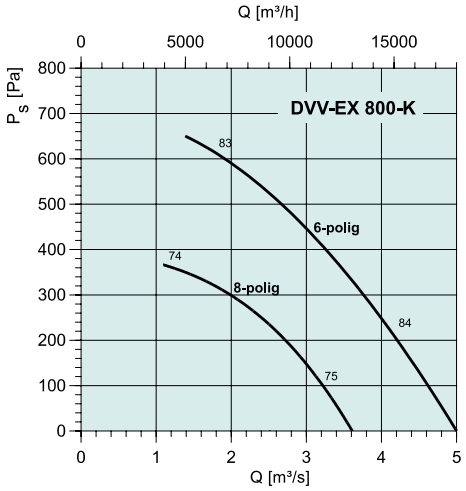
Measurement point: 4,2 m^3/s; 600 Pa

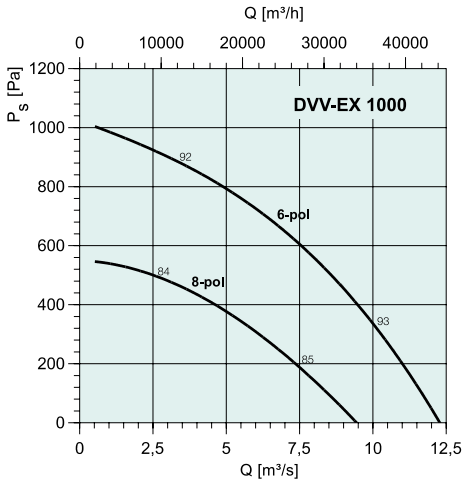
DVV-EX 630D6-K									
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	82	58	69	71	78	73	72	68	55
L_{wA} Surrounding	84	60	71	73	80	75	74	70	57

Measurement point: 1,0 m^3/s; 350 Pa

DVV-EX 800D8									
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	82	64	70	73	77	74	74	69	58
L_{wA} Surrounding	84	66	72	75	79	76	76	71	60

Measurement point: 2,50 m^3/s; 330 Pa





DVV-EX 800D6-K									
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	84	60	71	73	80	75	74	70	57
L_{wA} Surrounding	86	62	73	75	82	77	76	72	59

Measurement point: 4,00 m^3/s; 280 Pa

DVV-EX 1000D6									
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	92	69	78	84	88	83	81	79	67
L_{wA} Surrounding	94	71	80	86	90	85	83	81	69

Measurement point: 6,94 m^3/s; 650 Pa

DVV-EX 800D8-K									
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	75	58	64	66	70	68	68	60	49
L_{wA} Surrounding	77	60	66	68	72	70	70	62	51

Measurement point: 3,10 m^3/s; 150 Pa

DVV-EX 1000D8									
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	84	66	72	75	79	76	76	71	60
L_{wA} Surrounding	86	68	74	77	81	78	78	73	62

Measurement point: 6,11 m^3/s; 310 Pa



AW-EX

- In accordance with ATEX directive 94-9 EC
- Speed-controllable
- Motor protection via cold conductor

The AW-EX fans have speed controllable external rotor motors. The fans have a square plate for wall mounting and are painted in standard black. The casing and impeller is manufactured from sheet steel. To protect the motor from overheating, cold conductors are fitted with external leads which must be connected to the U-EK230E EX motor protection relay.

The AW-Ex fan motor is approved according to ATEX. Improved safety in accordance with Ex e IIB T3 or T4.

Accessories for Ex-fans only on request.

ELECTRICAL ACCESSORIES



U-EK 230E EX
p. 338



R-DK4 KT
p. 323



RTRD p. 321

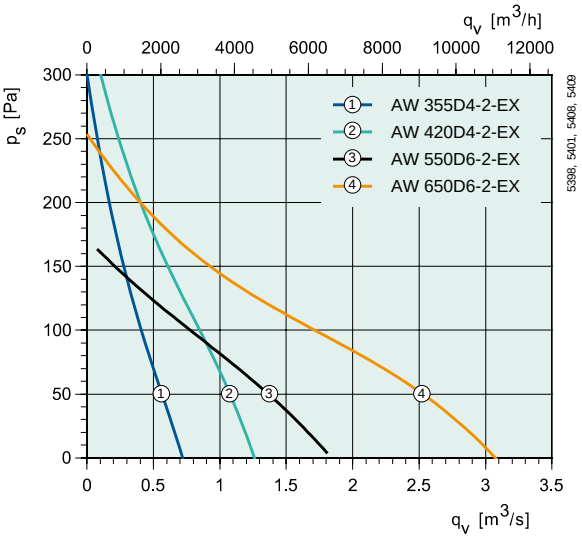


RTRDU p. 321



Ex e-Terminal box 32A
p. 339

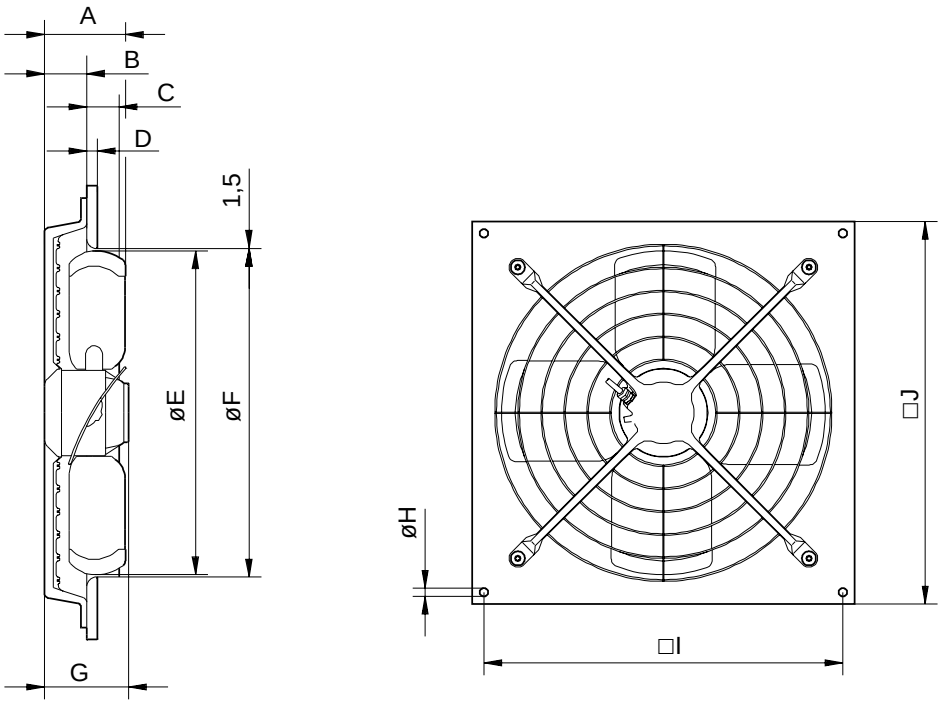
QUICK SELECTION



TECHNICAL DATA

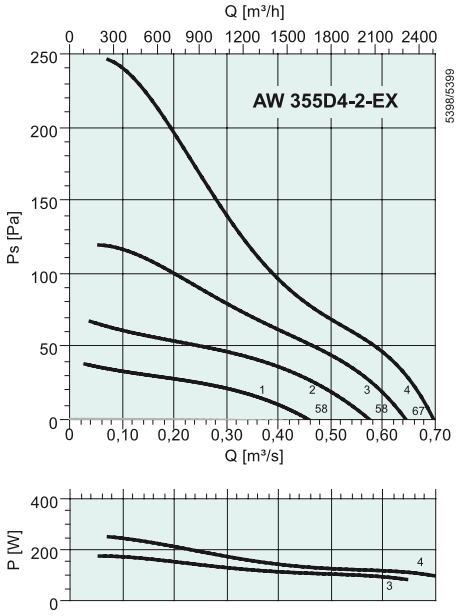
AW		355 D4-2-EX	420 D4-2-EX	550 D6-2-EX	650 D6-2-EX
Art no		5969	5970	5971	5972
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~
Power	W	286	536	579	1077
Current	A	0.27	0.943	1.15	1.78
Max air flow	m³/s	0.694	1.23	1.84	3.04
R.p.m.	min⁻¹	1420	1269	697	790
Max temp. of transported air	°C	40	40	40	40
" when speed controlled	°C	40	40	40	40
Sound pressure level at 3 m	dB(A)	62	69	67	72
Weight	kg	9	10	13	20
Insulation class, motor		F	F	F	F
Enclosure class, motor		IP 44	IP 44	IP 44	IP 44
Motor protection		U-EK230E EX	U-EK230E EX	U-EK230E EX	U-EK230E EX
Certificate		ZELM 05 ATEX0279X	ZELM 05 ATEX0279X	ZELM 05 ATEX0279X	ZELM 05 ATEX0279X
Speed control, five step	Transformer	RTRD 2*	RTRD 2*	RTRD 2*	RTRD 2*
Speed control, five step high/low	Transformer	RTRDU 2*	RTRDU 2*	RTRDU 2*	RTRDU 2*
Wiring diagram p. 391-400		19	19	19	19
** + U-EK230E EX*					

DIMENSIONS

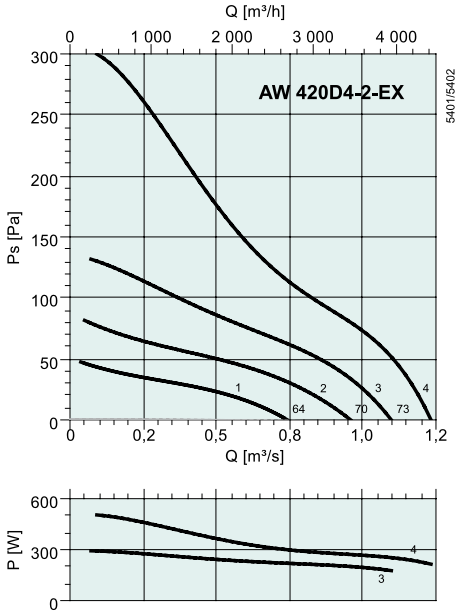


AW	A	B	C	D	øE	øF	G	øH	□I	□J
355 D4-2-EX	138	48	70	16	350.5	356	125	12	385	423
420 D4-2-EX	138	71	70	16	419	426	125	14.5	460	503
550 D6-2-EX	138	72	55	18	551	558	143	14.5	610	650
650 D6-2-EX	162	66	78	18	651	658	161	14.5	730	770

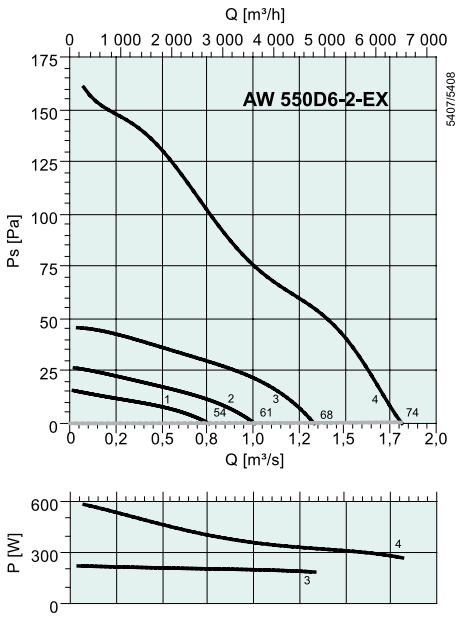
PERFORMANCE



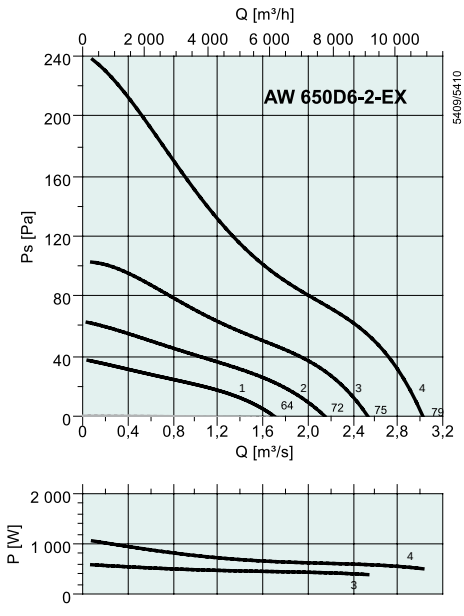
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	69	36	56	61	60	64	62	55	46
L_{wA} Outlet	69	36	56	61	60	64	62	55	46
Measurement point: 0,47 m³/s; 76 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	76	43	64	68	69	71	70	63	54
L_{wA} Outlet	76	43	64	68	69	71	70	63	54
Measurement point: 0,84 m³/s; 96 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	74	58	59	66	66	71	67	59	50
L_{wA} Outlet	74	58	59	66	66	71	67	59	50
Measurement point: 1,32 m³/s; 56 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	79	63	66	69	72	74	73	64	57
L_{wA} Outlet	79	63	66	69	72	74	73	64	57
Measurement point: 2,2 m³/s; 73 Pa									

Reference



Project: Choren Industries
Type of Building: Choren is an internationally leading supplier of technologies for the production of synthesis gas from carbonaceous solids.
City/Country: Freiberg (Sachsen), Germany
Products/Solution: Explosion proof roof fans, type DVV-EX 800
Explosion proof axial fans, AW 200-EX



AXC-EX

- Aerofoil impeller with adjustable pitch angle.
- Die cast aluminium hub and blades.
- Casing, hot dip galvanized steel, to EN ISO 1641.
- Aluminium anti-spark ring.
- Spun flanges for high rigidity, to Eurovent 1/2.
- Three phase motors, IP55, insulation class F, in accordance with EN 60034, IEC 85. Supplied with terminal box Ex e mounted at the outer side of the casing.
- Admissible ambient temperatures from -20°C to +40°C, other temperatures on request.
- Inspection hole to verify correct direction of rotation.

The AXC-EX range of long cased medium pressure axial fans is available in sizes 315 up to 900 mm impeller diameter. The possibility to set the pitch angles at the factory offers a wide performance and maximum flexibility to match precisely individual airflow requirements.

Attention: it is not permissible to change the pitch angle at site, this would invalidate the certification. The stock range offers a standard selection with maximum airflow for the installed motor power. The fans can be used for zones 1 or 2, field of application II, for gases of groups IIA, IIB, and IIC and temperature classes T1 to T4. The fans are classified to category 2G. The fans are certified under Sira 07ATEX6341X. The Ex d motors are equipped with PTC thermistors for optimum motor protection. The motor is speed controllable by frequency converter.

ELECTRICAL ACCESSORIES

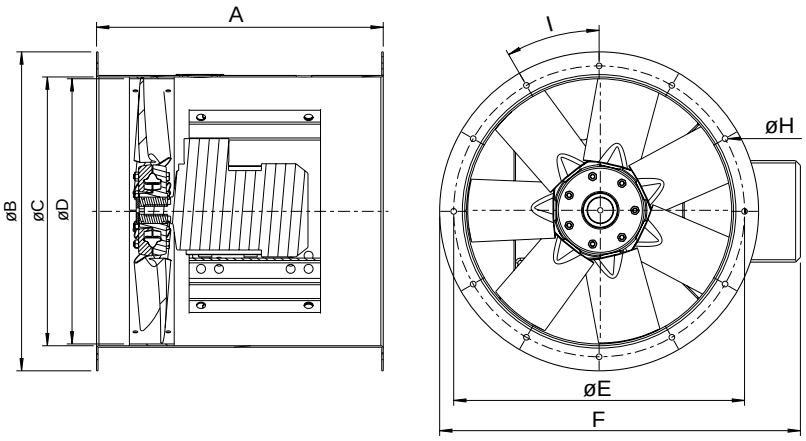


U-EK 230E EX p. 338

TECHNICAL DATA

AXC-EX		355-7 32°-4	400-7 32°-4	450-7 24°-2	450-7 32°-4	500-9 16°-2	500-9 22°-4	500-9 26°-2	500-9 28°-4	560-9 18°-2	560-9 20°-4
Art no		33007	33008	33001	33009	33002	33010	33003	33011	33004	33012
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~
Max. power load	kW	0.37	0.37	2.2	0.55	3.0	0.55	5.5	0.75	5.5	0.75
Power	W	225	337	2532	473	3396	546	4753	662	5502	779
Max current	A	–	–	4.8	1.6	7.3	1.6	12	2.0	12	2
Current	A	0.837	0.845	4.81	1.16	5.61	1.21	7.87	1.55	8.76	1.68
Max air flow	m^3/s	0.92	1.28	2.81	1.8	2.78	1.75	4.03	2.23	4.52	2.46
R.p.m.	min^{-1}	1471	1461	2924	1441	2905	1428	2945	1439	2932	1428
Max temp. of transported air	°C	40	40	40	40	40	40	40	40	40	40
Weight	kg	40	75	63	55	82	65	130	65	155	90
Insulation class, motor		F	F	F	F	F	F	F	F	F	F
Enclosure class, motor		IP 55	IP 55	IP 55	IP 55	IP 55	IP 55	IP 55	IP 55	IP 55	IP 55
Certificate		SIRA 07ATEX6341X									
Wiring diagram p. 391-400		44	44	44	44	44	44	44	44	44	44

DIMENSIONS



AXC-EX	A	øB	øC	øD	øE	F	øH	I
355	400	438	359	346	395	505	9.5	8x45°
400	400	484	401	388	438	552	9.5	12x30°
450	480	534	450	436	487	605	9.5	12 x 30°
500	480	584	504	490	541	659	9.5	12 x 30°
560	700	664	565	551	605	730	12	16 x 22.5°
630	700	734	634	618	674	803	12	16 x 22.5°
710	540	812	711	694	751	883	12	16 x 22.5°
800	700	904	797	778	837	973	12	24 x 15°
900	700	1004	894	869	934	1075	12	24 x 15°

VENTILATION ACCESSORIES


ESD-F p. 388


GFL-AR/AXC p. 389


EV-EX/AXC p. 387


FSD p. 386

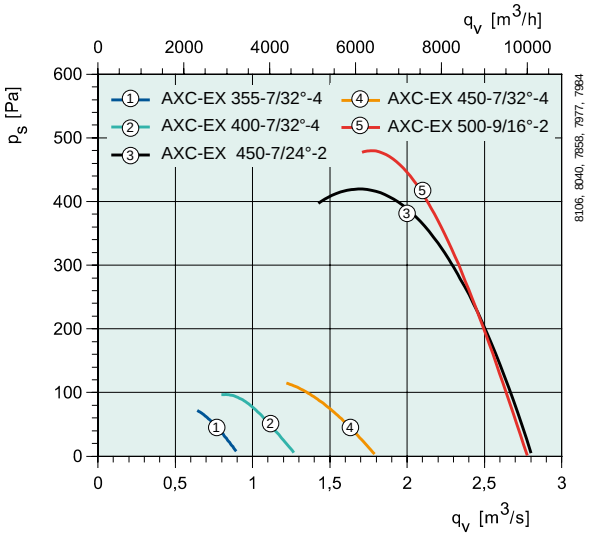

MFA-AR/AXC p. 386


SG AR/AXC p. 385

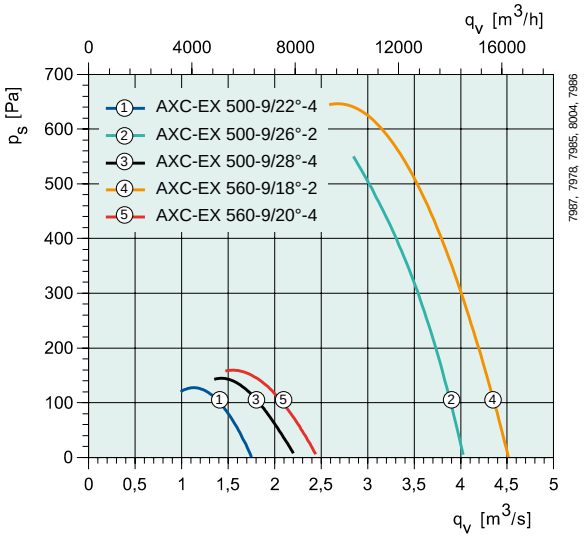

Cable gland set p. 386

AXC-EX		560-9 24°-2	560-9 26°-4	630-9 16°-2	630-9 18°-4	630-9 30°-4	710-9 30°-4	800-9 18°-4	800-9 28°-4	900-10 18°-4	900-10 26°-4
Art no		33005	33013	33006	33014	33015	33016	33017	33018	33019	33020
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~
Max. power load	kW	7.5	1.1	7.5	1.1	3.0	4.0	4.0	7.5	7.5	11
Power	W	6977	1088	7862	1156	2181	3360	2716	5339	6212	11 964
Max current	A	15	2.8	15	2.8	6.83	8.2	8.2	16.5	16.5	23
Current	A	11.5	2.04	12.6	2.15	4.69	6.03	5.27	11.8	12.5	16.7
Max air flow	m^3/s	5.43	3.18	6.18	3.44	5.14	6.7	6.57	9.1	10	12.4
R.p.m.	min^{-1}	2944	1434	2936	1429	1465	1457	1467	1480	1476	1479
Max temp. of transported air	°C	40	40	40	40	40	40	40	40	40	40
Weight	kg	155	93	155	95	105	130	130	158	255	330
Insulation class, motor		F	F	F	F	F	F	F	F	F	F
Enclosure class, motor		IP 55	IP 55	IP 55	IP 55	IP 55	IP 55	IP 55	IP 55	IP 55	IP 55
Certificate		SIRA 07ATEX6341X									
Wiring diagram p. 391-400		44	44	44	44	44	44	44	44	44	44

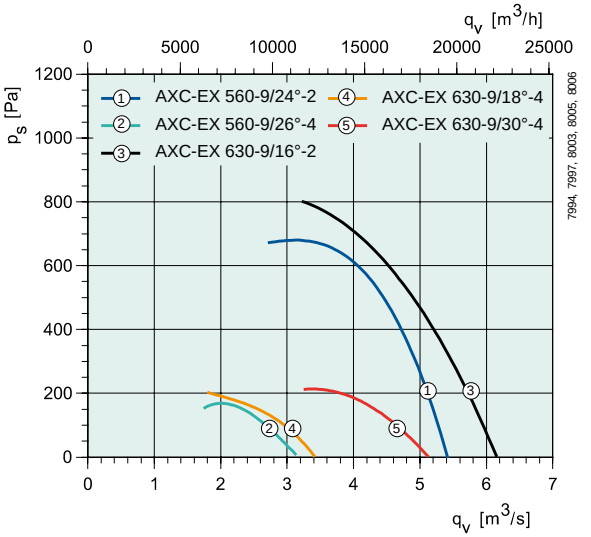
QUICK SELECTION



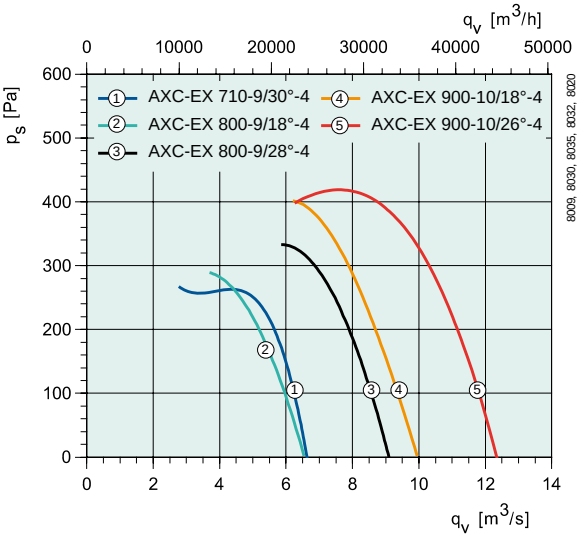
dB(A)	Tot	Frequency bands [Hz]							
L_{wA} Inlet/Outlet		63	125	250	500	1k	2k	4k	8k
AXC-EX									
355-7/32°-4	74	69	68	69	68	67	64	59	53
400-7/32°-4	77	72	71	72	71	70	67	62	56
450-7/24°-2	96	91	86	89	91	88	88	84	78
450-7/32°-4	82	77	76	77	76	75	72	67	61
500-9/16°-2	100	95	90	93	95	93	92	88	82



dB(A)	Tot	Frequency bands [Hz]							
L_{wA} Inlet/Outlet		63	125	250	500	1k	2k	4k	8k
AXC-EX									
500-9/22°-4	86	81	80	81	80	79	76	71	65
500-9/26°-2	102	97	92	95	97	95	94	90	84
500-9/28°-4	87	82	81	82	81	80	77	72	66
560-9/18°-2	106	101	96	99	101	99	98	94	88
560-9/20°-4	91	86	85	86	85	84	81	76	70



dB(A)	Tot	Frequency bands [Hz]							
L_{wA} Inlet/Outlet		63	125	250	500	1k	2k	4k	8k
AXC-EX									
560-9/24°-2	108	103	98	101	103	101	100	96	90
560-9/26°-4	93	88	87	88	87	86	83	78	72
630-9/16°-2	111	106	101	104	106	104	103	99	93
630-9/18°-4	96	91	90	91	90	89	86	81	75
630-9/30°-4	99	94	93	94	93	92	89	84	78



dB(A)	Tot	Frequency bands [Hz]							
L_{wA} Inlet/Outlet		63	125	250	500	1k	2k	4k	8k
AXC-EX									
710-9/30°-4	93	88	87	88	87	86	83	78	72
800-9/18°-4	97	92	91	92	91	90	87	82	76
800-9/28°-4	100	95	94	95	94	93	90	85	79
900-10/18°-4	101	91	89	95	96	94	91	86	80
900-10/26°-4	104	94	97	99	97	96	92	86	80



AXCBF-EX

- Aerofoil impeller with adjustable pitch angle
- Die cast aluminium hub and blades
- Casing, hot dip galvanized steel, to EN ISO 1641
- Aluminium anti-spark ring
- Spun flanges for high rigidity, to Eurovent 1/2 standard
- Single and three phase motors, IP55, insulation class F, in accordance with EN 60034, IEC 85.
- Admissible ambient temperatures from -20°C to +40°C, other temperatures on request
- With motor outside the airstream

ELECTRICAL ACCESSORIES



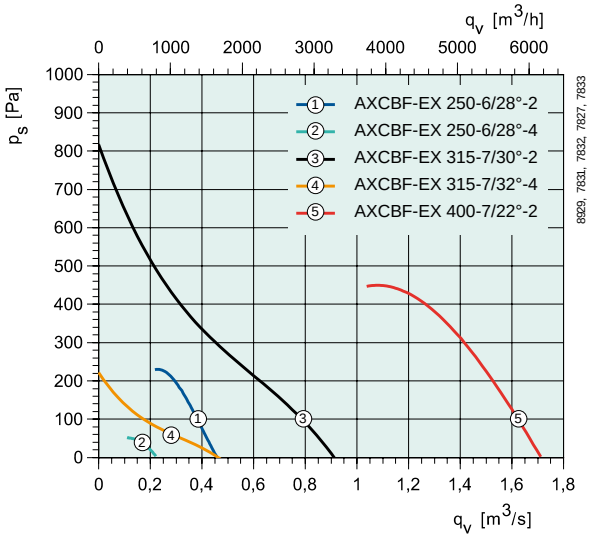
U-EK 230E EX
p. 338

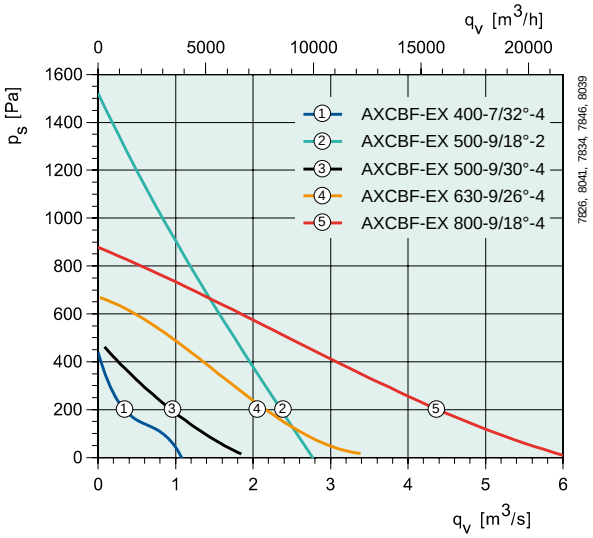


Ex e-Terminal box 32A
p. 339

The Systemair AXCBF-EX range of bifurcated medium pressure axial fans has been developed for applications with an atmosphere which would either require special motors or reduce the lifetime of a standard motor. The Ex d motors of AXCBF-EX are out of the airstream. Available in sizes from 250 up to 800 mm impeller diameter. The stock range offers a standard selection with maximum airflow for the installed motor power. The fans can be used for zones 1 or 2, field of application II, for gases of groups IIA, IIB and IIC and for temperature classes T1 to T4. The fans are classified to category 2G. The fans are certified under Sira 07ATEX6341X. The Ex d motors are equipped with PTC thermistors for optimum motor protection. The motor is speed controllable by frequency converter. AXCBF-EX bifurcated axial fan casings are heavy gauge, hot dip galvanized, with spun flanges for high rigidity. The motor compartment allows easy access to the motor terminal box for wiring. Single or three phase B3 foot mounted motors, totally enclosed and fan cooled.

QUICK SELECTION

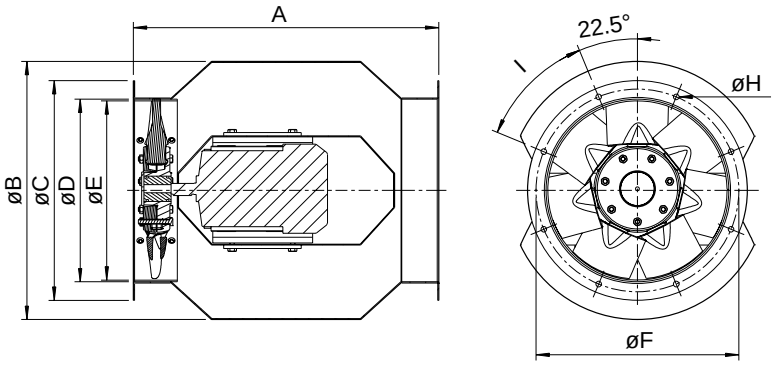




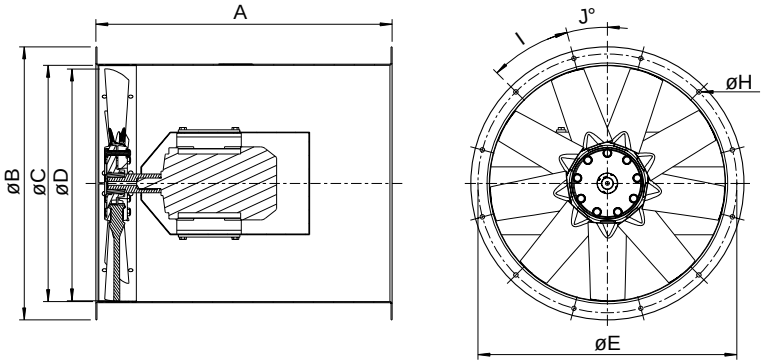
TECHNICAL DATA

AXCBF-EX		250-6/28°-2	250-6/28°-4	315-7/30°-2	315-7/32°-4	400-7/22°-2
Art no		33021	33025	33022	33026	33023
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~
Max. power load	kW	0.37	0.25	0.75	0.25	2.20
Power	W	309	93.4	693	155	1911
Max current	A	1.1	0.8	1.9	0.8	4.8
Current	A	0.79	0.563	1.43	0.609	3.16
Max air flow	m^3/s	0.463	0.225	0.911	0.459	1.71
R.p.m.	min^{-1}	2916	1487	2885	1476	2918
Max temp. of transported air	°C	40	40	40	40	40
Weight	kg	30	30	72	65	64
Insulation class, motor		F	F	F	F	F
Enclosure class, motor		IP 55	IP 55	IP 55	IP 55	IP 54
Certificate				SIRA 07ATEX6341X		
Wiring diagram p. 391-400		45	45	45	45	45

DIMENSIONS



AXCBF-EX	A	ø B	ø C	ø D	ø E	ø F	ø H	I
250	535	448	328	250	238	302	10	8 x 45°
315	535	452	385	320	308	355	10	8 x 45°
400	625	585	480	401	388	450	10	8 x 45°
500 short version	660	695	590	504	490	560	12	12 x 30°
500 long version	710	695	590	504	490	560	12	12 x 30°



AXCBF-EX	A	øB	øC	øD	øE	øH	I
630	790	728	634	618	690	12	12 x 30°
800	880	890	797	778	860	12	16 x 22,5°

VENTILATION ACCESSORIES



FSD p. 386



MFA-AXCBF p. 388



EV-EX/AXC p. 387



GFL-AR/AXC p. 389

AXCBF/EX		400-7/32°-4	500-7/18°-2	500-7/30°-4	630-9/26°-4	800-9/18°-4
Art no		33027	33024	33028	33029	33030
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~
Max. power load	kW	0.55	2.2	1.1	2.2	4.0
Power	W	444	3054	863	2187	3403
Max current	A	1.6	4.8	2.8	5.25	8.2
Current	A	1.1	4.78	1.85	4.27	6.02
Max air flow	m^3/s	1.08	2.71	1.85	3.4	5.88
R.p.m.	min^{-1}	1444	2840	1450	1459	1457
Max temp. of transported air	°C	40	40	40	40	40
Weight	kg	58	85	77	112	185
Insulation class, motor		F	F	F	F	F
Enclosure class, motor		IP 55	IP 55	IP 55	IP 55	IP 55
Certificate				SIRA 07ATEX6341X		
Wiring diagram p. 391-400		45	45	45	45	45



General

Fire develops smoke and heat. Within buildings these two factors represent a substantial danger for human beings, animals and the inventory. Constantly rising temperatures might lead to a so-called "flash-over", where the fire spreads like an explosion.

Buildings must be designed in a way that spreading of smoke and flames in case of a fire can be kept as small as possible. Escape routes have to be kept free of smoke to a largest possible extent, and fire fighting routes for the fire brigade have to be created.

Contrary to natural smoke outlets (i.e. roof openings), mechanical smoke and heat extract systems immediately provide full capacity.

Mechanical smoke and heat extract systems are particularly important for:

- High rooms without windows
- Underground floors and rooms
- Buildings with a constantly high wind load
- Large rooms with a high fire load
- Rooms with sprinkler systems, working against the thermal lift.

Systemair range

Systemair offers different types of smoke and heat extract fans: Centrifugal roof fans, centrifugal wall/duct fans and axial fans. All fans are approved for dual purpose ventilation, i.e. for normal daily ventilation and for emergency ventilation in case of a fire.

Typical applications

- In mechanical smoke and heat extract systems installed in shopping centres, airports, industrial buildings, big cinemas and theatres, warehouses etc.
- For industrial process air with increased temperatures.
- Car park ventilation.

Certified in accordance with EN 12101-3

Systemair smoke and heat extract fans have been certified in accordance with EN 12101-3. CE certification in accordance with EN 12101-3, 2002-06 by the TUV Süd, Munich.

Systemair is ISO 9001 approved. The Systemair quality is regularly monitored by TÜV Süd.

Warranty

Systemair offers a three year warranty on all AXC (B) and AXR (B) fan models. The Systemair warranty conditions apply.

Roof fans DVV, F400-F600

Casing

The base frame is manufactured from galvanized steel, the fan casing from aluminium (AlMg3) respectively alu zinc steel sheet.

Motor and motor cooling

Capsulated and insulated IEC standard motors outside the airstream, insulation class F, protection class IP54 resp IP55. Motor cooling through a cooling duct, in negative pressure system.

Impellers

Impellers with backward curved blades, F400 from galvanized steel, F600 from stainless steel. Dynamically balanced in accordance with DIN ISO 1940-1, grade Q6.3.

Accessories

Wide range of accessories for all types.

Terminal box

Mounted at the cooling duct.

DVV fans are also available as DVV/120 fans for continuous exhaust of air up to 120°C. The characteristics and data (with exception weight) are the same as for DVV/F range. Details are available in online catalogue.

Wall fans WVA/WVI

Casing

Sturdy welded structure. Surface painted in RAL 7032. WVA for mounting outside fire zone, on facade of building, with motor downwards. WVI for mounting inside fire zone, on outer wall, with motor downwards. WVI needs cooling air supply through the wall.

Motors and motor cooling

IEC standard motor, insulation class F, protection class IP54 resp. IP55. Single or two speeds. WVI has connection for duct (available as accessory) for cooling air supply in negative pressure system.

Impellers

Impellers with backward curved blades, F400 from galvanized steel, F600 from stainless steel. Dynamically balanced in accordance with DIN ISO 1940-1; Q6.3.

Accessories

Adapting pieces and bends for duct connection, exhaust ducts for installation into the wall.

Centrifugal fans KBR/F

KBR/F is suitable for dual purpose installations (standard installations in ambient temperature and smoke extract). For standard applications up to 120°C continuous operation.

Casing

Manufactured from galvanised steel. For installation outside the fire zone.

Motor

IEC motor in efficiency class IE2.

Impellers

Backward curved impellers manufactured from galvanized steel.

Axial fans F300

Casing

Casing manufactured from galvanized steel. Terminal box F600 in the cooling duct, F300/F400 at the outer side of the fan casing, mounted on a bracket.

Motor

IEC high temperature motor in F600 300 or 400°C/120 min, insulation class F or H, single or two speeds. F600 version with capsulated motors.

Impellers

Statically and dynamically balanced in accordance with DIN ISO 1940-1, grade Q6.3.

Multibox MUB/F

Casing

Steel frame and double skin panels from galvanized steel, 20 mm rock wool insulation.

Motor

High temperature IEC motor for 400°C/120 min.

Impeller

Impellers with backward curved blades.

KBR/F 238

Smoke extract fans: up to 1.97 m³/s, 3 phase.



DVV/F 244

Smoke extract roof fans: up to 14.6 m³/s, 3 phase.



DVG/F 250

Smoke extract roof fans 400°C/2h: up to 7,5 m³/s, 3 phase.



DVG-V, H 400D4V/400. . . 256

Smoke extract fans: up to 3.82 m³/s, 3 phase.



MUB/F. 260

Smoke extract axial fans: 300°C/2h, up to 19.16 m³/s, 3 phase, EN12101-3.



AXC(B). 266

Smoke extract fan for wall mounting, up to 11.1 m³/s, 3 phase. (I) insulated version.



WVA/WVI 268



400°C /120min

200°C

KBR/F

- 400°/120 min (F400)
- Insulated casing
- Speed-controllable
- Integral thermal contacts
- Low sound level
- Tested acc. to EN 12101-3 at LGAI Barcelona
- CE-certified acc. to EN 12101-3, 2002-06 at TÜV Süd

The KBR/F fans smoke extract unit are used in case of fire to extract smoke gases from rooms, and also during normal working conditions for standard temperature up to 200°C.

The KBR/F units have backward curved impellers made of galvanized steel except size 355 which is a steel impeller painted RAL 9005.The units have a swing out door for easy inspection and service. The direction of the door opening can easily be changed from left to right at site. The fans have a double isolated casing with 50 mm rockwool inside.

To protect the motors from overheating the KBR fans have integral thermal contacts with external leads for connection to a motor protection device. (Except size KBR 280 D2 and D2-4 which have integral cold conductors). In case of fire all protective devices must be bridged to guarantee functional capability. Single speed three phase units can also be delivered with motors according to IE2 standard on request.

ELECTRICAL ACCESSORIES



REV p. 340



RTRD p. 321



RTRDU p. 321

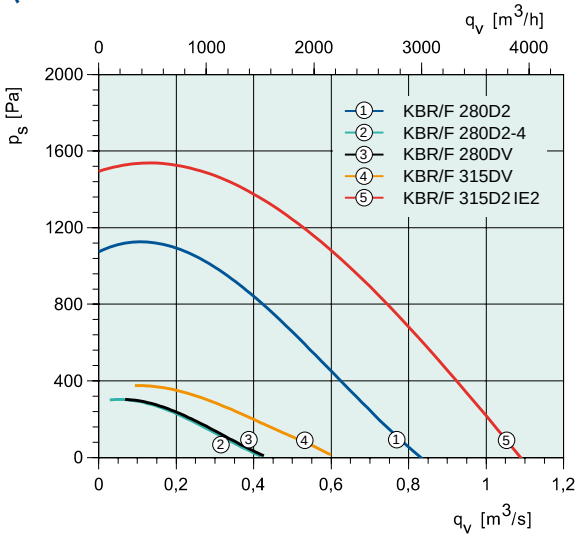


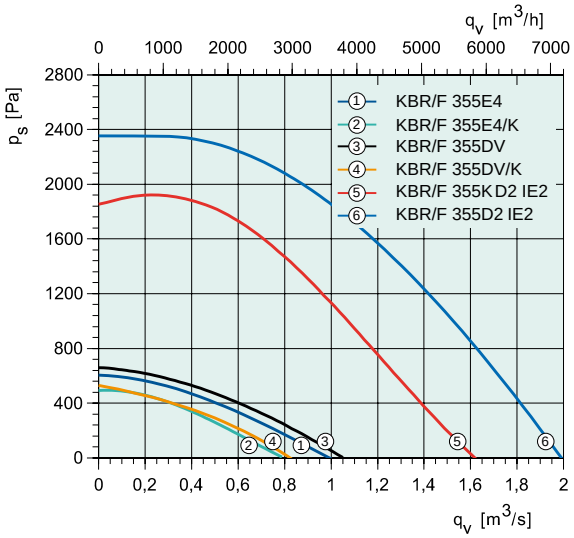
S-DT2 p. 340



STDT p. 342

QUICK SELECTION

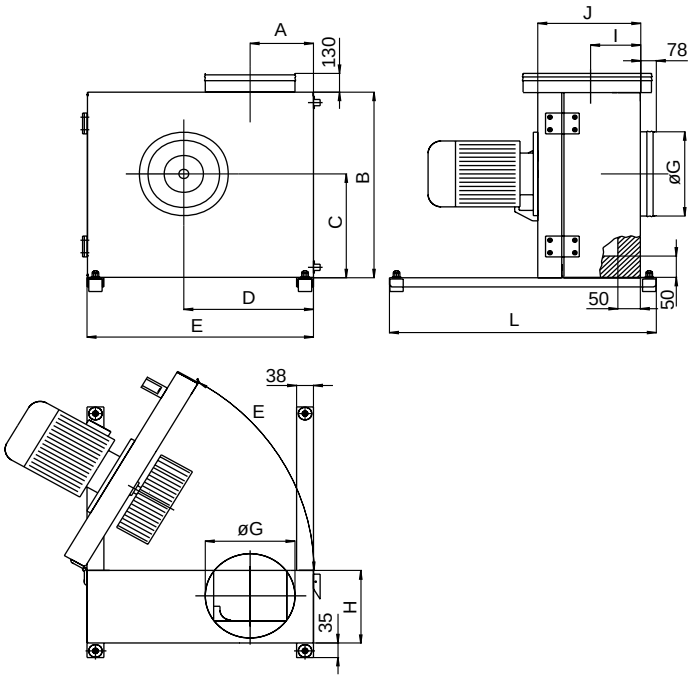




TECHNICAL DATA

KBR/F		280D2	280D2-4	280DV	315DV	315D2 IE2	355E4
Art no.		31586	31588	31587	31590	34509	31554
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	230
Power at shaft	W	550	480/120	370	370	1500	370
Power	W	730	–	–	–	1218	–
Current	A	1.24	1.2/0.33	1.39	1.39	2.33	2.1
Max air flow	m³/s	0.824	0.806/0.422	0.422	0.611	1.09	0.972
R.p.m.	min⁻¹	2820	2800/1410	1360	1360	2928	1330
Max temp. of transported air	°C	200	200	200	200	200	200
Max temp. of transported air for 120 min	°C	400	400	400	400	400	400
Sound pressure level at 4 m	dB(A)	44	44/33	33	36	50	44
Sound pressure level at 10 m	dB(A)	36	36/25	25	28	42	33
Weight	kg	48	49	49	77	57	81
Insulation class, motor		F	F	F	F	F	F
Enclosure class, motor		IP 55	IP 55	IP 54	IP 54	IP 54	IP 54
Wiring diagram p. 391-400		13b Y	14b	17	17	17	21

DIMENSIONS



KBR/F	A	B	C	D	E	øG	H	I	J	L
280	171,5	537	295	360	625	280	234	142,5	291	600
315	187,5	600	339	398	690	315	249	153,5	307	800
355	206,7	655	372	451	770	355	273	–	331	770

VENTILATION ACCESSORIES


EVH p. 388


LRK(F) p. 385

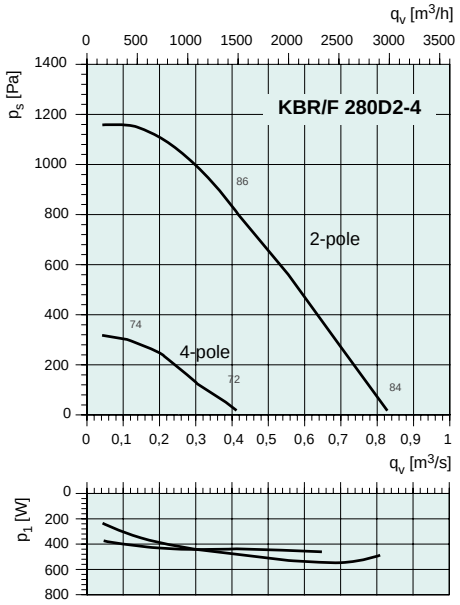

RSA p. 384


WBK p. 389

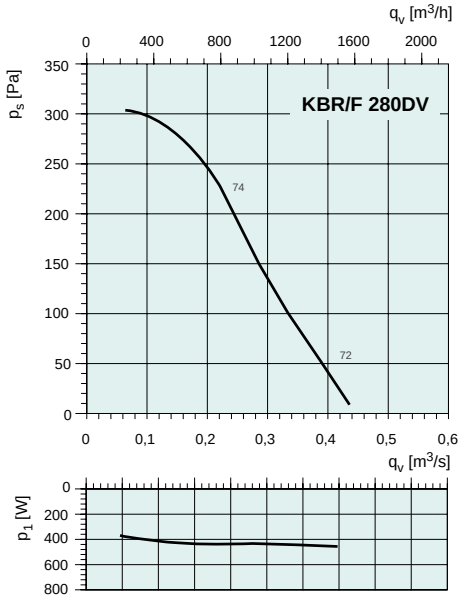

WSD-KBT p. 371

KBR/F		355E4/K	355DV	355DV/K	355K D2 IE2	355D2 IE2	
Art no.		32891	31594	31592	34511	34510	
Voltage/Frequency	V/50 Hz	230 1~	400 3~	400 3~	400 3~	400 3~	
Power at shaft	W	370	550	550	2200	4000	
Current	A	2.1	1.88	1.88	3.85	5.95	
Max air flow	m^3/s	0.778	1.06	0.806	1.63	2	
R.p.m.	min^{-1}	1330	1360	1360	2909	2889	
Max temp. of transported air	°C	200	200	200	200	200	
Max temp. of transported air for 120 min	°C	400	400	400	400	400	
Sound pressure level at 4 m	dB(A)	42	41	41	53	53	
Sound pressure level at 10 m	dB(A)	31	33	33	45	45	
Weight	kg	80	81	81	75	84	
Insulation class, motor		F	F	F	F	F	
Enclosure class, motor		IP 54	IP 54	IP 54	IP 55	IP 54	
Wiring diagram p. 391-400		21	17	17	17	17	

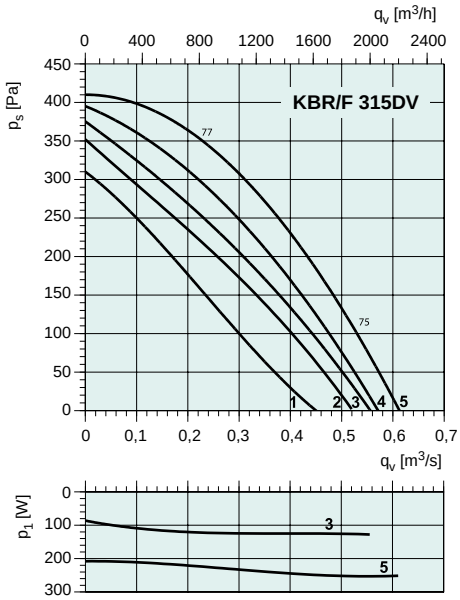
PERFORMANCE



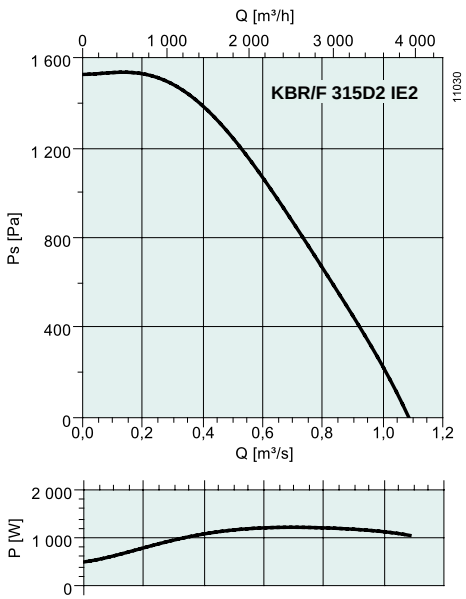
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
2-pole									
L_{wA} Inlet	86	80	78	74	71	69	65	61	
L_{wA} Outlet	88	82	80	76	73	71	67	61	
L_{wA} Surrounding	67	61	59	55	52	50	46	42	
Measurement point: 0,42 m³/s; 800 Pa									
4-pole									
L_{wA} Inlet	74	68	66	62	59	57	53	49	
L_{wA} Outlet	76	70	68	64	61	59	55	51	
L_{wA} Surrounding	56	50	48	44	41	39	35	31	
Measurement point: 0,22 m³/s; 220 Pa									



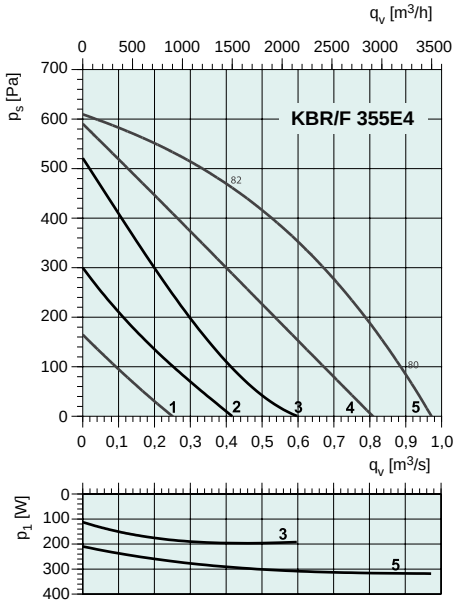
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	74	–	68	66	62	59	57	53	49
L_{wA} Outlet	76	–	70	68	64	61	59	55	51
L_{wA} Surrounding	56	–	50	48	44	41	39	35	31
Measurement point: 0,22 m³/s; 220 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	77	–	75	74	69	67	63	57	54
L_{wA} Outlet	79	–	77	76	71	68	65	59	56
L_{wA} Surrounding	59	–	57	56	51	49	45	39	36
Measurement point: 0,38 m³/s; 250 Pa									

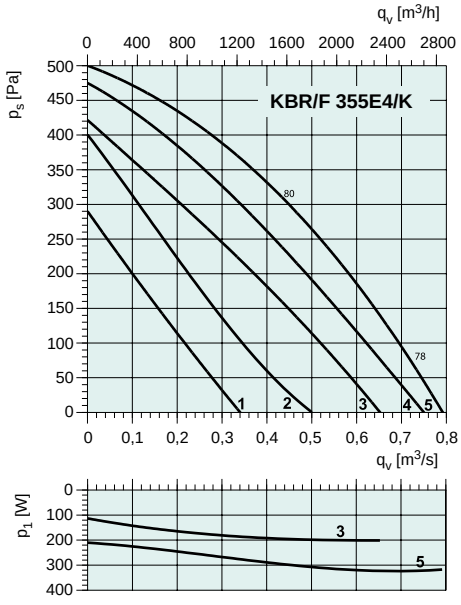


dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	91	-	89	88	83	81	77	71	68
L_{wA} Outlet	93	-	31	90	85	83	80	73	70
L_{wA} Surrounding	73	-	71	70	65	63	59	53	50
Measurement point: 0,46 m³/s; 1276 Pa									



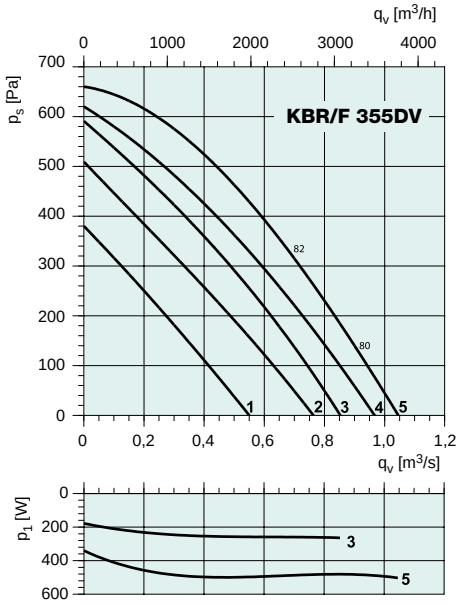
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	82	–	80	79	74	72	68	62	59
L_{wA} Outlet	84	–	82	81	76	74	70	64	61
L_{wA} Surrounding	64	–	62	61	56	54	50	44	41

Measurement point: 0,42 m³/s; 465 Pa



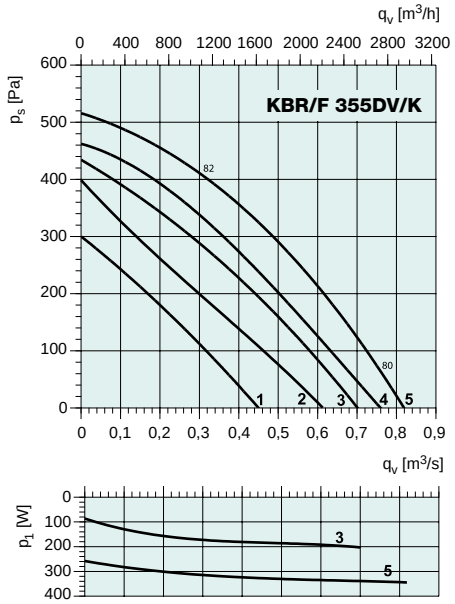
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	80	–	78	74	71	67	65	61	57
L_{wA} Outlet	82	–	80	76	73	69	67	63	59
L_{wA} Surrounding	62	–	60	56	53	49	47	43	39

Measurement point: 0,42 m³/s; 320 Pa



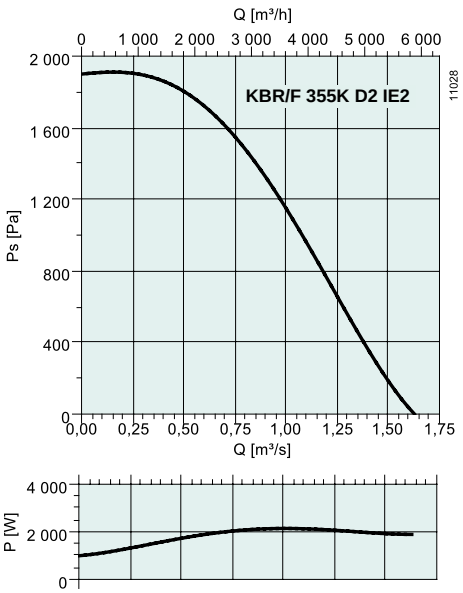
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	82	–	80	79	74	72	68	62	59
L_{wA} Outlet	84	–	82	81	76	74	70	64	61
L_{wA} Surrounding	64	–	62	61	56	54	50	44	41

Measurement point: 0,69 m³/s; 320 Pa



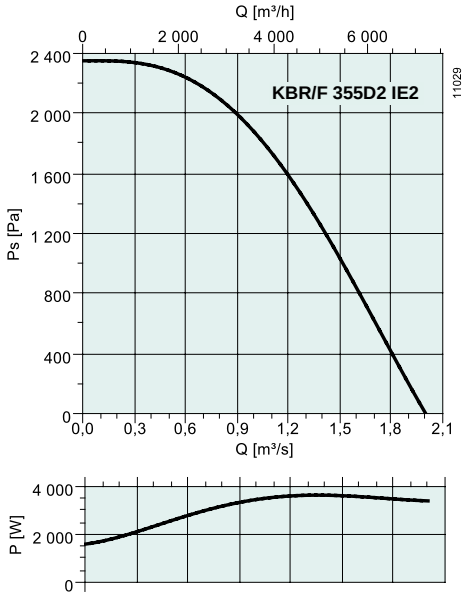
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	82	–	80	79	74	72	68	62	59
L_{wA} Outlet	84	–	82	81	76	74	70	64	61
L_{wA} Surrounding	64	–	62	61	56	54	50	44	41

Measurement point: 0,32 m³/s; 398 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	94	-	92	91	86	84	80	74	71
L_{wA} Outlet	96	-	94	93	88	86	82	76	73
L_{wA} Surrounding	76	-	74	73	68	66	62	56	53

Measurement point: 0,72 m^3/s; 1431 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	97	-	92	91	86	84	80	74	71
L_{wA} Outlet	96	-	94	93	88	86	82	76	73
L_{wA} Surrounding	76	-	74	73	68	66	62	56	53

Measurement point: 0,83 m^3/s; 1800 Pa

Reference



Installation of DVV smoke extract roof fans



DVV/F

- Smoke extract roof fan
- 400°C/120 min (F400) resp. 600°C/120 min (F600)
- Vertical exhaust
- Suitable for coastal applications
- Wide range of accessories
- Certified acc. to EN 12101-3 at TU Munich
- CE-certified acc. to EN 12101-3, 2002-06 at TÜV Süd

ELECTRICAL ACCESSORIES



REV DVV p. 340

The DVV/F smoke extract fans are used in case of fire to extract smoke gases from rooms, and also during normal working conditions for standard ventilation.

For installation only over heated rooms. For non-heated buildings flaps FSL for classification snow load SL1000 is available as accessories for sizes 450 up.

The casing is manufactured from seawater resistant aluminium (DVV/F 1000 M and P 4 pole from aluzinc steel sheet). The base frame consists of galvanised steel. The impeller with backward-curved blades is manufactured from galvanised steel (type F400) respectively from stainless steel (type F600). The fan is equipped with IEC standard motors according to the 2009/640/EC guideline and IEC 60034-30, with protection class IP 54 or 55, insulation class F. Motor cooling with fresh air via air duct. Thermal motor protection (PTC or thermal contact built-in) on request, in IE2 motors serial PTC built-in. For frequency controlled single speed units up to 0,55 kW PTC must be ordered (since IE1 motors built-in). For speed control use only combination of frequency inverter and appropriate filter to motor side (sine or du/dt), observing installation conditions (e.g. cable type, lenght). Operating over 50Hz is not allowed. Service switch serial on cooling duct at sizes 800 and 1000. Other sizes equipped with terminal box, service switch on request. In case of fire any speed control, frequency inverter and all motor protective devices must be bridged to guarantee functional capability (connection directly to mains). Frequency controlled units can have additional EMC protection (available on request).

For additional sound reduction an outlet silencer HSDV is available as an accessory for all DVV/F fans. If factory mounted, the item reference is DVVI (sound insulated) fan. FSL is not dimensionally suitable for DVVI.

Available also as DVV/120 for continuous exhaust of medium up to 120°C (see online catalogue).

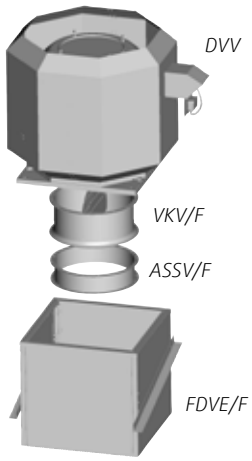
Note: article numbers in tables refer to items without PTC or thermal contact, with exception of items with IE2 motors, where PTC is serial built-in.

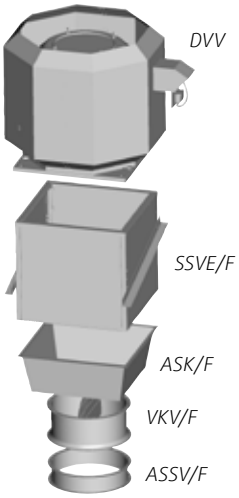


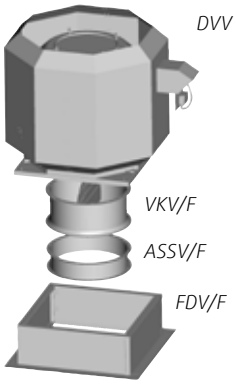
TECHNICAL DATA

DVV/F		400D4	400D4-6	450D4 IE2	450D4-6	560D4 IE2	560D6 IE2	560D4-6	630D4-K IE2	630D6-K IE2	630D4-8-K
Art no. F400		3501	3505	95176	3529	95178	95180	3553	95182	95186	3589
Art no. F600		3500	3504	95175	3528	95177	95179	3552	95181	95185	3588
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~
Power at shaft	kW	0.55	0.55/0.18	1.1	1.1/0.370	1.5	0.75	1.7/1.2	3.0	1.1	3.6/0.9
Current	A	1.6	1.7/0.8	2.6	3/1.4	3.5	2	4.6/3.7	6.6	2.9	8.0/3.2
Starting current	A	6.6	6.8/2.4	12.5	10.8/5.9	20.3	5.8	23.9/13.3	36.7	10.8	44/10
Max air flow	m^3/s	1.17	1.17/0.78	2.01	2.01/1.35	2.64	1.81	2.64/1.81	3.5	2.28	3.5/1.72
R.p.m.	min^{-1}	1390	1420/940	1435	1420/950	1420	880	1450/940	1400	910	1430/710
Max. temp. of transp. air	°C	55	55	55	55	55	55	55	55	55	55
Max. temp. of transp. air for 120 min	°C	400/600	400/600	400/600	400/600	400/600	400/600	400/600	400/600	400/600	400/600
Sound pressure level at 4 m	dB(A)	62	62/53	66	66/55	69	60	69/60	71	61	71/55
Sound pressure level at 10 m	dB(A)	52	52/43	56	56/46	59	52	59/52	63	53	63/47
Weight	kg	49	49	69	72	78	78	84	129	121	138
Enclosure class, motor efficiency		IP 54	IP 54	IP 54 IE2	IP 54	IP 54 IE2	IP 54 IE2	IP 54	IP 54 IE2	IP 54 IE2	IP 54
Thermal prot. PTC serial built-in		-	-	yes	-	yes	yes	-	yes	yes	-
Wiring diagram p. 391-400		15b	15a	15c	15a	15c	15c	15a	15c	15c	14a

Installation examples DVV fans







DVV/F		630D4 IE2	630D6 IE2	630D4-6	800D4-K	800D4-8-K	800D6-K IE2	800D6 IE2
Art no. F400		95184	95188	3585	95199	30064	95190	95192
Art no. F600		95183	95187	3584	95200	30065	95189	95191
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~
Power at shaft	kW	5.5	2.2	5.5/1.7	9.5	9.0/2.4	2.2	5.5
Current	A	11.6	5.5	12/4.5	18	18.5/5.6	5.5	12.6
Starting current	A	95	25.3	81.6/20.3	121	114/24	25.3	76
Max air flow	m³/s	5.36	3.36	5.36/3.36	7.08	7.08/3.92	5.0	7.08
R.p.m.	min-1	1455	935	1460/970	1445	1420/720	935	950
Max. temp. of transp. air	°C	55	55	55	55	55	55	55
Max. temp. of transp. air for 120 min	°C	400/600	400/600	400/600	400/600	400/600	400/600	400/600
Sound pressure level at 4 m	dB(A)	75	64	75/64	76	76/55	66	72
Sound pressure level at 10 m	dB(A)	69	58	69/58	70	70/48	60	64
Weight	kg	144	134	154	262	281	189	213
Enclosure class, motor efficiency		IP 54 IE2	IP 54 IE2	IP 55	IP 54	IP 55	IP 54 IE2	IP 54 IE2
Thermal prot. PTC serial built-in		yes	yes	-	-	-	yes	-
Wiring diagram p. 391-400		13b D	15c	15a	13b D	14a	15c	13b D

DVV/F		800D6-8	800D4-M IE2	800D4-8-M	800D6-M IE2	800D4-P IE2	800D4-8-P	1000D6 IE2	1000D6-8	1000D6-12
Art no. F400		3643	95195	30045	95209	95197	30057	95194	3766	3768
Art no. F600		3642	95196	30046	95210	95198	30058	95193	3765	3767
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~
Power at shaft	kW	5.7/2.4	15	16.2/3.7	4.0	18.5	18.5/4.5	11.0	11.0/5.0	12.0/2.4
Current	A	12.3/6.2	29.8	36/13	9	35	40/15	22	22/15	23/7.5
Starting current	A	62.8/21.7	265	290/64	48.6	280	335/75	156	154/82.5	140/23.3
Max air flow	m³/s	7.08/5.28	9.58	9.58/4.79	6.22	10.8	10.8/5.42	12.4	12.4/9.44	12.4/6.67
R.p.m.	min-1	960/720	1470	1470/735	955	1465	1470/735	955	970/730	960/480
Max. temp. of transp. air	°C	55	55	55	55	55	55	55	55	55
Max. temp. of transp. air for 120 min	°C	400/600	400/600	400/600	400/600	400/600	400/600	400/600	400/600	400/600
Sound pressure level at 4 m	dB(A)	72/66	80	80/65	70	83	83/65	74	74/66	74/63
Sound pressure level at 10 m	dB(A)	64/57	72	72/57	62	75	75/57	66	66/58	66/54
Weight	kg	224	309	399	209	397	413	378	445	445
Enclosure class, motor efficiency		IP 54	IP 55 IE2	IP 55	IP 55 IE2	IP 55 IE2	IP 55	IP 55 IE2	IP 55	IP 55
Thermal prot. PTC serial built-in		-	yes	-	yes	yes	-	yes	-	-
Wiring diagram p. 391-400		15a	13b D	14a	13b D	13b D	14a	13b D	15a	14a

VENTILATION ACCESSORIES


ASFV p. 384


ASK/F p. 380


ASSV/F p. 383


FDV/F p. 381

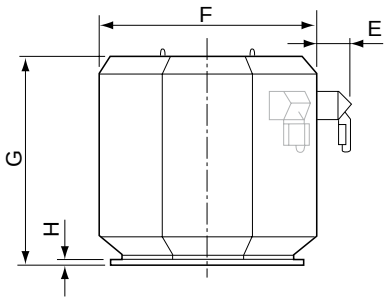

FDVE/F p. 382


FSL-DVV p. 379

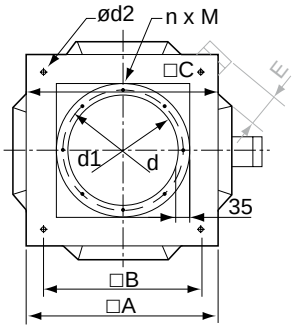

VKV/F p. 383


VKVE/F p. 383

DIMENSIONS



Shadowed area only for size DVV/F 400-560



DVV/F	□A	□B	□C	ød	ød1	ød2	E	F	G	H	nxM
400	560	460	557	315	356	14	250	635	630	40	8xM8
450	710	600	706	355	395	14	270	808	700	20	8xM8
560	710	600	706	400	438	14	270	808	750	20	12xM8
630	995	880	990	500	541	18	225	1100	958	40	12xM8
800	995	880	990	630	674	18	310	1272	1165	40	16xM10
800-M, P	995	880	990	630	674	18	280	1350	1280	40	16xM10
1000	1160	1040	1154	710	751	18	325	1500	1350	70	16xM10
1000D6-M, P	1160	1040	1154	710	751	18	325	1500	1350	70	16xM10
1000D4-M	1160	1040	1154	710	751	18	394	1500	1479	70	16xM10
1000D4-P	1160	1040	1154	710	751	18	394	1500	1479	70	16xM10

VENTILATION ACCESSORIES



HSDV p. 379



ESDV p. 384



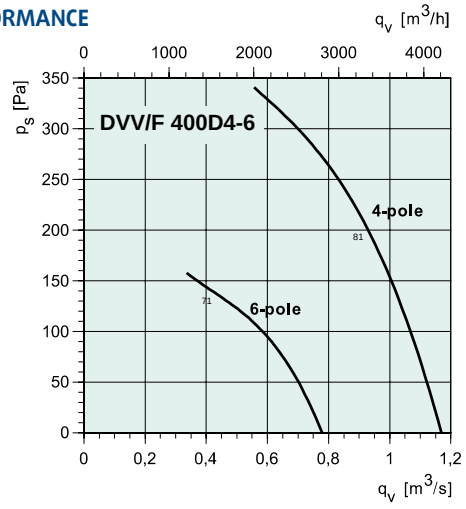
SSV/F p. 382



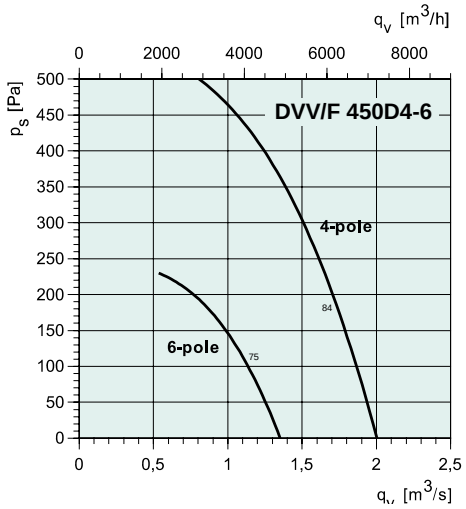
SSVE/F p. 377

DVV/F		1000D8	1000D4-M IE2	1000D6-M IE2	1000D4-8-M	1000D4-P IE2	1000D4-8-P	1000D6-P IE2
Art no. F400		3668	95205	95207	33126	95203	31270	95201
Art no. F600		3667	95206	95208	33127	95204	31271	95213
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~
Power at shaft	kW	5.5	22.0	7.5	22.0/5.5	28	28.0/7.0	8.5
Current	A	12.5	42	15.7	45/17	56	51/20	18
Starting current	A	63.8	340	112	338/85	420	400/80	126
Max air flow	m^3/s	9.44	14.2	9.42	14.2/7.08	15.2	15.2/7.56	10.1
R.p.m.	min-1	710	1470	970	1470/730	1470	1470/730	965
Max. temp. of transp. air	°C	55	55	55	55	55	55	55
Max. temp. of transp. air for 120 min	°C	400/600	400/600	400/600	400/600	400/600	400/600	400/600
Sound pressure level at 4 m	dB(A)	66	89	77	89/70	90	90/71	78
Sound pressure level at 10 m	dB(A)	58	79	67	79/60	79	79/60	67
Weight	kg	355	539	358	575	565	590	358
Enclosure class, motor efficiency		IP 55	IP 55 IE2	IP 55 IE2	IP 55	IP 55 IE2	IP 55	IP 55 IE2
Thermal prot. PTC serial built-in		-	yes	yes	-	yes	-	yes
Wiring diagram p. 391-400		13a D	13b D	13b D	14a	13b D	14a	13b D

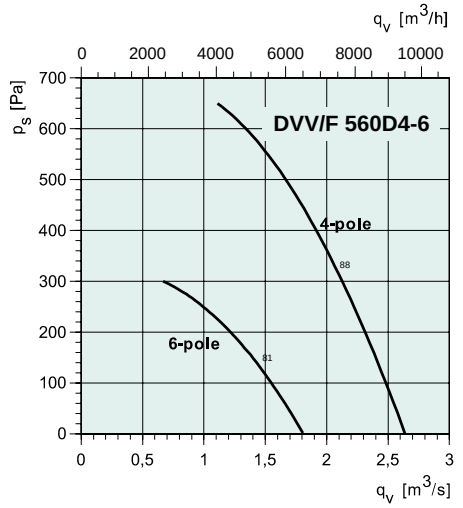
PERFORMANCE



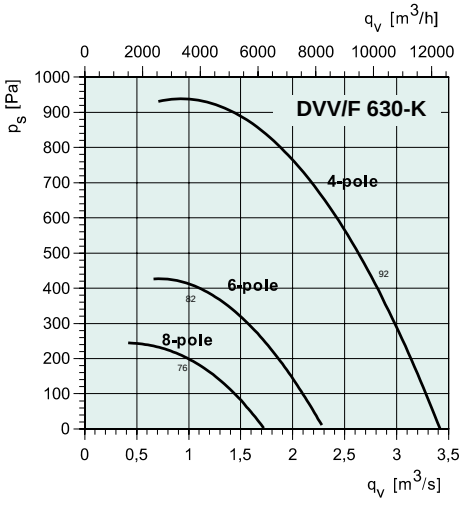
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	81	54	66	74	75	74	72	69	61
L_{wA} Surrounding	83	56	68	76	77	76	74	71	63
Measurement point: 0,9 m³/s; 200 Pa									
6-pole									
L_{wA} Inlet	71	48	57	63	67	62	60	58	46
L_{wA} Surrounding	73	50	59	65	69	64	62	60	48
Measurement point: 0,4 m³/s; 140 Pa									



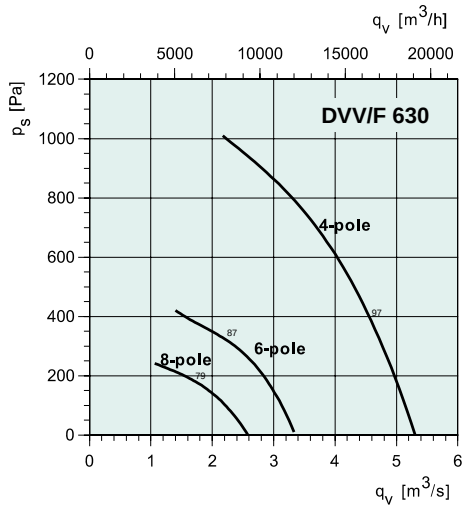
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	84	57	69	77	78	77	75	72	64
L_{wA} Surrounding	86	59	71	79	80	79	77	74	66
Measurement point: 1,7 m³/s; 200 Pa									
6-pole									
L_{wA} Inlet	75	52	61	67	71	66	64	62	50
L_{wA} Surrounding	76	53	62	68	72	67	65	63	51
Measurement point: 1,15 m³/s; 100 Pa									



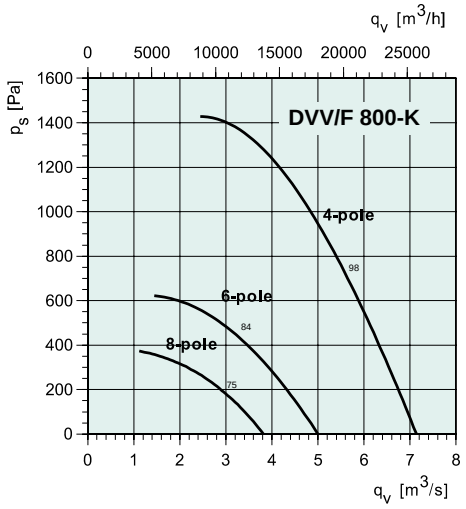
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	88	61	73	81	82	81	79	76	68
L_{wA} Surrounding	90	63	75	83	84	83	81	78	70
Measurement point: 2,1 m³/s; 310 Pa									
6-pole									
L_{wA} Inlet	81	58	67	73	77	72	70	68	56
L_{wA} Surrounding	83	60	69	75	79	74	72	70	58
Measurement point: 1,5 m³/s; 125 Pa									



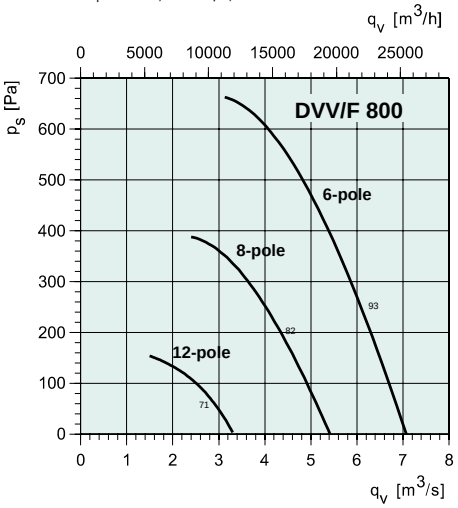
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	92	65	77	85	86	85	83	80	72
L_{wA} Surrounding	94	67	79	87	88	87	85	82	74
Measurement point: 2,8 m³/s; 400 Pa									
6-pole									
L_{wA} Inlet	82	58	69	71	78	73	72	68	55
L_{wA} Surrounding	84	60	71	73	80	75	74	70	57
Measurement point: 1,0 m³/s; 350 Pa									
8-pole									
L_{wA} Inlet	76	59	65	67	71	69	69	61	50
L_{wA} Surrounding	78	61	67	69	73	71	71	63	52
Measurement point: 0,98 m³/s; 200 Pa									



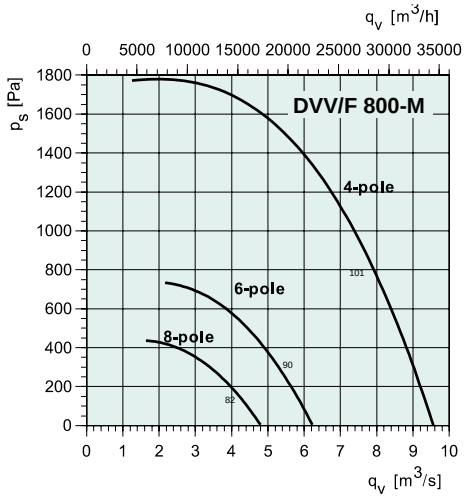
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	97	68	79	91	90	92	87	81	72
L_{wA} Surrounding	98	68	87	88	91	91	91	89	79
Measurement point: 4,58 m³/s; 370 Pa									
6-pole									
L_{wA} Inlet	87	64	73	79	83	78	76	74	62
L_{wA} Surrounding	88	65	74	80	84	79	77	75	63
Measurement point: 2,3 m³/s; 290 Pa									
8-pole									
L_{wA} Inlet	79	61	67	70	74	71	71	66	55
L_{wA} Surrounding	81	63	69	72	76	73	73	68	57
Measurement point: 1,67 m³/s; 170 Pa									



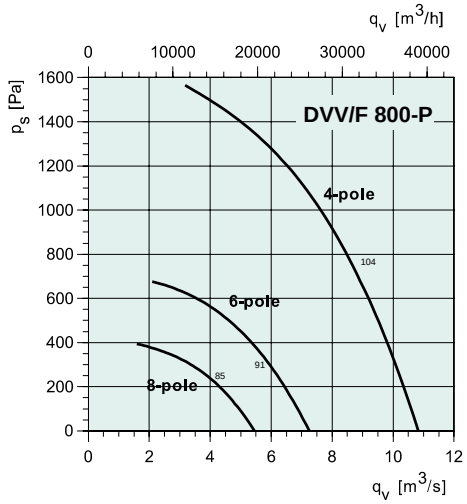
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	98	71	83	91	92	91	89	86	78
L_{wA} Surrounding	99	72	84	92	93	92	90	87	79
Measurement point: 5,6 m³/s; 700 Pa									
6-pole									
L_{wA} Inlet	84	60	71	73	80	75	74	70	57
L_{wA} Surrounding	86	62	73	75	82	77	76	72	59
Measurement point: 4,0 m³/s; 280 Pa									
8-pole									
L_{wA} Inlet	75	58	64	66	70	68	68	60	49
L_{wA} Surrounding	77	60	66	68	72	70	70	62	51
Measurement point: 3,1 m³/s; 150 Pa									



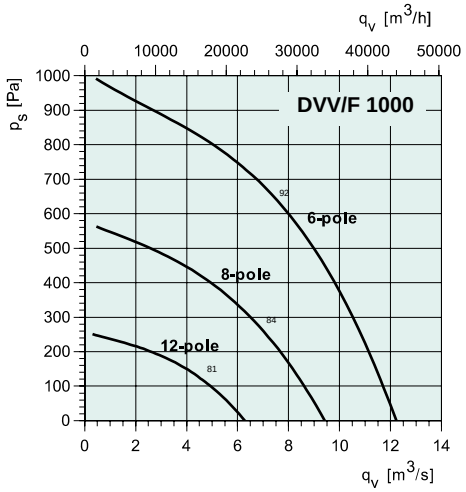
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
6-pole									
L_{wA} Inlet	93	70	79	85	89	84	82	80	68
L_{wA} Surrounding	95	72	81	87	91	86	84	82	70
Measurement point: 6,1 m³/s; 250 Pa									
8-pole									
L_{wA} Inlet	82	64	70	73	77	74	74	69	58
L_{wA} Surrounding	84	66	72	75	79	76	76	71	60
Measurement point: 4,3 m³/s; 200 Pa									
12-pole									
L_{wA} Inlet	71	53	59	62	66	63	63	58	47
L_{wA} Surrounding	73	55	61	64	68	65	65	60	49
Measurement point: 2,8 m³/s; 70 Pa									



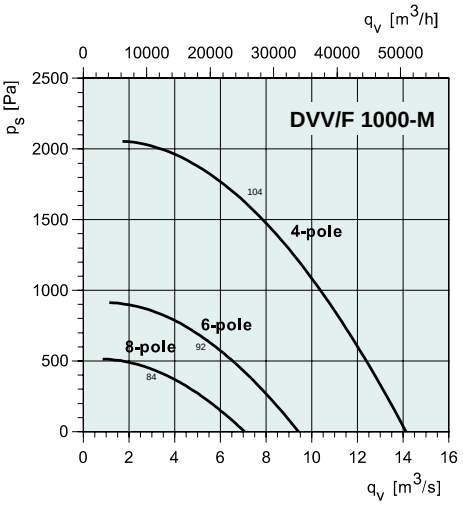
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	101	74	86	94	95	94	92	89	81
L_{wA} Surrounding	103	76	88	96	97	96	94	91	83
Measurement point: 7,2 m³/s; 740 Pa									
6-pole									
L_{wA} Inlet	90	67	78	80	87	82	81	77	64
L_{wA} Surrounding	92	69	80	82	89	84	83	79	66
Measurement point: 5,2 m³/s; 250 Pa									
8-pole									
L_{wA} Inlet	82	65	71	73	77	75	75	67	56
L_{wA} Surrounding	84	67	73	75	79	77	77	69	58
Measurement point: 4 m³/s; 150 Pa									



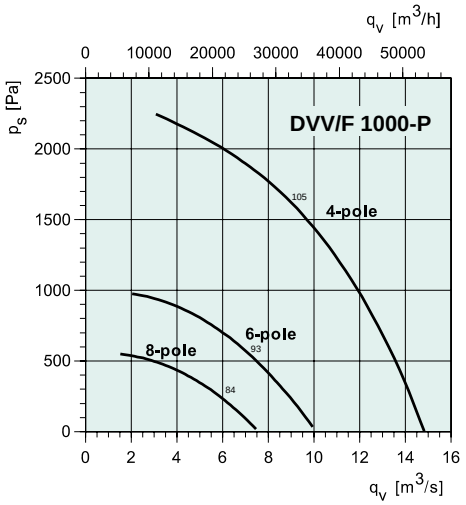
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	104	77	89	97	98	97	95	92	84
L_{wA} Surrounding	106	79	91	99	100	99	97	94	86
Measurement point: 8,6 m³/s; 740 Pa									
6-pole									
L_{wA} Inlet	91	67	78	80	87	82	81	77	64
L_{wA} Surrounding	93	69	80	82	89	84	83	79	66
Measurement point: 5,6 m³/s; 330 Pa									
8-pole									
L_{wA} Inlet	85	68	74	76	80	78	78	70	59
L_{wA} Surrounding	87	70	76	78	82	80	80	72	61
Measurement point: 4,3 m³/s; 200 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
6-pole									
L_{wA} Inlet	92	69	78	84	88	83	81	79	67
L_{wA} Surrounding	94	71	80	86	90	85	83	81	69
Measurement point: 6,94 m³/s; 650 Pa									
8-pole									
L_{wA} Inlet	84	66	72	75	79	76	76	71	60
L_{wA} Surrounding	86	68	74	77	81	78	78	73	62
Measurement point: 6,11 m³/s; 310 Pa									
12-pole									
L_{wA} Inlet	81	63	69	72	76	73	73	68	57
L_{wA} Surrounding	83	65	71	74	78	75	75	70	59
Measurement point: 5,36 m³/s; 85 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	104	82	91	97	100	96	94	92	80
L_{wA} Surrounding	109	87	96	102	105	101	99	97	85
Measurement point: 7,3 m³/s; 1600 Pa									
6-pole									
L_{wA} Inlet	92	75	81	83	87	85	85	80	69
L_{wA} Surrounding	97	80	86	88	92	90	90	85	74
Measurement point: 4,8 m³/s; 700 Pa									
8-pole									
L_{wA} Inlet	84	66	72	75	79	76	76	71	60
L_{wA} Surrounding	91	73	79	82	86	83	83	78	67
Measurement point: 3,1 m³/s; 430 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	105	82	91	97	101	96	94	92	80
L_{wA} Surrounding	110	87	96	102	106	101	99	97	85
Measurement point: 9,2 m³/s; 1580 Pa									
6-pole									
L_{wA} Inlet	93	75	81	84	88	85	85	80	69
L_{wA} Surrounding	98	80	86	89	93	90	90	85	74
Measurement point: 7,1 m³/s; 560 Pa									
8-pole									
L_{wA} Inlet	84	66	72	75	79	76	76	71	60
L_{wA} Surrounding	91	73	79	82	86	83	83	78	67
Measurement point: 6,1 m³/s; 220 Pa									



DVG/F

- Smoke and heat extract unit + normal ventilation
- Up to 400°C/120 min (F400/120, F400/90, F300, F200)
- Normal ventilation up to 120°C continuous operation
- Vertical exhaust DVG-V or horizontal DVG-H
- Includes pre-wired isolator
- Suitable for coastal applications
- Wide range of accessories
- Tested acc. to EN 12101-3 at LGAI, Barcelona
- CE-certified acc. to EN 12101-3, 2002-06 at TÜV Süd

The DVG/F smoke extract fans are used in case of fire to extract smoke gases from rooms, and also during normal working conditions for standard ventilation.

Smoke-free escape ways increase the chances to rescue people in case of a fire. The casing is manufactured from seawater resistant aluminium. The base frame consists of galvanised steel. The impeller with backward-curved blades is manufactured from galvanised steel.

Motor outside air stream is air cooled. The fan is equipped with IEC standard motors according to the 2009/640/EC guideline and IEC 60034-30, with protection class IP 54, insulation class F. Thermal motor protection (PTC or thermal contact built-in) on request, in IE2 motors serial PTC built-in, in DVG 400D4V serial thermal contact built-in. For frequency controlled single speed units up to 0,55 kW PTC must be ordered (since IE1 motors built-in). For two speed fans (up to 4 kW) two speed switch, S-DT2 SKT/S-DT2 GKT is available as accessory (in this case thermal contact must be ordered; not suitable for PTC or without thermal contact).

In case of fire two speed switch, eventual speed controller at DVG 400D4V and motor protective devices must be bridged to guarantee functional capability (connection direct to mains). For speed control use only combination of frequency inverter and appropriate all pole sine filter (hot tested at LGAI with inverter and sine filter).

If frequency inverter used in case of fire, PTC must be bridged and switching on max. speed even after eventual short supply cut off assured. Operating over 50 Hz is not allowed. Frequency controlled units can have additional EMC protection (available on request).

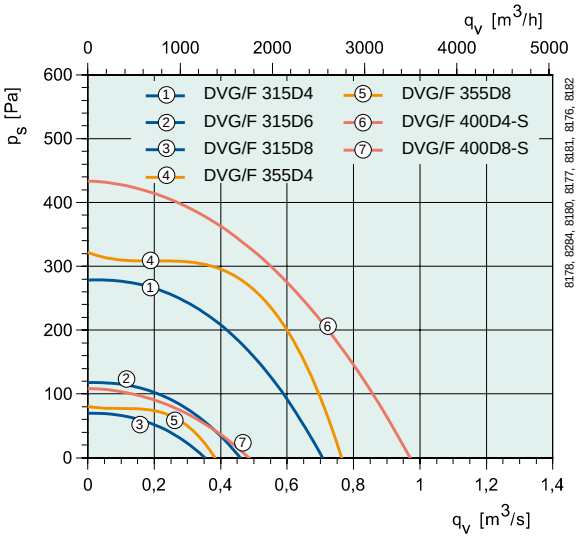
Note: article numbers in tables refer to items without PTC or thermal contact, with exception of items with IE2 motors, where PTC is serial built-in.

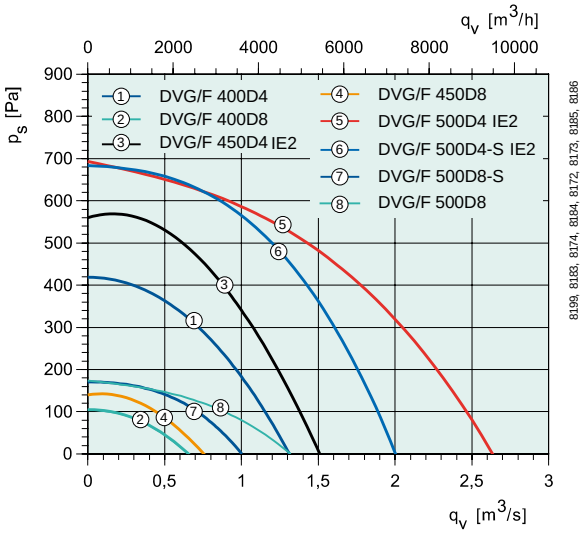
Note: diagrams and data of max. airflow and sound level refer to items with vertical exhaust DVG-V; diagrams and data of DVG-H are available on-line. Data related to motor and weight of delivered items can vary from catalogue data due to different suppliers.

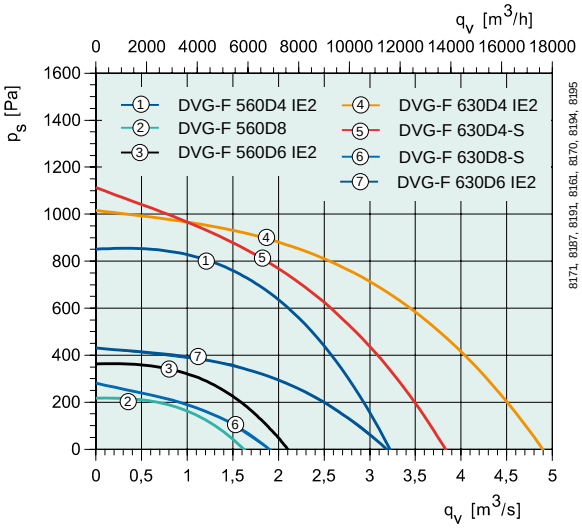
TECHNICAL DATA

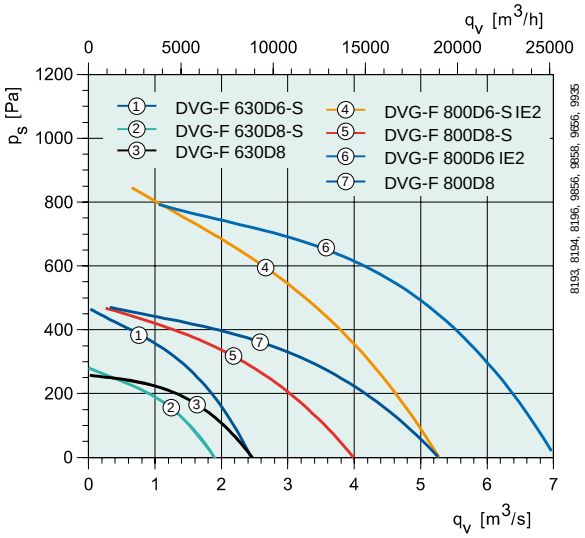
DVG/F		315D4	315D4-8	355D4	355D4-8	400D4-S	400D4-8-S	400D4	400D4-8	450D4 IE2
Art no. DVG-V (vertical)		32306	32307	32308	32309	32310	32311	32312	32313	95164
Art no. DVG-H (horizontal)		95001	95002	95003	95004	95005	95006	95007	95008	95153
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~
Power at shaft	kW	0.37	0.37/0.12	0.37	0.37/0.12	0.37	0.37/0.12	0.55	0.50/0.12	0.75
Current	A	0.95	1.3/0.6	0.95	1.3/0.6	1.6	1.3/0.6	1.6	1.6/0.6	2.1
Starting current	A	4.1	3.4/1.3	4.1	3.4/1.3	6.6	3.4/1.3	6.6	5.8/1.3	10.1
Max air flow	m^3/s	0.71	0.71/0.36	0.81	0.76/0.38	0.97	0.97/0.49	1.31	1.31/0.66	1.52
R.p.m.	min-1	1405	1350/680	1405	1350/680	1390	1350/680	1390	1410/670	1425
Max. temp. of transp. air*	°C	400	400	400	400	400	400	400	400	400
Sound pressure level at 4 m	dB(A)	55	55/39	56	56/41	59	59/43	62	62/46	65
Sound pressure level at 10 m	dB(A)	49	49/33	50	50/35	53	53/37	55	55/40	58
Weight vertical/horizontal	kg	41/39	41/39	43/41	43/41	45/41	45/41	46/44	46/44	56/52
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
PTC serial built-in motor										PTC
S-DT2DKT, S-DT2GKT			...DKT		...DKT		...DKT		...DKT	
FXDM										
Wiring diagram p. 391-400		15b	14a	15b	14a	15b	14a	15b	14a	15c
*for 120 min										

QUICK SELECTION









VENTILATION ACCESSORIES



ASFV p. 384



ASK/F p. 380



ASSG/F p. 383



FDGE/F p. 378



SSG/F p. 378



FDG/F p. 377

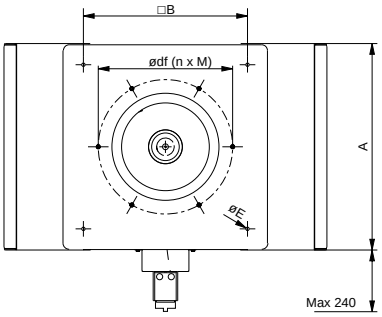


VKG/F p. 383

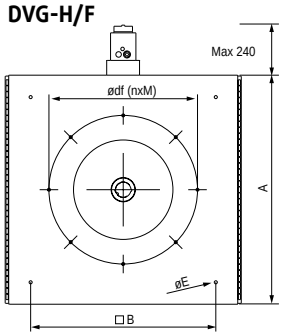
DVG/F		450D4-8	500D4 IE2	500D4-S IE2	500D4-8-S	500D4-8	560D4 IE2	560D4-8	560D6 IE2	630D4 IE2
Art no. V (vertical)		32315	95165	95166	32317	32319	95169	32323	95170	95171
Art no. H (horizontal)		95010	95154	95155	95012	95014	95158	95018	95159	95160
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~
Power at shaft	kW	1.1/0.25	1.5	1.1	1.1/0.25	1.4/0.35	2.2	2.5/0.6	0.75	4
Current	A	3.1/1.2	3.5	2.6	3.1/1.25	3.5/1.4	4.9	5.9/2.4	2	8.7
Starting current	A	12.4/3	20.3	12.5	12.4/3.0	14.4/3.5	28.9	30.7/7.4	5.8	51
Max air flow	m^3/s	1.52/0.76	2.64	2	2.0/1.0	2.64/1.32	3.24	3.24/1.6	2.11	4.91
R.p.m.	min^{-1}	1400/690	1420	1435	1400/690	1400/680	1425	1430/710	880	1445
Max. temp. of transp. air*	°C	400	400	400	400	400	400	400	400	400
Sound pressure level at 4 m	dB(A)	65/48	70	66	66/49	70/52	72	72/51	58	75
Sound pressure level at 10 m	dB(A)	58/42	63	60	60/44	63/45	67	67/46	52	69
Weight vertical/horizontal	kg	58/55	86/82	87/83	87/83	86/82	104/99	107/102	96/91	128/123
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
PTC serial built-in motor			PTC	PTC			PTC		PTC	PTC
S-DT2DKT, S-DT2GKT		...DKT			...DKT	...DKT		...DKT		
FXDM...			...5AM	...5AM			...5AM		...5AM	...14AM
Wiring diagram p. 391-400		14a	15c	15c	14a	14a	15c	14a	15c	15c
*for 120 min										

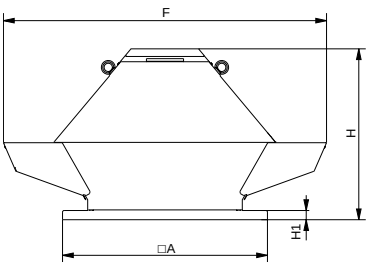
DIMENSIONS

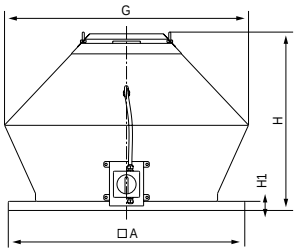
DVG-V/F



DVG-H/F





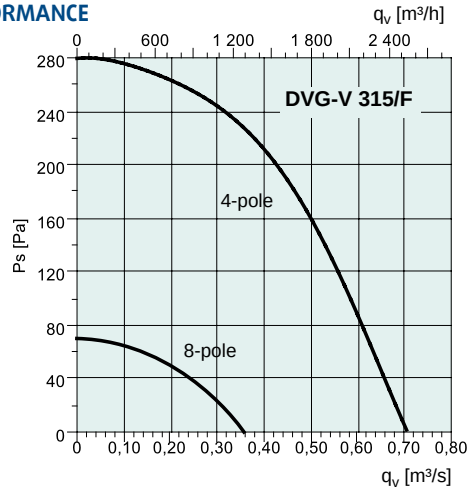


DVG/F	□A	□B	øE	F	G	ødf (n x M)	H1	H
315	598	450	12	891	594	438 (6xM8)	30	520
355	598	450	12	1003	704	438 (6xM8)	30	567
400	668	535	12	1053	724	438 (6xM8)	30	557
450	668	535	12	1261	854	438 (6xM8)	30	637
500	943	750	14	1343	892	605 (8xM8)	30	696
560	943	750	14	1540	1078	605 (8xM8)	30	773
630	1039	840	14	1573	1072	674 (8xM8)	40	858
800	1255	1050	14	2024	1280	872 (8xM8)	40	999

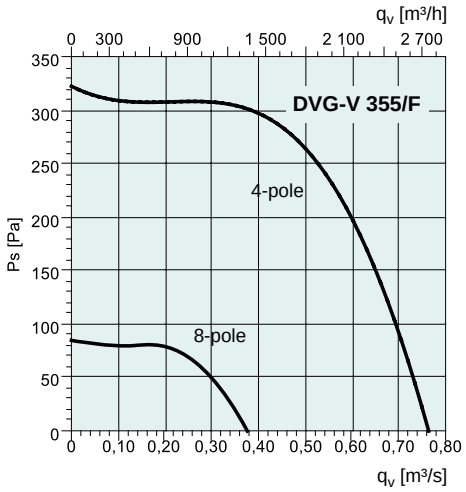
DVG/F		630D4-S IE2	630D4-8-S	630D6 IE2	630D6-S IE2	630D6-8-S	630D4-8		
Art no. DVG-V (vertical)		95172	32328	95173	95174	32326	32333		
Art no. DVG-H (horizontal		95161	95023	95162	95163	95021	95028		
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~		
Power at shaft	kW	3	3.6/0.9	1.5	1.1	1.0/0.4	4.6/1.1		
Current	A	6.6	8.0/3.2	3.8	2.9	3.3/1.35	9.5/3.5		
Starting current	A	36.7	44.0/10.0	18.6	10.8	14.2/4.7	57/12.3		
Max air flow	m^3/s	3.82	3.82/1.89	3.19	2.45	2.45/1.89	4.91/2.47		
R.p.m.	min^{-1}	1400	1430/710	945	890	950/710	1450/720		
Max. temp. of transp. air*	°C	400	400	400	400	400	400		
Sound pressure level at 4 m	dB(A)	71	71/55	66	62	62/55	75/59		
Sound pressure level at 10 m	dB(A)	65	65/49	60	56	55/49	69/54		
Weight	kg	119/114	128/123	115/110	111/106	117/112	144/139		
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54		
PTC serial built-in motor		PTC		PTC	PTC				
S-DT2DKT, S-DT2GKT			...DKT			...GKT	...DKT		
FXDM...		...8AM		...5AM					
Wiring diagram p. 391-400		15c	14a	15c	15c	15a	14a		
* for 120 min									

DVG/F		800D6-S IE2	800D6-8-S	800D6 IE2	800D6-8				
Art no. DVG-V (vertical)		95131	95132	95128	95130				
Art no. DVG-H (horizontal		95126	95127	95122	95125				
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~				
Power at shaft	kW	3	2.8/1.1	5.5	5.7/2.4				
Current	A	6.8	7.5/3.8	12.6	12.3/6.2				
Starting current	A	34.7	38.3/15.6	76	62.8/21.7				
Max air flow	m^3/s	5.28	5.28/3.96	7.03	7.08/5.28				
R.p.m.	min-1	950	970/730	960	960/720				
Max. temp. of transp. air*	°C	400	400	400	400				
Sound pressure level at 4 m	dB(A)	71	71/63	74	74/68				
Sound pressure level at 10 m	dB(A)	64	64/56	66	66/60				
Weight vertical/horizontal	kg	202/195	208/201	212/205	219/212				
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54				
PTC serial built-in motor		PTC		PTC					
S-DT2DKT, S-DT2GKT			...GKT		...GKT				
FXDM...		...8AM		...14AM					
Wiring diagram p. 391-400		15c	15a	13b D	15a				
*for 120 min									

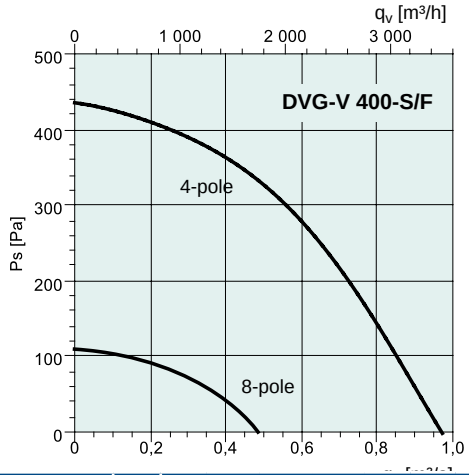
PERFORMANCE



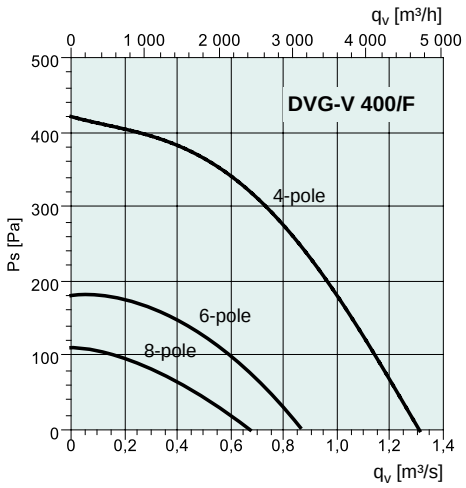
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	78	51	72	72	69	71	69	64	61
L_{wA} Outlet	76	54	65	72	67	69	67	61	51
Measurement point: 0,6 m³/s; 80 Pa									
8-pole									
L_{wA} Inlet	62	40	58	54	54	53	53	45	36
L_{wA} Outlet	60	44	52	53	53	55	50	42	33
Measurement point: 0,2 m³/s; 50 Pa									



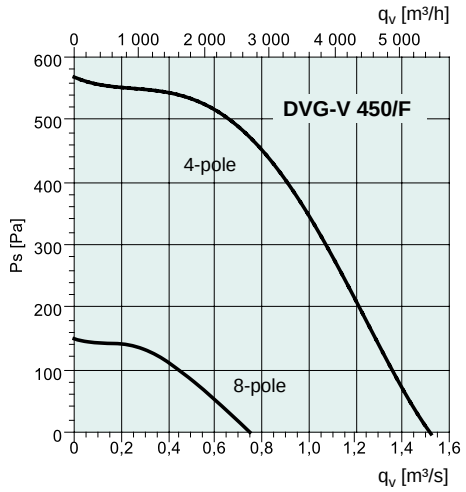
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	81	55	75	75	73	74	73	67	64
L_{wA} Outlet	77	55	67	74	69	71	68	62	52
Measurement point: 0,6 m³/s; 200 Pa									
8-pole									
L_{wA} Inlet	65	43	61	57	57	56	56	48	39
L_{wA} Outlet	62	46	54	55	55	57	52	44	35
Measurement point: 0,3 m³/s; 50 Pa									



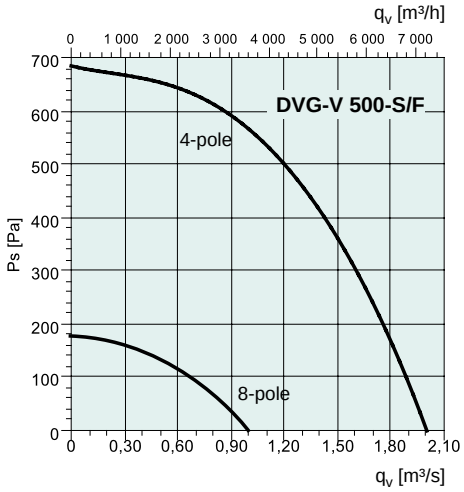
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	82	55	76	76	73	75	73	68	65
L_{wA} Outlet	82	60	71	78	73	75	73	67	57
Measurement point: 0,7 m³/s; 220 Pa									
8-pole									
L_{wA} Inlet	66	44	62	58	58	57	57	49	40
L_{wA} Outlet	66	50	58	59	59	61	56	48	39
Measurement point: 0,4 m³/s; 50 Pa									



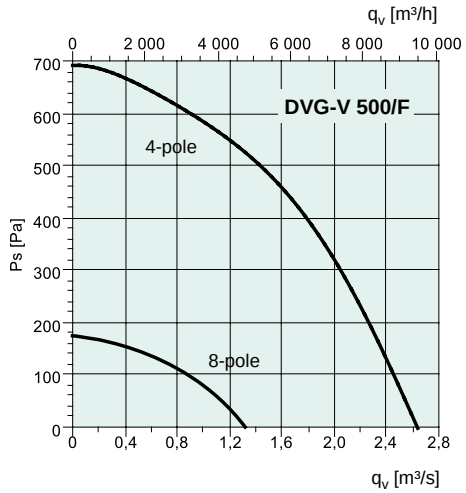
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	85	58	79	79	76	78	76	71	68
L_{wA} Outlet	85	63	74	81	76	78	76	70	60
Measurement point: 1,1 m³/s; 125 Pa									
6-pole									
L_{wA} Inlet	76	46	69	69	69	68	69	61	53
L_{wA} Outlet	76	55	66	70	69	71	67	59	49
Measurement point: 0,6 m³/s; 100 Pa									
8-pole									
L_{wA} Inlet	69	47	65	61	61	60	60	52	43
L_{wA} Outlet	68	52	60	61	61	63	58	50	41
Measurement point: 0,5 m³/s; 50 Pa									



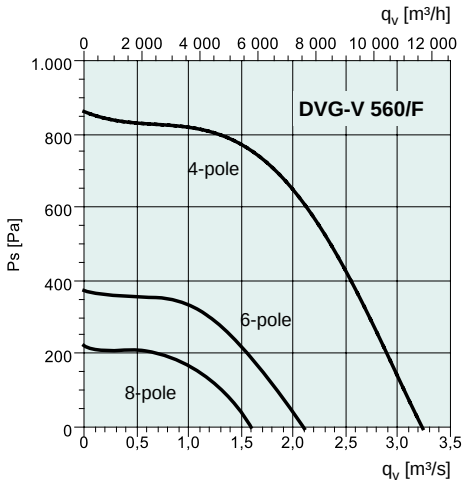
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	88	56	71	73	78	86	74	67	63
L_{wA} Outlet	87	57	73	77	81	84	73	67	60
Measurement point: 1,2 m³/s; 200 Pa									
8-pole									
L_{wA} Inlet	71	50	61	63	61	67	62	62	50
L_{wA} Outlet	69	52	58	63	62	63	59	56	39
Measurement point: 0,6 m³/s; 50 Pa									



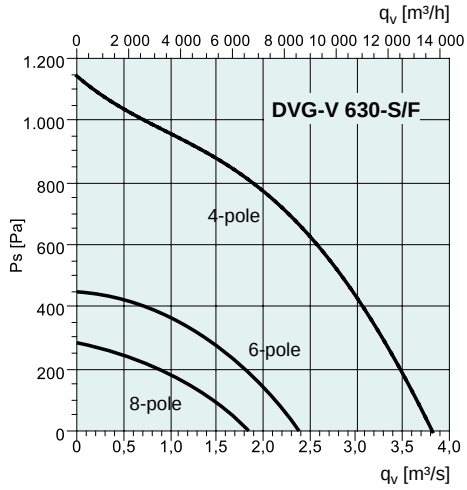
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	88	61	81	81	79	81	78	79	66
L_{wA} Outlet	88	63	76	81	80	84	78	73	62
Measurement point: 1,2 m³/s; 500 Pa									
8-pole									
L_{wA} Inlet	72	53	62	64	63	66	67	55	45
L_{wA} Outlet	69	52	59	62	63	65	61	52	40
Measurement point: 0,6 m³/s; 130 Pa									



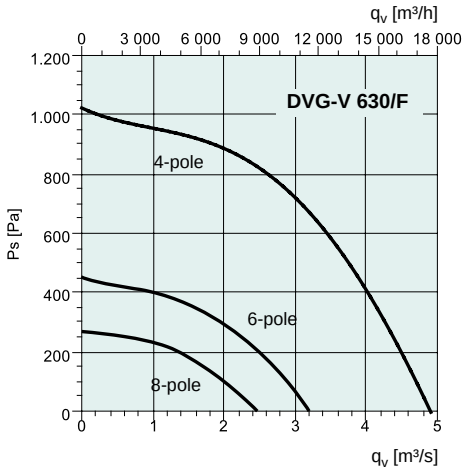
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	90	61	74	84	83	83	84	81	74
L_{wA} Outlet	91	64	75	86	83	87	82	76	65
Measurement point: 2,1 m³/s; 300 Pa									
8-pole									
L_{wA} Inlet	72	50	68	64	64	63	63	55	46
L_{wA} Outlet	73	57	65	66	66	68	63	55	46
Measurement point: 1,1 m³/s; 50 Pa									



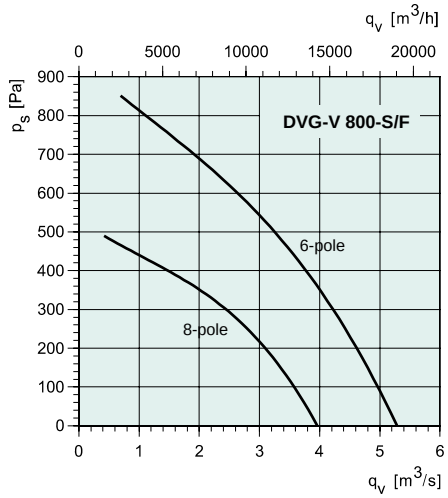
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	94	59	85	86	84	85	87	84	82
L_{wA} Outlet	94	67	84	88	88	89	85	77	70
Measurement point: 2,5 m³/s; 400 Pa									
6-pole									
L_{wA} Inlet	87	57	80	80	80	79	80	71	64
L_{wA} Outlet	82	61	73	77	74	75	74	66	58
Measurement point: 1,8 m³/s; 100 Pa									
8-pole									
L_{wA} Inlet	76	55	65	68	66	72	67	67	55
L_{wA} Outlet	74	58	64	69	67	69	65	61	44
Measurement point: 1,5 m³/s; 50 Pa									



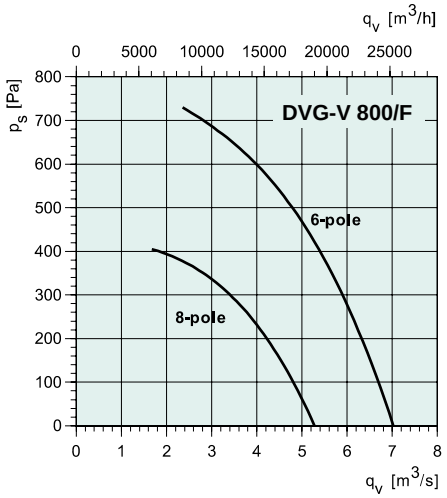
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	94	60	86	80	83	87	87	87	72
L_{wA} Outlet	93	66	84	84	86	88	84	79	68
Measurement point: 2,8 m³/s; 500 Pa									
6-pole									
L_{wA} Inlet	85	55	78	78	78	77	78	70	62
L_{wA} Outlet	84	63	74	78	77	79	75	67	57
Measurement point: 2,2 m³/s; 100 Pa									
8-pole									
L_{wA} Inlet	78	56	74	70	70	69	69	61	52
L_{wA} Outlet	77	61	69	70	70	72	67	59	50
Measurement point: 1,7 m³/s; 60 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	97	68	79	91	90	92	87	81	72
L_{wA} Outlet	96	66	85	86	89	89	89	87	77
Measurement point: 3,8 m³/s; 500 Pa									
6-pole									
L_{wA} Inlet	87	57	80	80	80	79	80	71	64
L_{wA} Outlet	89	69	79	83	82	84	80	72	62
Measurement point: 2,8 m³/s; 120 Pa									
8-pole									
LwA Inlet	81	59	77	73	73	72	72	64	55
L_{wA} Outlet	82	66	74	75	75	77	72	64	55
Measurement point: 2,1 m³/s; 80 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
6-pole									
L_{wA} Inlet	88	48	64	69	78	81	84	83	70
L_{wA} Outlet	91	56	70	76	84	88	84	79	64
Measurement point: 4,2 m³/s; 300 Pa									
8-pole									
L_{wA} Inlet	82	34	58	64	70	76	79	70	67
L_{wA} Outlet	83	45	61	68	77	79	75	68	69
Measurement point: 3,6 m³/s; 100 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
6-pole									
L_{wA} Inlet	96	55	65	81	87	89	93	86	83
L_{wA} Outlet	94	42	65	75	87	91	87	77	67
Measurement point: 5,4 m³/s; 400 Pa									
8-pole									
L_{wA} Inlet	90	48	62	70	79	88	84	77	71
L_{wA} Outlet	87	42	59	70	82	84	77	69	63
Measurement point: 3,9 m³/s; 250 Pa									



DVG-V, H 400D4V/400

- Smoke and heat extract unit + normal ventilation
- Up to 400°C/120 min (F400/120, F400/90, F300, F200)
- Normal ventilation up to 120°C continuous operation
- Horizontal/Vertical exhaust
- Service switch serial
- Suitable for coastal applications
- Suitable for speed control with transformer
- Nominal motor power 0,55 kW (not affected by Commission regulation (EC) No 640/2009)
- Wide range of accessories
- Tested acc. to EN 12101-3 at LGAI, Barcelona
- CE-certification acc. to EN 12101-3, 2002-06 at TÜV Süd

ELECTRICAL ACCESSORIES



RTRD p. 321



STDT 16 p. 342

The DVG smoke extract fans are used in case of fire to extract smoke gases from rooms, and also during normal working conditions for standard ventilation.

Smoke-free escape ways increase the chances to rescue people in case of a fire. For installation only on top of heated buildings.

The casing is manufactured from seawater resistant aluminium.

The base frame consists of galvanised steel. The impeller with backward-curved blades is manufactured from galvanised steel.

Motor outside air stream of IE1 standard efficiency is cooled with fresh air. Thermal contact built-in motor. In case of fire eventual transformer and all protective devices must be bridged to guarantee functional capability (connection direct to mains).

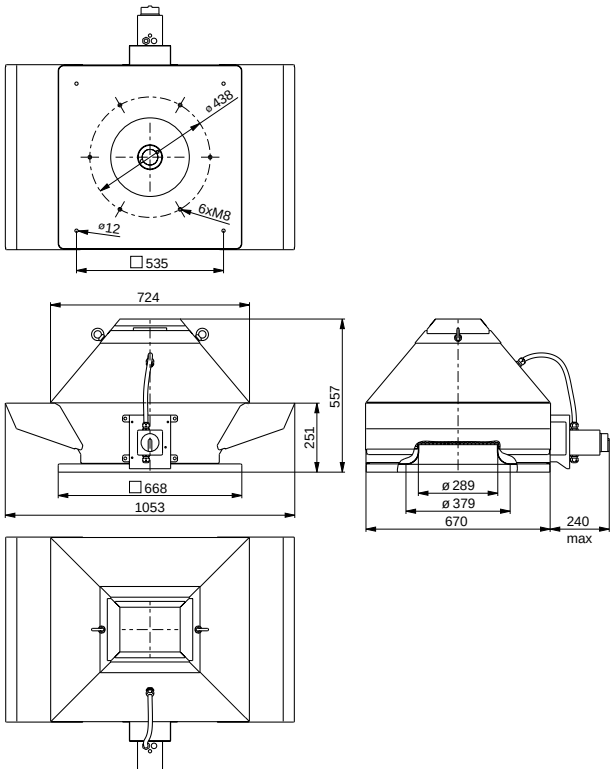
TECHNICAL DATA

DVG/F		DVG-V 400D4V	DVG-H 400D4V						
		Art no. V (vertical)	Art no. H (horizonal)						
		95220	95221						
Voltage/Frequency	V/50 Hz	400 3~	400 3~						
Power at shaft	kW	0.55	0.55						
Current	A	1.5	1.5						
Starting current	A	5.4	5.4						
Max air flow	m^3/s	1.32	1.42						
R.p.m.	min^{-1}	1290	1290						
Max. temp. of transp. air	°C	120	120						
Max. temp. of transp. air*	°C	400	400						
Sound pressure level at 4 m	dB(A)	62	63						
Sound pressure level at 10 m	dB(A)	55	56						
Weight	kg	46	44						
Insulation class, motor		F	F						
Enclosure class, motor		IP 55	IP 55						
Wiring diagram p. 391-400		7	7						

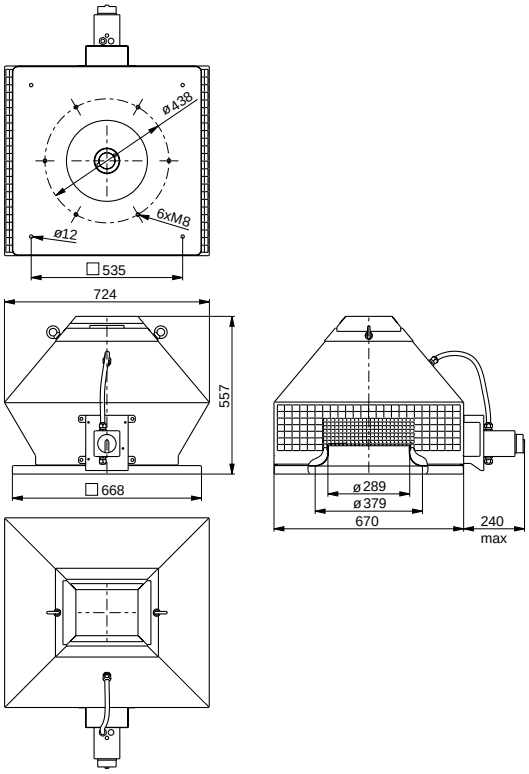
*for 120 min

DIMENSIONS

DVG/F-V



DVG/F-H



VENTILATION ACCESSORIES



ASFV p. 384



ASK/F p. 380



ASSG/F p. 383



FDG/F p. 377



FDGE/F p. 378



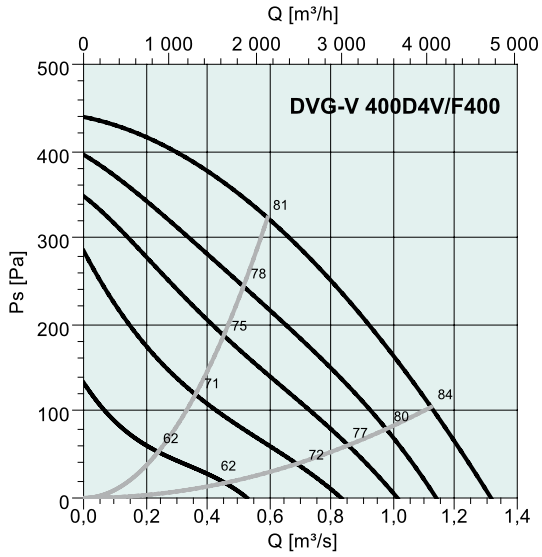
SSG/F p.378

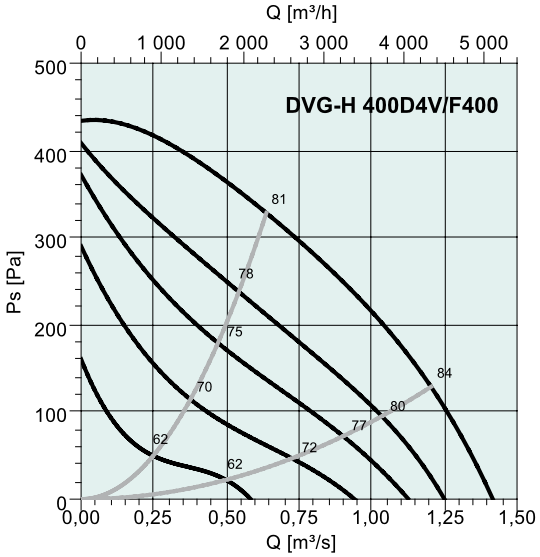


SSGE/F p. 379



VKG/F p. 383

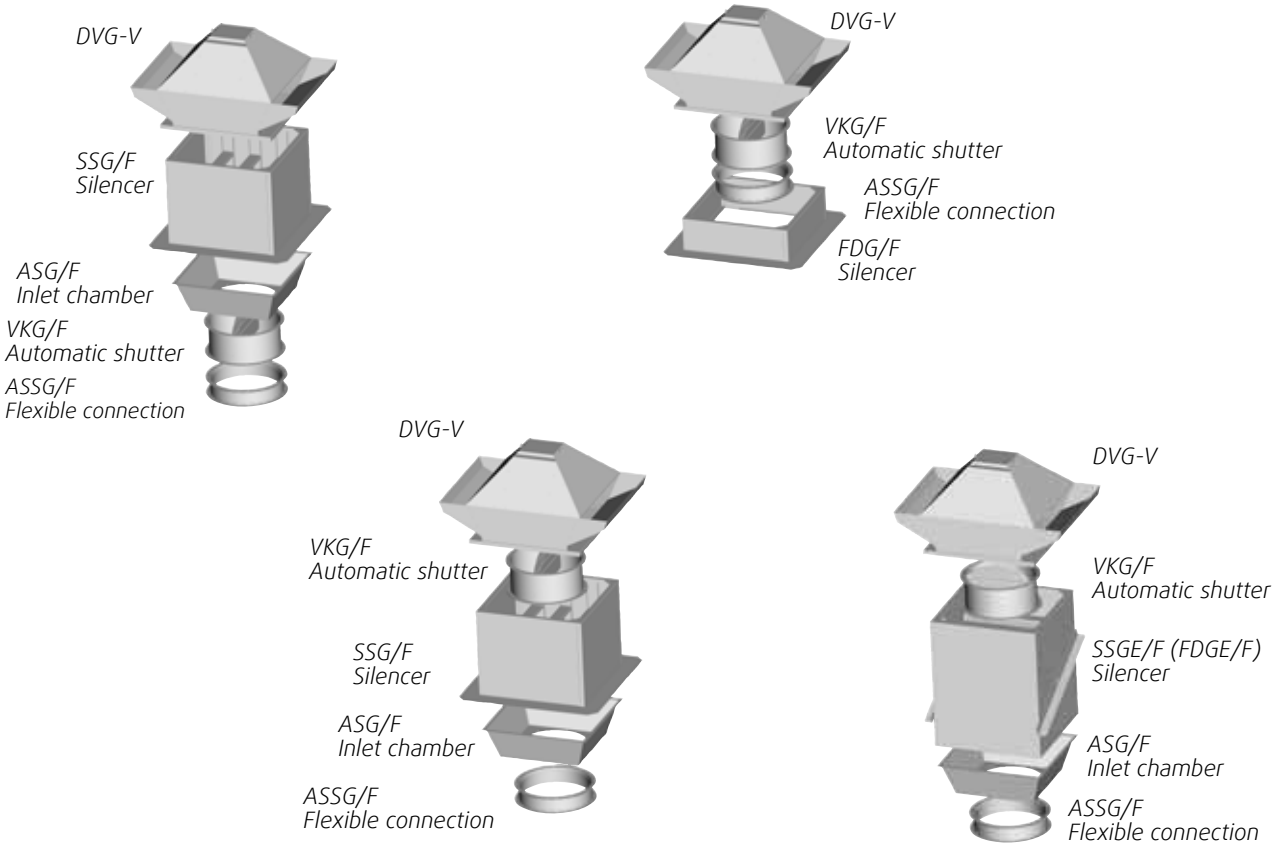




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	82	55	76	75	73	74	73	68	65
L_{wA} Outlet	82	60	71	78	73	75	73	56	82
Measurement point: 0.62 m³/s; 315 Pa									

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	82	55	76	76	73	74	73	68	65
L_{wA} Outlet	83	61	72	78	74	76	75	70	60
Measurement point: 0.78 m³/s; 290 Pa									

Installation example DVG





400°C /120min

MUB/F

- Smoke extract unit
- 400°/120 min. (F400)
- Insulated casing
- Low sound level
- For dual purpose operation
- Tested according to EN 12101-3 at LGAI Barcelona

The smoke extract units MUB/F are used in case of fire to extract smoke gases from rooms, and also during normal working conditions for standard temperature up to 55°C continuously.

The MUB/F units have backward curved impellers made of galvanized steel. The outlet can be easily changed on site from straight to side outlet. The unit is made of a profiled steel frame design. All materials are galvanized and seawater resistant.

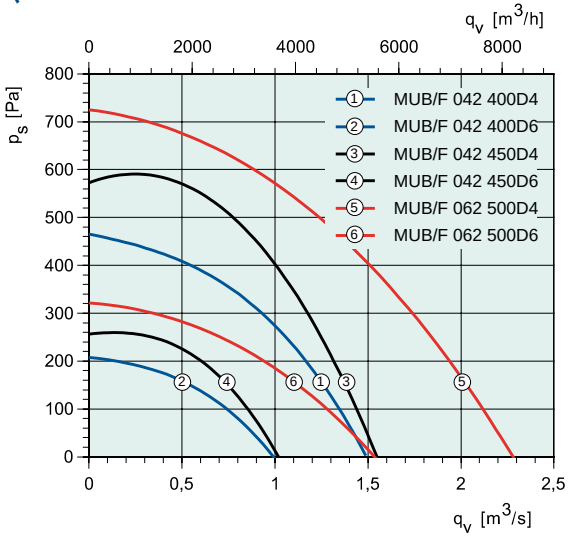
Motors are high temperature motors for temperature classification F 400/120 min. The fan has a double skinned panel with smooth surface to protect against dust and dirt. Motor can be wired for either single speed or 2-speed execution.

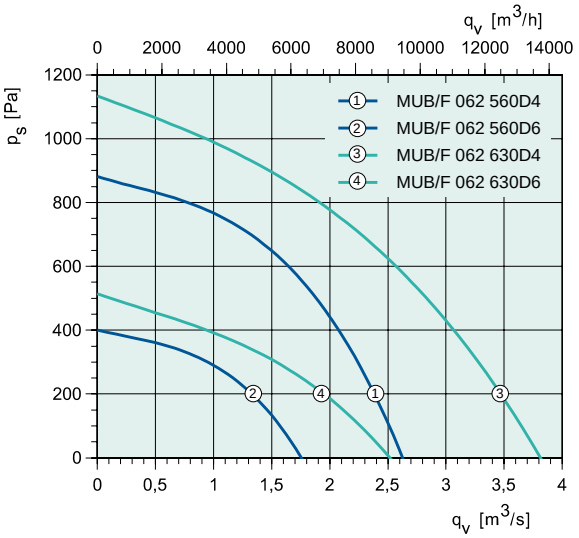
ELECTRICAL ACCESSORIES



REV DVV p. 340

QUICK SELECTION

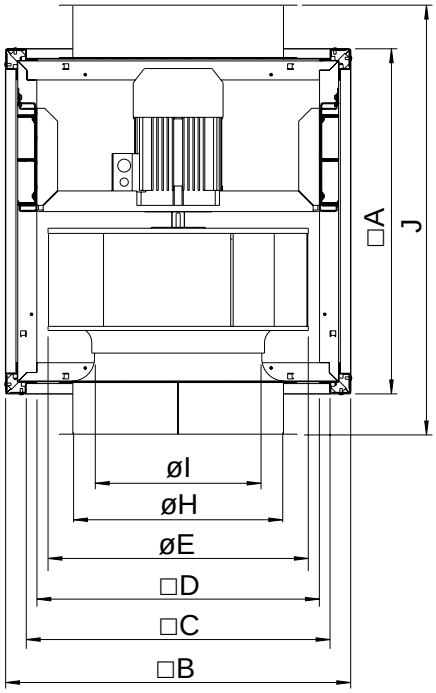




TECHNICAL DATA

MUB/F		042 400D4	042 400D4-6	042 450D4	042 450D4-6	062 500D4	062 500D4-6
Art no.		33290	33292	33293	33295	33296	33298
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~
Power at shaft	W	550	550/180	750	750/250	1500	1500/550
Current	A	1.32	1.32/0.80	1.63	1.63/0.90	3.26	3.26/1.76
Max air flow	m³/s	1.49	1.49/0.99	1.58	1.58/1.04	2.27	2.27/1.53
R.p.m.	min-1	1461	1461/980	1446	1446/971	1440	1440/967
Max temp. of transported air	°C	55	55	55	55	55	55
Max temp. of transported air for 120 min	°C	400	400	400	400	400	400
Sound pressure level at 3 m	dB(A)	31	31/23	33	33/25	42	42/31
Sound pressure level at 4 m	dB(A)	39	39/31	41	41/33	50	50/39
Sound pressure level at 10 m	dB(A)	55	55/47	57	57/49	66	66/55
Weight	kg	98	105	105	111	134	136
Insulation class, motor		HC	HC	HC	HC	HC	HC
Enclosure class, motor		IP 55	IP 55	IP 55	IP 55	IP 55	IP 55
Wiring diagram p. 391-400		10	15a	10	15a	10	15a

DIMENSIONS



MUB/F	□A	□B	□C	□D	øE	øH	øI	J max.
42 400	670	670	590	548	410	400	289	783
42 450	670	670	590	548	454	400	289	783
62 500	800	800	720	676	520	560	364	915
62 560	800	800	720	676	570	560	364	915
62 630	800	800	720	676	650	630	456	915

VENTILATION ACCESSORIES


FGV p. 370

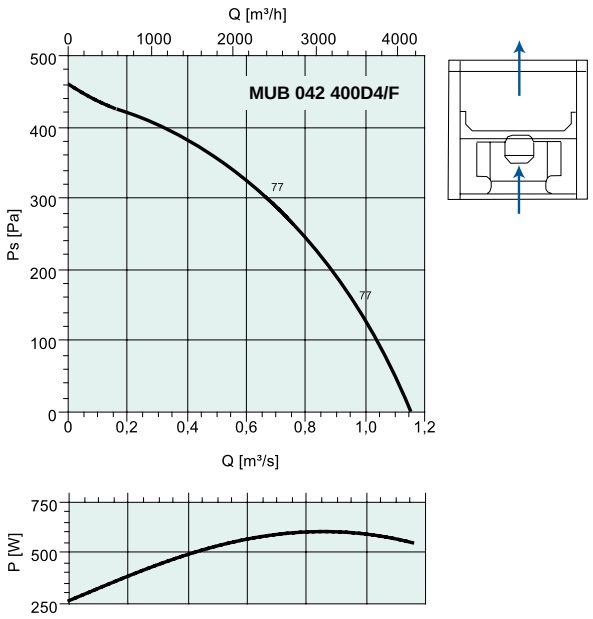

SDM p. 369


SRKG p. 370


UGS p. 370

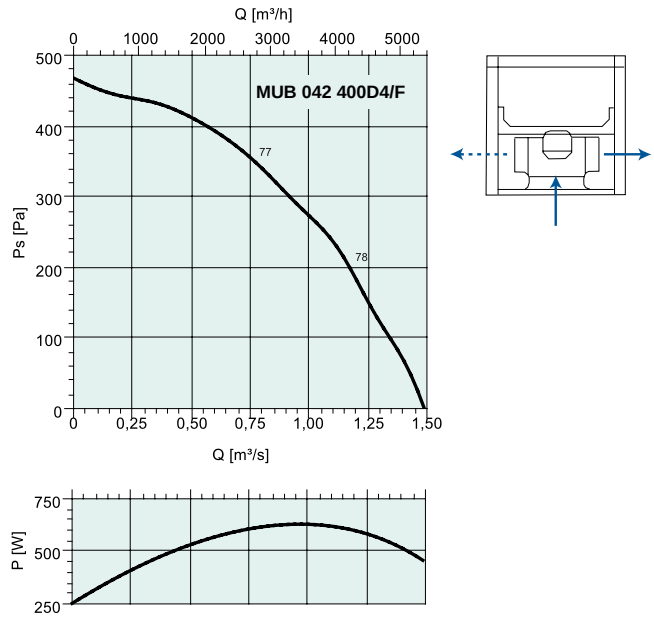

WSD p. 370

MUB/F		062 560D4	062 560D4-6	062 630D4	062 630D6	062 630D4-6
Art no.		33299	33301	33302	33303	33304
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~
Power at shaft	W	2200	2200/750	4000	1500	4000/1500
Current	A	4.58	4.58/2.47	8.58	3.93	8.58/3.93
Max air flow	m3/s	2.66	2.66/1.77	3.83	2.52	3.83/2.52
R.p.m.	min-1	1440	1440/972	1459	979	1459/979
Max temp. of transported air	°C	55	55	55	55	55
Max temp. of transported air for 120 min	°C	400	400	400	400	400
Sound pressure level at 3 m	dB(A)	45	45/34	51	40	51/40
Sound pressure level at 4 m	dB(A)	53	53/42	59	48	59/48
Sound pressure level at 10 m	dB(A)	69	69/58	75	64	75/64
Weight	kg	154	155	163	158	190
Insulation class, motor		HC	HC	HC	HC	HC
Enclosure class, motor		IP 55	IP 55	IP 55	IP 55	IP 55
Wiring diagram p. 391-400		10	15a	10	10	15a



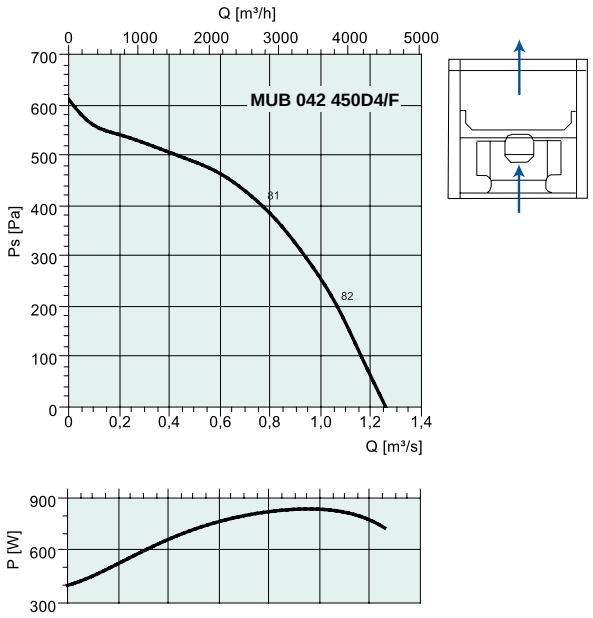
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	77	63	72	71	70	69	65	62	57
L_{wA} Outlet	73	62	64	63	64	66	66	61	55
L_{wA} Surrounding	61	35	50	60	50	50	45	40	36

Measurement point: 0,67 m³/s; 300 Pa



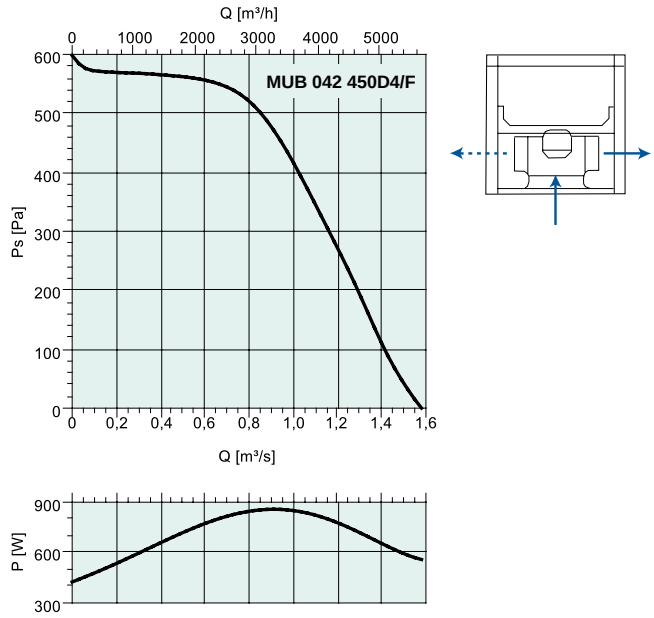
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	77	62	69	71	71	69	67	64	58
L_{wA} Outlet	79	64	72	72	72	73	72	67	59
L_{wA} Surrounding	62	42	49	61	51	50	47	42	38

Measurement point: 0,769 m³/s; 349 Pa



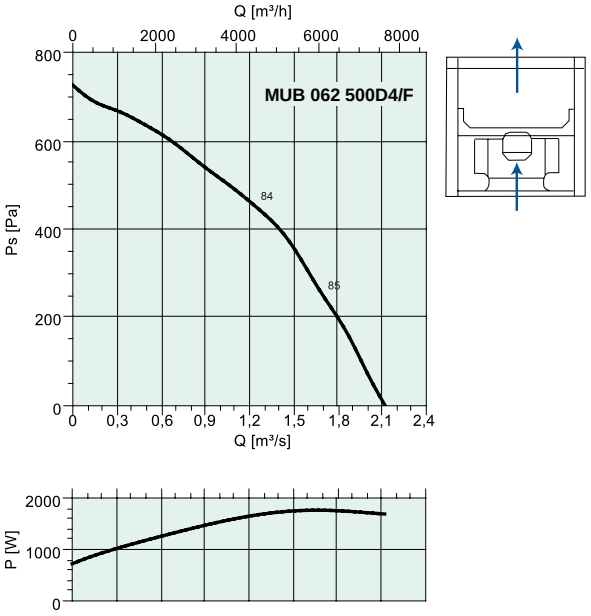
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	81	63	69	69	71	71	75	75	67
L_{wA} Outlet	76	42	60	62	67	69	71	70	61
L_{wA} Surrounding	65	49	56	61	54	56	55	55	49

Measurement point: 0,767 m³/s; 400 Pa



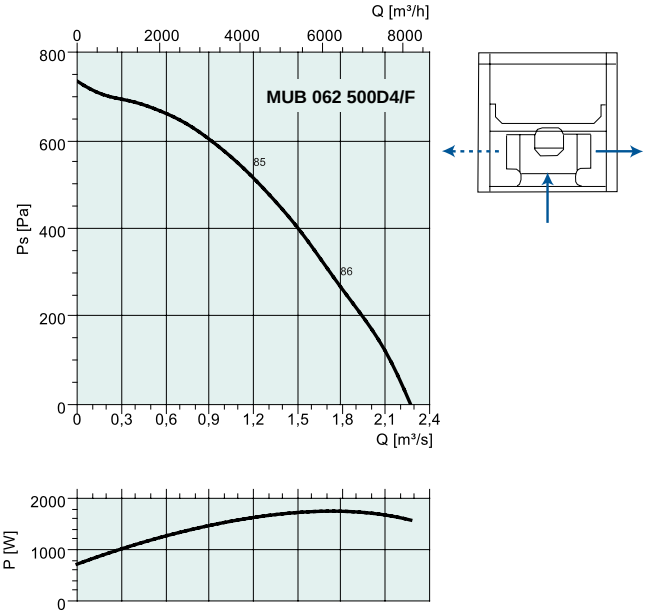
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	80	45	69	68	71	72	74	74	65
L_{wA} Outlet	79	53	67	68	72	72	72	71	61
L_{wA} Surrounding	64	31	58	58	54	57	53	54	47

Measurement point: 0,922 m³/s; 465 Pa



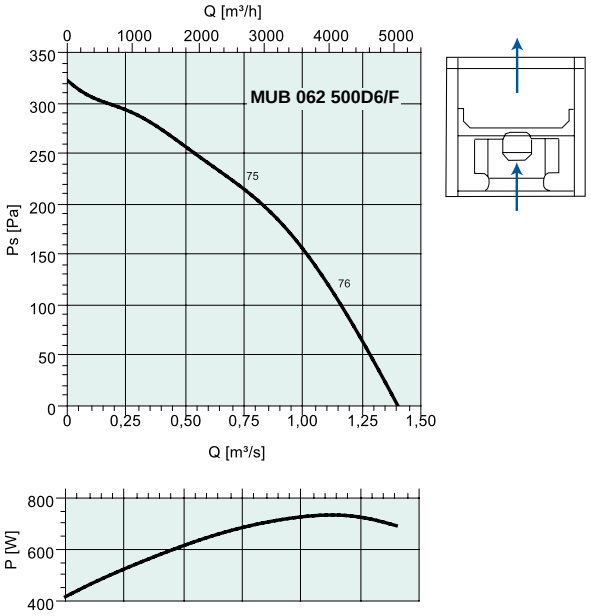
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	84	68	77	78	78	74	75	74	65
L_{wA} Outlet	79	55	64	65	71	75	73	71	61
L_{wA} Surrounding	73	50	65	70	61	62	64	61	46

Measurement point: 1,25 m³/s; 449 Pa



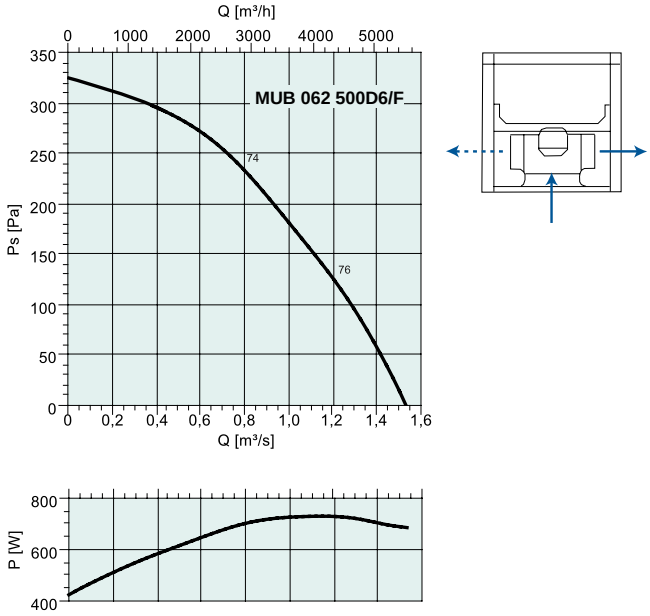
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	85	69	78	78	78	75	75	74	65
L_{wA} Outlet	80	57	68	70	72	75	73	72	63
L_{wA} Surrounding	73	51	65	70	62	62	65	61	46

Measurement point: 1,16 m³/s; 526 Pa



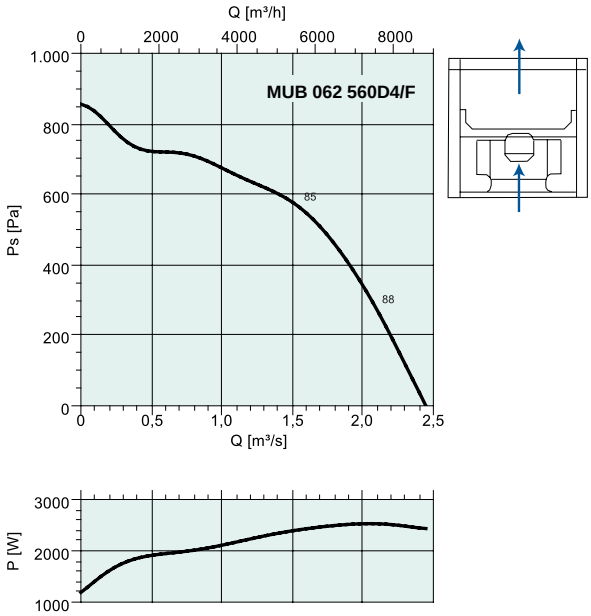
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	75	62	69	65	67	65	67	61	50
L_{wA} Outlet	71	59	61	58	62	65	65	61	52
L_{wA} Surrounding	62	42	57	56	52	52	55	48	32

Measurement point: 0,741 m³/s; 216 Pa



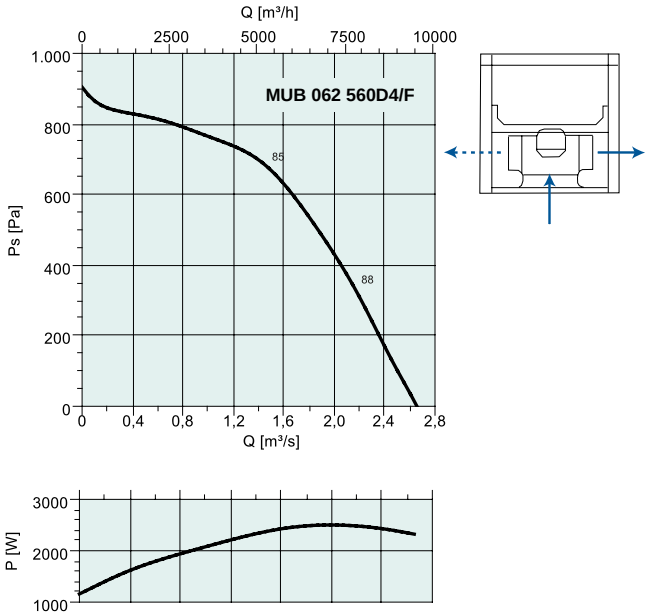
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	74	60	69	65	67	65	68	62	51
L_{wA} Outlet	71	55	65	60	63	65	65	60	48
L_{wA} Surrounding	62	41	57	55	51	52	55	48	33

Measurement point: 0,793 m³/s; 235 Pa



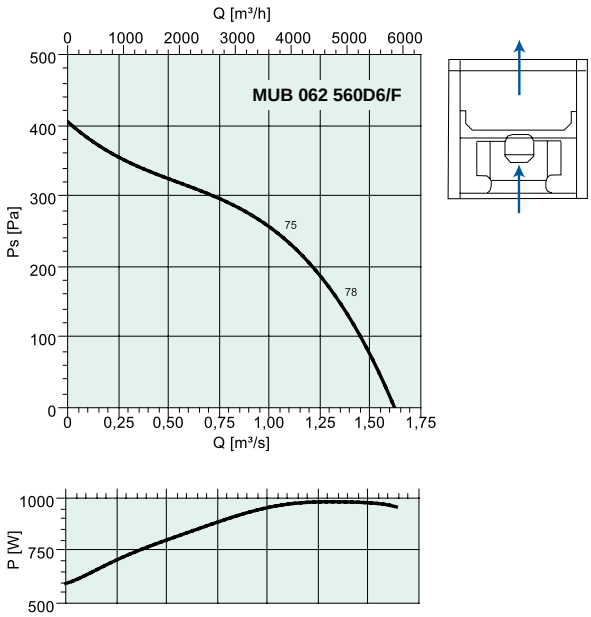
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	85	71	80	79	76	74	74	74	68
L_{wA} Outlet	82	72	74	72	75	75	74	73	67
L_{wA} Surrounding	76	52	74	68	64	62	61	58	49

Measurement point: 1,55 m^3/s; 562 Pa



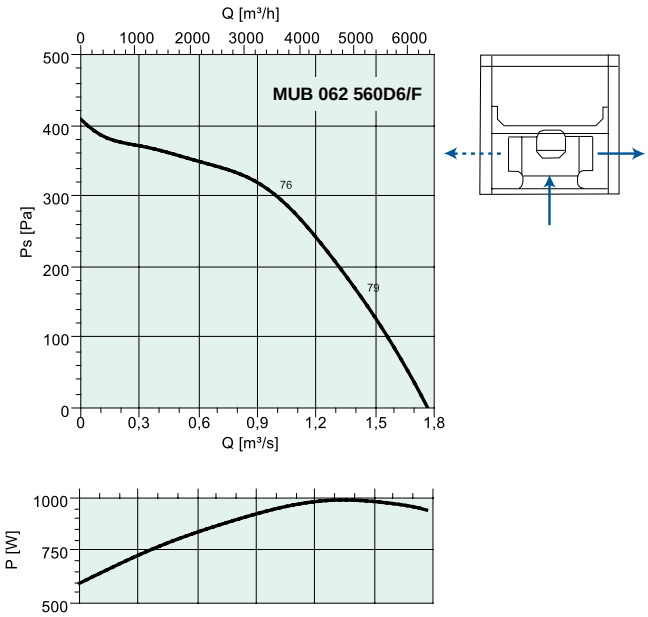
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	85	75	81	78	76	74	75	75	69
L_{wA} Outlet	86	65	84	75	76	76	75	74	67
L_{wA} Surrounding	76	55	74	68	64	63	62	59	50

Measurement point: 1,48 m^3/s; 676 Pa



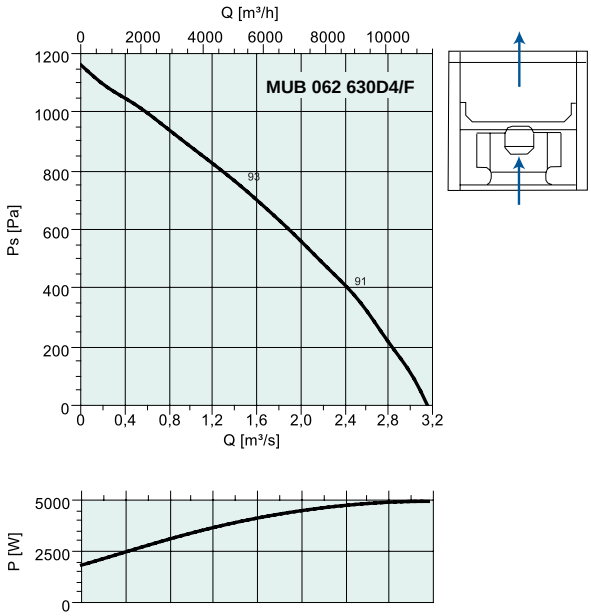
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	75	61	70	68	65	65	66	65	55
L_{wA} Outlet	81	68	73	73	76	73	70	65	58
L_{wA} Surrounding	65	44	59	59	55	55	56	55	40

Measurement point: 1,05 m^3/s; 245 Pa



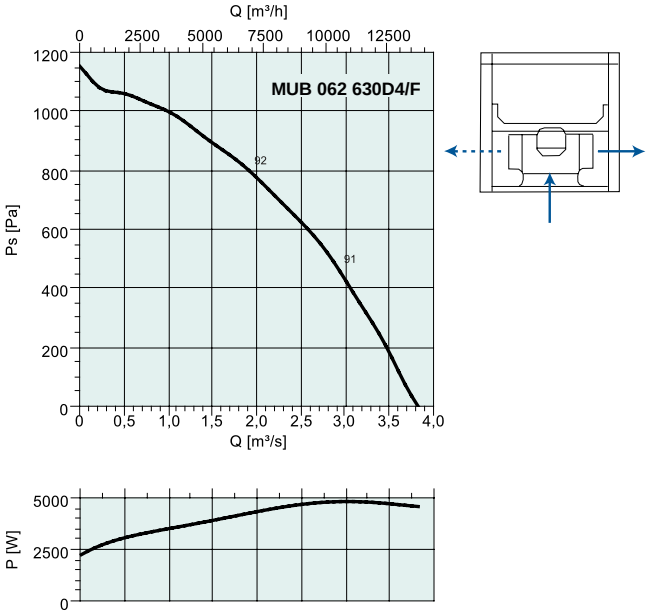
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	76	63	71	67	66	66	67	64	56
L_{wA} Outlet	73	56	64	65	65	66	65	63	54
L_{wA} Surrounding	65	46	60	59	55	56	57	54	40

Measurement point: 0,99 m^3/s; 302 Pa



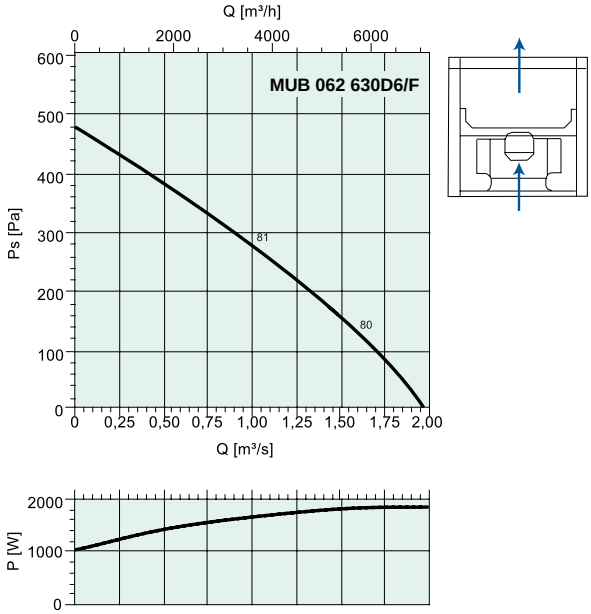
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	93	79	85	87	87	85	84	79	72
L_{wA} Outlet	93	82	84	84	87	87	84	80	74
L_{wA} Surrounding	83	62	74	81	70	70	72	67	56

Measurement point: 1,48 m³/s; 741 Pa



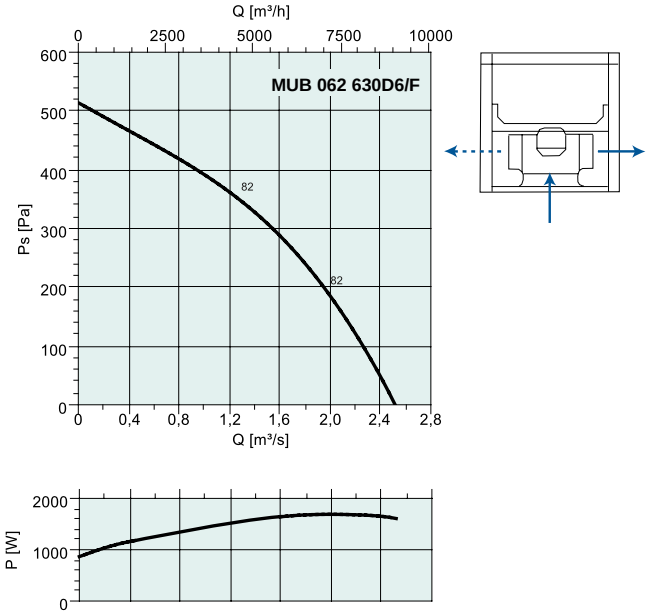
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	92	74	83	85	86	85	83	79	72
L_{wA} Outlet	94	85	83	87	87	87	85	80	74
L_{wA} Surrounding	82	58	72	80	69	69	71	66	56

Measurement point: 1,91 m³/s; 800 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	83	67	76	75	76	75	72	67	65
L_{wA} Outlet	80	63	68	71	75	75	71	66	60
L_{wA} Surrounding	71	48	68	64	61	60	61	55	46

Measurement point: 0,994 m³/s; 265 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	82	65	76	75	76	74	72	67	64
L_{wA} Outlet	81	68	74	72	75	75	72	67	62
L_{wA} Surrounding	71	46	67	64	60	60	61	55	45

Measurement point: 1,26 m³/s; 352 Pa



AXC(B)

Smoke extract axial fans certified for 300°C/120 min. in accordance with EN 12101-3.

Standard features:

- AXC with aerofoil impeller, adjustable pitch angle.
- Die cast aluminium hub and blades.
- Long casing, hot dip galvanized steel, to DIN EN ISO 1461.
- Spun flanges for high rigidity, to Eurovent 1/2.
- Terminal box in IP65 mounted at the outside of the casing for easy wiring.
- Motors IP54, insulation class H, in accordance with EN 60034-5/IEC 85.
- Suitable for operating temperatures of up to 55°C continuous or once for 300°C/120 min.
- Truly reversible version AXR (B) on request.



The Systemair AXC (B), AXR (B) range of long cased smoke extract axial fans is available in sizes from 315 up to 1600 mm impeller diameter. The adjustable pitch angle setting offers a wide performance and maximum flexibility to match precisely individual airflow requirements. The AXC (B) and AXR (B) axial fans have been performance tested in accordance with DIN ISO 5801, DIN 24163 and AMCA 210-99 on the Systemair fan test rig. High temperature testing at Technical University Munich, Germany. All AXC (B) fans are labeled with CE-mark and they are DIBt approved.

High efficiency impellers

The AXC die cast aerofoil aluminium impellers can be offered with full or fractional solidities, maximum efficiencies can be obtained. AXR impellers are truly reversible.

Sturdy casing

AXC and AXR axial fan casings are heavy gauge, hot dip galvanized, with spun flanges for high rigidity. Long cased execution as standard stock range.

Motors

Motors are air stream mounted. Frequency converter controllable only for standard ventilation on request. Single or two speed motors.

Multi stage fans

For higher pressure drops two stage fans are offered. Two fans in series increase the available static pressure drop.



Ordering code

AXR — Axial fan reversible

AXC 630 - 9 / 22° - 2 Box

- G — Two stage, two fans in series
- B — Sound insulated
- 300°/120 min.
- 2-pole motor
- Pitch angle
- Number of blades
- Nominal diameter
- Axial fan unidirectional





WVA/WVI

- Smoke extract unit for wall mounting
- 400°C/120 min (type F400) resp. 600°C/120 min (type F600)
- Wide range of accessories
- Certified acc. to EN 12101-3 at TU Munich
- CE-certified acc. to EN 12101-3, 2002-06 at TÜV Süd

The WVI smoke extract fans are used in case of fire to extract smoke gases from rooms, and also for daily ventilation (dual purpose fans). Smoke-free escape ways increase the chances to rescue people in case of fire.

The casing is manufactured from steel, powder coated RAL 7032. The base frame consists of galvanised steel. The impeller with backward-curved blades is manufactured from galvanised steel resp. stainless steel (type F600).

Thermal motor protection on request (PTC or thermal contact). In case of fire all motor protective devices must be bridged to guarantee functional capability.

ELECTRICAL ACCESSORIES



REV DVV p. 340

WVA

For installation only outside the building. Fans are certified for horizontal installation on a wall, motor pointing downwards.

WVI

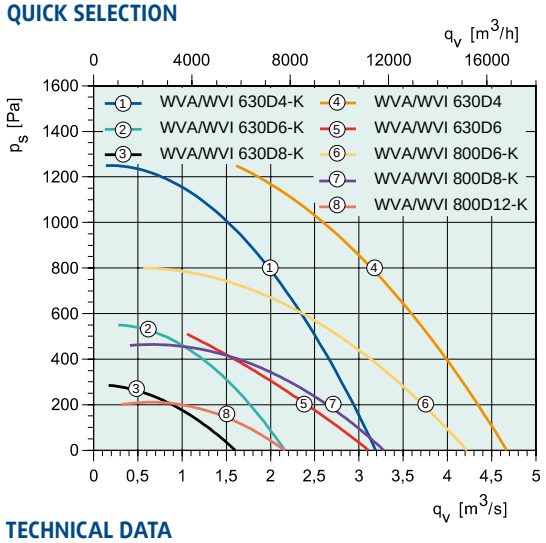
With insulated motor for installation inside the building and inside the fire zone. Cooling of motor via air duct (accessories). Fans are certified for horizontal installation on a outer wall, motor facing downwards.

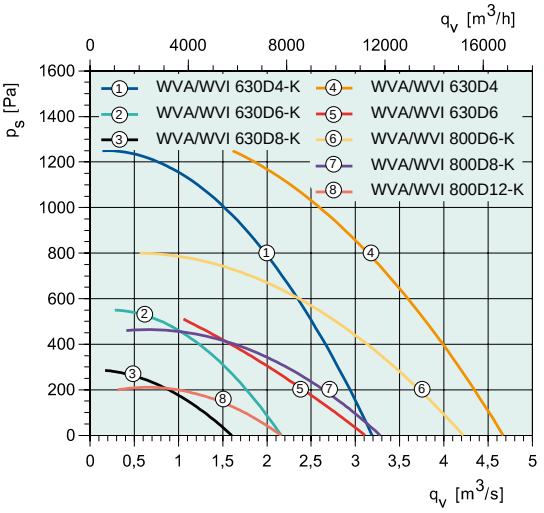
Note:

Article numbers in tables refer to items without PTC or thermal contact.

IE2 single speed motors are available with PTC built-in. Data related to motor and weight of delivered items can vary from catalogue data due to different suppliers.

QUICK SELECTION





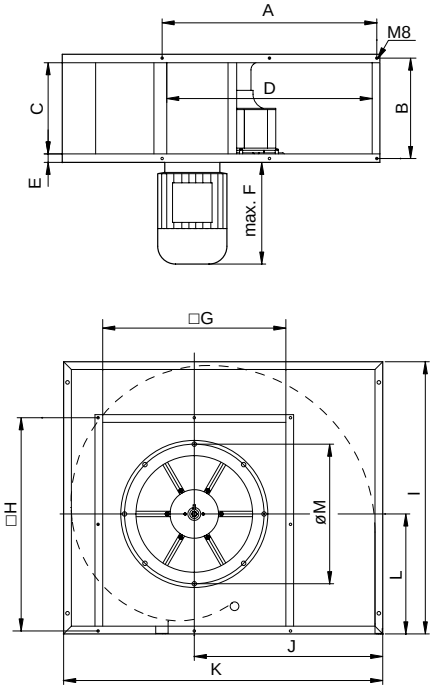
TECHNICAL DATA

WVA/WVI		400D4	400D4-6	400D4-8	450D4	450D4-6	450D4-8	560D4	560D4-6	560D4-8
Art no. WVA F400		30736	30737	95099	30739	30740	95101	30742	30743	95103
Art no. WVA F600		30789	30790	95100	30792	30793	95102	30795	30796	95104
Art no. WVI F400		30763	30764	95105	30766	30767	95107	30769	30770	95109
Art no. WVI F600		30815	30816	95106	30818	30819	95108	30821	30882	95110
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~
Power at shaft	kW	0.55	0.55/0.18	0.5/0.12	1.1	1.1/0.37	1.1/0.25	1.5	1.7/1.2	2.0/0.5
Current	A	1.6	1.7/0.8	1.6/0.6	2.7	3/1.4	3.1/1.2	3.6	4.6/3.7	5.0/2.0
Starting current	A	6.6	6.8/2.4	5.8/1.3	11.8	10.8/5.9	12.4/3.0	17.3	23.9/13.3	22.5/6.0
Max air flow	m^3/s	1.22	1.22/0.778	1.22/0.61	1.81	1.81/1.15	1.81/0.89	2.5	2.5/1.56	2.5/1.19
R.p.m.	min-1	1390	1420/940	1410/670	1390	1420/950	1400/690	1390	1450/940	1420/700
Max. temp. of transported air	°C	55	55	55	55	55	55	55	55	55
Max. temp. of transported air*	°C	400/600	400/600	400/600	400/600	400/600	400/600	400/600	400/600	400/600
Sound pressure level 4 m	dB(A)	68	68/54	68/48	75	75/63	75/56	77	77/66	77/59
Sound presssure level 10 m	dB(A)	57	57/43	57/37	64	64/52	64/45	66	66/55	66/48
Weight	kg	48	48	48	64	67	67	81	87	89
Insulation class, motor		F	F	F	F	F	F	F	F	F
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
Wiring diagram p. 391-400		15b	15a	14a	15b	15a	14a	15b	15a	14a

* for 120 min

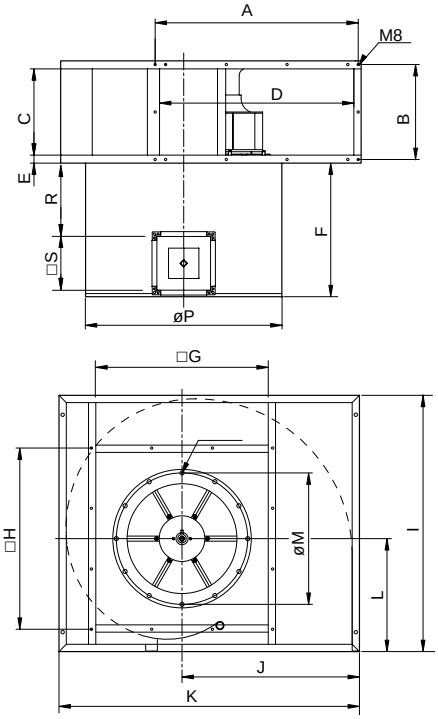
DIMENSIONS

WVA



More detailed dimensions

WVI



VENTILATION ACCESSORIES



EPSN/EPIN p. 389



IN p. 390



SN p. 390



WBK-W p. 389

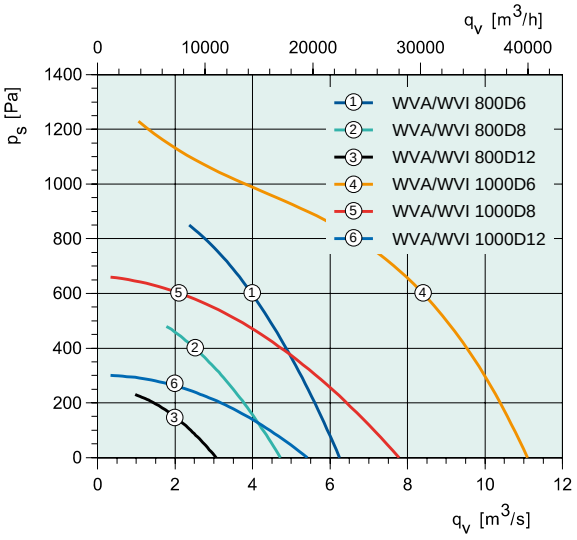


ZHZ p. 389

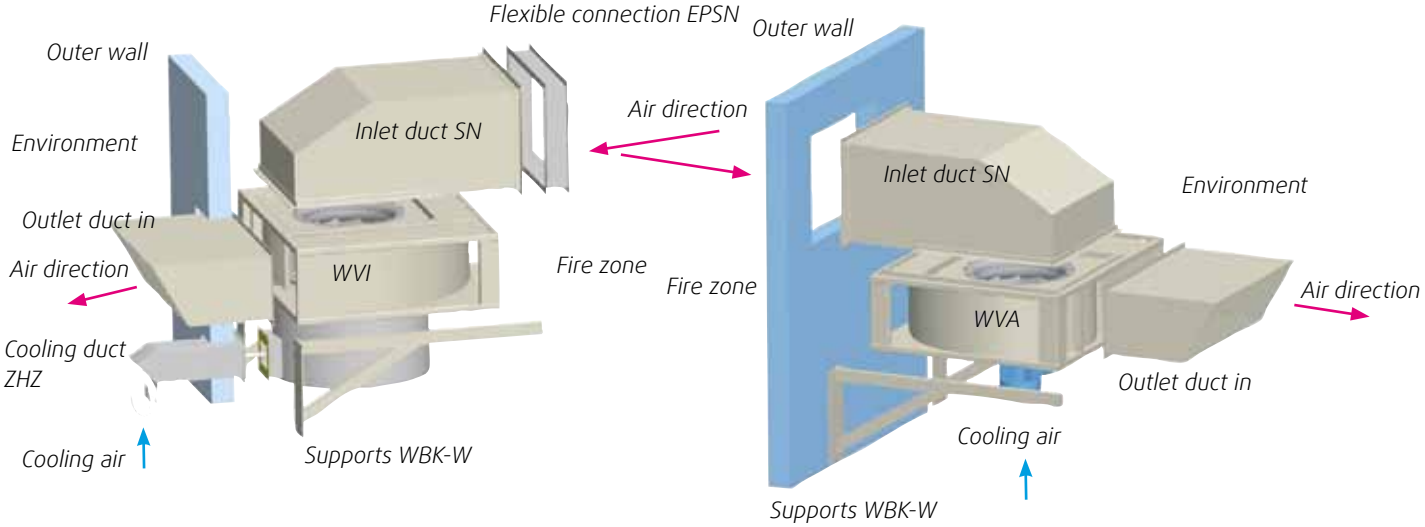
WVA/WVI	A	B	C	D	E	F	□G	□H	I	J	K	L	øM	øP	R	□S	Inlet duct connection ø
400	536	286	250	500	33	250	500	536	670	472	790	290	356 (8xM8)	510	116	200	315
450	746	286	250	710	33	300	500	536	764	528	886	340	395 (8xM8)	638	240	200	355
560	746	316	280	710	33	350	630	666	855	590	991	380	438 (12xM8)	638	200	225	400
630	836	391	355	800	33	450	710	746	1055	730	1237	465	541 (12xM8)	808	349	225	500
800	1156	436	400	1120	43	450	900	936	1300	930	1545	560	674 (16xM10)	980	295	250	630
1000	1446	666	630	1400	43	600	1180	1216	1400	1010	1700	580	751 (16xM10)	980	442	250	710

WVA/WVI		630D4-K	630D4-6-K	630D4-8-K	630D4	630D4-6	800D6-K	800D6-8-K	800D6-12-K	800D6
Art no. WVA F400		30750	30751	30752	30746	30747	30757	30758	30759	30754
Art no. WVA F600		30802	30803	30804	30798	30799	30809	30810	30811	30806
Art no. WVI F400		30776	30777	30778	30772	30773	30783	30784	30785	30780
Art no. WVI F600		30828	30829	30830	30824	30825	30835	30836	30837	30832
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3 ~	400 3~	400 3~	400 3~	400 3~	400 3~
Power at shaft	kW	3.0	3.0/0.9	3.6/0.9	5.5	5.5/1.7	2.2	2.2/0.9	2.5/0.5	5.5
Current	A	6.9	6.9/3.3	8.0/3.2	11.0	12.0/4.5	5.7	6.0/3.3	7.5/2.7	13.0
Starting current	A	38.0	38.0/13	44.0/10.0	75.5	81.6/20.3	30.2	27.7/11.7	38.0/5.2	75.4
Max air flow	m^3/s	3.28	3.28/2.17	3.28/1.61	4.75	4.75/3.06	4.28	4.28/3.31	4.28/2.17	6.19
R.p.m.	min-1	1400	1450/975	1430/710	1440	1460/970	930	965/730	970/465	950
Max. temp. of transported air	°C	55	55	55	55	55	55	55	55	55
Max. temp. of transported air*	°C	400/600	400/600	400/600	400/600	400/600	400/600	400/600	400/600	400/600
Sound pressure level 4 m	dB(A)	78	78/69	78/62	85	85/77	74	74/65	74/55	78
Sound presssure level 10 m	dB(A)	67	67/58	67/51	74	74/66	63	63/54	63/44	67
Weight	kg	169	176	175	179	183	204	220	211	231
Insulation class, motor		F	F	F	F	F	F	F	F	F
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
Wiring diagram p. 391-400		15b	15a	14a	13a D	15a	15b	15a	14a	13a D

* for 120 min

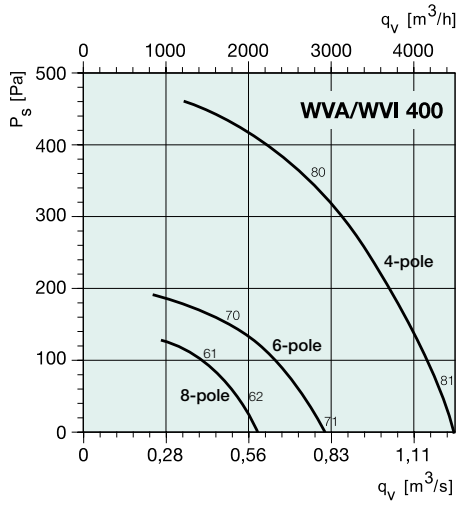


Installation examples

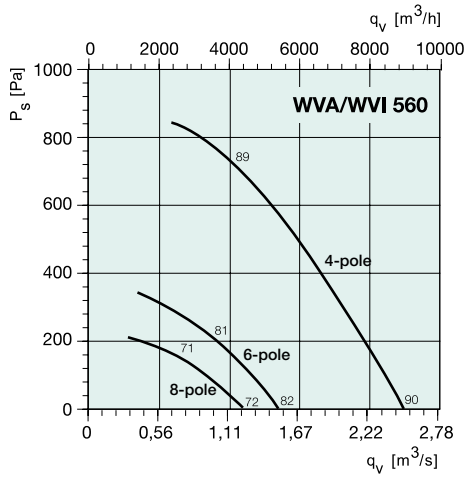


WVA/WVI		800D6-8	800D6-12	1000D6	1000D6-8	1000D6-12			
Art no. WVA F400		30755	30756	30760	30761	30762			
Art no. WVA F600		30807	30808	30812	30813	30814			
Art no. WVI F400		30781	30782	30786	30787	30788			
Art no. WVI F600		30833	30834	30838	30839	30840			
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~			
Power at shaft	kW	5.7/2.4	5.1/1.0	11.0	11.0/5.0	12.0/2.4			
Current	A	12.3/6.2	13.5/4.4	22.0	22.0/15.0	23.0/7.5			
Starting current	A	62.8/21.7	75.0/12.0	154	154/82.5	140.0/23.3			
Max air flow	m³/s	6.19/4.72	6.19/3.06	11.1	11.1/8.11	11.1/5.42			
R.p.m.	min-1	960/720	960/470	965	970/730	960/480			
Max. temp. of transported air	°C	55	55	55	55	55			
Max. temp. of transported air*	°C	400/600	400/600	400/600	400/600	400/600			
Sound pressure level 4 m	dB(A)	78/68	78/57	83	83/75	83/67			
Sound presssure level 10 m	dB(A)	67/57	67/46	72	72/64	72/56			
Weight	kg	231	249	407	472	472			
Insulation class, motor		F	F	F	F	F			
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	IP 54			
Wiring diagram p. 391-400		15a	14a	13a D	15a	14a			

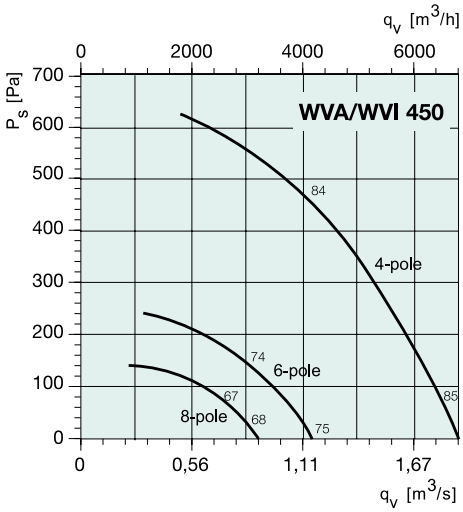
* for 120 min



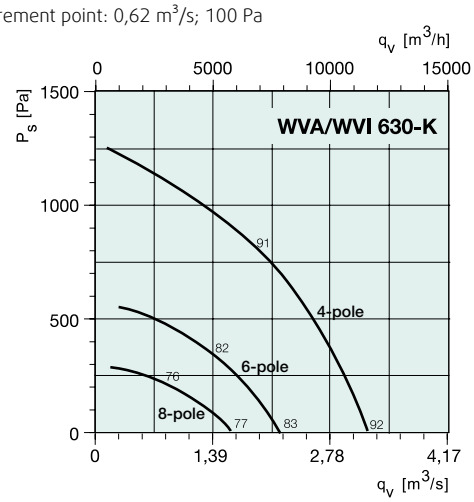
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	80	41	56	72	76	74	69	69	58
L_{wA} Outlet	87	51	66	79	82	81	78	74	64
Measurement point: 1,0 m³/s; 210 Pa									
6-pole									
L_{wA} Inlet	70	31	49	63	67	63	58	60	46
L_{wA} Outlet	74	39	55	66	69	68	65	62	50
Measurement point: 0,53 m³/s; 150 Pa									
8-pole									
L_{wA} Inlet	61	25	42	54	57	54	54	45	32
L_{wA} Outlet	68	38	55	61	63	61	60	53	42
Measurement point: 0,4 m³/s; 75 Pa									



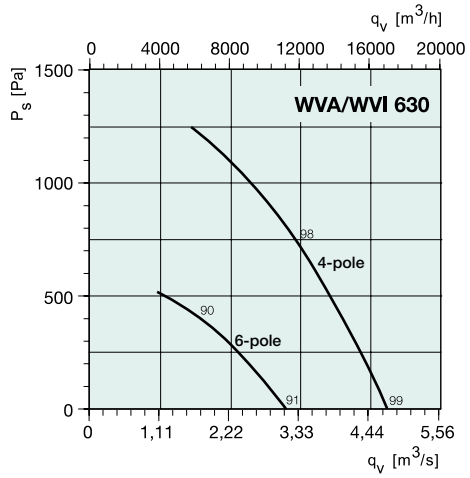
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	89	50	65	81	85	83	78	78	67
L_{wA} Outlet	97	61	76	89	93	90	88	84	74
Measurement point: 1,53 m³/s; 570 Pa									
6-pole									
L_{wA} Inlet	81	42	60	74	78	74	69	71	57
L_{wA} Outlet	86	51	67	78	81	80	77	74	62
Measurement point: 1 m³/s; 220 Pa									
8-pole									
L_{wA} Inlet	71	35	52	64	67	64	64	55	42
L_{wA} Outlet	75	45	62	68	70	68	67	60	49
Measurement point: 0,78 m³/s; 130 Pa									



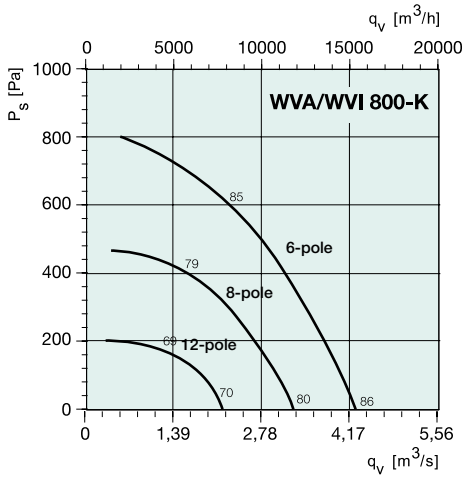
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	84	45	60	76	80	78	73	73	62
L_{wA} Outlet	92	56	71	84	87	86	83	79	69
Measurement point: 1,25 m³/s; 400 Pa									
6-pole									
L_{wA} Inlet	74	35	53	67	70	67	62	64	50
L_{wA} Outlet	79	44	60	71	74	73	70	67	55
Measurement point: 0,8 m³/s; 150 Pa									
8-pole									
L_{wA} Inlet	67	31	48	60	63	60	60	51	38
L_{wA} Outlet	72	42	59	65	67	65	64	57	46
Measurement point: 0,62 m³/s; 100 Pa									



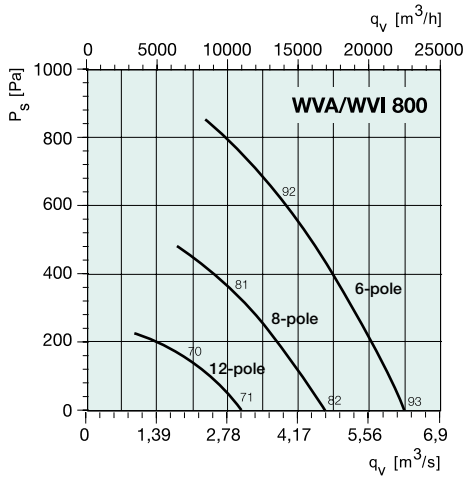
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	91	57	75	85	86	83	83	81	62
L_{wA} Outlet	98	68	88	92	91	93	88	87	71
Measurement point: 2,0 m³/s; 750 Pa									
6-pole									
L_{wA} Inlet	82	49	66	77	77	74	73	71	52
L_{wA} Outlet	89	60	79	83	83	82	78	77	61
Measurement point: 1,34 m³/s; 330 Pa									
8-pole									
L_{wA} Inlet	76	47	62	70	71	68	69	63	46
L_{wA} Outlet	82	60	71	77	76	75	72	67	53
Measurement point: 1,0 m³/s; 185 Pa									



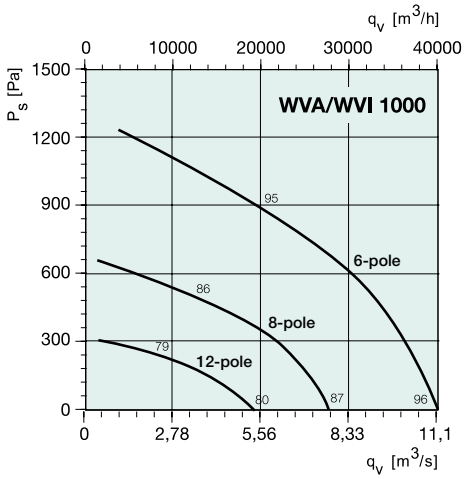
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
4-pole									
L_{wA} Inlet	97	59	74	89	93	92	87	87	76
L_{wA} Outlet	102	68	83	94	98	96	95	91	81
Measurement point: 3,45 m³/s; 700 Pa									
6-pole									
L_{wA} Inlet	90	51	69	83	87	83	78	80	66
L_{wA} Outlet	95	60	76	87	90	89	86	83	71
Measurement point: 2,22 m³/s; 300 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
6-pole									
L_{wA} Inlet	85	52	69	80	80	77	76	74	55
L_{wA} Outlet	94	65	84	87	88	88	83	82	66
Measurement point: 3,3 m³/s; 350 Pa									
8-pole									
L_{wA} Inlet	79	50	65	73	74	71	72	66	49
L_{wA} Outlet	85	63	74	79	79	78	75	70	56
Measurement point: 2,23 m³/s; 300 Pa									
12-pole									
L_{wA} Inlet	69	43	52	63	64	61	61	55	40
L_{wA} Outlet	75	55	62	68	69	70	66	56	53
Measurement point: 1,4 m³/s; 140 Pa									

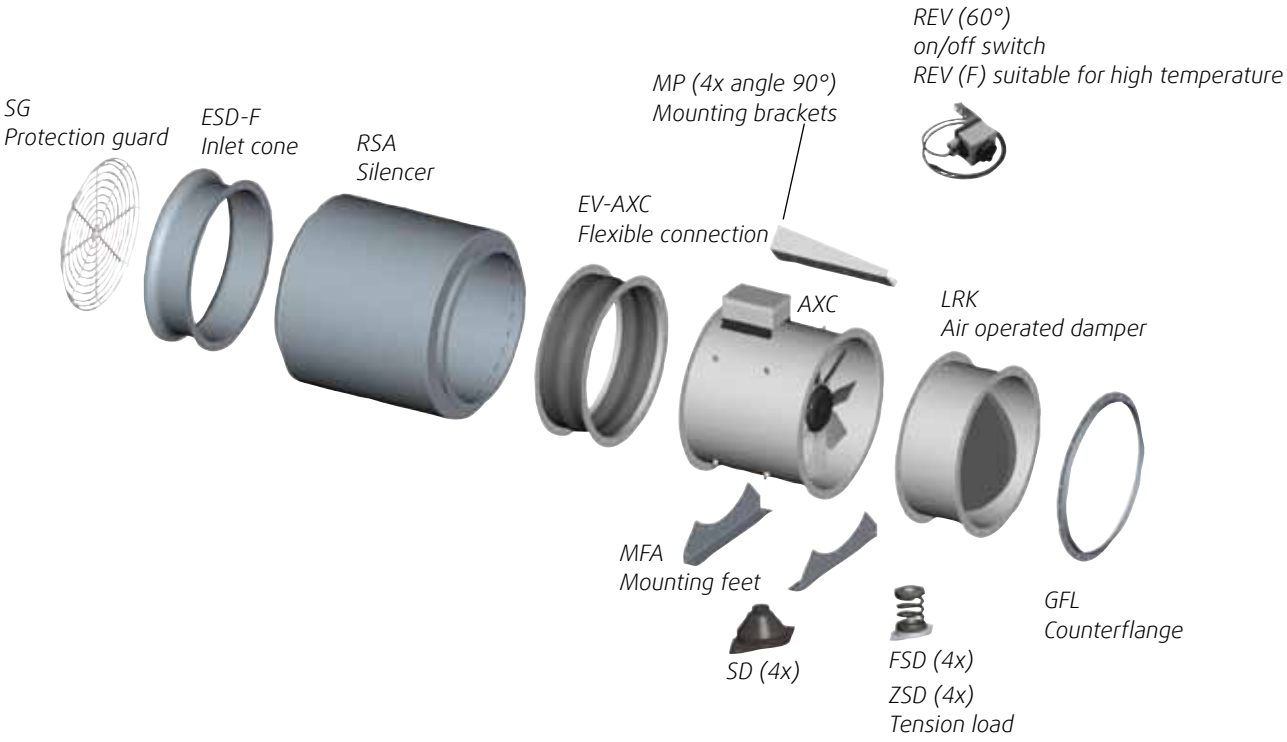


dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
6-pole									
L_{wA} Inlet	92	53	71	85	89	85	80	82	68
L_{wA} Outlet	98	63	79	90	93	92	89	86	74
Measurement point: 4,28 m³/s; 550 Pa									
8-pole									
L_{wA} Inlet	81	45	62	74	77	74	74	65	52
L_{wA} Outlet	88	58	75	81	83	81	80	73	62
Measurement point: 3,26 m³/s; 310 Pa									
12-pole									
L_{wA} Inlet	70	40	53	63	64	59	67	57	36
L_{wA} Outlet	77	49	61	68	71	72	70	64	47
Measurement point: 2,13 m³/s; 140 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
6-pole									
L_{wA} Inlet	95	62	79	90	90	87	86	84	65
L_{wA} Outlet	103	74	93	96	97	96	92	91	75
Measurement point: 8,0 m³/s; 600 Pa									
8-pole									
L_{wA} Inlet	86	57	72	80	81	78	79	73	56
L_{wA} Outlet	95	73	84	90	89	88	85	80	66
Measurement point: 5,6 m³/s; 370 Pa									
12-pole									
L_{wA} Inlet	79	53	62	73	74	71	71	65	50
L_{wA} Outlet	87	67	74	80	81	82	78	68	65
Measurement point: 3,9 m³/s; 150 Pa									

Installation examples Axial fans



General

Plastic fans for aggressive media

These sturdy plastic fans have been developed especially for applications where dirt or aggressive gases can contaminate the exhaust air. Typical applications are laboratories in medical or pharmaceutical institutions, food industry and chemical industry.

Single inlet centrifugal fan PRF

Casing
Standard casing in PE, water tight, with connections from 125 to 250mm diameter. Can be turned to have other outlet directions. Standard position LG270 (as per illustration).

Motor pedestal
Manufactured from steel, powder coated.

Impellers
Single inlet impellers manufactured from PP.

Motors
IEC standard motors, separated from the airstream, in ISO F, equipped with PTC cold conductors or with thermal contacts, to be connected to a motor protection device.



PRF 276

Plastic fan: up to 1.83 m³/s, backward curved impeller, 1 phase and 3 phase.

Roof fan DVP

Casing
Vertical outlet casing and single inlet backward curved impeller manufactured from PP.

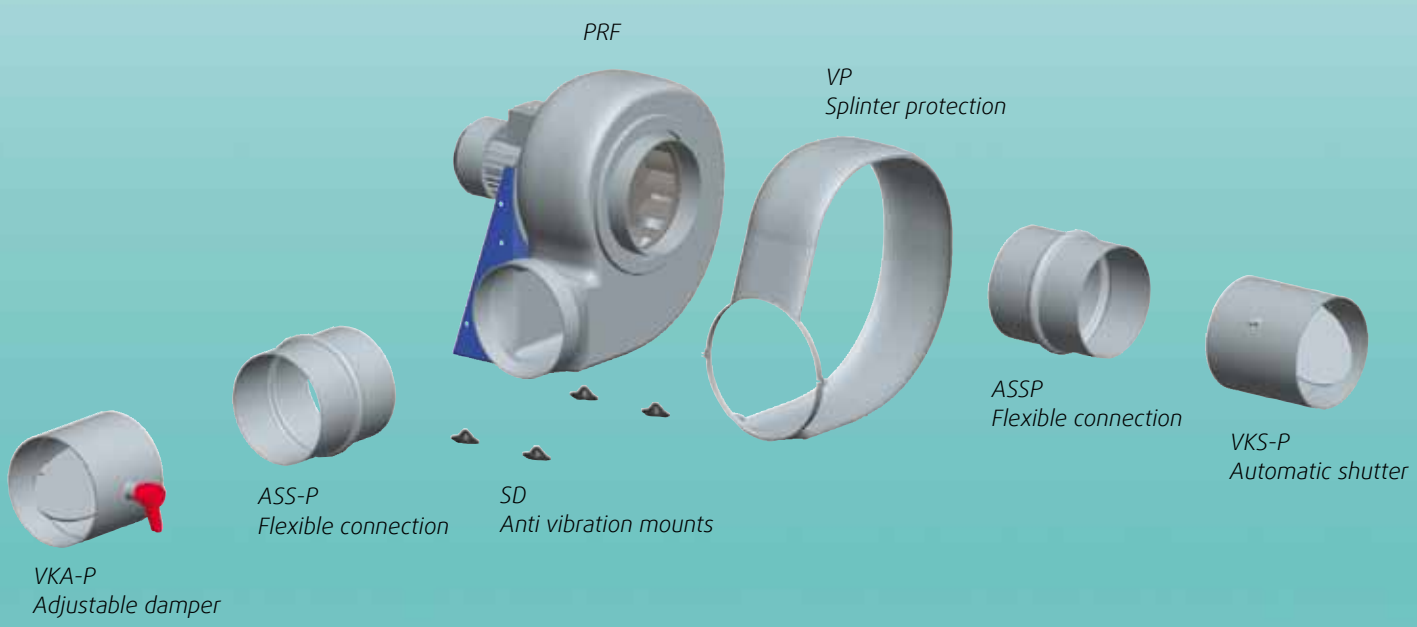
Motors
Motor speed controllable by frequency inverter. Connections from 200 to 400mm diameter.



DVP 280

Plastic roof fan: up to 2.11 m³/s, backward curved impeller, 1 phase and 3 phase.

Installation example





PRF

- Temperature of transported air from -15°C to +70°C
- Single-inlet impellers from PP with effective blade geometry
- The powder painted pedestal is manufactured from galvanised steel
- Position of casing can be easily adapted
- Perfect fitting accessories: connections, dampers, splinter protection

The PRF fans have been developed especially for the exhaust of aggressive media. This is the right fan when corrosive gases, contaminated air or other aggressive components are part of the exhaust air. Typical applications are medical facilities, the food-, electrical- or chemical industry.

The sintered casing from UV-resistant PE is absolutely waterproof and offers a variety of applications with its connectors from ø125-250 mm. The casing can be easily adjusted through turning it (standard position is LG270, see picture).

ELECTRICAL ACCESSORIES



REU p. 320



RTRE p. 320

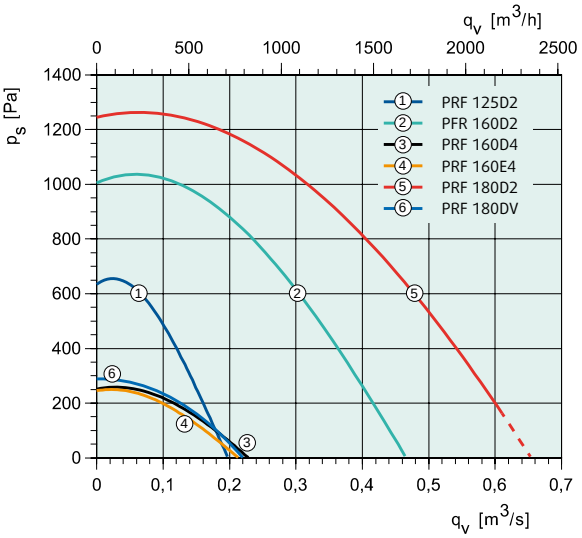


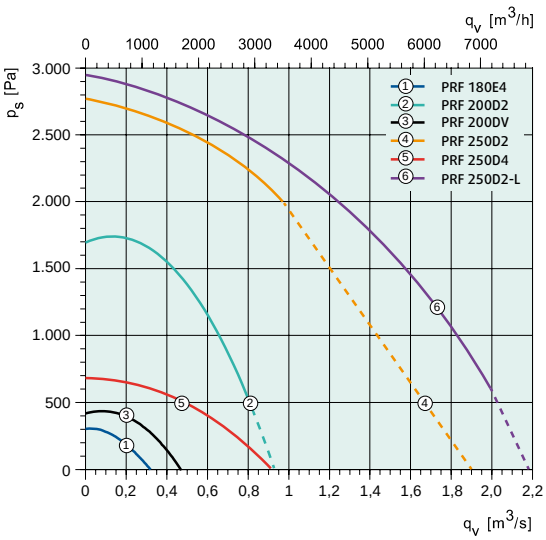
REV p. 340



S-ET p. 341

QUICK SELECTION

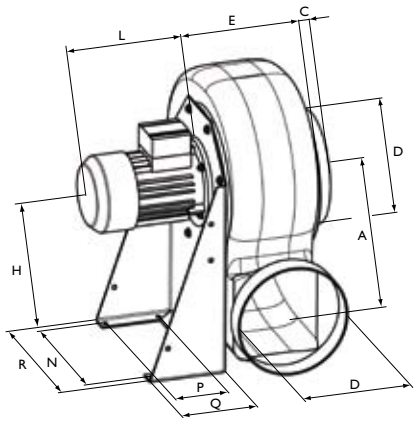




TECHNICAL DATA

PRF		125D2	160D2 IE2	160D4	160E4	180D2 IE2	180DV
Art no.		31525	33562	31495	31545	33563	31497
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	230 1~	400 3~	400 3~
Power	W	250	750	142	171	1100	229
Current	A	0.579	1.68	0.571	0.75	2.37	1.01
Max air flow	m³/s	0.197	0.464	0.228	0.213	0.635	0.32
R.p.m.	min⁻¹	2806	2825	1467	1427	2825	1365
Max temp. of transported air	°C	70	70	70	70	70	70
" when speed controlled	°C	70	70	–	–	70	70
Sound pressure level at 3 m	dB(A)	59	67	50	46	68	49
Weight	kg	9	13	14	14	19	14
Insulation class, motor		F	F	F	F	F	F
Enclosure class, motor		IP 55	IP 55	IP 55	IP 54	IP 55	IP 54
Capacitor	µF	–	–	–	6	–	–
Motor protection		–	–	–	S-ET 10	–	STDT 16
Speed control, five-step	Transformer	–	FRQ5(S)-4A	–	RTRE 1.5	FRQ5(S)-4A	RTRD 2
Speed control, five-step high/low	Transformer	–	–	–	REU 1.5	–	RTRDU 2
Speed control, stepless		–	FRQ(S)-4A	–	–	FRQ(S)-4A	–
Wiring diagram p. 391-400		13b Y	13b Y	13b Y	21	13b Y	13b D

DIMENSIONS



PRF	A	C	øD	E	H	L	N	P	Q	R
125D2	140	40	125	150	250	195	200	100	140	235
160D2	183	40	160	180	310	210	255	100	140	290
160D4/E4	183	40	160	180	310	190	255	100	140	290
180D2	208	40	180	190	350	230	277	120	190	320
180E4/DV	208	40	180	190	350	190	277	120	190	320
200D2	240	40	200	200	410	245	320	150	230	355
200DV	240	40	200	200	410	210	320	150	230	355
250D2	290	40	250	240	495	340	330	170	250	370
250D2-L	290	40	250	240	495		330	170	250	370
250DV	290	40	250	240	495	230	330	170	250	370

VENTILATION ACCESSORIES

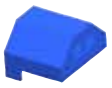

ASS-P p. 285


SD-PRF p. 285


VKA-P p. 285

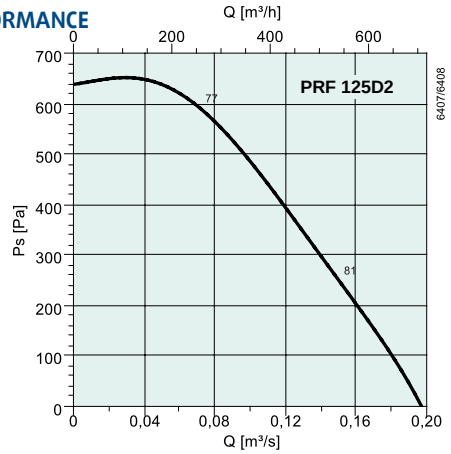

VKS-P p. 285


VP p. 285


WSD PRF p. 285

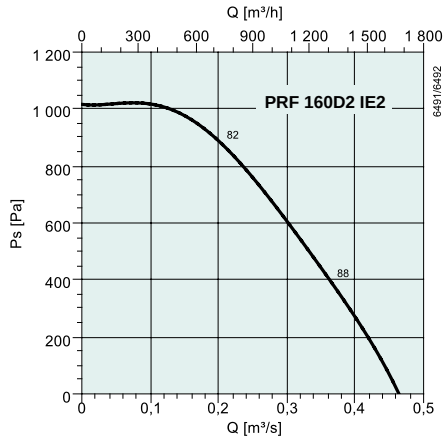
PRF		180E4	200D2 IE2	200DV	250D2 IE2	250D2-L IE2	250D4 IE2
Art no.		31564	33564	31499	33566	34531	33565
Voltage/Frequency	V/50 Hz	230 1~	400 3~	400 3~	400 3~	400 3~	400 3~
Power	W	140	1500	250	4000	5500	750
Current	A	1.11	3.16	0.95	7.64	10.4	1.78
Max air flow	m^3/s	0.32	0.937	0.47	1.83	1.87	0.911
R.p.m.	min-1	1365	2840	1413	2890	2855	1400
Min. back pressure	Pa	-	400	-	2000	600	-
Max temp. of transported air	°C	70	70	70	70	70	70
" when speed controlled	°C	70	70	70	70	70	70
Sound pressure level at 3 m	dB(A)	49	74	60	95	95	66
Weight	kg	15	29	19	50	60	35
Insulation class, motor		F	F	F	F	F	F
Enclosure class, motor		IP 54	IP 55	IP 54	IP 55	IP 54	IP 54
Capacitor	µF	6	–	–	–	–	–
Motor protection		S-ET 10	–	STDT 16	–	–	–
Speed control, five step	Transformer	RTRE 1.5	–	RTRD 2	–	–	–
Speed control, five step high/low	Transformer	REU 1.5	–	RTRDU 2	–	–	–
Wiring diagram p. 391-400		21	13b Y	13b D	13b D	13b D	13b D

PERFORMANCE



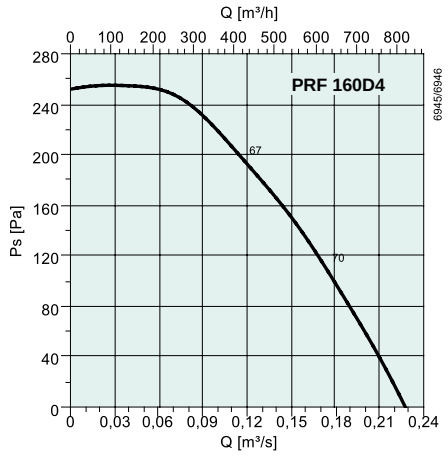
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	77	69	61	74	70	68	62	55	48
L_{wA} Outlet	80	71	68	77	74	69	62	58	48
L_{wA} Surrounding	66	48	25	52	59	64	55	48	39

Measurement point: 0,0725 m³/s; 589 Pa



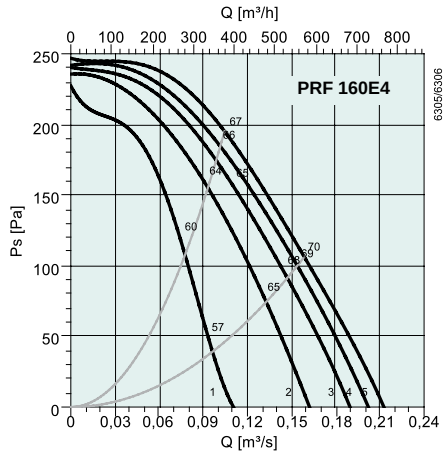
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	82	71	73	76	76	75	68	60	53
L_{wA} Outlet	87	73	77	83	82	78	74	68	60
L_{wA} Surrounding	74	53	45	68	70	67	63	53	45

Measurement point: 0,205 m³/s; 877 Pa



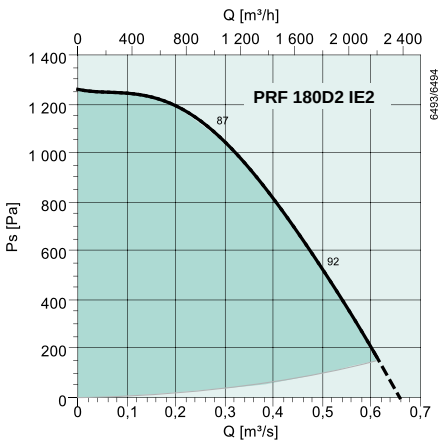
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	67	57	59	63	59	53	51	42	33
L_{wA} Outlet	70	58	64	66	62	55	51	43	34
L_{wA} Surrounding	57	17	25	53	52	44	48	38	29

Measurement point: 0,118 m³/s; 196 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	67	63	62	58	57	53	49	41	33
L_{wA} Outlet	67	55	59	64	62	56	51	43	34
L_{wA} Surrounding	53	32	40	43	48	47	45	35	31

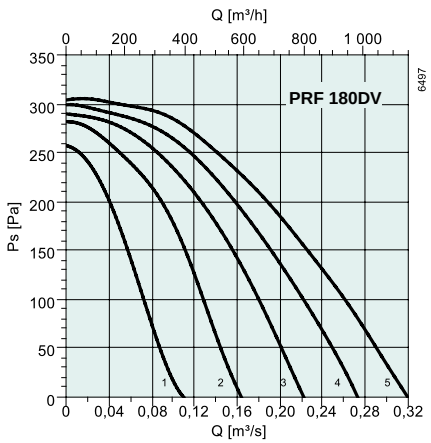
Measurement point: 0,104 m³/s; 195 Pa



Minimum back pressure 180 Pa

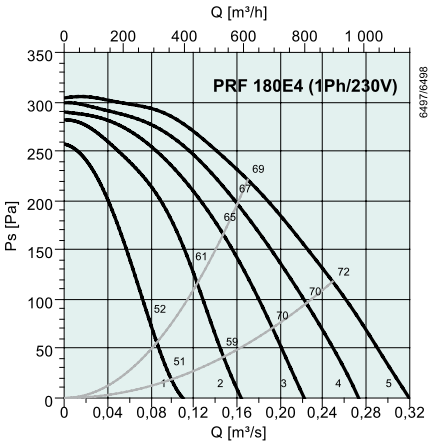
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	87	78	81	80	81	80	73	67	61
L_{wA} Outlet	91	70	86	85	85	83	78	71	63
L_{wA} Surrounding	74	68	46	60	69	69	62	53	47

Measurement point: 0,274 m³/s; 1093 Pa



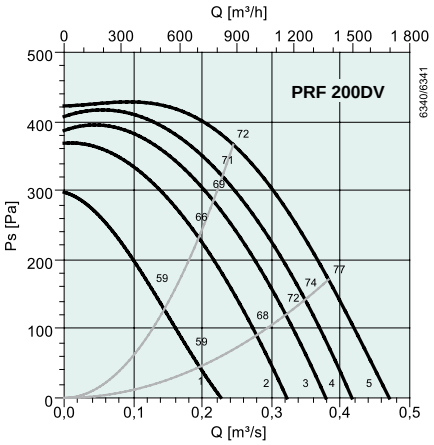
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	70	53	67	62	62	58	54	48	41
L_{wA} Outlet	73	54	70	67	66	60	58	49	41
L_{wA} Surrounding	56	32	34	45	54	49	46	37	34

Measurement point: 0,17 m³/s; 221 Pa



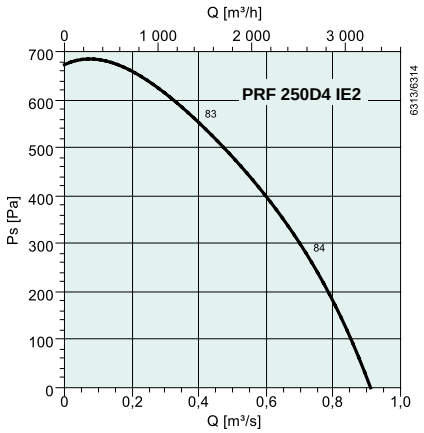
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	69	52	66	61	61	58	54	47	41
L_{wA} Outlet	73	53	70	66	66	60	58	49	41
L_{wA} Surrounding	56	32	34	45	54	49	46	37	34

Measurement point: 0,17 m³/s; 221 Pa



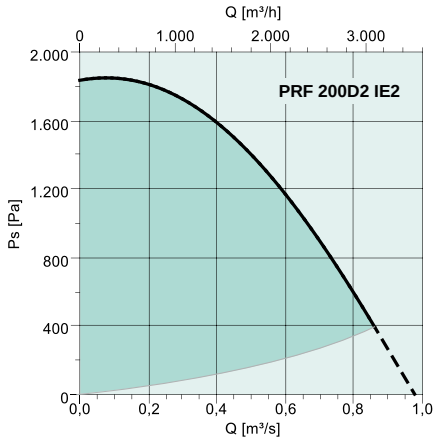
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	77	59	66	70	72	70	65	58	51
L_{wA} Outlet	74	58	69	69	68	63	61	51	42
L_{wA} Surrounding	67	32	38	54	65	58	54	48	43

Measurement point: 0,383 m³/s; 171 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	83	76	75	72	77	76	73	65	56
L_{wA} Outlet	87	83	78	77	77	77	76	64	55
L_{wA} Surrounding	73	47	51	60	66	71	65	58	44

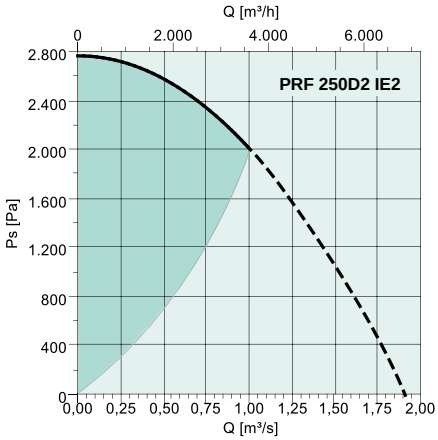
Measurement point: 0,406 m³/s; 548 Pa



Minimum back pressure 400 Pa

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	90	83	78	81	85	84	81	74	67
L_{wA} Outlet	93	85	86	85	87	85	83	74	65
L_{wA} Surrounding	81	77	47	63	74	75	72	63	55

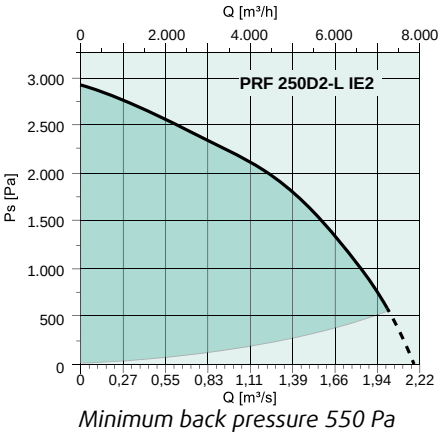
Measurement point: 0,345 m³/s; 1576 Pa



Minimum back pressure 2000 Pa

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	102	91	92	96	96	93	92	87	78
L_{wA} Outlet	102	86	96	96	96	94	93	85	75
L_{wA} Surrounding	95	69	82	90	89	88	86	83	73

Measurement point: 0,824 m³/s; 2002 Pa



Minimum back pressure 550 Pa

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	102	91	92	96	96	93	92	87	78
L_{wA} Outlet	102	86	96	96	96	94	93	85	75
L_{wA} Surrounding	95	69	82	90	89	88	86	83	73

Measurement point: 0,824 m³/s; 2002 Pa



DVP

- Temperature of transported air from -15°C to +60°C
- Single inlet impellers from PP with effective blade geometry
- Weather-resistant, sturdy casing made from PP
- Motor and terminal box in IP55
- Capsulated motor, outside the airstream

The DVP fans have been developed especially for the exhaust of aggressive media. This is the right fan when corrosive gases, contaminated air or other aggressive components are part of the exhaust air. Typical applications are medical facilities, the food-, electrical-or chemical industry. The casing from PP offers a variety of applications with its connectors from ø200 - 400 mm. Motor protection by protection switch.

ELECTRICAL ACCESSORIES

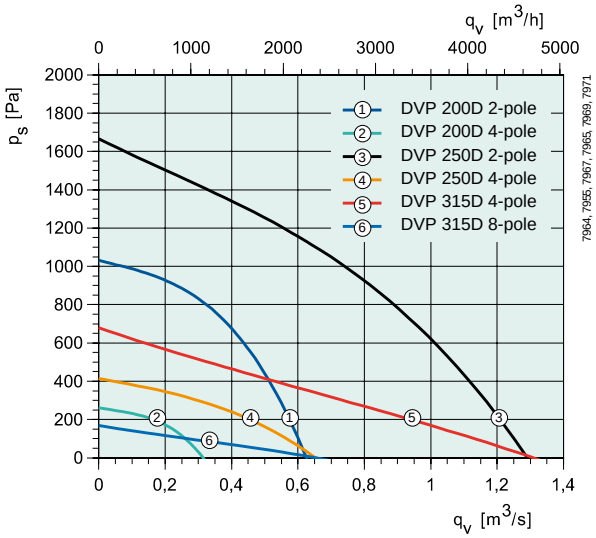


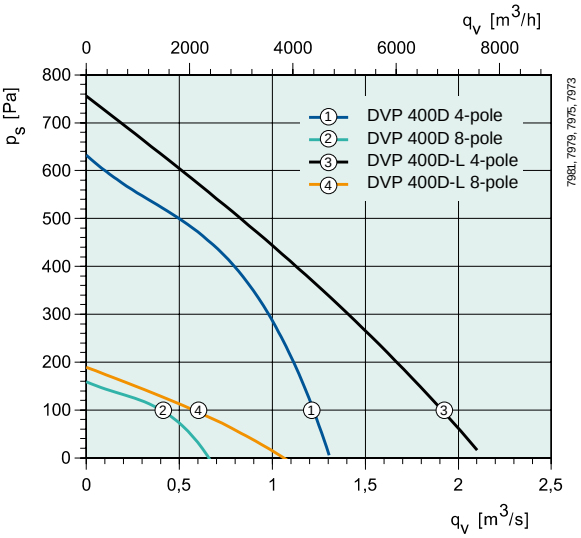
STDT p. 342



S-DT2 SKT p. 340

QUICK SELECTION

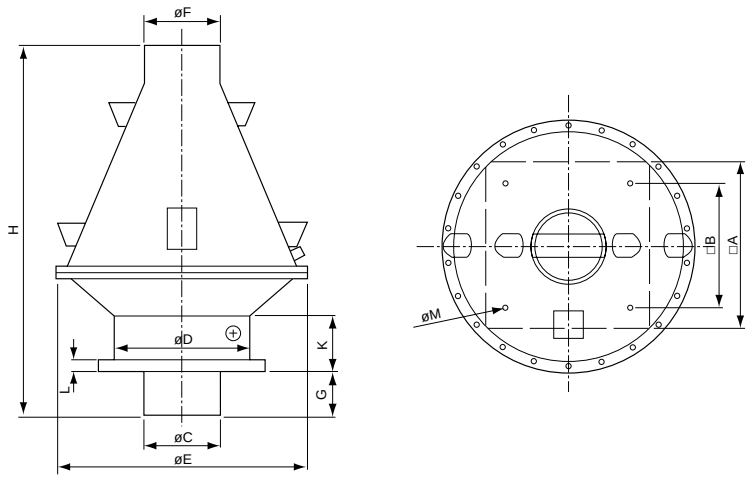




TECHNICAL DATA

DVP		200D2-4	200D2-4	250D2-4	250D2-4	315D4-8	315D4-8
		2-pole	4-pole	2-pole	4-pole	4-pole	8-pole
Art no.		32295		32296		32297	
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~
Power "P2"	W	1500	370	3600	900	2200	500
Current	A	3.4	0.84	7.7	2.0	4.8	1.98
Max air flow	m³/s	0.628	0.316	1.27	0.649	1.28	0.647
R.p.m.	min-1	2885	1468	2874	1468	1494	732
Max temp. of transported air	°C	60	60	60	60	60	60
Sound pressure level at 4 m/10 m	dB(A)	62/54	43/35	69/61	51/43	55/47	40/32
Weight	kg	25	25	35	35	45	45
Insulation class, motor		F	F	F	F	F	F
Enclosure class, motor		IP 55	IP 55	IP 55	IP 55	IP 55	IP 55
Wiring diagram p. 391-400		14a	14a	14a	14a	14a	14a

DIMENSIONS



	□A	□B	øC	øD	øE	øF	G	H	K	L	øM
DVP 200	435	330	200	355	662	200	119	1065	146	30	4x10
DVP 250	595	450	250	400	768	250	119	981	181	30	4x12
DVP 315	665	535	315	560	810	315	218	1161	200	30	4x12
DVP 400	939	750	400	601	976	400	218	1134	235	30	4x14

DVP 200 = SSD/FDS 310/311
DVP 250 = SSD/FDS 355/400
DVP 315 = SSD/FDS 450/500
DVP 400 = SSD/FDS 560/630

VENTILATION ACCESSORIES



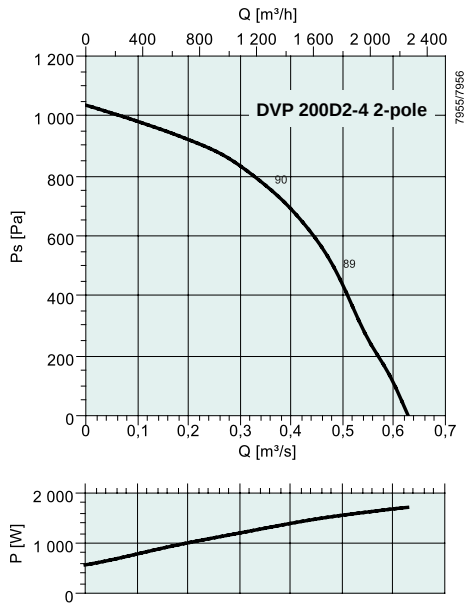
SSD p. 374



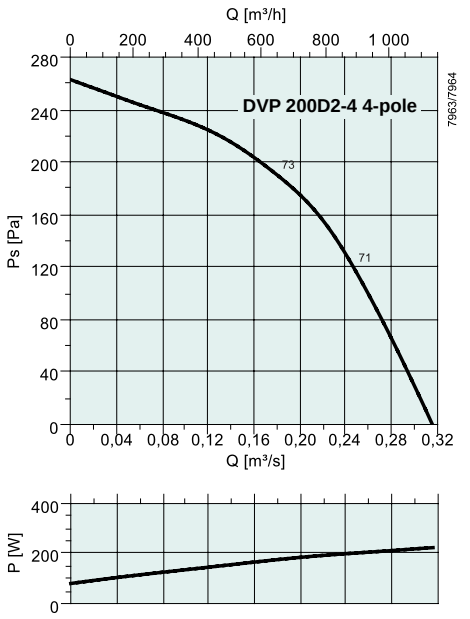
FDS p. 374

DVP		400D4-8	400D4-8	400D4-8-L	400D4-8-L		
		4-pole	8-pole	4-pole	8-pole		
Art no.		32299		32298			
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~		
Power	W	2000	500	3600	900		
Current	A	4.8	1.98	7.9	2.0		
Max air flow	m^3/s	1.31	0.661	2.11	1.05		
R.p.m.	min-1	1445	732	1447	733		
Max temp. of transported air	°C	60	60	60	60		
Sound pressure level at 4 m/10 m	dB(A)	60/52	44/36	61/53	47/39		
Weight	kg	55	55	55	55		
Insulation class, motor		F	F	F	F		
Enclosure class, motor		IP 55	IP 55	IP 55	IP 55		
Wiring diagram p. 391-400		14a	14a	14a	14a		

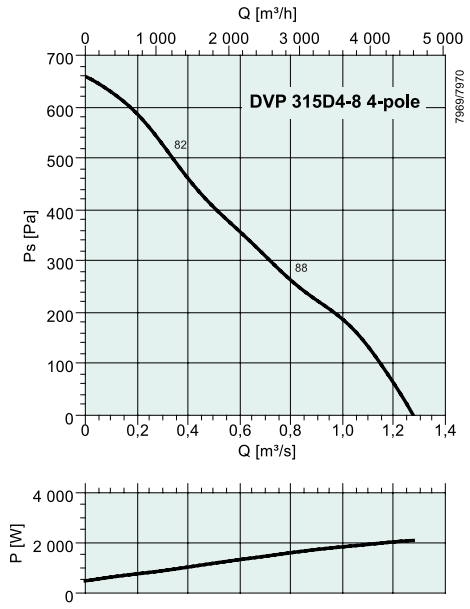
PERFORMANCE



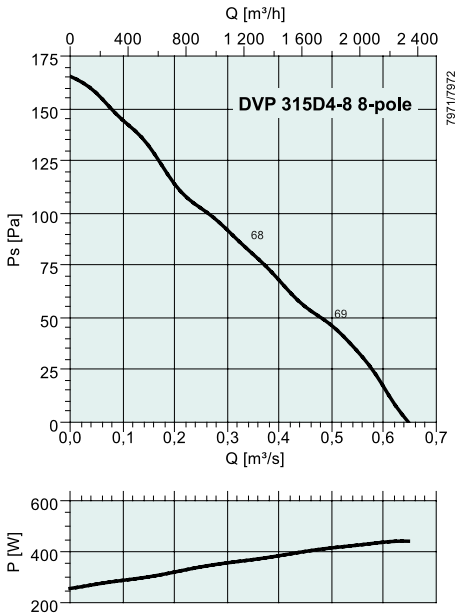
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	90	71	74	83	86	83	78	69	61
L_{wA} Surrounding	85	61	65	78	81	77	76	69	62
Measurement point: 0,36 m³/s; 755 Pa									



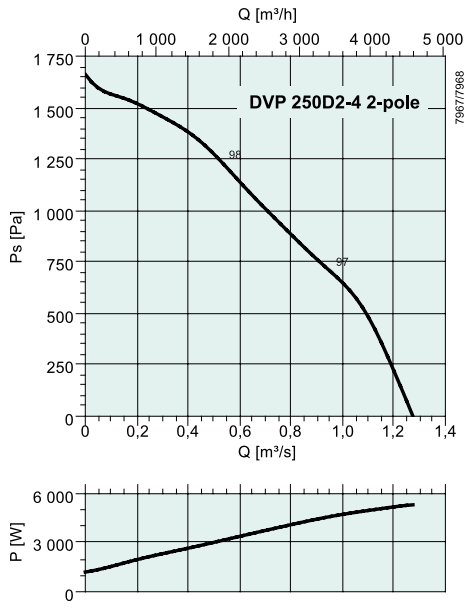
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	73	57	64	69	65	64	58	48	39
L_{wA} Surrounding	66	46	54	61	61	57	55	48	39
Measurement point: 0,18 m³/s; 190 Pa									



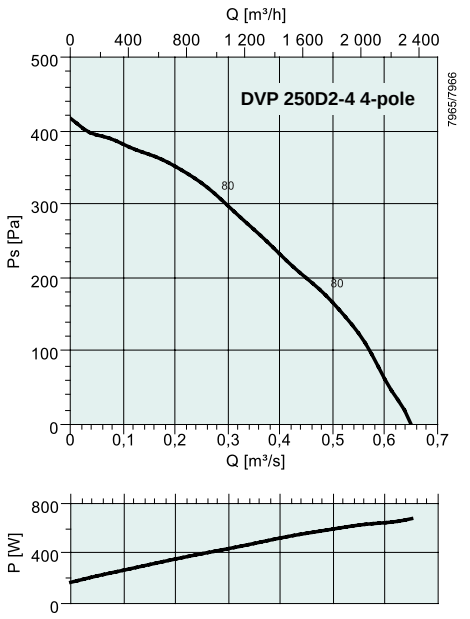
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	82	66	77	77	74	74	67	64	55
L_{wA} Surrounding	81	70	75	73	74	73	68	64	57
Measurement point: 0,329 m³/s; 507 Pa									



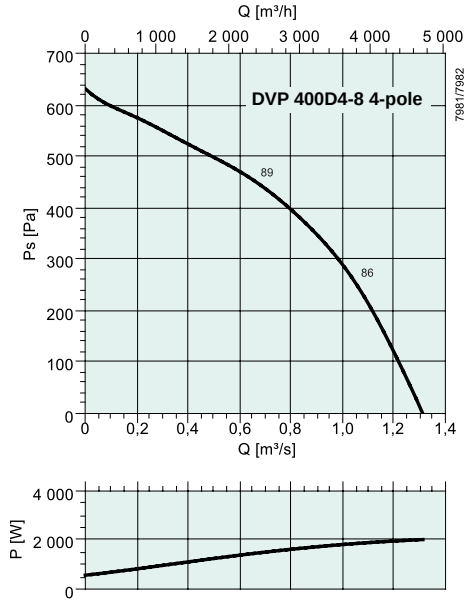
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	68	55	65	61	61	56	47	43	33
L_{wA} Surrounding	63	45	52	53	61	54	49	45	37
Measurement point: 0,335 m³/s; 84 Pa									



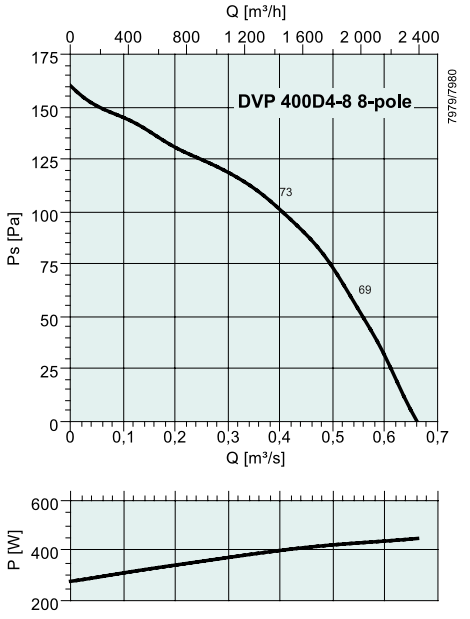
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	98	78	81	93	94	89	84	76	69
L_{wA} Surrounding	95	83	80	86	91	87	85	78	71
Measurement point: 0,543 m³/s; 1218 Pa									



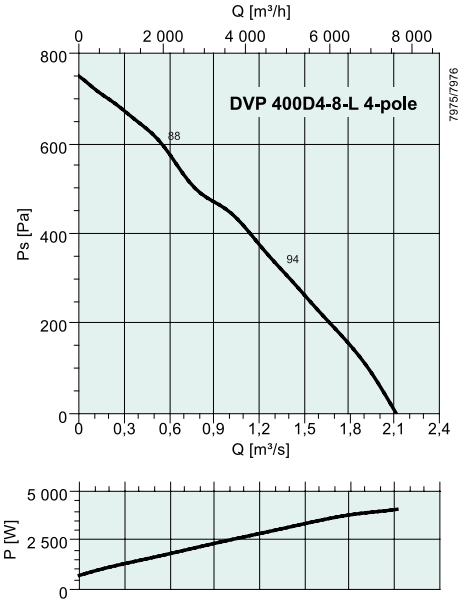
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	80	60	73	77	73	71	63	56	48
L_{wA} Surrounding	78	69	68	72	73	70	63	56	49
Measurement point: 0,279 m³/s; 312 Pa									



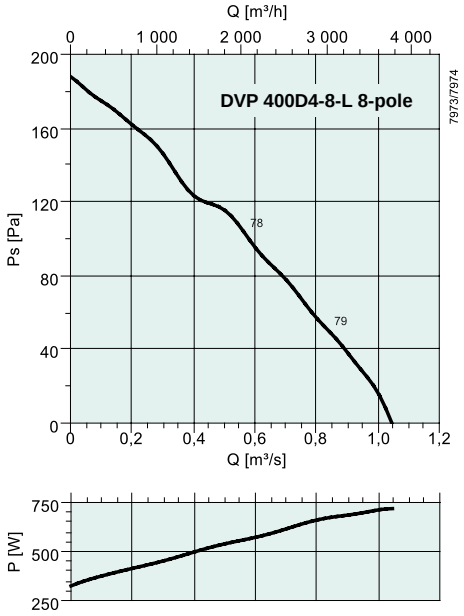
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	89	65	86	85	79	79	72	67	59
L_{wA} Surrounding	87	72	81	83	78	76	72	68	60
Measurement point: 0,669 m³/s; 448 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
LwA Inlet	73	57	72	59	63	62	52	46	36
LwA Surrounding	76	62	75	59	62	56	51	46	36
Measurement point: 0,388 m³/s; 104 Pa									

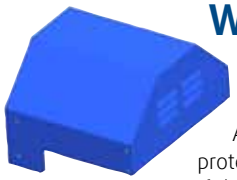


dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	88	69	84	82	80	80	75	72	64
L_{wA} Surrounding	86	72	77	80	78	79	75	71	63
Measurement point: 0,564 m³/s; 594 Pa									



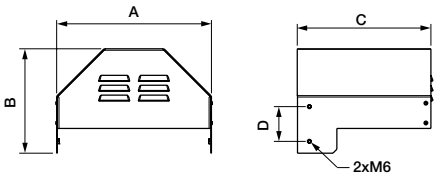
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
LwA Inlet	78	62	78	65	64	61	54	50	40
LwA Surrounding	76	63	75	63	65	59	54	49	40
Measurement point: 0,567 m³/s; 103 Pa									

WSD PRF



Weather roof for motor

Additional weather protection for the motor, if the fan is outdoor mounted. Manufactured from seawater resistant aluminium. The WSD PRF is painted in RAL 5015.



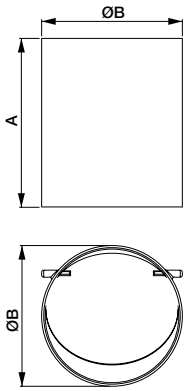
WSD-PRF	A	B	C	D
125	228	173,5	210	60
160	283	201	270	60
180	313	211	270	70
200	348	218,5	320	70
250	287	228,5	400	70

VKS-P



Automatic shutter for PRF

The automatic shutter is manufactured from PP.



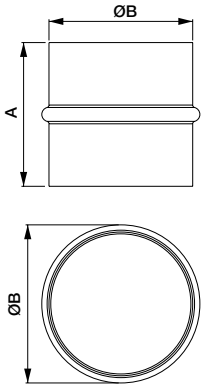
VKS-P	A	øB
125	205	125
160	240	160
180	260	180
200	280	200
250	330	250

ASS-P



Flexible connections for PRF

The flexible connections is made of PVC.



ASS-P	A	øB
125	155	125
160	155	160
180	155	180
200	155	200
250	155	250

VP

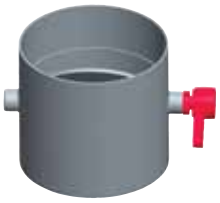


Splinter protection PRF

The splinter protection is manufactured in PVC and the bracket consist of stainless steel

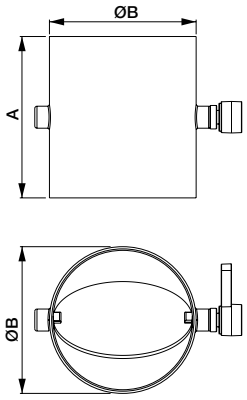
The size of the splinter protection is based upon the size of the corresponding PRF size.

VKA-P



Adjustable shutter for PRF

The automatic shutter is manufactured from PP.



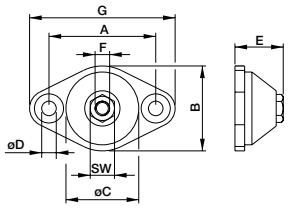
VKA-P	A	øB
125	120	125
160	120	160
180	120	180
200	120	200
250	120	250

SD-PRF



Vibration damper PRF (4 pcs)

Rubber-mount for active and passive vibration- and impact sound isolation.



SD-PRF	A	B	øC	øD	E
125	45	35	30	6	20
160-250	70	50	45	9	32

	F	G	SW		
	M6	60	11		
	M10	90	17		

General

Motors

All fans in this series are equipped with speed controllable external rotor motors. To protect the motor from overheating, the fans have integral thermal contacts with external leads for connection to a motor protection device.

The casings are manufactured from galvanised sheet steel.

CE/CT centrifugal fans

CE/CT with forward curved impeller blades. Electrical connection via a junction box.

CKS centrifugal fans

CKS with backward curved impeller blades. Swing-out function of motor impeller assembly for easy cleaning and maintenance.

KBT/KBR thermo fans

KBT with forward curved, KBR with backward curved impeller blades, for the extract of air up to a temperature of 120°C. Casing manufactured from galvanised steel, IEC standard motors, in three phase from 750 W speed controllable via frequency inverter, smaller and single phase motors speed controllable by transformers.

KBT/KBR EC thermo fans with highly efficient EC motor, speed control by 0-10V signal.

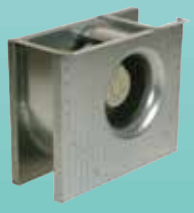
CE. 288

Single-inlet centrifugal fan with forward-curved blades: up to 0.8 m³/s, 1 phase.



CT. 292

Centrifugal fans: up to 2.56 m³/s, forward curved impeller, 3 phase.



CKS 296

Centrifugal fans: up to 3.00 m³/s, backward curved impeller, 1-3 phase.



KBR/KBT EC. 300

Thermo Box: up to 1.86 m³/s, KBT-EC with forward curved impeller, KBR-EC with backward curved impellers, 1 phase and 3 phase.



KBT/KBR 304

Thermo Box: up to 1.97 m³/s KBT with forward curved, KBR with backward curved impellers, 1 phase and 3 phase.



Centrifugal fans single inlet



CE

- Speed-controllable
- Integral thermal contacts
- Can be installed in any position
- Maintenance-free and reliable

CE fans are easy to install. Fans in this series have impellers with forward-curved blades and external rotor motors. The casing is manufactured from galvanised sheet steel.

To protect the motor from overheating, the CE 140 fans have integral thermal contacts with manual reset, CE 200-280 have integral thermal contacts with external leads for connection to a motor protection device.

CE fans are electrically connected via a junction box.

ELECTRICAL ACCESSORIES



S-ET p. 341



RE p. 320

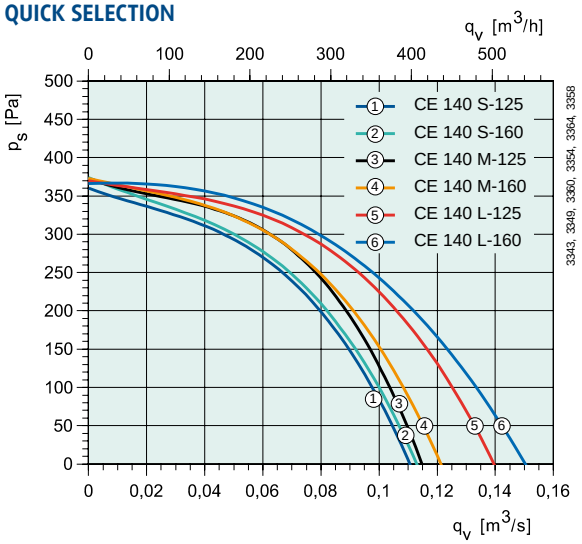


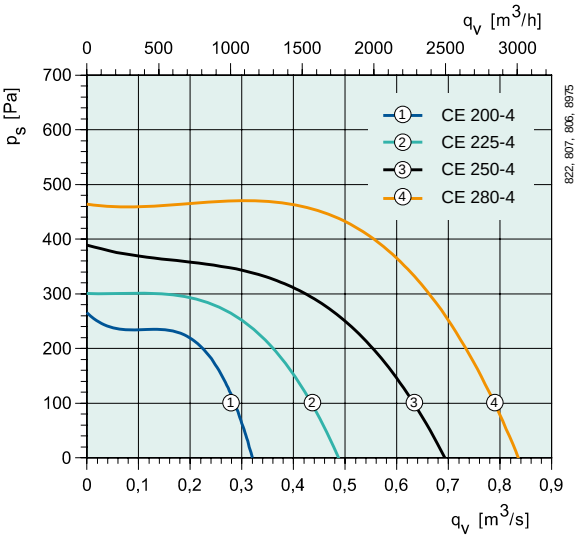
REU p. 320



REE p. 321

QUICK SELECTION



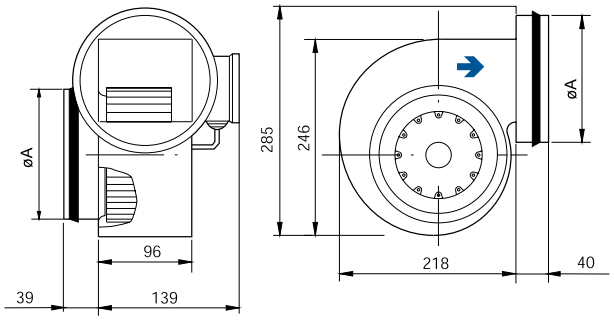


TECHNICAL DATA

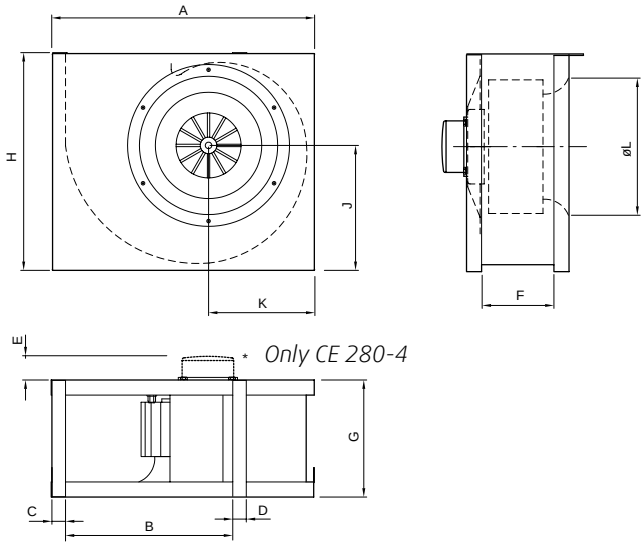
CE		CE 140 S-125	CE 140 S-160	CE 140 M-125	CE 140 M-160	CE 140 L-125	CE 140 L-160
Art. no		1525	1528	1526	1529	1527	1530
Voltage/Frequency	V/50 Hz	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~
Power	W	104	105	121	125	147	153
Current	A	0.45	0.451	0.529	0.54	0.64	0.661
Max air flow	m³/s	0.11	0.114	0.115	0.121	0.14	0.151
R.p.m.	min-1	1633	1498	1833	1807	2459	2406
Max temp. of transported air	°C	50	54	68	65	70	70
" when speed controlled	°C	50	54	68	65	70	70
Sound pressure level at 3 m	dB(A)	43	45	44	42	44	42
Weight	kg	2.7	2.7	3.1	3.1	3.5	3.5
Insulation class, motor		B	B	B	B	B	B
Enclosure class, motor		IP 44	IP 44	IP 44	IP 44	IP 44	IP 44
Capacitor	µF	2	2	4	4	4	4
Motor protection		Integral	Integral	Integral	Integral	Integral	Integral
Speed control, five-step	Transformer	RE 1.5	RE 1.5	RE 1.5	RE 1.5	RE 1.5	RE 1.5
Speed control, five-step high/low	Transformer	REU 1.5	REU 1.5	REU 1.5	REU 1.5	REU 1.5	REU 1.5
Speed control, stepless	Thyristor	REE 1.5	REE 1.5	REE 1.5	REE 1.5	REE 1.5	REE 1.5
Wiring diagram p. 391-400		2	2	2	2	2	2

DIMENSIONS

CE 140



CE/CT 200-280



* *Only CE 280-4*

	A	B	C	D	E	F	G	H	J	K	øL
CE 200-4	404	250	26	26	4	132	183	332	187	164	186
CE 225-4	445	280	25	25	6	147	198	369	211	180	234
CE 250-4	492	315	26	26	8	167	218	412	239	198	261
CE 280-4	547	357	26	26	50	182	233	455	257	221	293

CE		CE 200-4	CE 225-4	CE 250-4	CE 280-4		
Art. no		1577	1582	1585	1534		
Voltage/Frequency	V/50 Hz	230 1~	230 1~	230 1~	230 1~		
Power	W	230	509	836	1259		
Current	A	1.0	2.45	3.75	5.96		
Max air flow	m^3/s	0.302	0.489	0.693	0.828		
R.p.m.	min-1	1202	1301	1183	1074		
Max temp. of transported air	°C	51	70	70	59		
" when speed controlled	°C	51	70	70	59		
Sound pressure level at 3 m	dB(A)	51	61	55	57		
Weight	kg	8.5	13	16.7	21.8		
Insulation class, motor		F	F	F	F		
Enclosure class, motor		IP 44	IP 54	IP 54	IP 54		
Capacitor	µF	6	8	14	20		
Motor protection		S-ET 10	S-ET 10	S-ET 10	S-ET 10		
Speed control, five-step	Transformer	RTRE 1.5	RTRE 3	RTRE 5	RTRE 7		
Speed control, five-step high/low	Transformer	REU 1.5	REU 3	REU 5	REU 7		
Speed control, stepless	Thyristor	REE 2	REE 4	REE 4	–		
Wiring diagram p. 391-400		5	6	6	6		

VENTILATION ACCESSORIES


VK p. 356


RSK p. 355


LDC p. 348

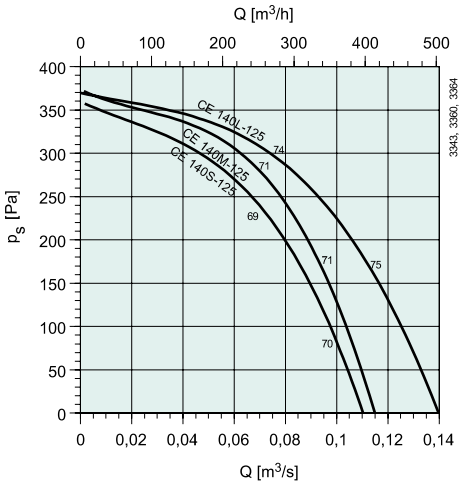

FFR p. 349

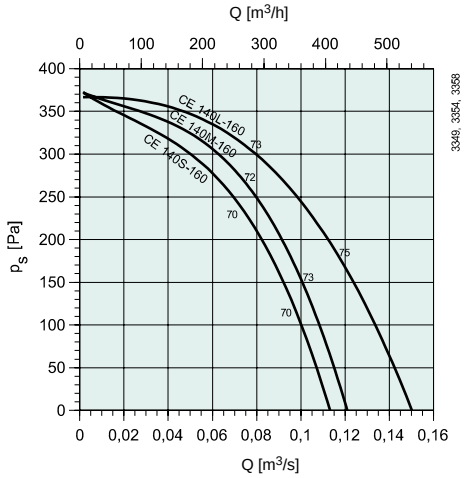

CWK p. 354


VBR p. 365

Centrifugal fans single inlet

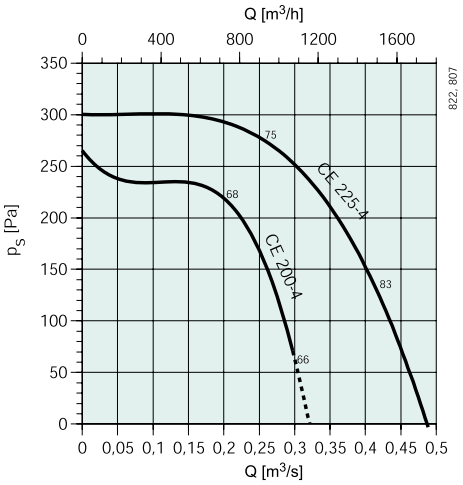
PERFORMANCE

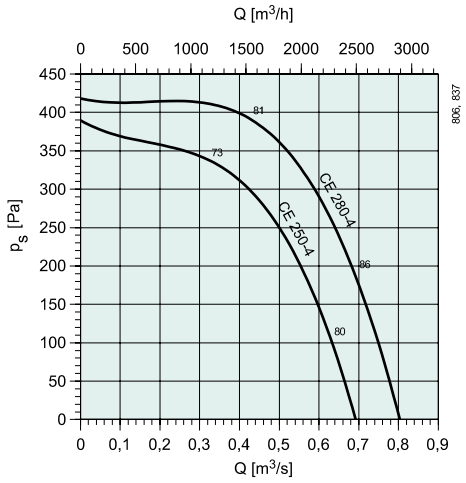




dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
CE 140 S-125									
L_{wA} Inlet	70	49	65	64	60	61	56	53	45
L_{wA} Outlet	70	49	65	64	63	63	59	53	48
LwA Surrounding	50	7	38	29	42	47	40	34	37
Measurement point: 0,069 m³/s; 242 Pa									
CE 140 M-125									
L_{wA} Inlet	71	56	64	67	63	62	58	56	48
L_{wA} Outlet	72	48	65	67	66	64	60	56	51
L_{wA} Surrounding	51	17	37	36	46	48	41	36	29
Measurement point: 0,071 m³/s; 271 Pa									
CE 140 L-125									
L_{wA} Inlet	74	67	67	69	65	64	61	59	52
L_{wA} Outlet	74	62	66	69	67	67	64	59	56
L_{wA} Surrounding	51	38	40	32	45	48	42	39	33
Measurement point: 0,079 m³/s; 286 Pa									

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
CE 140 S-160									
L_{wA} Inlet	69	49	64	64	60	60	58	53	46
L_{wA} Outlet	69	50	64	64	61	61	57	51	47
L_{wA} Surrounding	52	39	37	30	47	49	39	33	29
Measurement point: 0,069 m³/s; 255 Pa									
CE 140 M-160									
L_{wA} Inlet	71	50	67	67	62	60	58	56	50
L_{wA} Outlet	71	50	66	66	63	63	59	54	51
L_{wA} Surrounding	49	26	32	41	43	45	38	35	29
Measurement point: 0,076 m³/s; 267 Pa									
CE 140 L-160									
L_{wA} Inlet	73	56	66	69	64	62	60	59	53
L_{wA} Outlet	73	53	65	69	66	65	63	58	56
L_{wA} Surrounding	49	27	37	35	43	44	41	38	35
Measurement point: 0,082 m³/s; 300 Pa									





dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
CE 200-4									
L_{wA} Inlet	68	51	52	60	60	62	63	60	56
L_{wA} Outlet	69	44	45	57	63	65	61	59	55
L_{wA} Surrounding	58	47	43	40	51	55	47	44	38
Measurement point: 0,195 m^3/s; 222 Pa									
CE 225-4									
L_{wA} Inlet	75	46	50	63	66	70	69	68	64
L_{wA} Outlet	75	46	51	63	66	70	68	67	64
L_{wA} Surrounding	68	54	49	52	60	65	61	57	52
Measurement point: 0,267 m^3/s; 272 Pa									

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
CE 250-4									
L_{wA} Inlet	73	51	58	63	62	68	68	65	61
L_{wA} Outlet	76	49	53	63	68	72	69	68	63
L_{wA} Surrounding	62	45	50	58	50	55	53	49	49
Measurement point: 0,338 m^3/s; 332 Pa									
CE 280-4									
L_{wA} Inlet	78	52	66	70	66	72	72	69	64
L_{wA} Outlet	80	50	60	66	72	75	73	73	66
L_{wA} Surrounding	64	40	50	60	52	57	56	53	41
Measurement point: 0,43 m^3/s; 456 Pa									

Centrifugal fans single inlet



CT

- Speed-controllable
- Integral thermal contacts
- Can be installed in any position
- Maintenance-free and reliable

CT fans are easy to install. Fans in this series have impellers with forward-curved blades and external rotor motors. The casing is manufactured from galvanised sheet steel.

To protect the motor from overheating, the fans have integral thermal contacts with external leads for connection to a motor protection device.

CT 200 fans are electrically connected via a junction box. CT 225 - 450 fans electrical cable is directly connected to the motor without junction box.

ELECTRICAL ACCESSORIES



RTRD p. 321

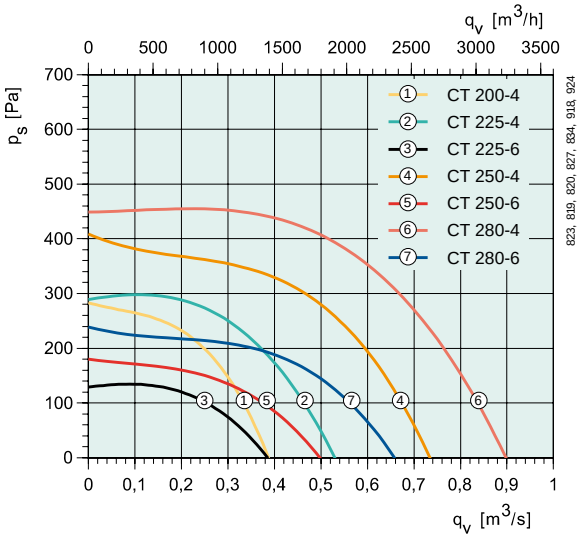


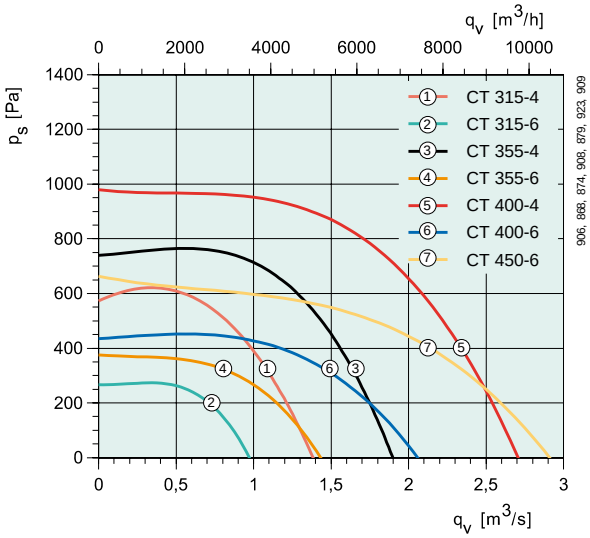
RTRDU p. 321



STDT p. 342

QUICK SELECTION

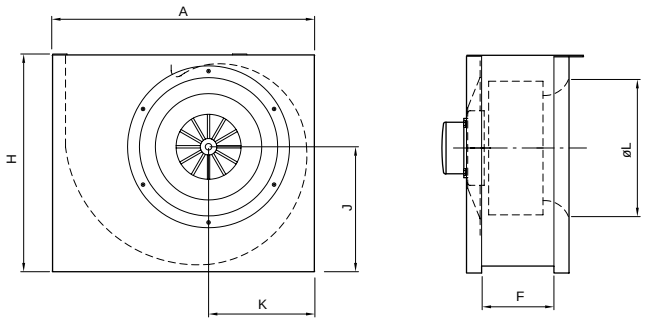


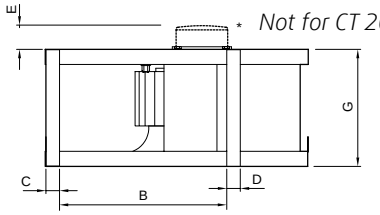


TECHNICAL DATA

CT		200-4	225-4	225-6	250-4	250-6	280-4	280-6
Art. no		1579	1583	1581	1574	1584	1586	1575
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~
Power	W	310	504	198	788	297	1333	407
Current	A	0.551	0.892	0.42	1.4	0.624	2.35	0.863
Max air flow	m³/s	0.392	0.534	0.386	0.68	0.5	0.906	0.587
R.p.m.	min-1	1304	1319	857	1266	832	1307	825
Max temp. of transported air	°C	61	70	70	60	55	70	60
" when speed controlled	°C	61	56	70	60	55	70	60
Sound pressure level at 3 m	dB(A)	44	53	45	60	51	59	45
Weight	kg	8.5	11.5	10.6	14.5	12.3	22.5	16
Insulation class, motor		B	F	F	F	F	F	F
Enclosure class, motor		IP 44	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
Motor protection		STDT 16	STDT 16	STDT 16	STDT 16	STDT 16	STDT 16	STDT 16
Speed control, five-step	Transformer	RTRD 2	RTRD 2	RTRD 2	RTRD 2	RTRD 2	RTRD 4	RTRD 2
Speed control, five-step high/low	Transformer	RTRDU 2	RTRDU 2	RTRDU 2	RTRDU 2	RTRDU 2	RTRDU 4	RTRDU 2
Wiring diagram p. 391-400		7	8	8	8	8	8	8

DIMENSIONS





* *Not for CT 200-4, 225-4, 250-4*

	A	B	C	D	E	F	G	H	J	K	øL
CT 200-4	404	250	26	26	4	132	183	332	187	164	186
CT 225-4	445	280	25	25	6	147	198	369	211	180	234
CT 225-6	445	280	25	25	40	147	198	369	211	180	234
CT 250-4	492	315	26	26	8	167	218	412	239	198	261
CT 250-6	492	315	26	26	42	167	218	412	239	198	261
CT 280-4	547	357	26	26	50	182	233	455	257	221	293
CT 280-6	547	357	26	26	46	182	233	455	257	221	293
CT 315-4/6	615	400	26	26	58	203	254	517	298	247	326
CT 355-4	689	450	26	26	70	227	278	574	325	287	367
CT 355-6	689	450	26	26	53	227	278	574	325	287	367
CT 400-4/6	768	500	26	26	72	252	304	643	365	310	413
CT 450-6	859	560	26	26	76	283	335	721	412	348	463

VENTILATION ACCESSORIES


VK p. 356


RSK p. 355


LDR p. 358


FFR p. 349

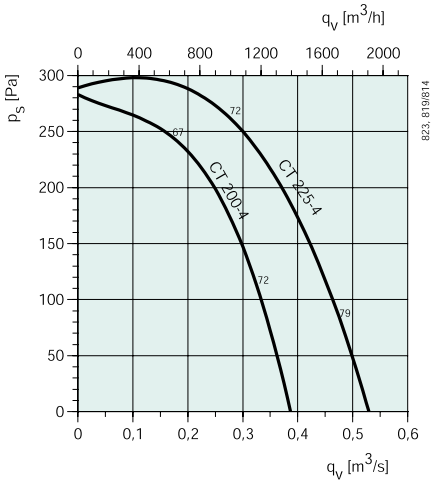

CWK p. 354


VBR p. 365

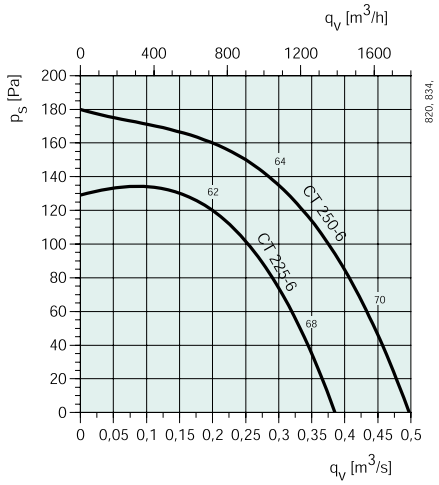
CT		315-4	315-6	355-4	355-6	400-4	400-6	450-6
Art. no		1587	1576	1589	1588	1536	1591	1593
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~
Power	W	2365	843	3716	1538	4984	2624	3821
Current	A	3.95	1.69	6.16	2.88	8.12	4.84	6.76
Max air flow	m^3/s	1.21	0.98	1.73	1.45	2.01	2.07	2.56
R.p.m.	min-1	1233	782	1291	818	1312	843	842
Max temp. of transported air	°C	40	55	70	70	70	70	59
" when speed controlled	°C	40	55	70	70	70	70	59
Sound pressure level at 3 m	dB(A)	65	55	63	56	70	58	61
Weight	kg	28.4	22.6	42.4	31	54.9	51	59.8
Insulation class, motor		F	F	F	F	F	F	F
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
Motor protection		STDT 16	STDT 16	STDT 16	STDT 16	STDT 16	STDT 16	STDT 16
Speed control, five-step	Transformer	RTRD 7	RTRD 2	RTRD 7	RTRD 4	RTRD 14	RTRD 7	RTRD 7
Speed control, five-step high/low	Transformer	RTRDU 7	RTRDU 2	RTRDU 7	RTRDU 4	–	RTRDU 7	RTRDU 7
Wiring diagram p. 391-400		8	8	8	8	8	8	8

Centrifugal fans single inlet

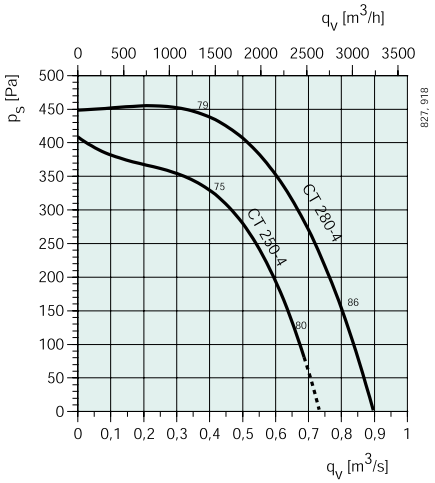
PERFORMANCE



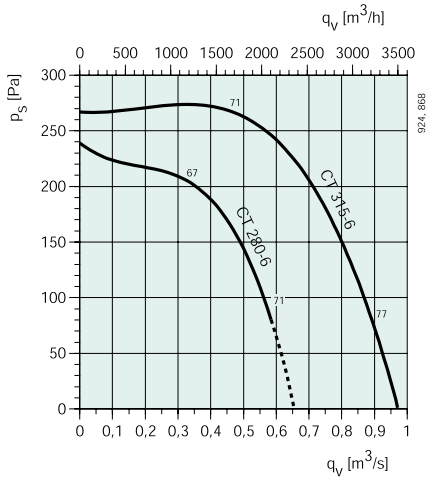
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
CT 200-4									
L_{wA} Inlet	67	44	50	62	56	60	60	57	52
L_{wA} Outlet	69	44	46	59	62	65	62	60	55
L_{wA} Surrounding	51	37	31	44	43	45	45	41	34
Measurement point: 0,181 m³/s; 254 Pa									
CT 225-4									
L_{wA} Inlet	75	65	64	71	63	67	67	65	61
L_{wA} Outlet	77	63	59	69	69	72	68	66	63
L_{wA} Surrounding	59	44	40	47	49	53	54	51	53
Measurement point: 0,291 m³/s; 263 Pa									



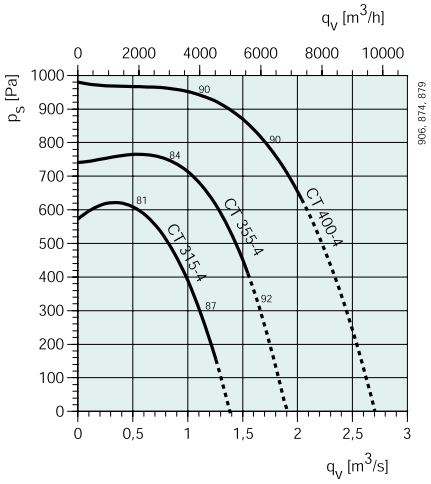
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
CT 225-6									
L_{wA} Inlet	62	38	45	55	54	55	56	53	43
L_{wA} Outlet	64	39	39	53	59	57	56	54	46
L_{wA} Surrounding	51	34	35	44	47	44	43	41	39
Measurement point: 0,194 m³/s; 125 Pa									
CT 250-6									
L_{wA} Inlet	64	41	46	54	55	58	58	55	47
L_{wA} Outlet	67	41	41	54	62	60	59	58	49
L_{wA} Surrounding	58	46	33	42	50	53	53	47	35
Measurement point: 0,29 m³/s; 143 Pa									

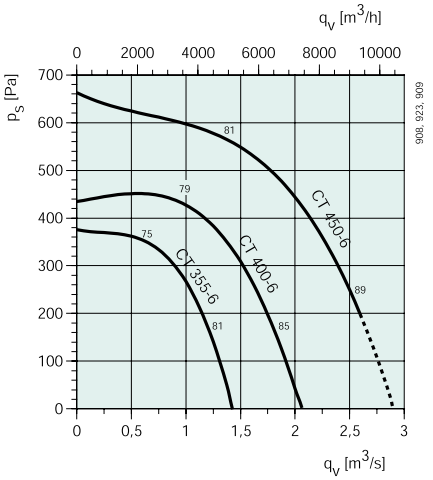


dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
CT 250-4									
L_{wA} Inlet	75	51	57	62	63	71	70	68	64
L_{wA} Outlet	77	50	52	63	68	74	70	69	64
L_{wA} Surrounding	67	53	43	47	56	64	61	56	50
Measurement point: 0,425 m³/s; 319 Pa									
CT 280-4									
L_{wA} Inlet	79	55	62	66	67	74	75	70	66
L_{wA} Outlet	81	54	58	66	72	77	74	72	67
L_{wA} Surrounding	66	49	42	52	53	62	61	57	53
Measurement point: 0,399 m³/s; 445 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
CT 280-6									
L_{wA} Inlet	67	44	51	56	59	62	60	58	51
L_{wA} Outlet	70	42	46	56	66	64	61	60	52
L_{wA} Surrounding	52	41	31	40	44	48	45	40	31
Measurement point: 0,341 m³/s; 205 Pa									
CT 315-6									
L_{wA} Inlet	71	49	57	59	63	66	64	63	56
L_{wA} Outlet	72	47	52	60	68	65	64	64	55
L_{wA} Surrounding	62	38	37	48	57	57	53	50	41
Measurement point: 0,479 m³/s; 274 Pa									





dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
CT 315-4									
L_{wA} Inlet	81	59	68	66	68	76	76	74	69
L_{wA} Outlet	83	56	64	69	74	78	76	75	71
L_{wA} Surrounding	72	51	49	55	61	68	66	62	55
Measurement point: 0,615 m³/s; 594 Pa									
CT 355-4									
L_{wA} Inlet	84	60	71	68	73	81	79	75	71
L_{wA} Outlet	88	57	69	73	79	84	81	79	73
L_{wA} Surrounding	70	44	51	54	56	68	62	54	48
Measurement point: 0,922 m³/s; 756 Pa									
CT 400-4									
L_{wA} Inlet	90	60	72	76	81	87	84	80	76
L_{wA} Outlet	88	63	73	71	76	84	82	77	74
L_{wA} Surrounding	77	46	52	61	67	75	69	60	54
Measurement point: 1,16 m³/s; 974 Pa									

dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
CT 355-6									
L_{wA} Inlet	75	52	59	60	67	70	69	66	62
L_{wA} Outlet	79	63	63	67	74	74	71	70	64
L_{wA} Surrounding	63	39	42	49	58	59	56	50	45
Measurement point: 0,688 m³/s; 355 Pa									
CT 400-6									
L_{wA} Inlet	79	56	63	62	75	73	72	69	65
L_{wA} Outlet	81	51	60	67	76	75	74	72	66
L_{wA} Surrounding	65	40	43	48	60	60	58	49	42
Measurement point: 1,0 m³/s; 442 Pa									
CT 450-6									
L_{wA} Inlet	81	60	66	64	77	75	74	70	67
L_{wA} Outlet	85	55	64	70	80	79	78	74	69
L_{wA} Surrounding	67	39	49	51	64	63	59	48	45
Measurement point: 1,35 m³/s; 593 Pa									

Centrifugal fans single inlet



CKS

- Swing-out
- Speed-controllable
- Integral thermal contacts
- Can be mounted in any position

Swing-out cover for easy cleaning and servicing. Maintenance- free and reliable.

CKS fans are easy to install. Fans in this series have impellers with backward-curved blades and external rotor motors. The casing is manufactured from galvanised sheet steel.

To protect the motor from overheating, the fans have integral thermal contacts with external leads for connection to a motor protection device.

ELECTRICAL ACCESSORIES



S-ET p. 341



RTRE p. 320



REU p. 320



REE p. 321

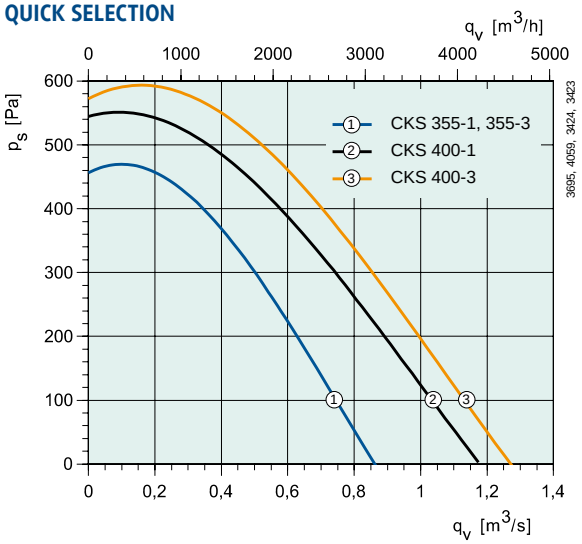


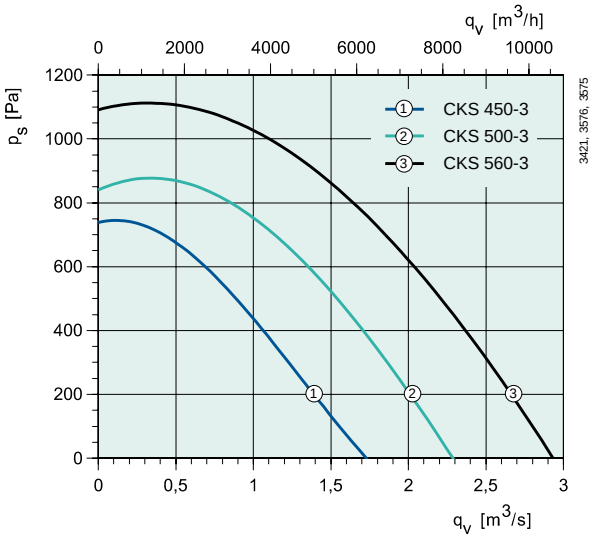
RTRD/RTRDU p. 321



STDT p. 342

QUICK SELECTION

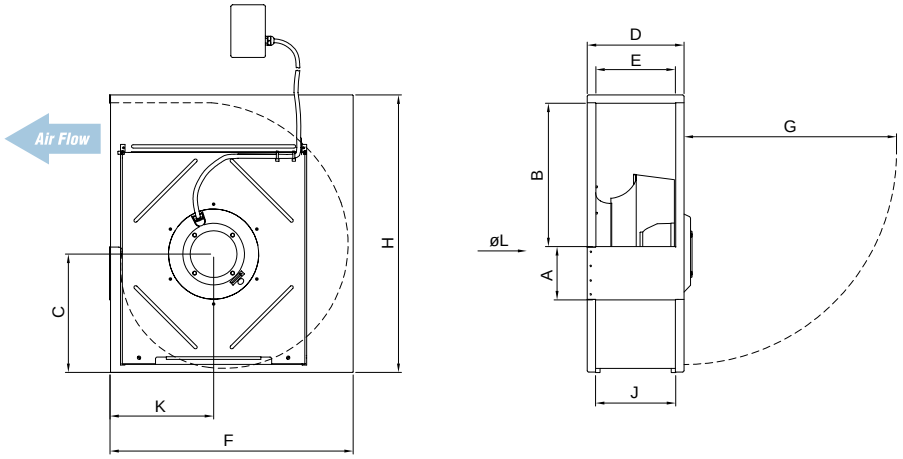




TECHNICAL DATA

CKS		355-1	355-3	400-1	400-3	450-3	500-3	560-3
Art. no		1518	1519	1520	1521	1522	1523	1524
Voltage/Frequency	V/50 Hz	230 1~	400 3~	230 1~	400 3~	400 3~	400 3~	400 3~
Power	W	410	353	611	687	1048	1726	2801
Current	A	1.96	0.73	2.77	1.6	1.88	3.34	4.86
Max air flow	m³/s	0.868	0.856	1.18	1.27	1.75	2.32	2.98
R.p.m.	min-1	1356	1380	1314	1404	1333	1393	1360
Max temp. of transported air	°C	70	70	70	70	70	66	70
" when speed controlled	°C	70	70	70	70	68	62	70
Sound pressure level at 3 m	dB(A)	54	50	56	48	60	65	68
Weight	kg	26.4	25.2	33	32.6	43.6	60.6	74.1
Insulation class, motor		F	F	F	F	F	F	F
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54
Capacitor	µF	8	–	14	–	–	–	–
Motor protection		S-ET 10	STDT 16	S-ET 10	STDT 16	STDT 16	STDT 16	STDT 16
Speed control, five-step	Transformer	RTRE 3	RTRD 2	RTRE 3	RTRD 2	RTRD 4	RTRD 4	RTRD 7
Speed control, five-step high/low	Transformer	REU 3	RTRDU 2	REU 3	RTRDU 2	RTRDU 4	RTRDU 4	RTRDU 7
Speed control, stepless	Thyrisor	REE 4	–	REE 4	–	–	–	–
Wiring diagram p. 391-400		6	8	6	8	8	8	8

DIMENSIONS



CKS	A	B	C	D	E	F	G	H	J	K	øL
355	135	342	283	243	193	590	530	668	196	250	329
400	148	383	317	266	216	658	530	748	219	283	370
450	160	432	355	294	244	734	650	837	247	312	415
500	180	482	393	317	267	810	650	926	270	343	469
560	197	542	440	342	292	900	650	1033	295	380	515

VENTILATION ACCESSORIES



ISE p. 371



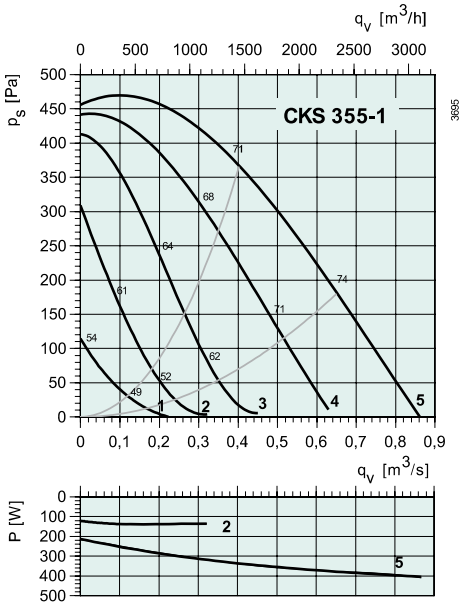
LDC p. 348



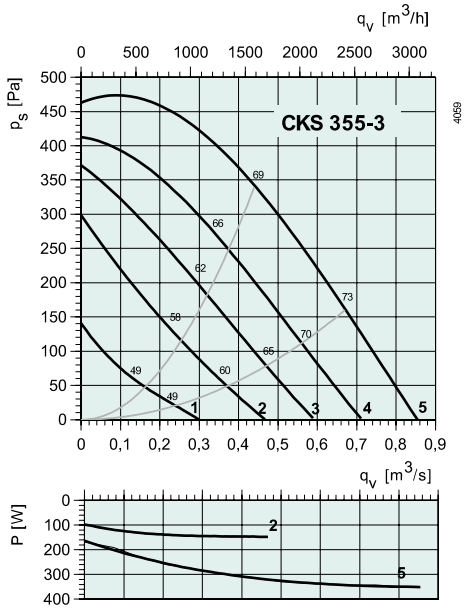
USE p. 371

Centrifugal fans single inlet

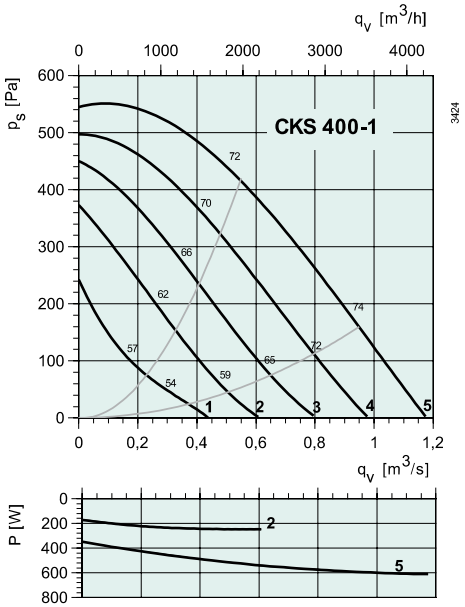
PERFORMANCE



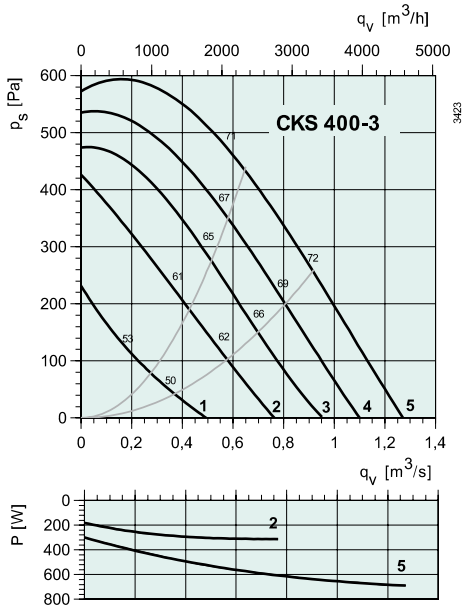
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	71	45	60	65	65	64	61	55	52
L_{wA} Outlet	72	46	58	66	66	66	63	54	49
L_{wA} Surrounding	61	32	46	58	52	54	50	42	33
With LDC 355-900									
L_{wA} Inlet	62	45	57	59	52	46	51	49	45
L_{wA} Outlet	63	46	55	60	53	48	53	48	42
Measurement point: 0,399 m³/s; 375 Pa									



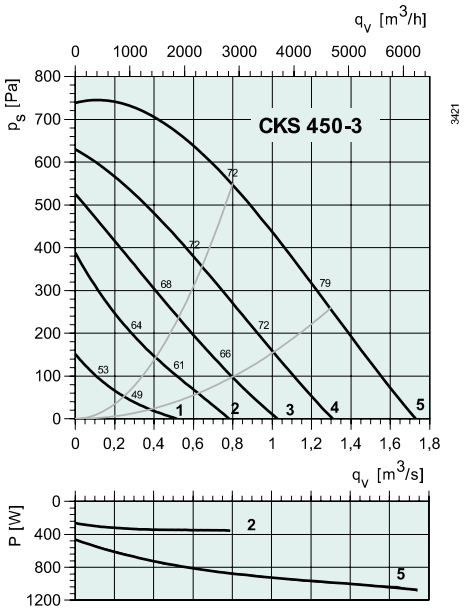
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	69	44	58	63	64	62	60	58	55
L_{wA} Outlet	73	44	57	68	67	66	63	54	45
L_{wA} Surrounding	57	25	41	53	48	51	48	41	33
With LDC 355-900									
L_{wA} Inlet	61	44	55	57	51	44	50	52	48
L_{wA} Outlet	64	44	54	62	54	48	53	48	38
Measurement point: 0,435 m³/s; 345 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	72	49	63	66	67	65	64	58	54
L_{wA} Outlet	76	45	65	71	71	69	65	60	58
L_{wA} Surrounding	63	38	47	59	55	56	54	42	37
With LDC 400-900									
L_{wA} Inlet	66	48	60	61	57	52	57	53	48
L_{wA} Outlet	69	44	62	66	61	56	58	55	52
Measurement point: 0,511 m³/s; 438 Pa									

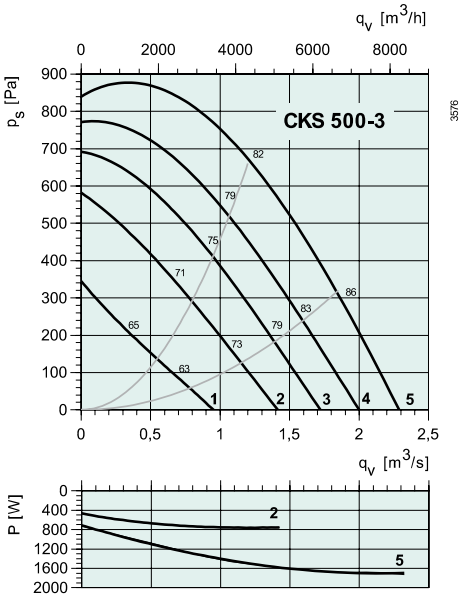


dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	71	41	60	65	66	62	60	52	42
L_{wA} Outlet	77	48	61	72	72	71	67	59	52
L_{wA} Surrounding	55	15	37	50	50	49	46	30	12
With LDC 400-900									
L_{wA} Inlet	64	40	57	60	56	49	53	47	36
L_{wA} Outlet	70	47	58	67	62	58	60	54	46
Measurement point: 0,552 m³/s; 491 Pa									



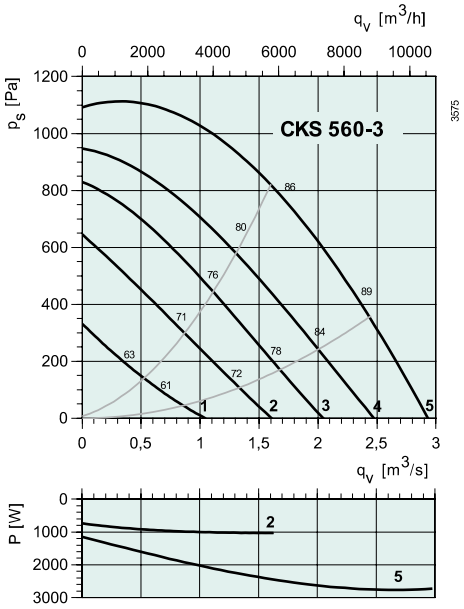
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	72	42	62	65	67	65	64	56	46
L_{wA} Outlet	79	51	64	72	74	73	69	62	57
L_{wA} Surrounding	67	28	48	64	60	59	56	44	33

Measurement point: 0,798 m³/s; 548 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	82	55	69	74	78	74	73	66	58
L_{wA} Outlet	87	56	68	81	83	81	76	72	61
L_{wA} Surrounding	72	33	56	61	68	67	63	51	41

Measurement point: 1,21 m³/s; 672 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	86	61	72	80	81	78	77	71	63
L_{wA} Outlet	89	65	72	83	83	84	79	72	63
L_{wA} Surrounding	75	37	58	71	67	69	65	56	48

Measurement point: 1,76 m³/s; 761 Pa

Centrifugal fans single inlet



KBR/KBT EC

- EC-motors, high level of efficiency
- 100% speed controllable
- Integrated motor protection
- Low noise level
- Max. temp. of continuously transported air 120°C

EC technology is intelligent technology; using integral electronic control which eliminates the slip losses in the motor and ensures that the motor always runs at optimal load and guarantees that the proportion of energy utilized effectively is many times higher and the energy usage considerably lower compared with AC motors. EC fans are notable for their economical use of energy and excellent ease of control. They can be varied in speed to match the airflow demand, and operate at high efficiency levels. For the same air volume, they consume distinctly less energy than AC fan drives. Another special feature of EC fans is their energy-saving potential not only at full load, but especially at part-load. When operating at partload, the energy used is much lower than with an asynchronous motor of equivalent output. Reduced energy usage guarantees a drop in operating costs. The power electronics are integrated in the motor housing. All models have one potential-free terminal for error message. All motors are suitable to be used for 50/60Hz. The input voltage for single phase units can vary between 200 and 277V. Speed control by a 0-10V signal. Every motor has an output voltage of 10V for an external potentiometer or sensor. The KBR-EC fans have impellers manufactured from aluminium with backward-curved blades. The casing is manufactured from double-skinned galvanized sheet steel and is insulated with 50 mm mineral wool. The KBR-EC fans have a swing-out door for easy inspection and service. The direction of the door opening can easily be changed from left to right at site. The fan is isolated from the casing via connectors and anti-vibration dampers are incorporated into the base frame.



ELECTRICAL ACCESSORIES



MTP 10
p. 341



MTV 1 p. 341



REV p. 340

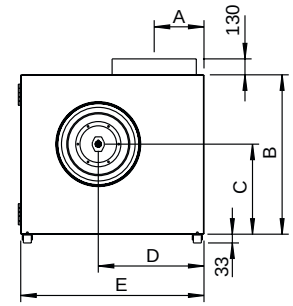


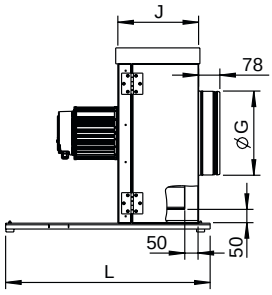
EC-Vent
p. 329-330

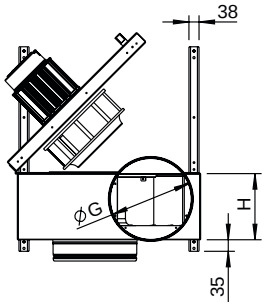
TECHNICAL DATA

KBR-EC		280	315	315-L	355	355-K	355-L		
KBT-EC								200	250
Art. no		33396	33397	33653	33400	33398	33665	33231	33259
Voltage/Frequency	V/50/60 Hz	230 1~	230 1~	230 1~	230 1~	230 1~	400 3~	230 1~	400 3~
Fan power consumption (P1)	W	107	173	1268	498	296	2567	535	1252
Current	A	0.502	0.771	5.53	2.17	1.3	3.92	2.43	2.01
Max air flow	m^3/s	0.426	0.579	1.12	0.997	0.822	1.86	0.554	0.925
R.p.m.	min-1	1512	1512	3025	1495	1514	2610	1498	1370
Max temp. of transported air	°C	120	120	120	120	120	120	70	120
" when speed controlled	°C	120	120	120	120	120	120	70	120
Sound pressure level at 4/10 m	dB(A)	31/23	34/26	49/41	39/31	39/31	52/44	36/28	37/29
Weight	kg	47	75	75	81	81	83	35.6	52.5
Insulation class, motor		F	F	F	F	F	F	F	F
Enclosure class, motor		IP 55	IP 55	IP 55	IP 55	IP 55	IP 55	IP 55	IP 55
Speed control, stepless		MTP 10	MTP 10	MTP 10	MTP 10	MTP 10	MTP 10	MTP 10	MTP 10
Wiring diagram p. 391-400		46	46	48	48	46	47	48	47

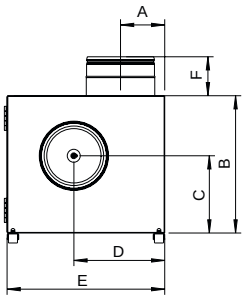
DIMENSIONS

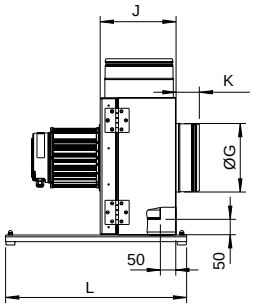


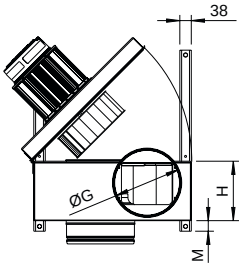




KBR-EC	A	B	C	D	E	øG	H	J	L
280	171.5	537	295	360	625	280	234	291	600
315	187.5	600	339	398	690	315	249	307	800
355	206.7	655	372	451	770	355	273	331	770







KBT-EC	A	B	C	D	E	F	øG	H	J	K	L	M
200	142.7	445	249	292	510	130	200	174	232	78	450	35
250	160	500	285	333	576	130	250	213	272	78	600	35

VENTILATION ACCESSORIES



ALS-KBT p. 371



ASF/KB p. 371

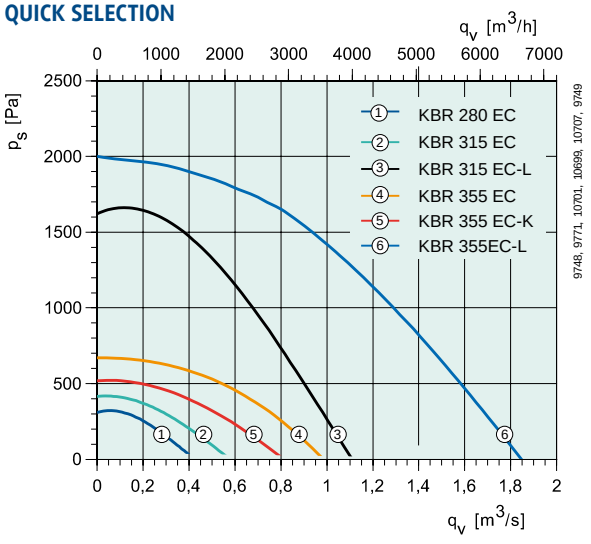


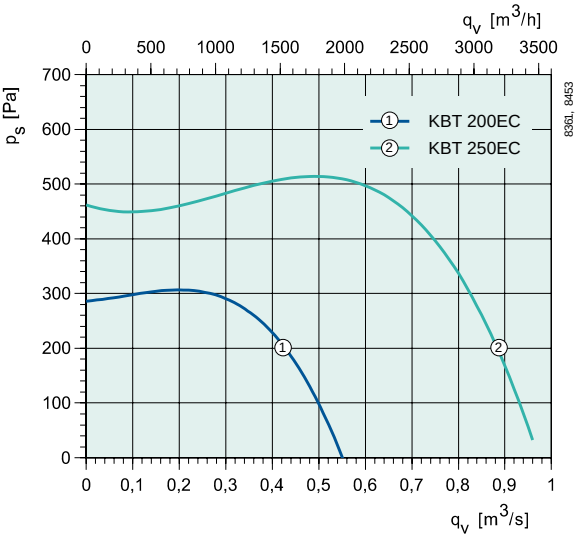
WBK p. 389



WSD KBT p. 371

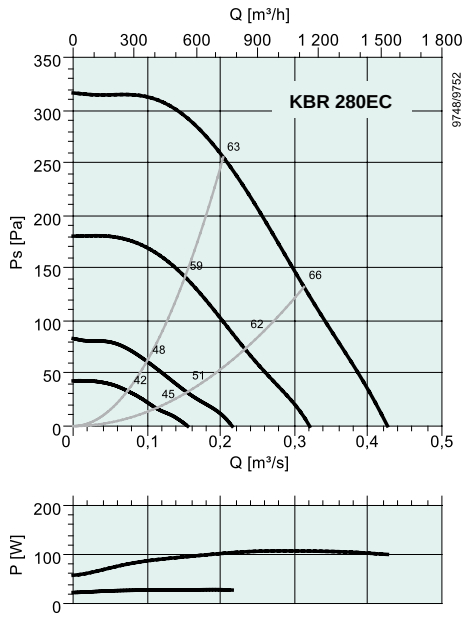
QUICK SELECTION





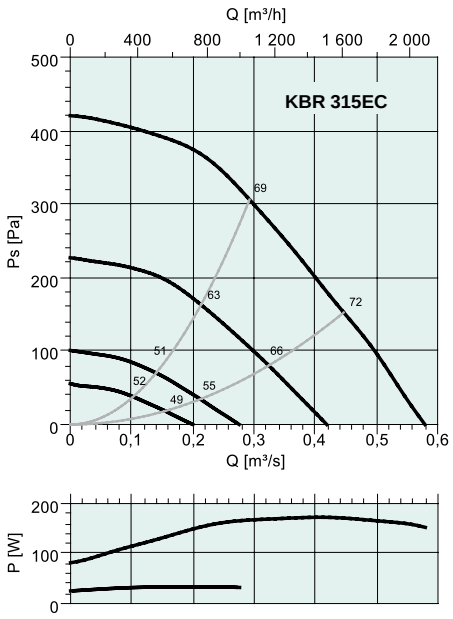
Centrifugal fans single inlet

PERFORMANCE



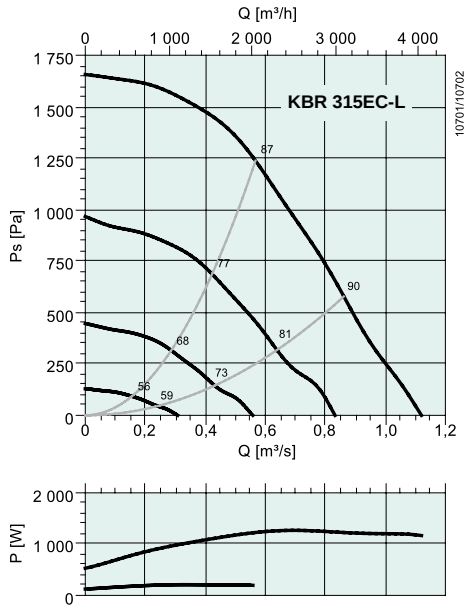
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	63	31	45	56	57	55	56	53	47
L_{wA} Outlet	64	34	47	59	58	56	56	47	46
L_{wA} Surrounding	53	28	41	47	39	43	41	50	31

Measurement point: 0,204 m^3/s; 255 Pa



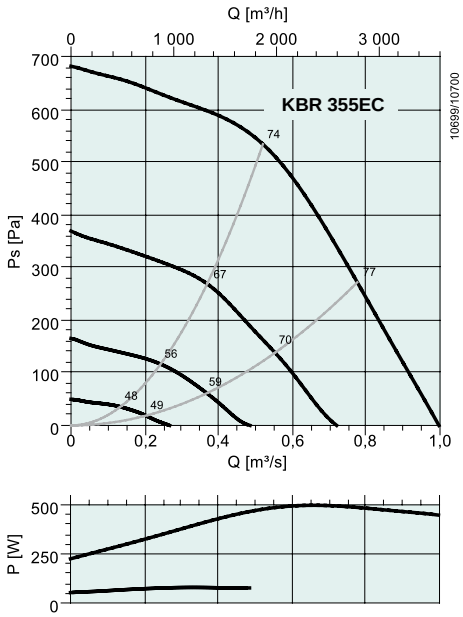
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	69	46	58	64	65	58	58	54	49
L_{wA} Outlet	70	46	58	66	66	61	60	53	48
L_{wA} Surrounding	49	16	39	45	39	44	36	34	25

Measurement point: 0,293 m^3/s; 306 Pa



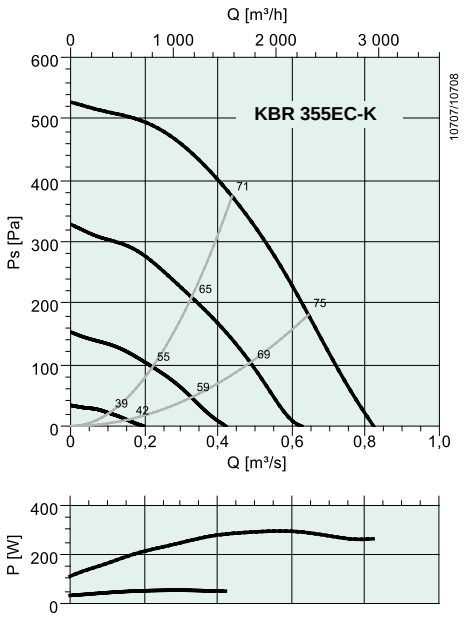
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	87	63	74	76	85	74	75	72	67
L_{wA} Outlet	90	64	72	75	88	81	80	71	66
L_{wA} Surrounding	61	42	54	55	56	51	52	48	40

Measurement point: 0.567 m^3/s; 1238 Pa



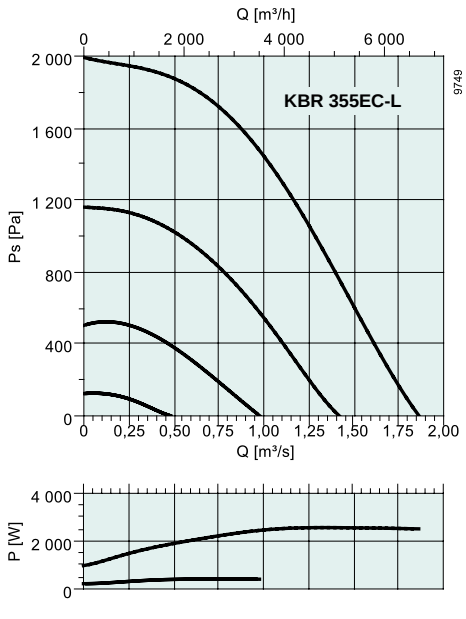
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	74	55	65	69	69	64	61	60	55
L_{wA} Outlet	76	60	65	74	68	66	61	59	54
L_{wA} Surrounding	54	26	42	45	45	45	47	49	45

Measurement point: 0,52 m^3/s; 534 Pa



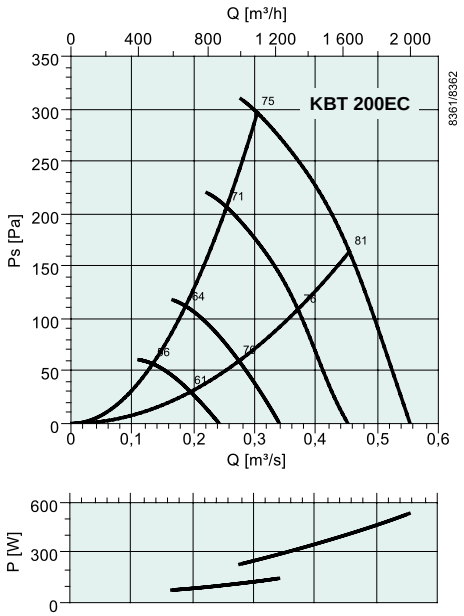
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	71	60	62	63	67	61	61	57	51
L_{wA} Outlet	71	56	59	65	66	63	59	54	49
L_{wA} Surrounding	47	31	35	36	36	45	38	31	24

Measurement point: 0,438 m^3/s; 374 Pa



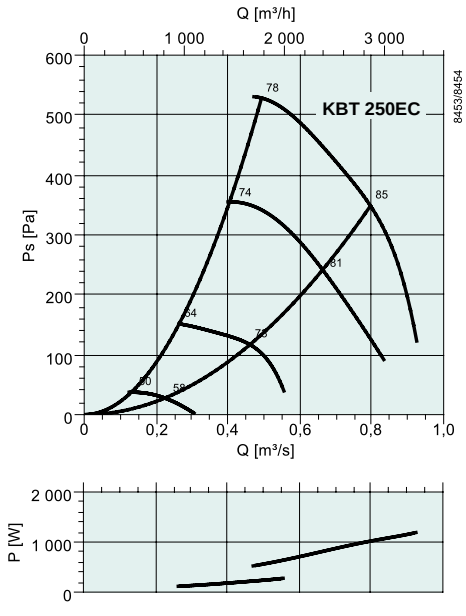
dB(A)	Tot		Frequency bands [Hz]						
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	90	-	88	87	82	80	76	70	67
L_{wA} Outlet	92	-	90	89	84	82	78	72	69
L_{wA} Surrounding	72	-	70	69	64	62	58	52	49

Measurement point: 0,93 m^3/s, Ps = 1531 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	75	60	59	72	66	68	64	62	56
L_{wA} Outlet	77	63	69	74	69	68	64	62	56
L_{wA} Surrounding	59	26	23	53	50	49	54	52	42

Measurement point: 0,304 m^3/s; 296 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	78	51	68	69	69	73	70	69	64
L_{wA} Outlet	80	58	68	73	73	75	71	70	63
L_{wA} Surrounding	60	12	45	51	50	54	53	55	50

Measurement point: 0,493 m^3/s; 528 Pa



KBT/KBR

- Max temperature of transported air 120°C
- Speed-controllable
- Integral thermal contacts
- Low sound level

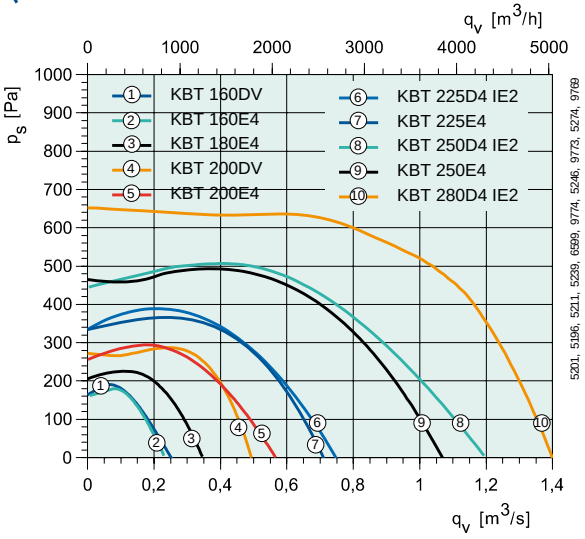
The fans have impellers manufactured from galvanised sheet steel, KBT with forward-curved blades, KBR with backward-curved blades. The casing is manufactured from double-skinned galvanised sheet steel and is insulated with 50 mm mineral wool.

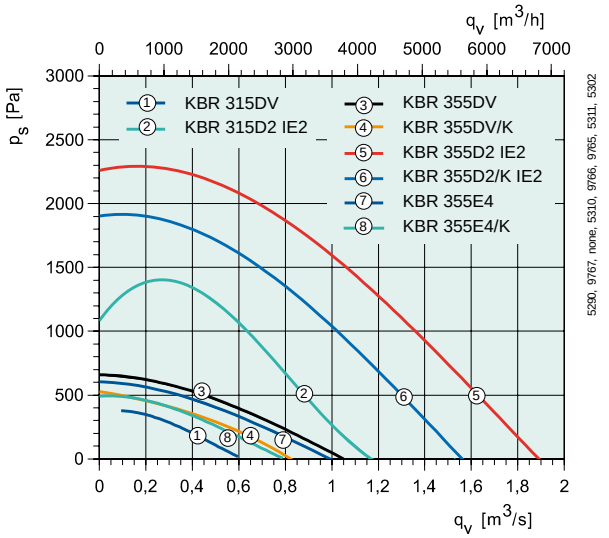
KBT/KBR fans have a swing-out door for easy inspection and service. The direction of the door opening can easily be changed from left to right at site. The fan is isolated from the casing via connectors and anti-vibration dampers are incorporated into the base frame.

To protect the motors from overheating the fans have integral thermal contacts with external leads for connection to a motor protection device.



QUICK SELECTION





ELECTRICAL ACCESSORIES



REV p. 340



RTRD p. 321



RTRDU p. 321



S-DT2 p. 340



STDT p. 342



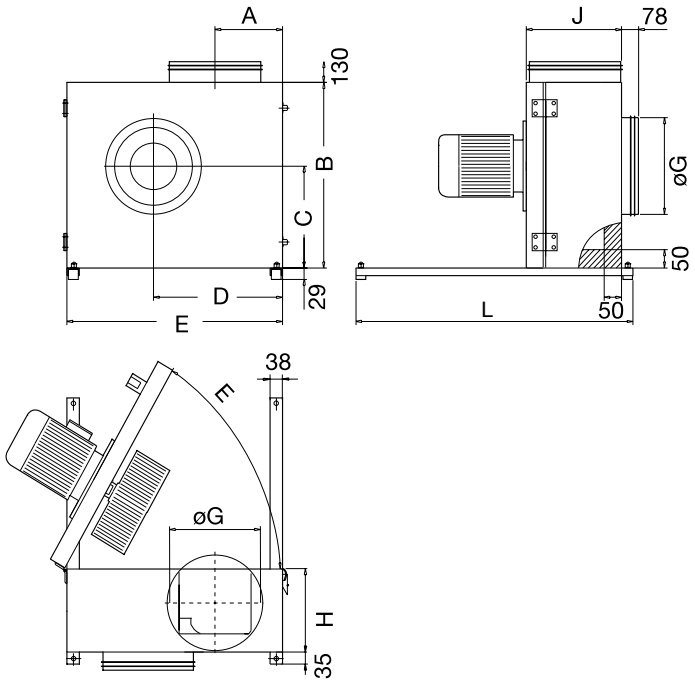
FRQ p. 325

TECHNICAL DATA

KBT		160DV	160E4	180E4	200DV	200E4	225D4 IE2	225E4	250D4 IE2	250E4	280D4 IE2
Art no.		5823	5976	5824	5825	5826	33556	5828	33557	5830	33558
Voltage/Frequency	V/50 Hz	400 3~	230 1~	230 1~	400 3~	230 1~	400 3~	230 1~	400 3~	230 1~	400 3~
Power at shaft	kW	0.16	0.14	0.14	0.55	0.75	0.75	0.88	1.5	1.84	2.2
Current	A	0.57	1.1	1.11	1.88	5.1	1.78	5.5	3.39	10.5	4.64
Max air flow	m³/s	0.248	0.231	0.345	0.583	0.541	0.747	0.653	1.2	1.08	1.41w
R.p.m.	min⁻¹	1120	1476	1490	1360	1370	1390	1417	1400	1400	1420
Max temp. of transported air	°C	120	120	120	120	120	120	120	120	120	120
Sound pressure level at 4/10 m	dB(A)	31/23	31/23	34/26	37/29	37/29	39/31	38/30	44/36	45/37	47/39
Weight	kg	24	25	29	35.6	40.2	40.3	43	52.5	52	63
Insulation class, motor		F	F	F	F	F	F	F	F	F	F
Enclosure class, motor		IP 54	IP 54	IP 54	IP 54	IP 54	IP 55	IP 54	IP 55	IP 54	IP 55
Capacitor	µF	–	6	6	–	30	–	30	–	50	–
Motor protection		STDT 16	S-ET 10	S-ET 10	STDT 16	S-ET 10	U-EK 230E	S-ET 10	U-EK 230E	S-ET 10	U-EK 230E
Speed control, five step		RTRD 2	RTRE 1.5	RTRE 1.5	RTRD 2	RTRE 7	FRQ5(S)-4A	RTRE 7	FRQ5(S)-4A	RTRE 12	FRQ5(S)-10A
Speed control, five step high/low		RTRDU 2	REU 1.5*	REU 1.5*	RTRDU 2	REU 7*	–	REU 7*	–	–	–
Speed control, D/Y two step 400V		S-DT2	–	–	S-DT2	–	–	–	–	–	–
Speed control, stepless		FXDM	–	–	FXDM	–	FRQ(S)-4A	–	FRQ(S)-4A	–	FRQ(S)-10A
Wiring diagram p. 391-400		17	21	21	17	21	13b Y	21	13b Y	21	13b Y

*+ S-ET 10

DIMENSIONS



KBT	A	B	C	D	E	øG	H	J	L
160	127.4	382	213	248	435	160	149	207	450
180	134.4	412	230	269	470	200	161	219	450
200	142.7	445	249	292	510	200	174	232	450
225	146.5	455	256	301	522	225	193	251	600
250	162	500	282	333	576	250	213	272	600
280	171.5	537	295	360	625	280	234	291	600

KBR									
315	187.5	600	339	398	690	315	249	307	800
355	206.7	655	372	451	770	355	273	331	770

VENTILATION ACCESSORIES



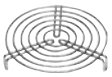
FK p. 355



LDC p. 348



RSK p. 355



SG p. 357



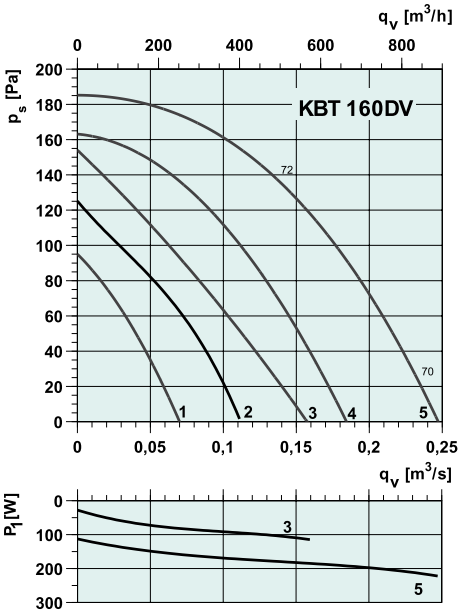
WSD-KBT p. 371

KBR		315DV	315D2 IE2	355DV	355DV/K	355D2 IE2	355D2/K IE2	355E4	355E4/K
Art no.		5833	33559	5835	5977	33560	33561	5980	5978
Voltage/Frequency	V/50 Hz	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	230 1~	230 1~
Power at shaft	kW	0.37	1.5	0.37	0.37	3.0	2.2	0.37	0.37
Current	A	1.39	3.16	1.39	1.39	5.86	4.48	2.1	2.1
Max air flow	m^3/s	0.611	1.14	1.06	0.82	1.97	1.53	0.972	0.778
R.p.m.	min^{-1}	1360	2840	1360	1434	2890	2880	1330	1330
Max temp. of transported air	°C	120	120	120	120	120	120	120	120
Sound pressure level at 4/10 m	dB(A)	36/28	50/42	41/33	41/33	53/45	53/45	41/33	41/33
Weight	kg	75	67.1	81	81	83.3	78.3	70.1	80
Insulation class, motor		F	F	F	F	F	F	F	F
Enclosure class, motor		IP 54	IP 55	IP 54	IP 54	IP 55	IP 55	IP 54	IP 54
Capacitor	µF	–	–	–	–	–	–	12	12
Motor protection		STDT 16	U-EK 230E	STDT 16	STDT 16	U-EK 230E	U-EK 230E	S-ET 10	S-ET 10
Speed control, five step		RTRD 2	FRQ5(S)-4A	RTRD 2	RTRD 2	FRQ5(S)-10A	FRQ5(S)-10A	RTRE 3	RTRE 3
Speed control, five step high/low		RTRDU 2	–	RTRDU 2	RTRDU 2	–	–	REU 3*	REU 3*
Speed control, D/Y two step 400V		S-DT2	–	S-DT2	S-DT2	–	–	–	–
Speed control, stepless		FXDM	FRQ(S)-4A	FXDM	FXDM	FRQ5(S)-10A	FRQ5(S)-10A	–	–
Wiring diagram p. 391-400		17	13b Y	17	17	13b Y	13b Y	21	21

* + S-ET 10

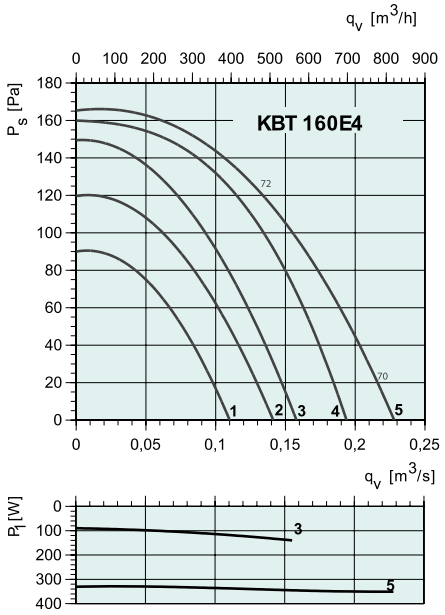
Centrifugal fans single inlet

PERFORMANCE



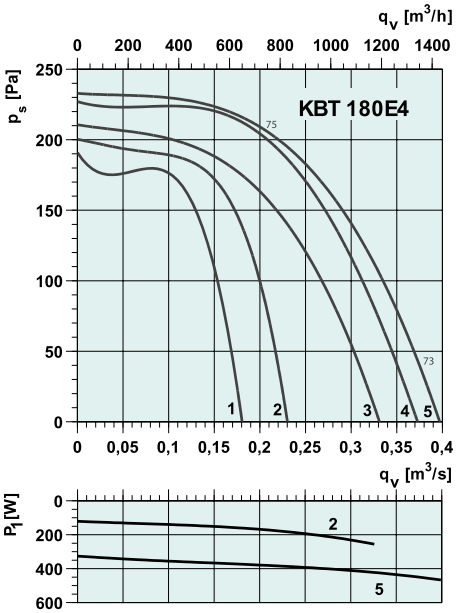
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	72	–	70	66	63	59	57	53	49
L_{wA} Outlet	74	–	72	68	65	61	59	55	51
L_{wA} Surrounding	54	–	52	48	45	41	39	35	31

Measurement point: 0,14 m³/s; 134 Pa



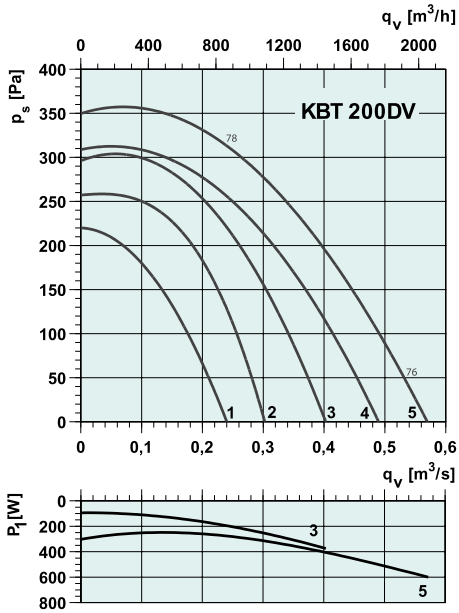
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	72	–	70	66	63	59	57	53	49
L_{wA} Outlet	74	–	72	68	65	61	59	55	51
L_{wA} Surrounding	54	–	52	48	45	41	39	35	31

Measurement point: 0,12 m³/s; 120 Pa



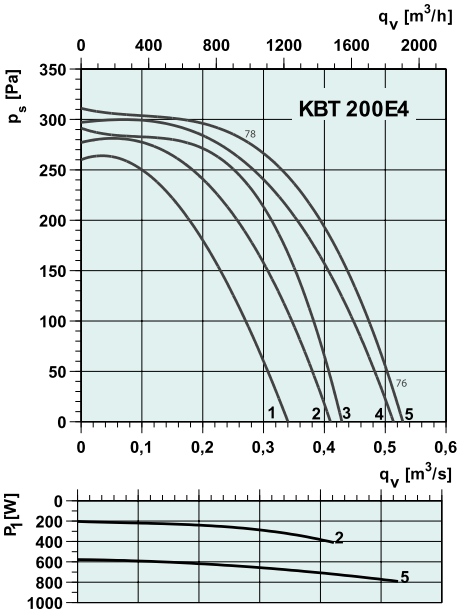
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	75	–	73	69	66	62	60	56	–
L_{wA} Outlet	77	–	75	71	68	64	62	58	–
L_{wA} Surrounding	57	–	55	51	48	44	42	38	–

Measurement point: 0,21 m³/s; 210 Pa



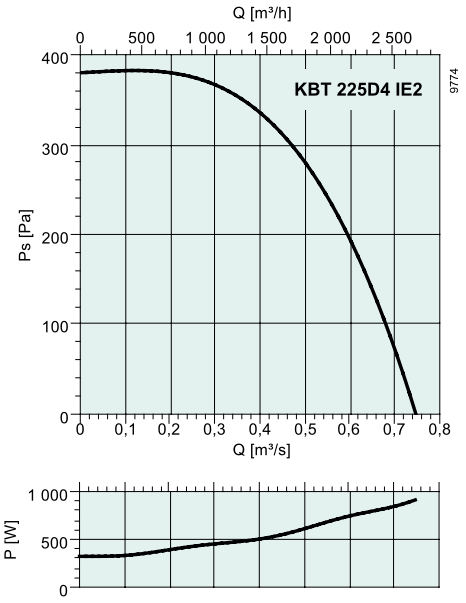
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	78	–	76	72	69	65	63	59	55
L_{wA} Outlet	80	–	78	74	71	67	65	61	57
L_{wA} Surrounding	60	–	58	54	51	47	45	41	37

Measurement point: 0,29 m³/s; 280 Pa



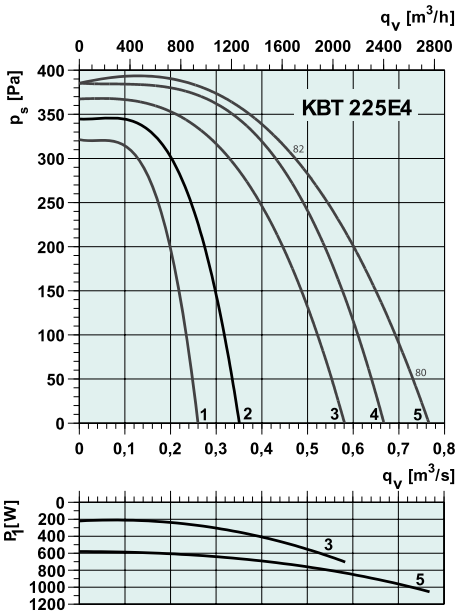
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	78	–	76	72	69	65	63	59	55
L_{wA} Outlet	80	–	78	74	71	67	65	61	57
L_{wA} Surrounding	60	–	58	54	51	47	45	41	37

Measurement point: 0,29 m³/s; 280 Pa



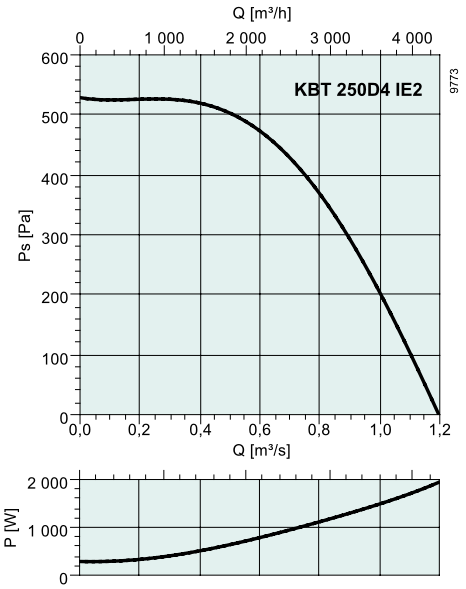
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	81	-	79	75	72	68	66	62	58
L_{wA} Outlet	83	-	81	77	74	70	68	64	60
L_{wA} Surrounding	63	-	61	57	54	50	48	44	40

Measurement point: 0,37 m³/s; 382 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	82	–	80	76	73	69	67	63	59
L_{wA} Outlet	84	–	82	78	75	71	69	65	61
L_{wA} Surrounding	64	–	62	58	55	51	49	45	41

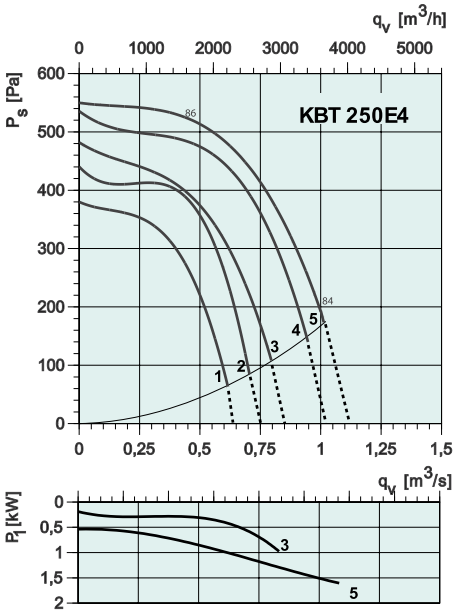
Measurement point: 0,49 m³/s; 285 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	85	-	83	79	76	72	70	66	62
L_{wA} Outlet	87	-	85	81	78	74	72	68	64
L_{wA} Surrounding	67	-	65	61	58	54	52	48	44

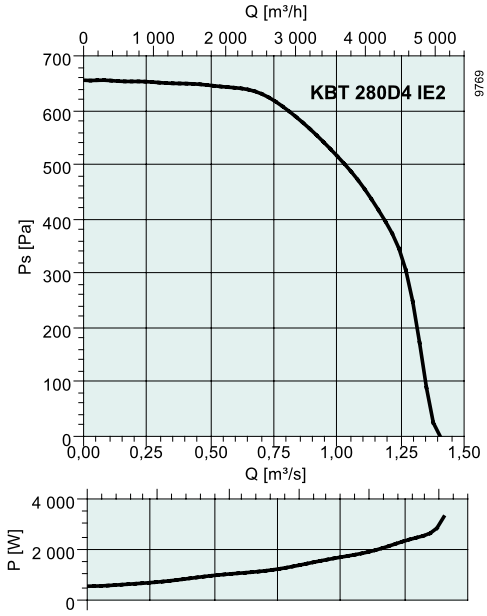
Measurement point: 0,67 m³/s; 400 Pa

Centrifugal fans single inlet



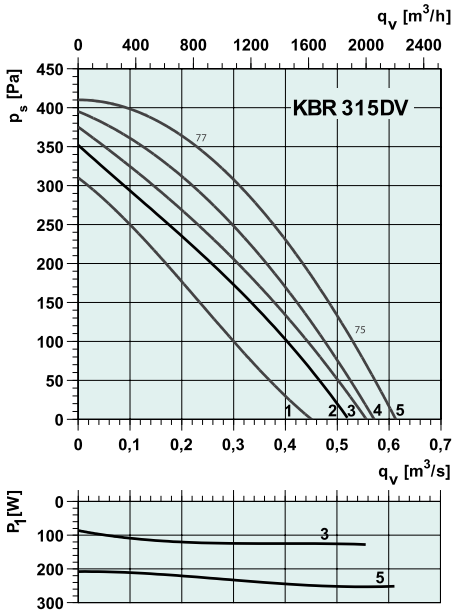
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	86	–	84	80	77	73	71	67	63
L_{wA} Outlet	88	–	86	82	79	75	73	69	65
L_{wA} Surrounding	68	–	66	62	59	55	53	49	45

Measurement point: 0,56 m³/s; 500 Pa



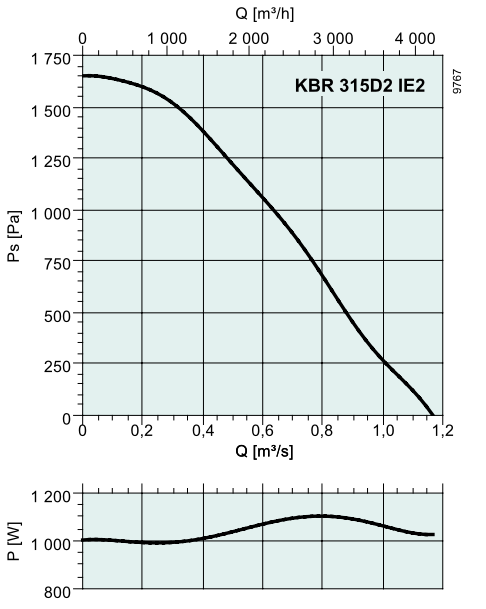
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	88	-	86	82	79	75	73	69	65
L_{wA} Outlet	90	-	88	84	81	77	75	71	67
L_{wA} Surrounding	70	-	68	64	61	57	55	51	45

Measurement point: 0,60 m³/s; 630 Pa



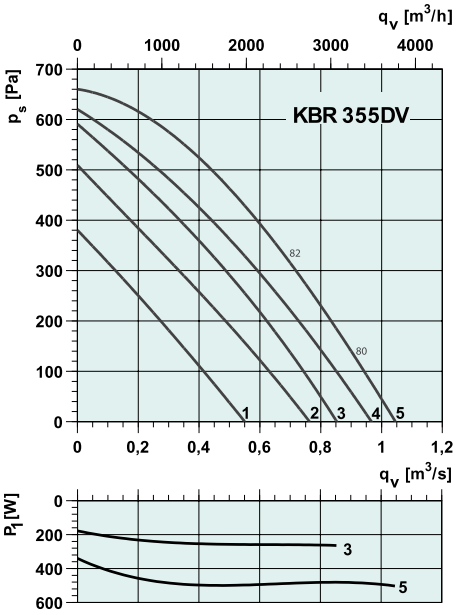
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	77	–	75	74	69	67	63	57	54
L_{wA} Outlet	79	–	77	76	71	68	65	59	56
L_{wA} Surrounding	59	–	57	56	51	49	45	39	36

Measurement point: 0,38 m³/s; 250 Pa



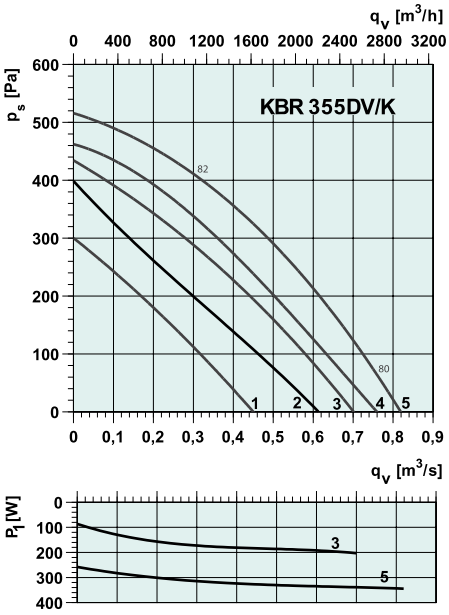
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	91	-	89	88	83	81	77	71	68
L_{wA} Outlet	93	-	31	90	85	83	80	73	70
L_{wA} Surrounding	73	-	71	70	65	63	59	53	50

Measurement point: 0,46 m³/s; 1276 Pa



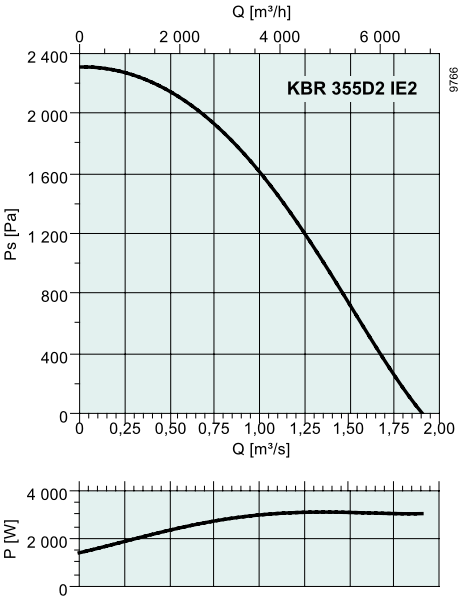
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	82	–	80	79	74	72	68	62	–
L_{wA} Outlet	84	–	82	81	76	74	70	64	–
L_{wA} Surrounding	64	–	62	61	56	54	50	44	–

Measurement point: 0,69 m³/s; 320 Pa



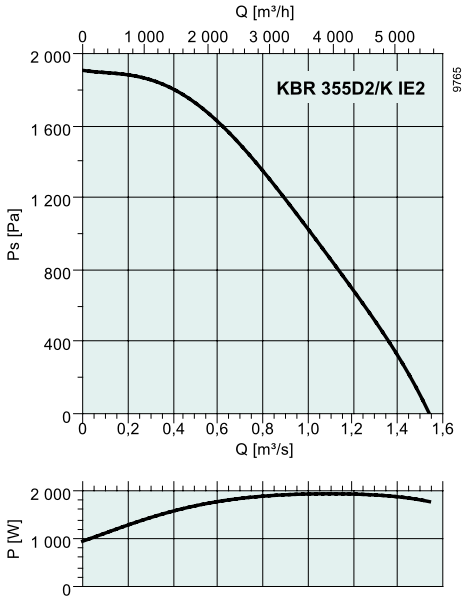
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	82	-	80	79	74	72	68	62	59
L_{wA} Outlet	84	-	82	81	76	74	70	64	61
L_{wA} Surrounding	64	-	62	61	56	54	50	44	41

Measurement point: 0,32 m³/s, Ps = 398 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	94	-	92	91	86	84	80	74	71
L_{wA} Outlet	96	-	94	93	88	86	82	76	73
L_{wA} Surrounding	76	-	74	73	68	66	62	56	53

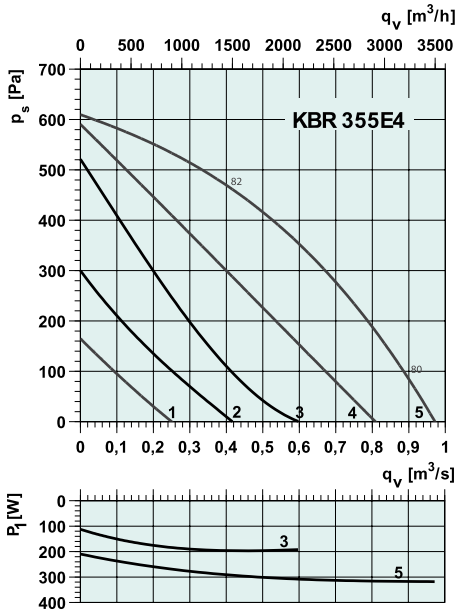
Measurement point: 0,83 m³/s; 1800 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	94	-	92	91	86	84	80	74	71
L_{wA} Outlet	96	-	94	93	88	86	82	76	73
L_{wA} Surrounding	76	-	74	73	68	66	62	56	53

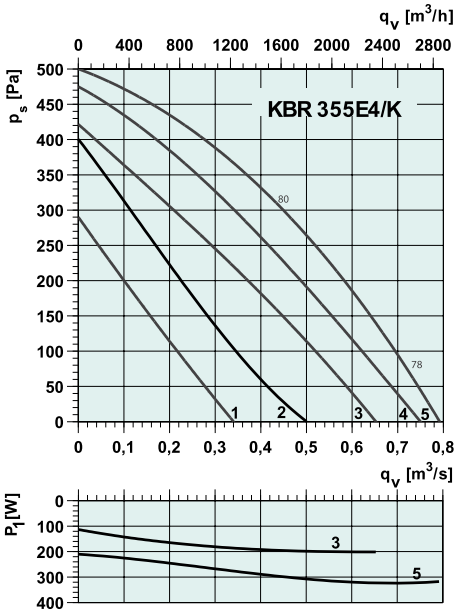
Measurement point: 0,72 m³/s; 1431 Pa

Centrifugal fans single inlet



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	82	–	80	79	74	72	68	62	59
L_{wA} Outlet	84	–	82	81	76	74	70	64	61
L_{wA} Surrounding	64	–	62	61	56	54	50	44	41

Measurement point: 0,42 m³/s; 465 Pa



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	80	–	78	74	71	67	65	61	57
L_{wA} Outlet	82	–	80	76	73	69	67	63	59
L_{wA} Surrounding	62	–	60	56	53	49	47	43	39

Measurement point: 0,42 m³/s; 320 Pa

Reference



Applications for KBT, Therme Erding, Germany



General

Domestic fans for the ventilation of bathrooms,toilets and storage rooms. Can be wall or window mounted and in some cases duct mounted.

BF axial fan, CBF centrifugal fan

Casing manufactured from sturdy ABS plastic. Available in standard exhaust fan version, with timer or with timer and humidity sensor.

BF-W axial fan

Casing manufactured from sturdy ABS plastic. For wall or window mounting. Back draught damper included.

IF inline axial fan

Booster fan for duct mounting, with single phase induction motors.

BF-W 314

Fans for bathrooms, toilets and store rooms, up to 0.06 m³/s.



IF 316

Fans for bathrooms, toilets and store rooms. 0,03 m³/s.



BF 316

Fans for bathrooms, toilets and shower rooms, up to 0.07 m³/s.



CBF 316

Window or wall mounted fans for bathrooms, toilets and store rooms, up to 0.19 m³/s.





BF-W 230A

BF-W 120A

BF-W

BF-W axial fan for window mounting. Suitable for a variety of domestic and commercial applications, the BF-W range has been designed for window or wall mounting.

These extract fans are easy to install and manufactured from ABS plastic for durability, ease of cleaning and maintenance and cover a wide variety of domestic and commercial applications including kitchens, utility rooms, pubs, restaurant, offices shops and factories. They, can be connected either through the light switch, so that they start when the light is turned on, or through a separate switch.

BF-W is equipped with external gravity backdraught shutters.

VENTILATION ACCESSORIES

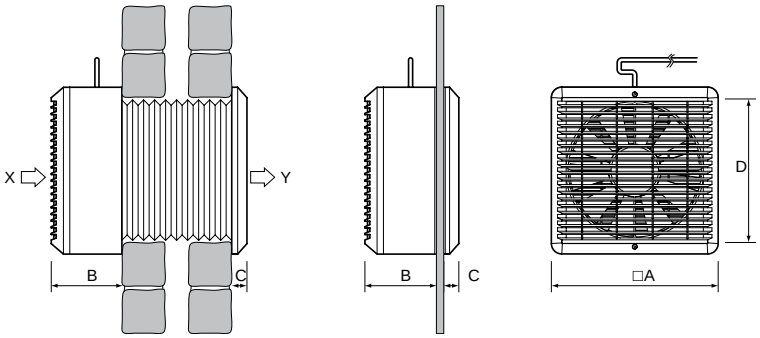


BVK p. 390



BDS p. 390

BF-W

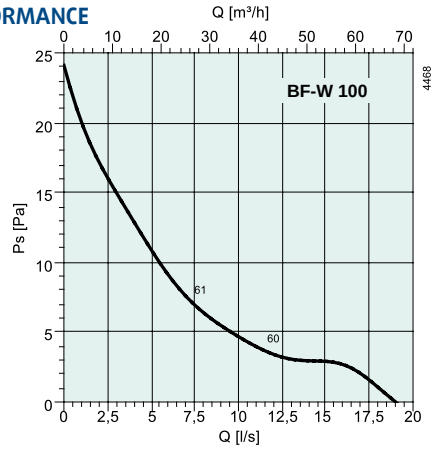


BF-W	A	B	C	D
100A	163	90	30	98
120A	182	92	32	118
150A	203	105	23	150
230A	286	125	25	230
300A	362	145	29	300

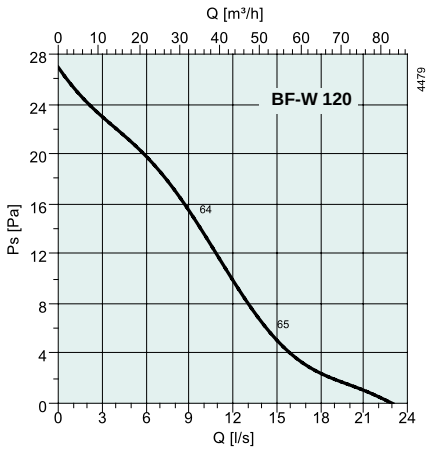
TECHNICAL DATA

BF-W		100A	120A	150A	230A	300A		
Art no.		7200	7202	7204	7206	7219		
Voltage/Frequency	V/50 Hz	230 1~	230 1~	230 1~	230 1~	230 1~		
Power	W	14.8	13.9	30.8	41.7	70.8		
Current	A	0.0899	0.0899	0.19	0.197	0.32		
Max air flow	m^3/s	0.0191	0.023	0.0641	0.124	0.192		
R.p.m.	min-1	2468	2198	2253	1155	1035		
Max temp. of transported air	°C	70	57.4	63.9	61.1	70		
" when speed controlled	°C	70	57.4	63.9	61.1	70		
Sound pressure level at 3 m	dB(A)	45	48	54	53	55		
Weight	kg	1	1.2	1.5	3.1	5.2		
Insulation class, motor		B	B	B	B	B		
Enclosure class, motor		IP 44	IP 44	IP 44	IP 44	IP 44		
Capacitor	µF	–	–	–	2	3.15		

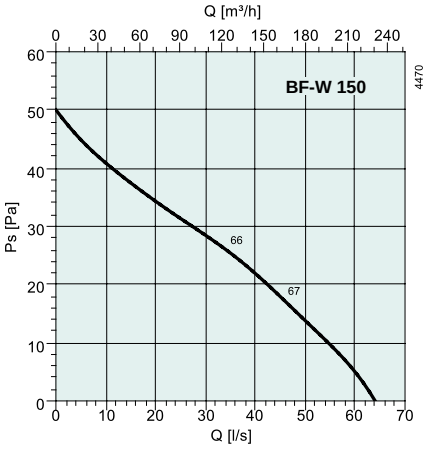
PERFORMANCE



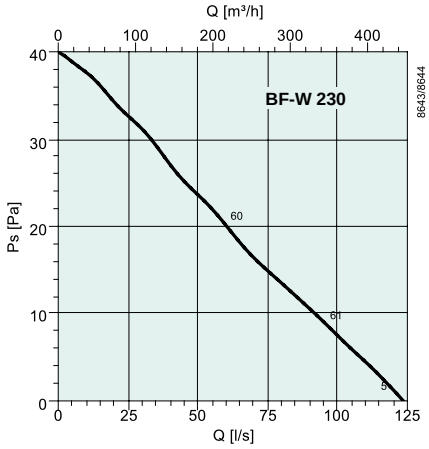
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	52	12	42	47	47	43	40	36	29
L_{wA} Outlet	59	40	54	55	53	44	41	36	28
Measurement point: 0,0072 m³/s; 7,3 Pa									



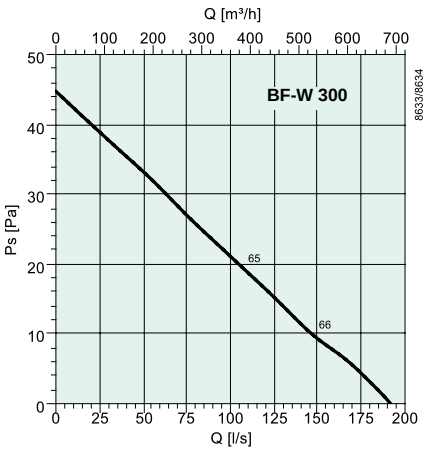
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	55	18	48	48	49	48	46	38	31
L_{wA} Outlet	62	42	57	57	57	50	47	36	29
Measurement point: 0,0094 m³/s; 14,7 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	60	17	50	54	56	54	50	43	34
L_{wA} Outlet	66	42	59	63	60	50	50	42	31
Measurement point: 0,0342 m³/s; 25,9 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	60	37	47	52	54	56	52	47	38
L_{wA} Outlet	61	37	47	50	54	58	53	47	40
Measurement point: 0,0603 m³/s; 20 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	65	55	59	58	58	58	55	50	40
L_{wA} Outlet	66	54	61	59	58	59	55	50	43
Measurement point: 0,108 m³/s; 19,3 Pa									

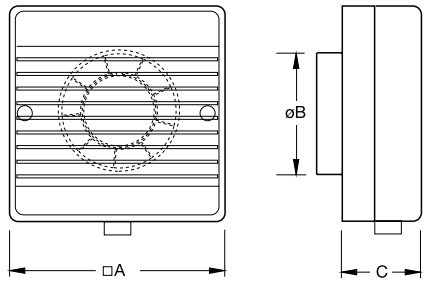


BF
CBF

The BF/CBF units are extraction fans manufactured from ABS plastic. These fans, can be connected either through the light switch, so that they start when the light is turned on, or to a separate switch. The CBF has a spring-loaded back draft damper.

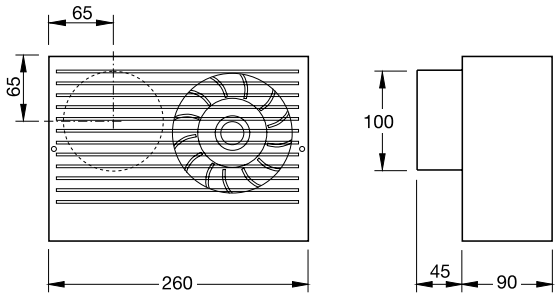
There are three models: standard model (S), a model with timer (T) and a model with timer and humidity sensor (TH). A time delay of between 1 and 20 minutes can be set by removing the unit's front cover. The humidity sensor can be set to a value between 40 and 95% relative humidity. The BF fan has an adjustment knob that is easily accessible at the bottom of the fan. To adjust the humidity sensor on the CBF fan, the front cover should be removed first.

BF



BF	□A	øB	C
100	163	98	60
120	182	118	40
150	203	150	81

CBF



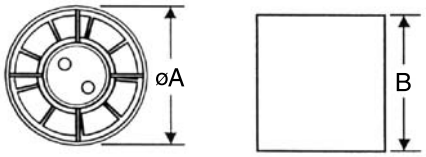


IF

IF in-line axial fan, suitable for bathrooms, toilets and shower rooms. The IF series are in-line extractor fans designed for the safe ventilation of bathrooms, toilets and shower rooms. Manufactured from high impact ABS thermoplastic. The series comprises of a fan unit only and is suitable for boosting a BF fan where a longer run of ducting is used.

The IF fans have single-phase induction motors with sealed for life bearings.

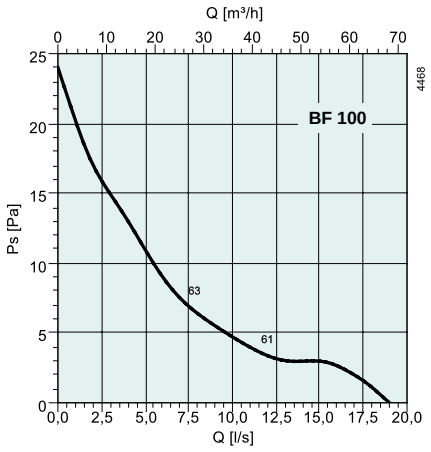
IF



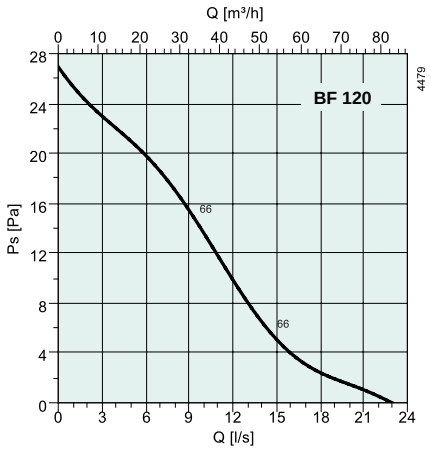
IF	øA	B
100	100	90
120	118	99
150	150	110

TECHNICAL DATA

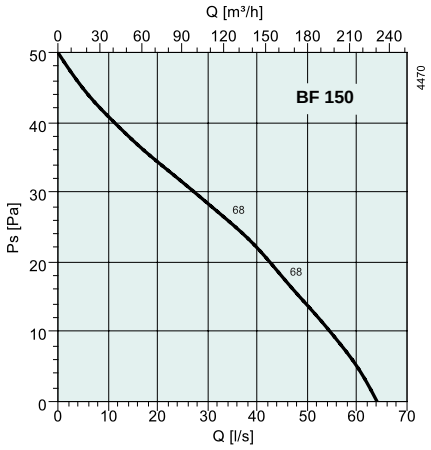
		BF 100	BF 120	BF 150	CBF 100L	IF 100	IF 120	IF 150
Art no. standard		5950	5951	5952	5959	5962	5963	5964
Art no BF + timer		5953	5954	5955	5960	–	–	–
Art no + timer and humidity sensor		5956	5957	5958	5961	–	–	–
Voltage/Frequency	V/50 Hz	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~
Power	W	14.8	13.9	30.8	29.1	14	25	25
Current	A	0.09	0.09	0.19	0.19	–	–	–
Max air flow	m^3/s	0.0191	0.023	0.0641	0.0291	0.0242	0.0361	0.0667
R.p.m.	min-1	2468	2198	2253	2403	2432	2000	2400
Max temp. of transported air	°C	70	57.4	63.9	57.3	–	–	–
" when speed controlled	°C	70	57.4	63.9	57.3	–	–	–
Sound pressure level at 3 m	dB(A)	45	48	54	52	–	–	–
Weight	kg	0.7	0.8	1.0	1.2	–	–	–
Insulation class, motor		B	B	B	B	–	–	–
Enclosure class, motor		IP 44	IP 44	IP 54	IP 54	IP 44	IP 44	IP 44



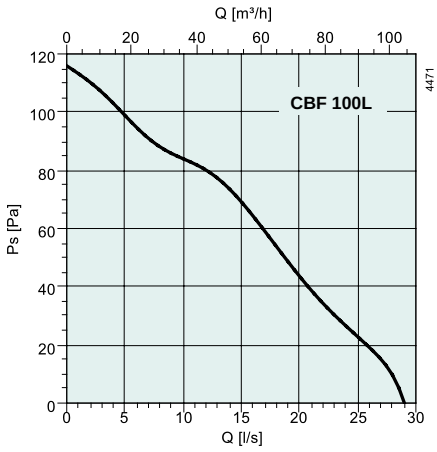
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	52	12	42	47	47	43	40	36	29
L_{wA} Outlet	59	40	54	55	53	44	41	36	28
Measurement point: 0,0072 m^3/s; 7,3 Pa									



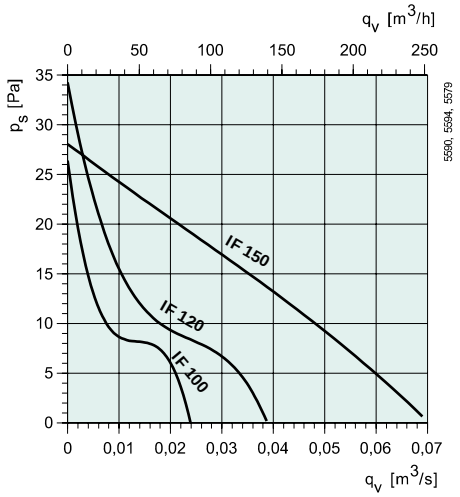
dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	55	18	48	48	49	48	46	38	31
L_{wA} Outlet	62	42	57	57	57	50	47	36	29
Measurement point: 0,0094 m^3/s; 14,7 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	60	17	50	54	56	54	50	43	34
L_{wA} Outlet	66	42	59	63	60	50	50	42	31
Measurement point: 0,0342 m^3/s; 25,9 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	59	17	40	50	55	55	49	44	35
L_{wA} Outlet	61	40	54	57	55	53	43	37	27
Measurement point: 0,0139 m^3/s; 74 Pa									



dB(A)	Tot	Frequency bands [Hz]							
		63	125	250	500	1k	2k	4k	8k
L_{wA} Inlet	55	18	48	48	49	48	46	38	31
L_{wA} Outlet	62	42	57	57	57	50	47	36	29
Measurement point: 0,0094 m^3/s; 14,7 Pa									



Switching devices & isolators



Motor protection



Electrical actuators



Speed control, transformers



Other electrical accessories



Sensors and thermostats



Speed control, electronic



Heat controls

Switching devices & isolators

EMC KIT REV 340
REV 340
REV DVV 340
S-DT2 DKT 340
S-DT2 GKT 340
S-DT2 SKT 340
S2S 160 340
S5S 100T1 340
S5S 100T3 340

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STDT 16, STDT 16E 342
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T 120 339

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Pulser 334
Pulser M 334
TTC 335
TT-S1 335
TT-S4/D 336



RE

Manual five-step transformer

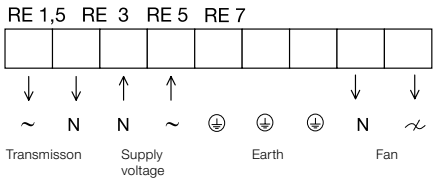
A single-phase transformer which controls the fan speed by altering the supply voltage in five fixed steps. The steps are adjusted manually, using the control knob on the front of the unit. The transformer has 230V terminals for operating dampers, electric heater batteries or other external equipment. When the transformer knob is in position 0, the outlet has no current. The indicator lamp on the front shows that the transformer is in operation. The fuse may be reset from outside. The RE has a self extinguishing thermoplastic casing.

NOTE! Fans with external contact leads (TK) must always be connected to a motor protection device.

Output voltages for each of the 5 steps:					
Step	1	2	3	4	5
Voltage	80	105	130	160	230

RE	Current	Enclosure
1.5	1.5	54
3	3	54
5	5	54
7	7	54

RE	Width	Height	Depth	Weight, kg
1.5	105	200	105	1.5
3	105	200	105	2.5
5	105	200	105	4.1
7	147	257	145	7.5



Transmisson: between ~ and N is always 230V when the transformer handle is in pos. 1-5



RTRE

Manual five-step transformer

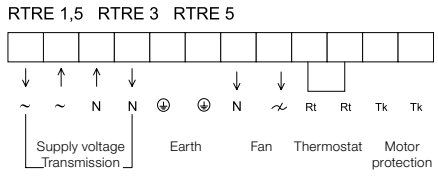
(with motor protection)
A single-phase transformer which controls the fan speed by altering the supply voltage in five fixed steps. The steps are adjusted manually, using the control knob on the front of the unit. An integral motor protection device is included which cuts the supply voltage to the fan if the thermal contact in the fan motor is activated. The unit is reset by turning the knob to "0" for 10 seconds, after which the unit restarts.

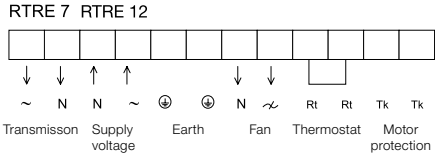
The unit has input terminals for room thermostat RT, which stops the supply voltage to the fan when the circuit is broken. These terminals are bridged before delivery. The transformer has 230V terminals for operating dampers, electric water-heater batteries or other external equipment. These terminals have no current when the transformer knob is in position 0, or when the TK or RT input is open. The indicator lamp on the front shows when the transformer is in operation. The fuse may be reset from outside. The RTRE has a self-extinguishing thermoplastic casing. Supply voltage: 230V 50/60Hz.

Output voltages for each of the 5 steps:					
Step	1	2	3	4	5
Voltage	80	105	130	160	230

RTRE	Current	Enclosure
1.5	1.5	IP 54
3	3	IP 54
5	5	IP 54
7	7	IP 54
12	12	IP 54

RTRE	Width	Height	Depth	Weight, kg
1.5	105	203	106	1.9
3	105	203	106	2.6
5	105	203	106	4.2
7	147	278	140	7.2
12	147	278	140	10.5







REU

Manual five-step transformer

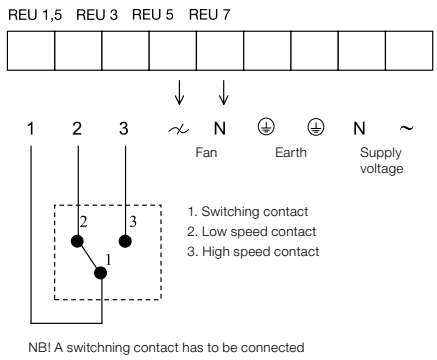
A single-phase transformer which controls the fan speed by altering the supply voltage in five fixed steps. The steps are adjusted manually, using the control knob on the front of the unit. There are two control switches: one for higher fan speeds and one for lower fan speeds. Switching between the high and low settings is done by an external change-over contact, which could be a thermostat or a timer. The indicator lamp on the front shows when the transformer is in operation. The fuse may be reset from outside. The REU has a self-extinguishing thermoplastic casing. Supply voltage: 230V 50/60Hz.

NOTE! Fans with external thermal contact leads (TK) must always be connected to a motor protection device.

Output voltages for each of the 5 steps:					
Step	1	2	3	4	5
Voltage	80	105	130	160	230

REU	Current	Enclosure
1.5	1.5	IP 54
3	3	IP 54
5	5	IP 54
7	7	IP 54

REU	Width	Height	Depth	Weight, kg
1.5	105	200	105	2.0
3	105	275	145	4.05
5	105	275	145	4.9
7	105	275	145	7.05



NB! A switchning contact has to be connected



RTRD

Manual five-step transformer

(With motor protection).
A three-phase transformer which controls the fan speed by altering the supply voltage in five fixed steps. The steps are adjusted manually, using the control knob on the front of the unit.

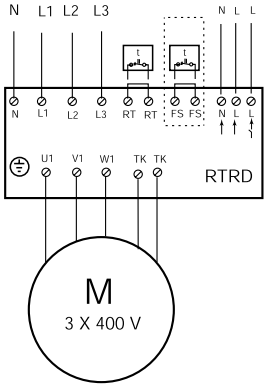
An integral motor protection device is included which cuts the supply voltage to the fan if the thermal contact in the fan motor is activated. The unit is reset by turning the knob to "0" for 10 seconds, after which the unit restarts.

Input terminals for room thermostat RT and frost protection thermostat FS cut supply voltage to the fan when the circuit is broken. When the frost protection thermostat FS breaks the circuit, it is reset in the same way as when the TK is triggered. Terminals are linked before delivery. The indicator lamp on the front shows that the transformer is in operation. The transformer has 230V terminals for operating dampers, electric heater batteries or other external equipment. These terminals have no current when the transformer knob is in position 0, or when the TK or RT input is open. Supply voltage: 400V 50/60Hz.

Output voltages for each of the 5 steps:					
Step	1	2	3	4	5
Voltage	95	145	190	240	400

RTRD	Current	Enclosure
2	2	IP 54
3	3	IP 54
4	4	IP 21
5.2	5.2	IP 54
7	7	IP 21
14	14	IP 21

RTRD	Width	Height	Depth	Weight, kg
2	240	284	132	7.4
3	270	323	172	11
4	270	323	173	11
5.2	270	323	172	15.6
7	270	323	172	16
14	450	290	174	32





RTRDU

Manual five-step transformer

(With motor protection).
A three-phase transformer which controls the fan speed by altering the supply voltage in five fixed steps. The steps are adjusted manually, using the control knobs on the front of the unit.

There are two control knobs: one for higher fan speeds and one for lower fan speeds. Switching between the high and low settings is done by an external change-over contact, which could be a thermostat or a timer.

An integral motor protection device is included which cuts the supply voltage to the fan if the thermal contact in the fan motor is activated. The unit is reset by turning the switch to "0" for 10 seconds, after which the unit restarts.

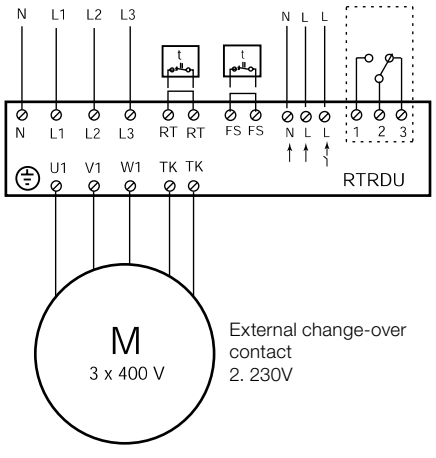
Input terminals for room thermostat RT cuts supply voltage to the fan when the circuit is broken. Terminals are linked before delivery. The indicator lamp on the front shows when the transformer is in operation.

The transformer has 230V terminals for operating dampers, electric heater batteries or other external equipment. These terminals have no current when the transformer switch is in position 0, or when the TK or RT input is open. Supply voltage: 400V 50/60Hz.

Output voltages for each of the 5 steps:					
Step	1	2	3	4	5
Voltage	95	145	190	240	400

RTRDU	Current	Enclosure
2	2	IP 21
4	4	IP 21
7	7	IP 21

RTRDU	Width	Height	Depth	Weight, kg
2	270	323	163	8
4	270	323	163	12
7	270	323	163	16.5



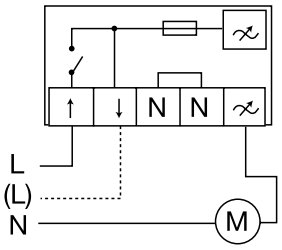
External change-over contact
2. 230V

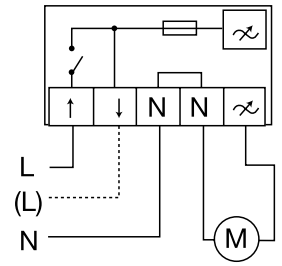
REE

Thyristor speed controller

- only surface mounting
For the manual control of speed and air flow of electrical fans, AC-induction motors of universal motor- and permanent-capacitor type. The jetproof IP 54 enclosure is achieved with the included surface mounting case. (Flushmounting without the surfase mounting case, gives a splash proof IP 44 enclosure also suitable for highly demanding enviroments as bathrooms etc.) Several motors can be connected in parallel as long as the total current does not exceed current range. Starting currents must be considered when choosing speed controller type. Fans to be used with this controller require a built-in overheating protection and should be designed for thyristor speed control.

		REE 1	REE 2	REE 4
Voltage	V	230 ~	230~	230~
Frequency	Hz	50	50	50
Current	A	0.1-1.0	0.1-2.0	0.4-4.0
Fuse	A	1.25	2.5	5
Enclosure	IP	54	54	54
WxHxD	mm	82x82x65	82x82x65	82x82x65
Weight	kg	0.25	0.25	0.25





Line L state connection with cutting function on the speed control.

Broken line (L) state connection without cutting function.



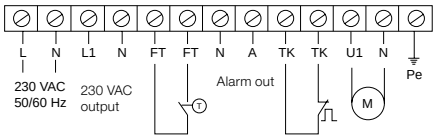
REE TR0

Thyristor speed controller

Stepless phase cutting controller for 1~230V/50Hz motors. It has a potentiometer to set the speed and control lamps for operation and alarm. Internal potentiometer to set a min speed. On/off switch with control lamp. Connection for on/off switch, alarm and thermal contacts. White plastic casing IP54. Several motors can be connected in parallel as long as the total current does not exceed the current range. Fans to be used with this controller must be designed for thyristor speed control.

NOTE: phase cutting controller can cause electrical noise interference!

REE		050TR0	100TR0
Voltage	V	230~	230~
Current	A	0.5-5.0	1.0-10.0
Fuse	A	FF8	FF14
Enclosure	IP	54	54



L1-N:
Input to bypass the on/off contact
230 V non-controlled output

FT-FT
Connection for thermostat, timer, frostprotection, on/off-switch at a distance

N-A
Alarm output in case of motor fault
230 VAC, 2A

TK-TK
Input thermal contacts of the motor



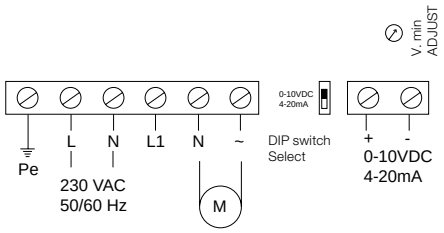
REE S0

Thyristor power unit

Stepless phase cutting contoller for 1~230V/50Hz motors. It has a connection for an external control signal 0...10V or 4...20mA. The control signal can be choosen by an internal switch. Internal potentiometer to set a min speed. On/off switch with control lamp. White plastic casing IP54. Several motors can be connected in parallel as long as the total current does not exceed the current range. Fans to be used with this controller require a build-in overheating protection and should be designed for thyristor speed control.

NOTE: phase cutting controller can cause electrical noise interference!

REE		030S0	050S0	100S0
Voltage	V	230 ~	230~	230~
Current	A	0.3-3.0	0.5-5.0	1.0-10.0
Control signal		0...10VDC/4...20mA		
Fuse	A	FF4	FF8	FF14
Enclosure	IP	54	54	54





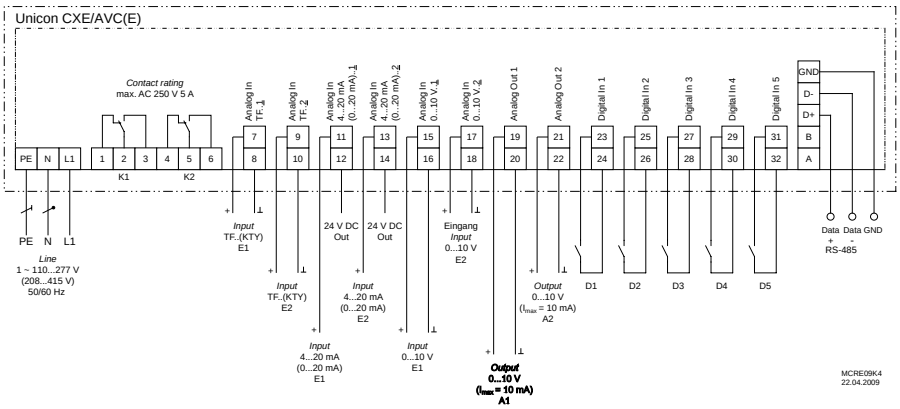
CXE/AVC

Regulator

Universal module with timer function. Controlled 0-10 V output e.g. for electronic speed controllers of fans.

Applications: Pressure control, outdoor temperature control, outdoor temperature compensated pressure control, etc.

		CXE/AVC
Voltage	V	230
Frequency	Hz	50/60
Phase	~	1
Output 0-10 V, Imax	mA	10
Enclosure class	IP	54
Weight	kg	1.3
Dimensions	mm	213x185x102



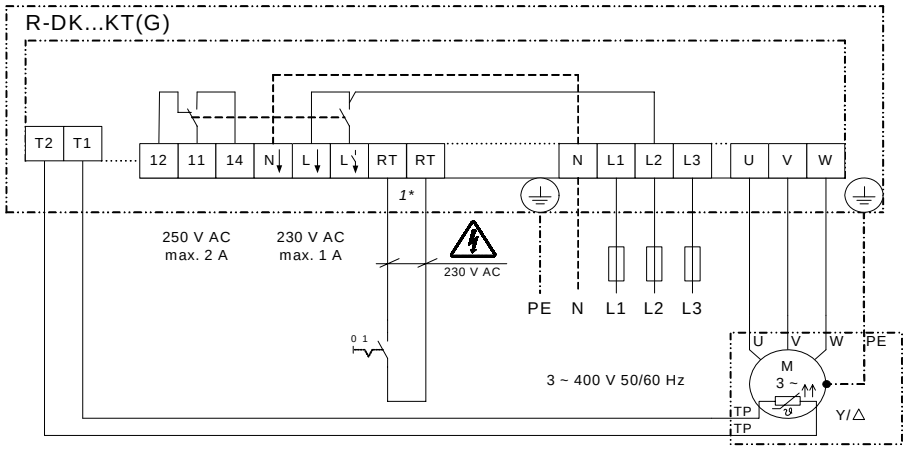


R-DK4 KT (EX)

Manual five-step transformer

(With motor protection) for RVK 315Y4, KTEX, DKEX and DVEX fans. An integral thermistor releasing unit type U-EK230E with ATEX-approval can be used for the temperature monitoring of motors in explosion protected range. A three-phase transformer which controls the fan speed by altering the supply voltage in five fixed steps. The steps are adjusted manually, using the control knob on the front of the unit. An integral motor protection device is included which cuts the supply voltage to the fan should the thermistor motor position trigger. The unit is reset by turning the knob to "0" for 1 minute. Input terminals for room thermostat RT cut supply voltage to the fan when the circuit is broken.

NB. The transformer can not be placed in the EX zone.



SR171K13
27.11.2007

On/off

3~ motor with internal thermistors

1* If function is not needed, terminals must be bridged

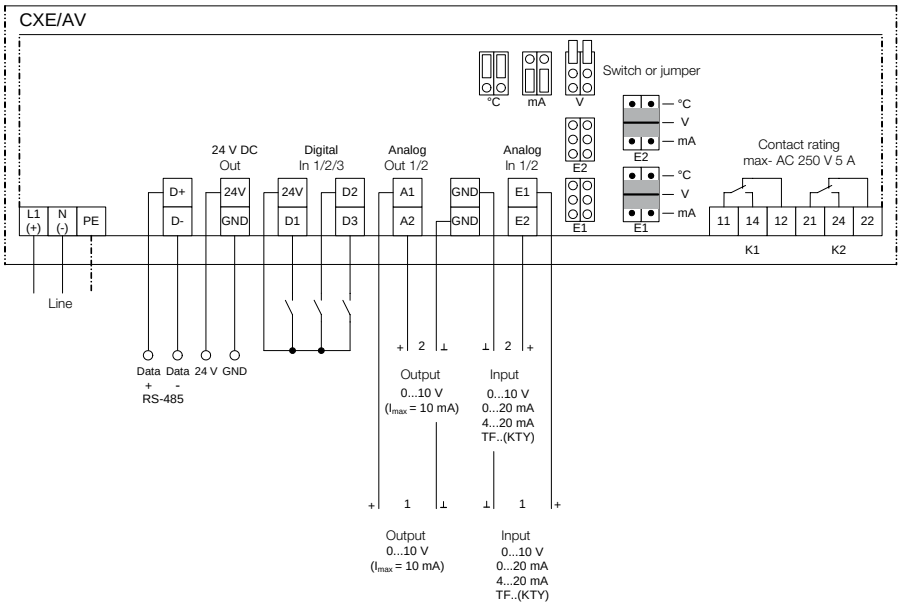
		R-DK4 KT
Voltage	V	400 3~
Frequency	Hz	50/60
Current	A	4.0
Max. ambient temp.	°C	40
Enclosure	IP	21
WxHxD	mm	270x323x163
Weight	kg	11.5



CXE/AV

Universal regulator

Regulator with multi-function display constant temperature or constant pressure in duct systems with 0...10V output signal to control external devices (power units, frequency inverters, EC-motors etc.). Two setpoints are possible. 3 digital inputs, 2 analogue inputs, 2 analogue outputs 0...10V and 2 relays with change-over contact. All in-/outputs are programable. With preprogram modes also for outdoor compensation for easy setup. Menu languages are English, German, Swedish,... 24VAC/ Imax 70mA power supply for sensors.



		CXE/AVC
Voltage	V	230
Frequency	Hz	50/60
Phase	~	1
Output 0-10 V, Imax	mA	10
Switching capacity		5A/250VAC
Ambient temp.	°C	0...40
Enclosure class	IP	54
Weight	kg	0.9
Dimensions	mm	166x160x87



FXDM

Frequency inverter

Frequency inverter with integrated allpole sine filter. Frequency regulator with multifunction display for constant temperature or constant pressure in duct systems with integrated process controller (PID free programmable) or with 0...10V control signal. Two setpoints or manual mode is possible. 2 digital inputs, 2 analogue inputs, 1 analogue output 0...10V and 2 relays with change-over contact. All inputs and outputs are programmable. Total motor protection using thermocontact/ thermistor connection. Menu languages are English, German, Swedish,... +24VAC/Imax 120mA power supply for sensors. Masking up to three settable speed ranges. Min. and max. speed limitation. Integrated allpole sine filter for external rotor motors.
NB! Absolute parallel operation of fans, no risk of damage to motor. Screened motor cables are not required!

Wiring diagram on page 326.

FXDM		5	8
Voltage	V	208...480	208...480
Phase	~	3	3
Frequency	Hz	50/60	50/60
Max. current	A	5	8
Recom.fuse	max A	10	10
Ambient temp.	°C	40	40
Enclosure	IP	54	54
Weight	kg	7.2	7.9
Width	mm	252	252
Height	mm	302	302
Depth	mm	195.5	195.5

FXDM		13	18
Voltage	V	208...480	208...480
Phase	~	3	3
Frequency	Hz	50/60	50/60
Max. current	A	14	18
Recom.fuse	max A	16	20
Ambient temp.	°C	40	40
Enclosure	IP	54	54
Weight	kg	8.7	14.2
Width	mm	252	382
Height	mm	302	355
Depth	mm	195.5	239



PXDM5A

Internal display

Universal regulator, three phase. Regulator with multifunction display constant temperature or constant pressure in duct systems for 3~400V motors. Connection for thermal contacts. Two setpoints are possible. 2 digital inputs, 2 analogue inputs, 1 analogue output 0...10V and 2 relays with change-over contact. All in-/outputs are programmable. With preprogram modes also for outdoor compensation for easy setup. Menu languages are English, German, Swedish,... 24VDC/Imax 70mA power supply for sensors. Permitted relative humidity, non condensating 85%.

Wiring on page 326.

		PXDM5A
Voltage	V	400
Phase	~	3
Frequency	Hz	50/60
Current	A	5
Recommended fuse	A	10
Output voltage approx.	%	20...100
Max. power dissipation	W	40
Perm. ambient temp.	°C	0...40
Enclosure class	IP	54
Weight	kg	2.9
WxHxD	mm	240x284x131



PKDM12

Thyristor power unit

Stepless phase cutting controller for 3~400V/50Hz motors with motor protection. It has a connection for a potentiometer or an external control signal 0...10V, 0...20mA or 4...20mA. The control signal can be chosen by an internal jumper. Internal potentiometer for setting set point, min. speed, max. speed and p-band. Digital input for on/off. Temperature control possible. Several motors can be connected in parallel as long as the total current does not exceed the current range. Fans to be used with this controller should be designed for thyristor speed control. Permitted relative humidity, non condensating 85%.
NB! Phase cutting controller can cause electrical noise interference!

Wiring diagram on page 326.

		PKDM12
Voltage	V	208...415
Phase	~	3
Frequency	Hz	50/60
Current	A	12
Min. motor current	A	0,2
Output voltage appr.	%	0...100
Max. power dissipation	W	55
Control signal		0...10V/4...20mA
Recom. fuse	A	FF30A 10x38mm
Ambient temperature	°C	40
Enclosure class	IP	54
Weight	kg	3.4
WxHxD	mm	270x323x146



FRQ(5)

Speed controller with 0-10V (or 5-step) Input for 3~ fan

Optimized frequency inverters for the control of one fan motor for frequency converter suitable isolation system and bearings e.g. IE2

- Analog input for external speed setting(0-10 V, 0-20 mA, PWM)
- 10V DC output for external potentiometer
- Alarm relay
- Enable contact section
- Motor protection by connecting thermo stats or thermistors
- Interference emission EN 61000-6-3
- Interference immunity EN 61000-6-2
- Parallel operation of several motors is not allowed
- Max. length of contoller(poti) cable 100m
- Max. length of motor cable 10m (screened)
- Please note: Not suitable for external rotor motors.

Wiring diagram on page 327

FRQ		4A	10A
Voltage	V	208...480	208...480
Phase	~	3	3
Frequency	Hz	50...60	50...60
Max. current	A	4	10
Max. power load	kW	1.5	4
Recom.fuse	A	10	16
Ambient temp.	°C	40	40
Hum, non cond.	%	85	85
Enclosure	IP	54	54
Weight	kg	2.3	5.3
Width	mm	240	250^{+2}
Height	mm	284	302
Depth	mm	115	195.5

FRQ5		4A	10A
Voltage	V	208...480	208...480
Phase	~	3	3
Frequency	Hz	50...60	50...60
Max. current	A	4	10
Max. power load	kW	1.5	4
Recom.fuse	A	10	16
Ambient temp.	°C	40	40
Hum, non cond.	%	85	85
Enclosure	IP	54	54
Weight	kg	2.4	5.4
Width	mm	240	250^{+2}
Height	mm	284	302
Depth	mm	132	212



FRQ(5)S

Speed controller with 0-10V(or 5-step) Input for 3~ fan with all pole sine filter

The FRQS/FRQ5S frequency inverters have integrated all pole sine filters as standard. Therfore there is no need for shielded cables for the installation. This makes the unit also perfectly suited to retrofit into existing systems. The sine filters enable existing non-shielded cables to be retained. This units also reliably control motors which, due to their design, are not usually considered suitable for frequency inverter operation i.e. external rotor motors.

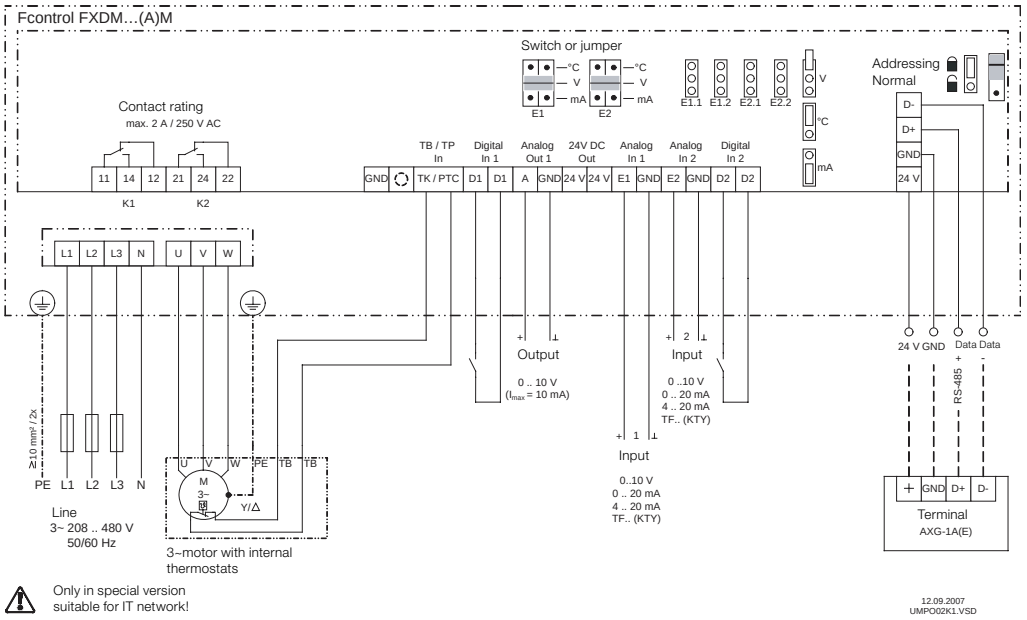
- Save and trouble free motor operation with integrated, all pole effective sine filter
- Enable contact section for a stand-by switch or electronic reset
- Motor protection by connecting thermostat or thermistors
- Interference emission EN 61000-6-3
- Interference immunity EN 61000-6-2
- Complete range in IP54
- Trouble free parallel operation of motors -
- No danger to the motors through voltage peaks, bearing current, etc.
- No limit of motor cable length
- Retrofit in installations with existing wiring (unshielded cables)
- Operation without electromagnetic motor noise
- Wide voltage range 3~ 208V-480V, 50/60Hz.

Wiring diagram on page 328

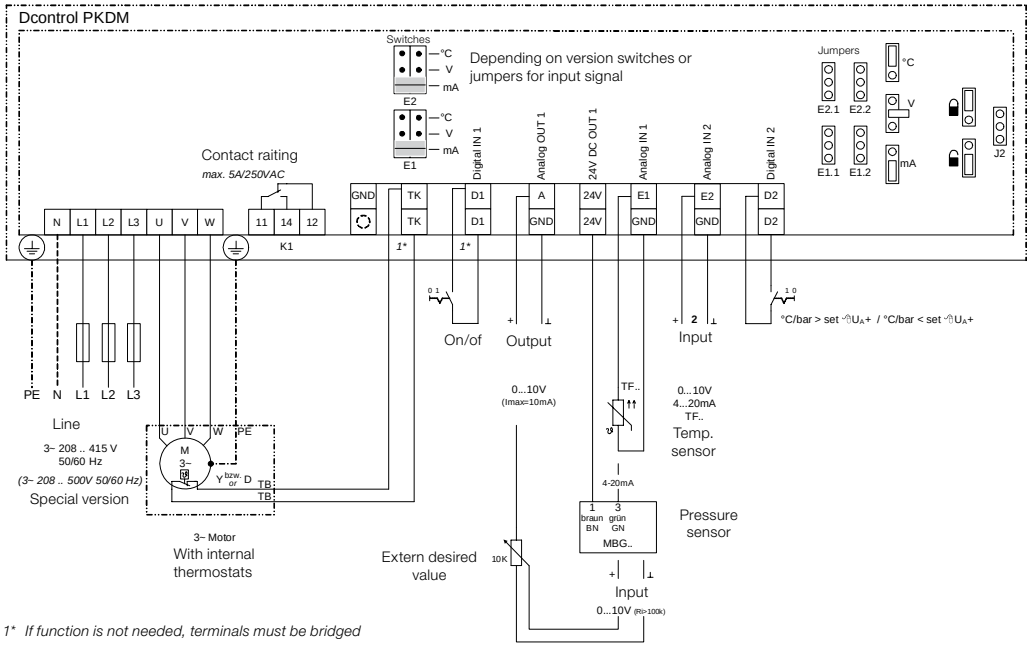
FRQ5S		4A	10A
Voltage	V	208...480	208...480
Phase	~	3	3
Frequency	Hz	50...60	50...60
Max. current	A	4	10
Max. power load	kW	1.5	4
Recom.fuse	A	10	16
Ambient temp.	°C	40	40
Hum, non cond.	%	85	85
Enclosure	IP	54	54
Weight	kg	5.4	5.4
Width	mm	250^{+2}	250^{+2}
Height	mm	302	302
Depth	mm	212	212

FRQS		4A	10A
Voltage	V	208...480	208...480
Phase	~	3	3
Frequency	Hz	50...60	50...60
Max. current	A	4	10
Max. power load	kW	1.5	4
Recom.fuse	A	10	16
Ambient temp.	°C	40	40
Hum, non cond.	%	85	85
Enclosure	IP	54	54
Weight	kg	5.4	5.4
Width	mm	250^{+2}	250^{+2}
Height	mm	302	302
Depth	mm	195.5	195.5

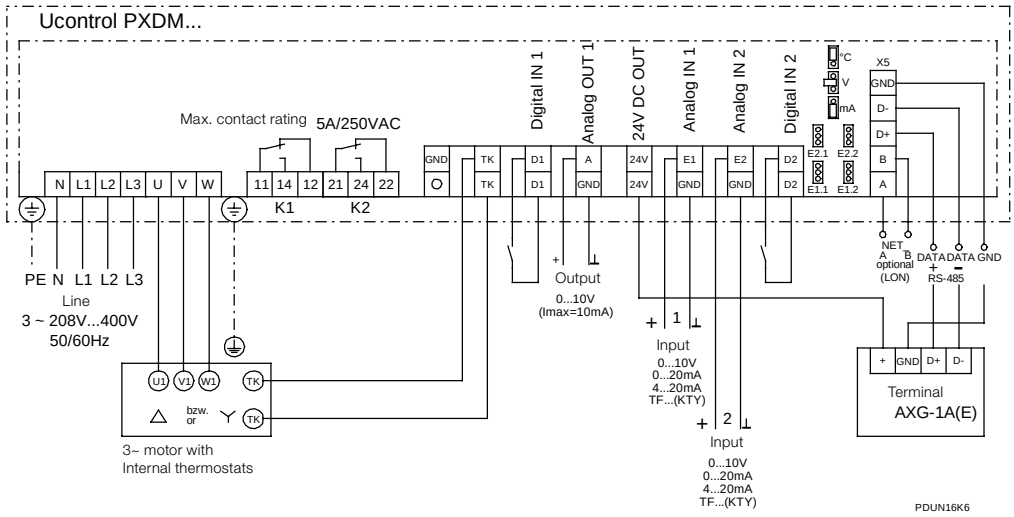
Wiring diagram FXDM



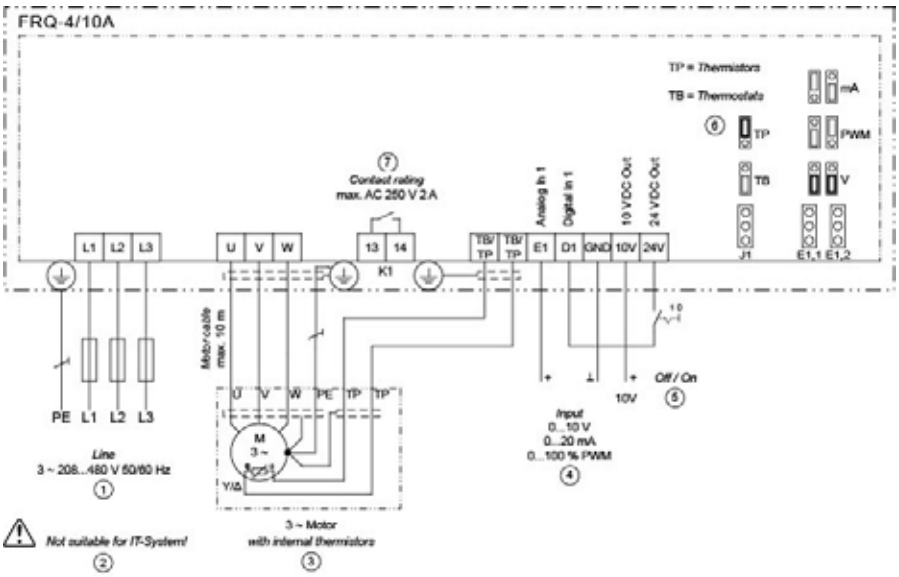
Wiring diagram PKDM



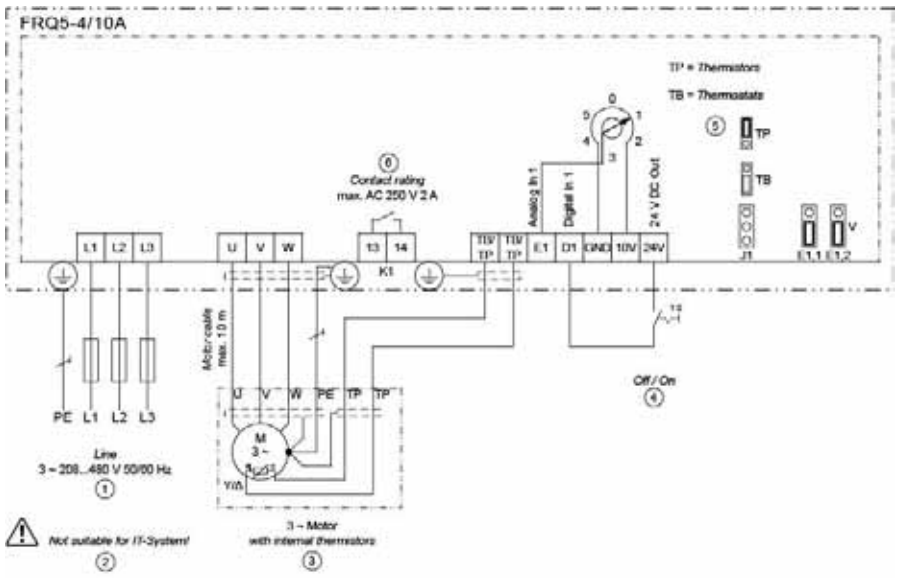
Wiring diagram PXDM



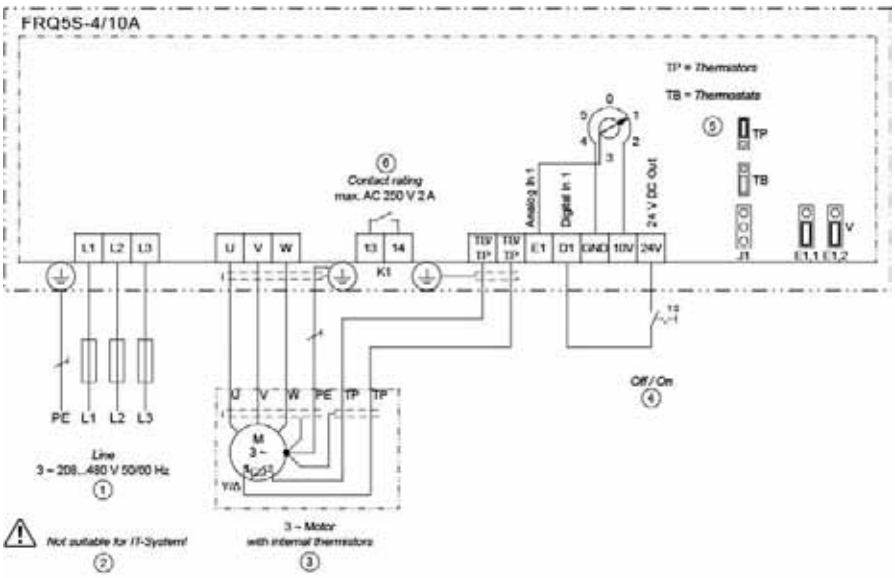
Wiring diagram FRQ 4/10A



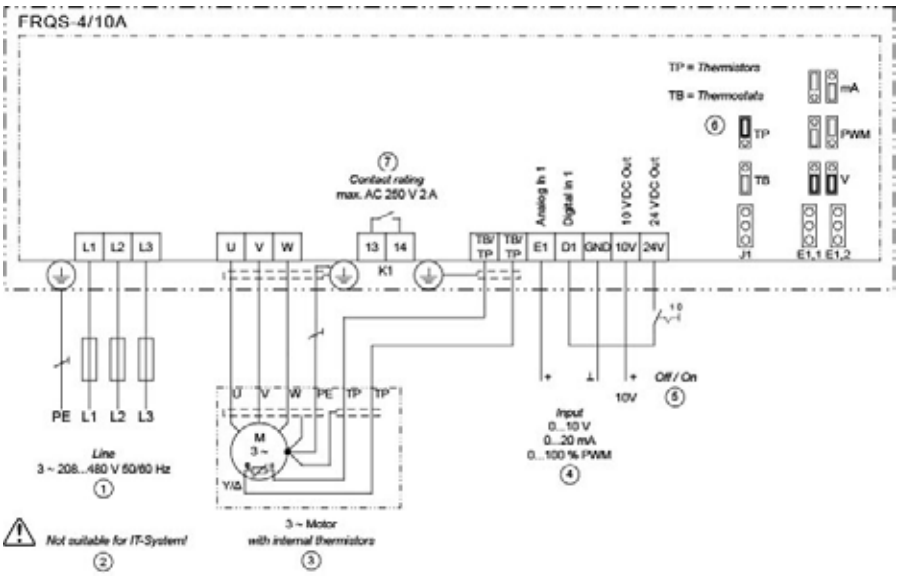
Wiring diagram FRQ5 4/10A



Wiring diagram FRQ5S 4/10A



Wiring diagram FRQS 4/10A



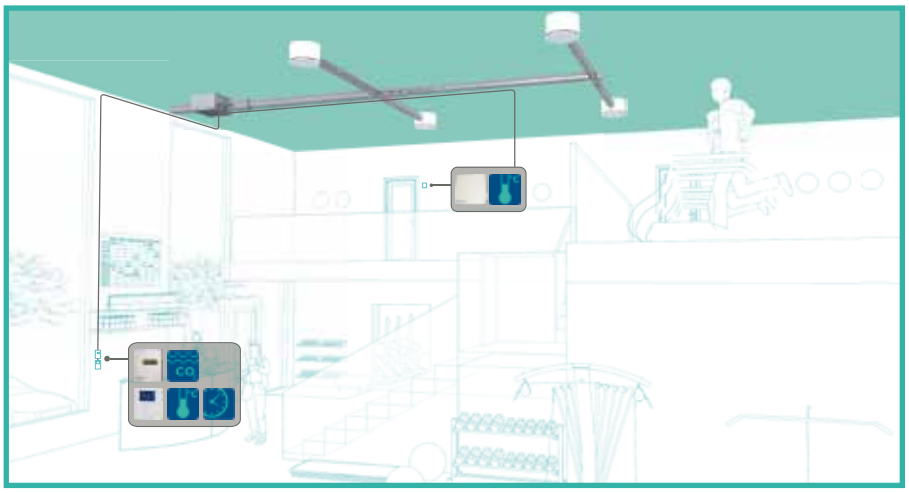


EC-Vent control board

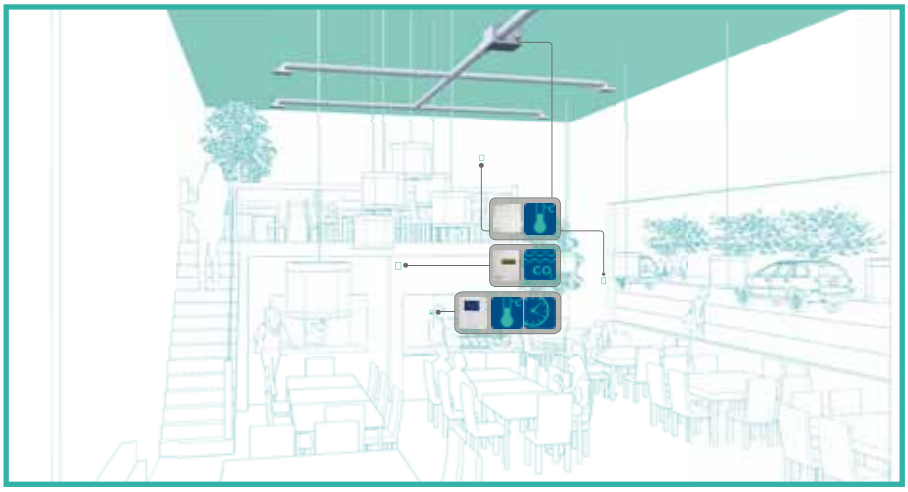
EC-Vent offers the option to simultaneously connect multiple sensors (Temp, Humidity, CO_2, PIR etc) that will detect the actual ventilation requirements and in this way speed control the EC fan so that it ventilates exactly as much as is needed, not more, not less. This way an energy efficient ventilation solution is obtained while a good indoor climate is achieved. EC-Vent consists of two units, a central unit placed near the fan and a room unit that can be placed in the occupied zone. These two are connected to each other with a low voltage cable.

		CB
Voltage	V	230
Phase	~	1
Frequency	Hz	50/60
Current	A	6
Recommended fuse	A	10
Supply to sensor, 24V DC	mA	150
Ambient temp.	°C	-20...50
Enclosure class	IP	44
Weight	kg	0.95

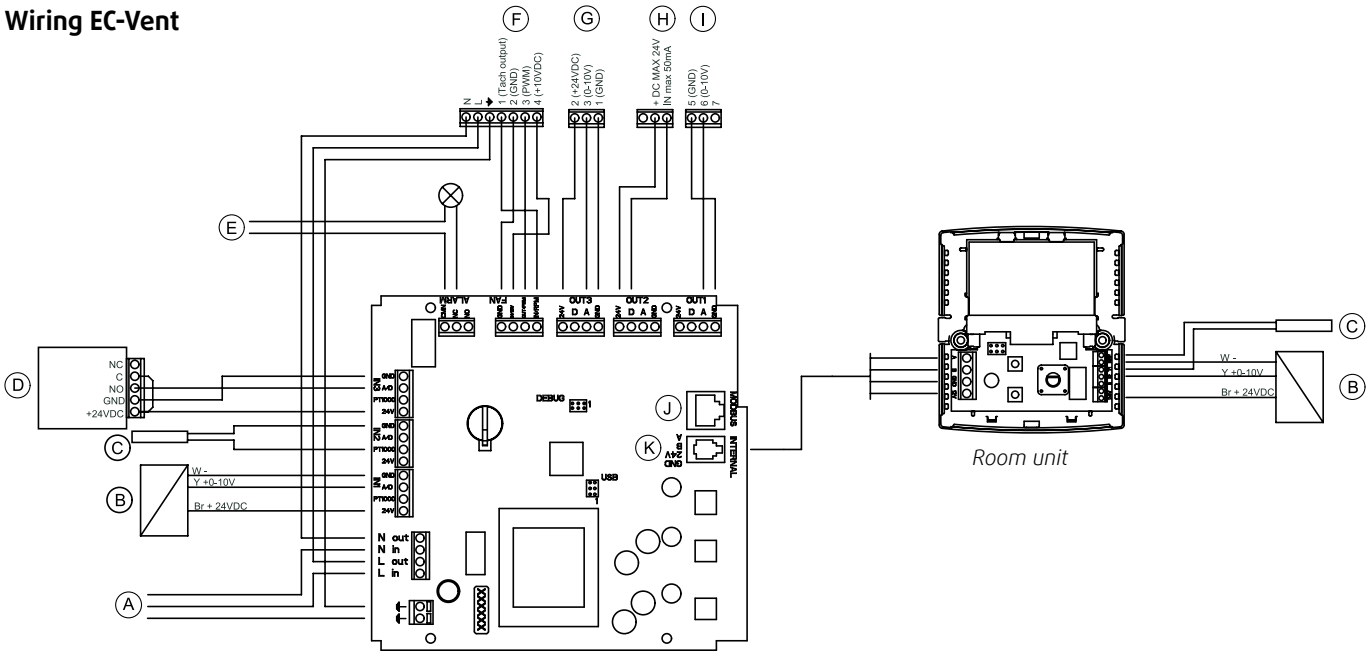
Fitness centre



Restaurant



Wiring EC-Vent



Control board



EC-Vent room unit

EC-Vent room unit that can be placed in the occupied zone. Room unit are connected to EC-vent control board with a low voltage cable.

		WC
Voltage	V	24
Phase	DC	=
Ambient temp.	°C	0...50
Enclosure class	IP	20
Weight	kg	0.2

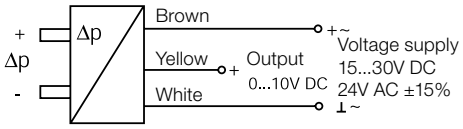


DSG

Pressure sensor

A membrane-type sensor for measuring the differential pressure in non-aggressive gases. The difference in pressure between the sensor's plus (+) and minus (-) connections affects the membrane, which generates a voltage via a differential transformer. This voltage converts into a continuous DC voltage proportional to the membrane's position. Cable length approx. 0.5 m.

DSG		200/500/1000
Voltage supply	V	15V-30V DC/24V~± 15%
Outp. 0-10 V, Imax	mA	2
Enclosure	IP	65
Current	A	0.012
Press. range 200	Pa	0...200
Press. range 500	Pa	0...500
Press. range 1000	Pa	0...1000



Pressure connection ø5 mm



CO2RT
CO2RT-R-D

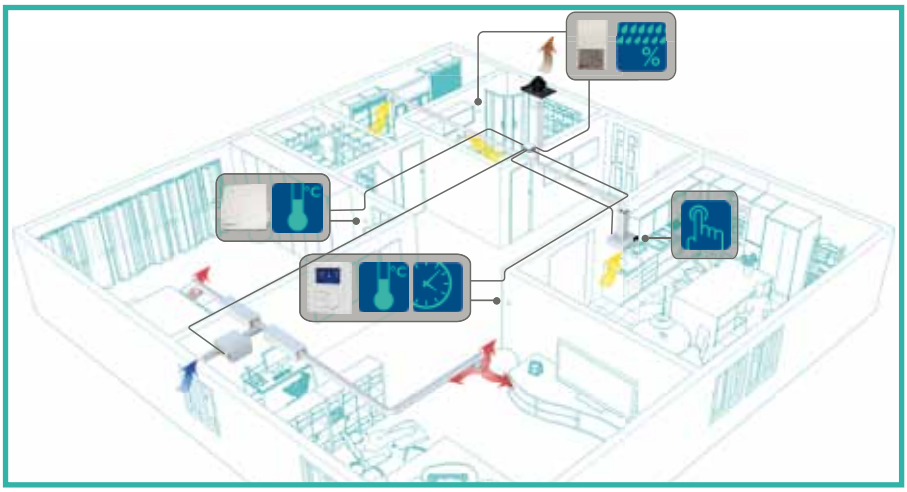
CO2-sensor for wall mounting

CO2RT is a room sensor for measuring carbondioxide, CO_2 concentration in indoor environments. Measuring range 0...2000ppm. Output signal 0...10 V for the full measuring range. CO2RT also has a temperature signal, 0...10 V DC for 0...50°C. Apart from the above mentioned temperature signal CO2RT also has a PT1000 temperature sensor with separate terminals CO2RT is intended for wall mounting.

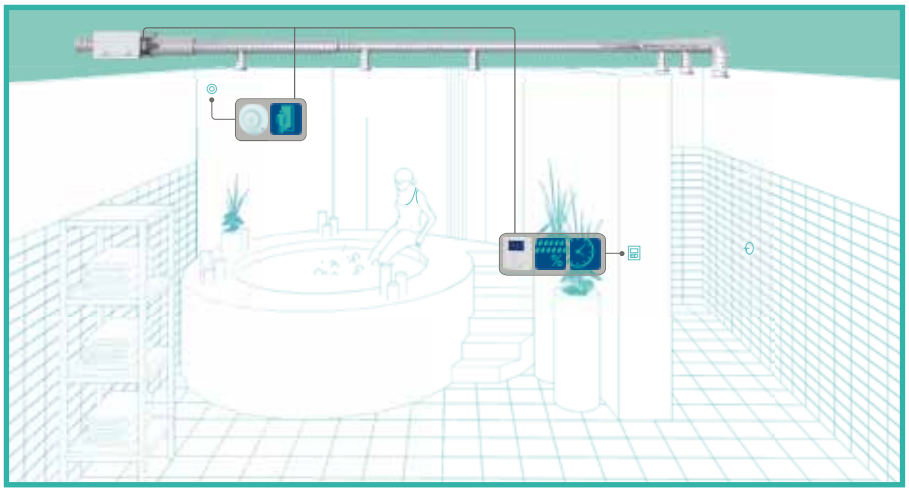
The display models (D) have an LCD-display showing both actual values by regularly alternating.

CO2RT, CO2RT-R-D		
Voltage	V	24
Frequency	Hz	50/60
Power consumption	W	3
Ambient temperature	°C	-5...+55
Re. humidity, non condens.	%	90
Working range	ppm	0...2000
Enclosure class	IP	30
Weight	kg	0.1
Dimension	mm	85x100x30

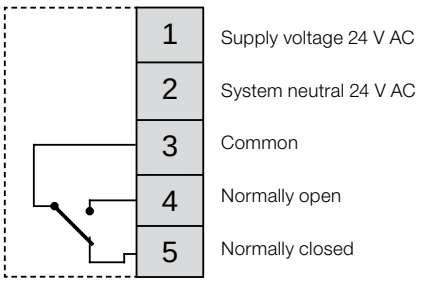
Residential



Spa



CO2RT-R-D



CO2RT

1	Supply voltage 24 V AC
2	System neutral 24 V AC
3	Output 0...10 V (humidity)
4	Output 0...10 V (temperature)
5	Output 0...10 V (CO2)
6	Signal neutral
7	Output, PT1000-sensor
8	Output, PT1000-sensor



SC1/D

Step controller 1-stage

SC1/D is a one-stage signal converter which converts a 0...10V DC input signal to a change-over relay function with adjustable switching points. SC1/D can be set for direct or reverse action, i.e. relay activation on rising input voltage or relay activation on falling input voltage.

		SC1/D
Voltage supply	V	24 VAC
Frequency	Hz	50/60
Power consumption		2 VA
Control signal		0...10 V
Circuit-breaking relay	A	230V AC, max. 10
Max. ambient humidity	%RH	90
Ambient temperature	°C	0...50
Enclosure class	IP	20
WxHxD	mm	53x85x74

1	Sys.neutral	Supply-voltage
2	24V AC in	
3	Not connected	
4	Relay	
5		
6	230V AC, 10A	
7	Signal neutral	
8	Input signal 0-10 V DC	
9	Not connected	
10	Not connected	
11	Not connected	
12	Not connected	



SC2/D

Step controller 2-stage

Step controller suitable for heating/cooling or alarm applications. Converts 0...10 V input signal to relay output. The module is suitable for mounting on a DIN-rail in a cabinet or other enclosure and has adjustable switching points. SC2/D can be set for either binary or sequential control. Voltage supply 24 V AC +/- 15%, 24 V DC (18...35 V DC).

		SC2/D
Frequency	Hz	50/60
Power consumption		2 VA
Perm. ambient temp.	°C	0...50
Max. ambient humidity	%RH	90
Step distance		0...2 V
Enclosure class	IP	20
WxHxD	mm	53x85x74

1	R1	10A 230V~
2		
3	Not connected	
4	Not connected	
5	R2	10A 230V~
6		
7	Input signal 0-10V DC	
8	Signal neutral	
9	Not connected	
10	Not connected	
11	Sys.neutral	Supply voltage
12	24V~ in	



REPT

Digital voltage regulation, single phase

Thyristor-type digital regulation for single-phase motors with variable voltage control. Used, for example, for the pressure regulation of fans in systems where there is a risk of increased draught, and compensation is required for outdoor temperature conditions and other pressure conditions. An integral motor protection device is included which cuts the supply voltage to the fan if the thermal contact in the fan motor is activated.

Radio interference suppression in accordance with EN 50081-1 and EN 50082-2. Regulated output voltage approx. 20-100%. Permitted relative humidity, non condensating 85%. Voltage supply +24 V ±20%, Imax 70 mA.

Wiring on page 332.

		REPT 6/10
Voltage	V	230~
Frequency	Hz	50-60
Current	A	6/10
Min. motor current	A	0.2
Output 0-10 V, Imax	mA	10
Max. power disspation	W	16
Perm. ambient temp.	°C	0....40
Enclosure class	IP	54
WxHxD REPT 6	mm	223x200x131
WxHxD REPT 10	mm	240x284x132
Weight	kg	2



RETP

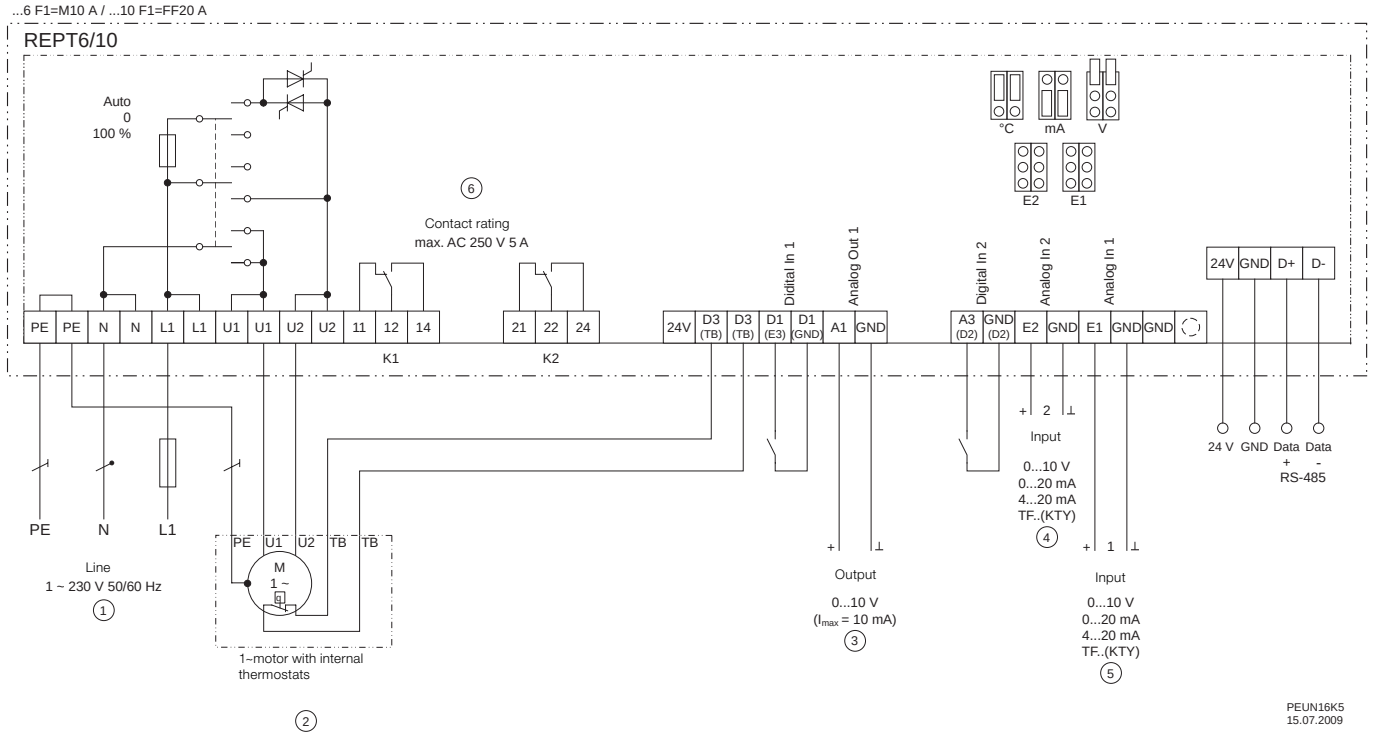
Pressure/temperature regulation, single phase

Thyristor-type stepless pressure or temperature regulation (P-regulation) for single-phase motors with variable voltage control. Used, for example, for room temperature regulation where the heating is conducted by air. An integral motor protection device is included which switch off the supply voltage to the fan if the thermal contact in the fan motor is activated. Regulated output voltage approx. 20-100%. Permitted relative humidity, non condensating 85%. Voltage supply +24 V ±20%, Imax 250 mA.

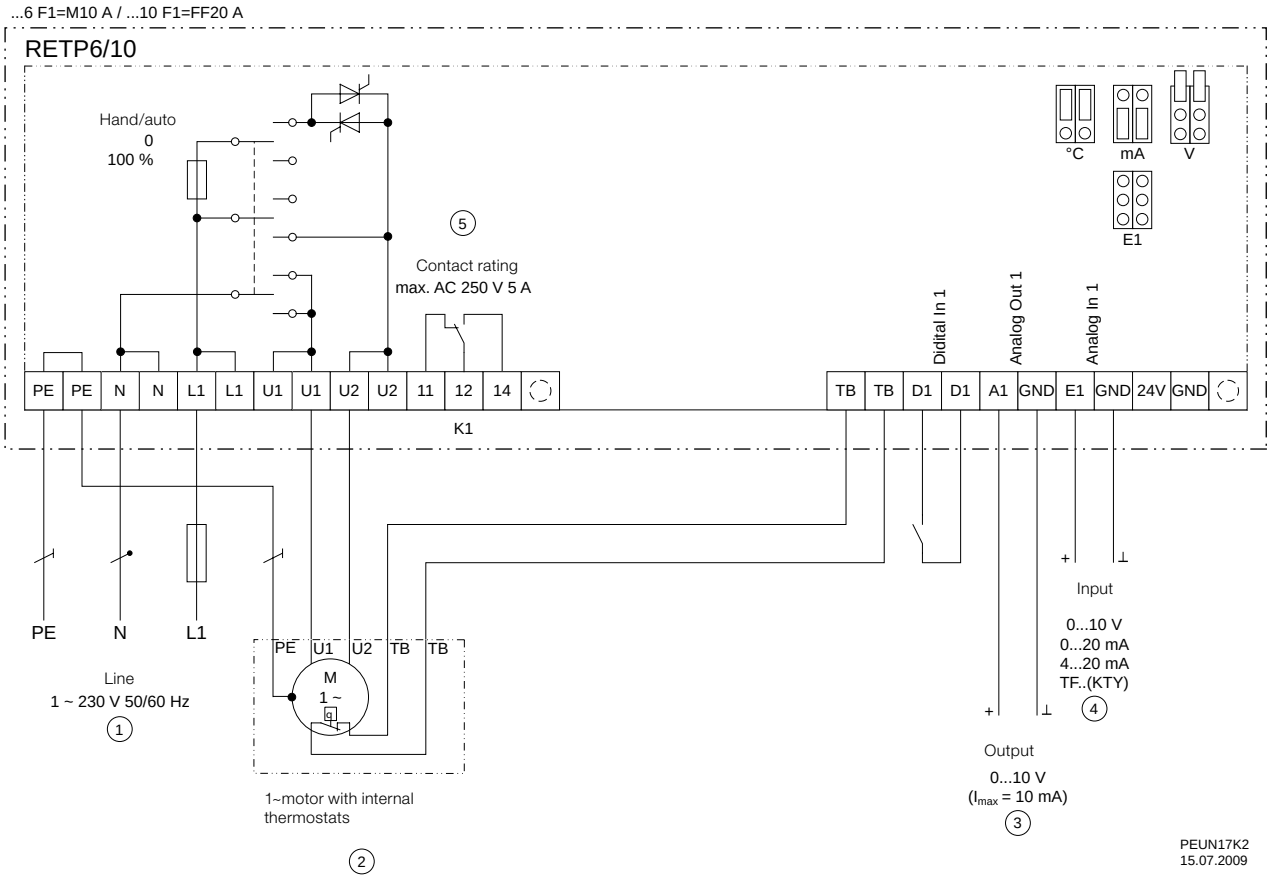
Wiring on page 332.

		RETP 6/10
Voltage	V	230~
Frequency	Hz	50-60
Current	A	6/10
Min. motor current	A	0.2
Output 0-10 V, Imax	mA	10
Recommended fuse	A	16
Max. power disspation	W	10/40
Perm. ambient temp.	°C	40
Enclosure class	IP	54
WxHxD RETP 6	mm	223x200x131
WxHxD RETP 10	mm	240x284x132
Weight	kg	1.3/2.3

Wiring REPT 6/10



Wiring RETP 6/10

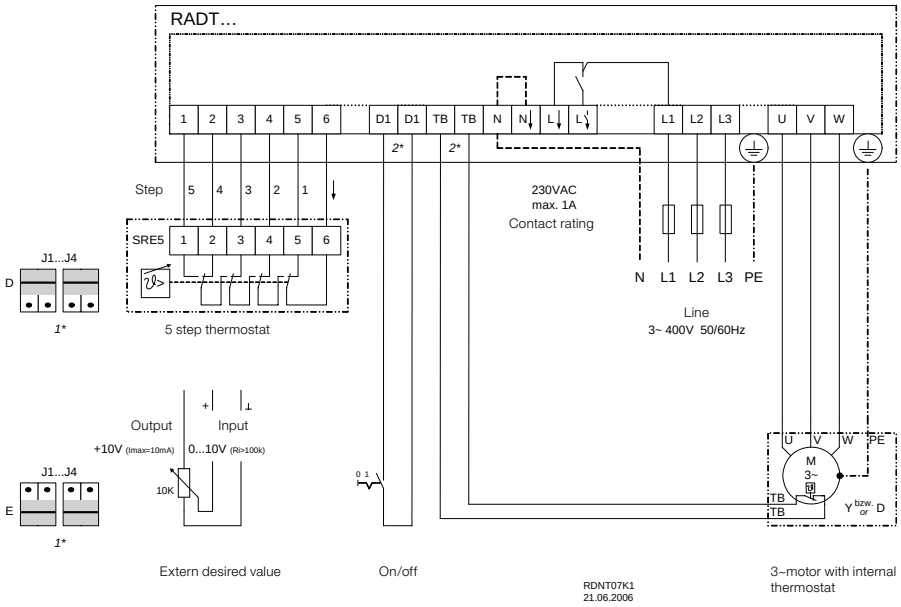




RADT

5-step-transformer with control input

A three-phase transformer which controls the fan speed by altering the supply voltage in five fixed steps. The steps are adjusted by an external 0..10V control signal or by a potentiometer. Supply voltage +10V. Main switch on the front of the unit. An integral motor protection device is included which cuts the supply voltage to the fan if the thermal contact in the fan motor is activated. The unit is reset by turning the knob to "0" for 10 seconds, after which the unit restarts.
Input terminals for on/off cut supply voltage to the fan when the circuit is broken. The indicator lamp on the front shows that the transformer is in operation. The transformer has 230V terminals for operating dampers, electric heater batteries or other external equipment. These terminals have no current when the transformer knob is in position 0, or when the on/off input is open. Max. ambient temp 40°C. Dimensions: W 270, H 323, D 163 mm.



1 Function change by changing the position of the switch*

2 If function is not needed, terminal must be bridged*

RADT		2V	4V	7V
Voltage	V	400 3~	400 3~	400 3~
Frequency	Hz	50/60	50/60	50/60
Current	A	2.0	4.0	7.0
Control signal		0...10VDC		
Enclosure	IP	21	21	21
Weight	kg	7.6	12.5	18
Dimensions	mm	270x323x163		



Pulser

Electronic heating controller

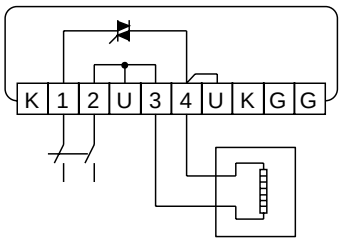
The Pulser is a single or two-phase temperature regulator for controlling heater batteries.

This device is connected in series between the mains and an electric heater. The Pulser has an integral regulator with an input terminal for a duct temperature sensor which is located in the supply air duct.

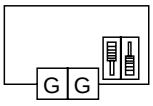
The integral sensor can be used when regulating room temperature. The power regulation is completely stepless thanks to what is known as time-proportional control, which means that the relationship between the 'on' and 'off' times is determined by the set temperature requirement. The total 'on' and 'off' time, or pulse period, is approximately 1 minute.

		Pulser
Voltage	V	230/400
Frequency	Hz	50
Current	A	16
Heating power	W	max 3600/6400
Temp. range of adjustment	°C	0...30
Temp. reduction at night	°C	0...10
Ambient temperature	°C	0...30
Ambient humidity	%RH	0...90
Enclosure	IP	20
WxHxD	mm	94x150x43
Weight	kg	0.3

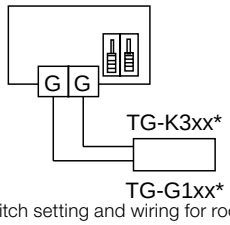
Wiring of supply voltage and heater



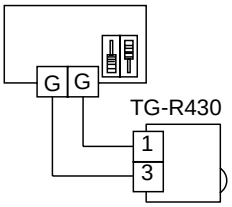
Switch setting for internal set-point and sensor



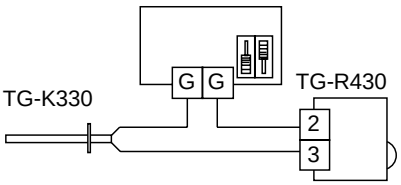
Switch setting and wiring for internal set-point and external sensor



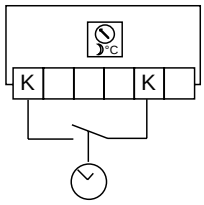
Switch setting and wiring for room control using TG-R430 as sensor and set-point



Switch setting and wiring using external separate sensor and TG-R430 as set-point



Wiring of night set-back function



**Various temp. ranges available, for example TG-G150 = 20...50°C, TG-K370 = 40...70°C etc.*



Pulser M

Electronic heating controller

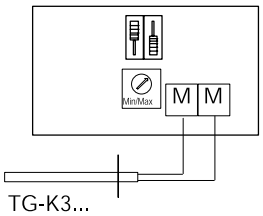
The Pulser M is a single or two-phase temperature regulator for controlling heater batteries.

This device is connected in series between the mains and an electric heater. The Pulser M has an integral regulator with input terminals for a main sensor together with min. or max. limit sensors. The integral sensor can be used when regulating room temperature. The power regulation is completely stepless thanks to what is known as time-proportional control, which means that the relationship between the 'on' and 'off' times is determined by the set temperature requirement. The total 'on' and 'off' time, or pulse period, is approximately 1 minute.

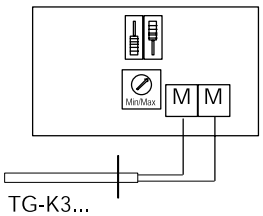
		Pulser M
Voltage	V	230/400
Frequency	Hz	50/60
Current	A	16
Heating power	W	max 3600/6400
Temp. range of adjustment	°C	0...30
Temp. reduction at night	°C	0...10
Ambient temperature	°C	0...30
Ambient humidity	%RH	0...90
Enclosure	IP	20
WxHxD	mm	94x150x43
Weight	kg	0.32

Circuit diagram for supply voltage and adjustment of change-over switch with external sensor. See Pulser.

Adjustment of change-over switch with min. limit sensor.



Adjustment of change-over switch with max. limit sensor.





TTC

Heating controller

TTC-2000 is a 3-phase triac controller for controlling electric heating up to 25 A. It is made for wall mounting. TTC-2000 is to be connected in series between power supply and an electric heater and can control both Y- and Delta- connected loads. TTC-2000 can control assymetrical Delta-loads.

Function

The controller pulses the entire power output ON/OFF and utilises time-proportional control, the ratio between On-time and Off-time is varied to fit the prevailing heating requirement. E.g. ON = 30 sec and OFF= 30 sec gives 50% output power. The cycle-time (the sum of on-time and off-time) is adjustable 6...120 sec.

		TTC
Voltage	V	230/400 3~
Frequency	Hz	50
Current	A	25
Max heating power	kW	10/17
Temp. range of adjustment	°C	0...30
Temp. reduction at night	°C	0...10
Ambient temperature	°C	0....40
Enclosure	IP	30
WxHxD	mm	160x207x94
Weight	kg	1.8

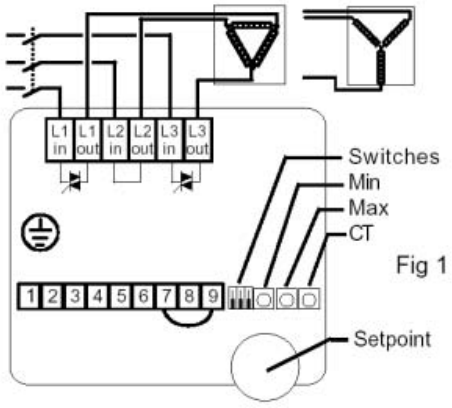
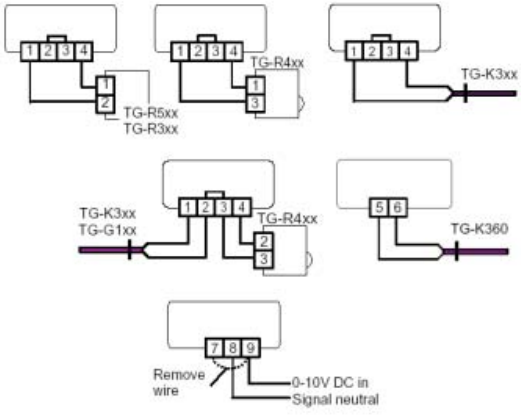


Fig 1



TTC-2000 automatically adapts control mode to suit the dynamics of the controlled object.

Supply air temperature control

For rapid temperature changes, TTC-2000 will work as a PI-controller with a fixed proportional band of 20K and a fixed reset time of 6 minutes.

Room temperature control

For slow temperature changes, TTC-2000 will work as a P-controller with a fixed proportional band of 1.5 K. When running room temperature control the supply air temperature can be maximum and/or minimum limited.

Controlling larger electric heaters

At larger loads TTC-2000 can be combined with ancillary board TT-S1.



TT-S1

Control board

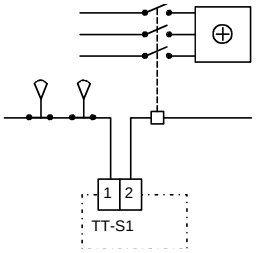
TT-S1 is a control board for use when you need to control larger loads with a TTC-2000. TT-S1 is used to control a contactor that activates and deactivates a basic heating load. For best function the load connected to TT-S1 should be of equal size to the load connected to the TTC-2000. TT-S1 and TTC-2000 must have separate loads.

Easy to install

The TTC-2000 is prepared to plug-in the TT-S1 module. TTC-2000 detects if a TT-S1 is installed and automatically adapts the control function accordingly. No settings are necessary. Connect in series with the control voltage for the heating load contactor. The supply should be wired via the fan stat, the high temperature limit switch etc. TTC-2000 and TT-S1 must have separate, equal-sized loads.

		TT-S1
Voltage supply	V	Suppl. by TTC-2000
Control signal		Suppl. by TTC-2000
Contact		max. 250V/2A
Max. heating power	kW	34

*together with TTC-2000





TT-S4/D

Step switching unit

Step controller for DIN-rail mounting in a cabinet or other enclosure. The controller is intended for controlling electric heating batteries, 4 relay output. The step controller can be set to sequence or binary mode. Can be used together with any controller with 0...10 V output signal. The switch setting on the front of the controller determines the number of steps to be used. The input signal 0...10 V is divided up into the number of steps, thus setting the switch-on point for each step.

		TT-S4/D
Voltage supply	V	24 VAC
Voltage	V	Out signal max 250V AC, 2A
Regulating ratio		Outgoing 4 sequence steps
Working range		15 binary steps
Enclosure class	IP	20
WxHxD	mm	101x85x74

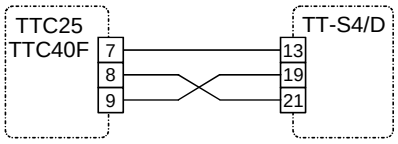


Fig 1

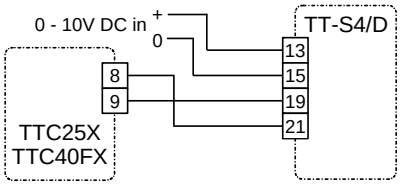


Fig 2



Optigo OP 5

Multi purpose controller

- Temperature
- CO2
- Pressure
- Humidity
- Domestic hot water

Language independent, simple configuration via the backlit display. Input for an external set point device. Optigo 5 is a pre-programmed, configurable controller for DIN-mounting that is intended to control temperature, CO2, pressure, humidity and domestic hot water in HVAC applications.

The controller is extremely easy to install and use. It is mainly intended for small applications. Optigo has a knob with an encoder which makes the menu system very easy to use. You can read and set values shown in the back-lit display. A value is approved by pressing the knob. Optigo is suitable for DIN-rail or cabinet mounting. Since the terminals are detachable all connections can be made before Optigo is installed.

Number of inputs/outputs OP5:

1 analogue input, PT1000
1 SPI input for external set-point device
1 universal input, PT1000 or digital
1 digital input
2 analogue outputs, 0...10V DC

		OP5
Voltage	V	24
Frequency	Hz	50...60
Power	W	3
Perm. max. amb. humidity	%RH	90
Perm. ambient temp.	°C	0...50
Enclosure class	IP	20
WxHxD	mm	122x120x64
Weight	kg	0.215



Optigo OP 10

Multi purpose controller

- Temperature
- CO2
- Pressure
- Humidity
- Domestic hot water

OP10 has 10 inputs/outputs and can be configured to control temperature (ventilation control with heating and cooling), water-heated radiator heating with outdoor temperature dependent control-curve or domestic hot-water control.

The controller is extremely easy to install and use. It is mainly intended for small applications. Optigo has a knob with an encoder which makes the menu system very easy to use. You can read and set values shown in the back-lit display. A value is approved by pressing the knob. Optigo is suitable for DIN-rail or cabinet mounting. Since the terminals are detachable all connections can be made before Optigo is installed.

OP10 is available in two versions, OP10 with 24 V AC supply voltage and OP10-230 with 230 V AC supply voltage.
Number of inputs/outputs OP10:

AI 2
DI 2
UI 1
AO 2
DO 3

		OP10
Voltage	V	24
Frequency	Hz	50...60
Power	W	6
Perm. max. amb. humidity	%RH	90
Perm. ambient temp.	°C	0...50
Enclosure class	IP	20
WxHxD	mm	122x120x64
Weight	kg	0.215

		OP10-230
Voltage supply	V	230V AC
Power consump.	W	4
Perm. max. amb. humidity	%RH	90
Perm. ambient temp.	°C	-40...+50
Enclosure class	IP	20
WxHxD	mm	122x120x64
Weight	kg	0.215

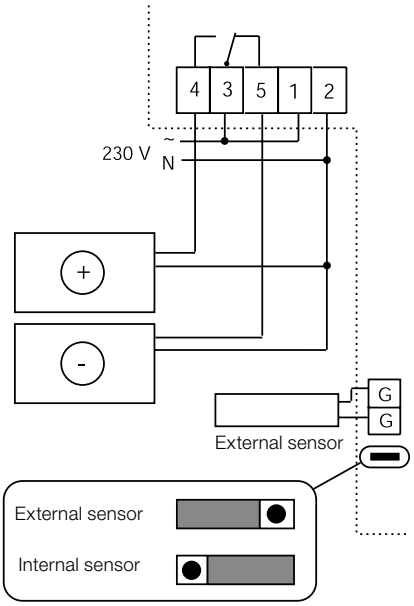


RT 0-30

Room thermostat

The RT 0-30 is an electronic room thermostat for indoor wall mounting, with a change-over relay for regulating either heating or cooling. It has an integral sensor, but an external sensor such as the TG-K330 or TG-R630 can also be connected to the thermostat. The RT 0-30 can also be used with other external temperature sensors to achieve different temperature range.

		RT 0-30
Voltage	V	230
Phase	~	1
Frequency	Hz	50/60
Temp. range of adjustment	°C	0...30
Enclosure class	IP	30
Power consumption	W	1
Perm. ambient temp.	°C	0...50
Perm. max. ambient humidity	%RH	90
Circuit-breaking relay	A	16, 250 VAC
WxHxD	mm	86x86x30



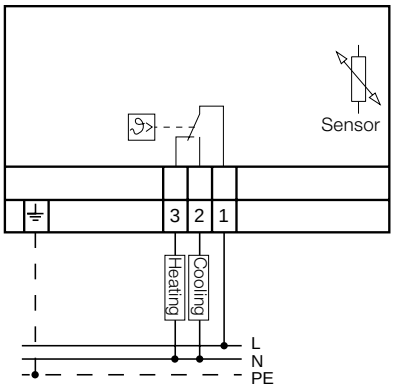


TM 10

Mechanical thermostat

Mechanical thermostat with change contact to switch fans or for the connection to controllers with thermostat or release connection. The setpoint is at the rotary button from 0 to 40°C adjustable.

		TM 10
Temp. range	°C	0...40
Ambient temp.	°C	-20...+50
Differential		1.5K
Contact		1 Wechler
Switching capacity		250V/max 4A
Enclosure class		54 IP
Weight	kg	0.35
WxHxD	mm	86 (+27)x126x58 (+13)



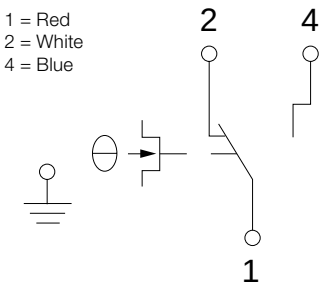


K-FST1

Frost protection thermostat

Especially suited to ensure the protection of hot water coil heating systems against freezing. The frost protection thermostat models are equipped with two switching outputs that provide the option to act on the system already in advance of the attaining of the corresponding danger point. All devices are fail-safe and dispose of a lead-sealable set value setting facility. In each case, the capillary tubes are active over their entire length. Capillar length: 6.0 M. capillar is active on the whole length. The device responds if the adjusted scale value is attained over a length of approx. 30 cm 60 cm respectively. Specially suited for the measuring of temperatures in non-aggressive gases. The bracing of the capillary tubes in front of the coil heating system can be realised by means of installation clips.

		K-FST1
Contact		1 change-over
Curcuit-breaking	A	15(8)A, 24-250V~
Temp. range of adjustm.	°C	-10...+12
Max. temp. of transp. air	°C	200
Ambient temperature	°C	-10...+55
Enclosure class		IP 40
WxHxD	mm	112x105x55





TG-R600/630

External sensor

For sensor measurement in applications where a sensor with a higher enclosure rating is required. To be used with the TTC 2000, Pulser or RT 0-30.

		TG-R600	TG-R630
Temp. of adjustment	°C	-30...+30	0...30
Enclosure class	IP	65	65
WxHxD	mm	85x90x35	85x90x35



TG-K330

Duct sensor

Duct sensor which is mounted inside the duct, with a sensor diameter of 9 mm, a circular flange ø 40 mm and adjustable length from 15 to 130 mm. The connecting cable is 1.5 m. To be used with the TTC, Pulser or RT 0-30.

TG-K		330	350	360
Temp. range	°C	0...30	20...50	0...60
Enclosure	IP	20	20	20



TG-R430/530

Room sensor for wall mounting

TG-R430 room sensor with adjustment of desired value. The dial can be locked with a screw which is concealed behind the cover. The TG-R530 is a room sensor for measuring the room temperature. To be used with the TTC, Pulser or RT 0-30.

TG-R		430/530
Temp. range of adjustment	°C	0...30
Enclosure class	IP	30
WxHxD	mm	86x86x30



TG-A 130

Surface sensor

Surface sensor TG-A 130 to be used together with AQUA 24TF when frost protection or shut down function is required. Cannot be used together with the PULSER series.

		TG-A130
Length	mm	1500
Temp. range of adjustment	°C	0...30
Enclosure	IP	IP 65



TG-R4/R5/ PT1000

Room sensor

Room sensor with setpoint. For measuring room temperature, -R4 with setpoint adjustment, -R5 without setpoint adjustment.

		TG-R4/PT1000
Temperature range	°C	0...50
Control signal		PT1000
Enclosure class	IP	30
WxHxD	mm	86x86x30



TG-KH/ PT1000

Duct sensor

Duct sensor for measuring air temperature in ventilation ducts.

		TG-KH/PT1000
Temperature range	°C	-30 – +70°C
Time constant		16 s
Insert length	mm	60...205
Enclosure class	IP	65



TG-UH/PT1000

Outdoor sensor

For measuring outdoor temperature.

		TG-UH/PT1000
Temperature range	°C	-40...+60
Enclosure class	IP	65
WxHxD	mm	70x93x46



U-EK 230E EX

Thermistor motor protection

The U-EK 230E is a thermistor motor protection device which is intended for use in conjunction with a contactor for the protection of the Ex fans in the DKEX, KTEX and TFDX series. This is an electronic unit designed for snap fitting on to a 35 mm instrument rail. Fan motors have six series-connected thermistors, two per phase winding, whose resistance is determined by the motor temperature. When the motor temperature exceeds the permitted limit, the resistance rises sharply and the motor protector is triggered.

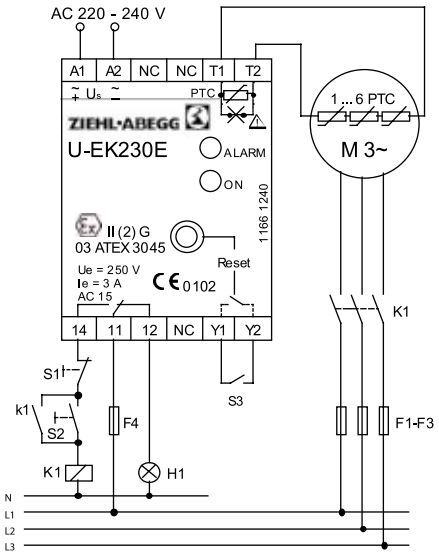
When the motor protector has been triggered, the warning light marked “Störung” (“Fault”) is illuminated. The device is reset manually, either by pressing the “Reset” button, or by interrupting the voltage supply to the motor protector (stopping supply to A2) for approximately 10 seconds.

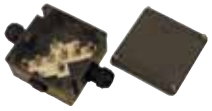
If a five-step transformer is used for regulating EX fans, the U-EK 230E should be connected to the transformer.

A casing is available as an accessory.

Do not place the U-EK 230E in the EX zone!

		U-EK 230E EX
Voltage	V	230
Frequency	Hz	50
Max. current	A	6
Switching capacity		250V AC/3A
Ambient temperature	°C	-20...+50
Enclosure class	IP	20
Weight	kg	0,1
WxHxD	mm	35x116x58





EX connection box

The EX-connection box is of dark grey, glass fibre polyester resin and will be delivered with 2 cable connections and 1 stopping plug in Ex-execution. There are 8 clamps in the connection box.

		EX connection box
Explosion proof		Ex II 2G EX e II T6
Certificate		PTB 99 ATEX 3103
Voltage	V	690
Max. current	A	32
Enclosure, motor	IP	66
WxHxD	mm	115x115x64
Ambient temperature	°C	-50...+55



RVAZ4-24
RVAZ4-24A

Valve actuator

RVAZ4 24A is a valve actuator for 0...10 V DC control signal. 24 V AC supply voltage. Suitable for controlling ZTV/ZTR valves, kvs <= 6,0.

This product conforms with the EMC requirements of European harmonised standards EN60730-1:2000 and EN60730-2-8:2002 and carries the CE mark.

		RVAZ4-24/24A
Voltage supply	V	24 V AC +/- 15%
Power consumption		max 6 W
Frequency	Hz	50/60
Max. stroke	mm	5.5
Full stroke time		121 sec
Stem force	Nm	400
Max. ambient humidity	%RH	95
Ambient temperature	°C	0...50
Enclosure class	IP	44



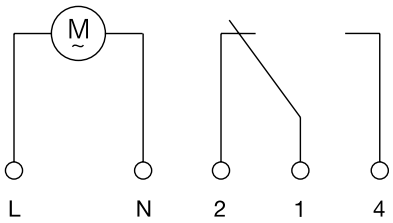
MicroREX D21

Time switch

The MicroREX D21 is a digital 7 day time switch with a circular segmented display for general rail mounting use or on walls in a box, included. Up to 8 program pictures can be set. A program picture incorporates both ON and OFF time. If no button is pressed for 60 seconds during programing the time switch goes back to the start position.

The copying function enables program to be copied to other days. Minimum switching time is 1 minute. The switching times are protected but can be overlaid by other programs. Programs are displayed with a minimum segment size of 30 minutes. The time and the week days are presented digitally. The summer-/winter changeover can be programmed for hand or automatic operation.

		MicroREX
Voltage	V	230
Frequency	Hz	50/60
Max. current load	A	16
Accuracy		±1s/day
WxHxD	mm	36x83x66





Frame for wallmounting

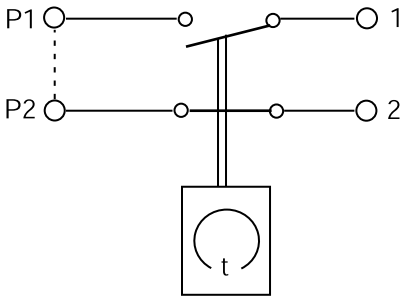
T 120

Timer

Timer with 120-minute operating time. Supplied with flange for fitting into equipment housing. Casing for surface mounting is available as an extra. A switch for closing and breaking circuits. A link can be used to produce a change-over function. The timer makes a quiet ticking sound when connected.

This timer is suitable for controlling the REU and RTRDU five step transformers.

		T 120
Voltage	V	230
Frequency	Hz	50
Max. current load	A	10 (2)
Connection time	min	0...120
WxHxD	mm	80x80x25





Trafo 15/D

Transformer 230/24

The transformer mounted in a 3-module casing for DIN-mounting in a cabinet or other tight enclosure.

		Trafo 15/D
Voltage supply	V	230 AC
Voltage output	V	24 AC
Enclosure class	IP	20
Power output	VA	15
WxHxD	mm	53x85x74



REV

ON-OFF f. EMC inl.

REV- Isolator mounted on a bracket, leads connected I max 16 A.

-3POL/03
3-pole (closing/auxillary contact 1) lead 3x1.5 mm² for 1 phase motor TK not lead out.

-5POL/05
5-pole (closing/auxillary contact 1) lead 5x1.5 mm² for 1 phase motors TK lead out and 3 phase motors TK not lead out.

-5POL/07
5-pole (closing/auxillary contact 1) lead 7x1.5 mm² for 3 phase motors TK lead out.

-9POL/12
9-pole (closing/auxillary contact 1) lead 12x1.5 mm² for 3 phase motors TK lead out and two speed (D/Y).



EMC KIT REV

3-POL/5-POL

The EMC-KIT is an accessory for the REV-switch. The EMC-KIT fitts in the casing of our REV-switch (3Pol/3, 5Pol/5, 5Pol/7). Due to IE2/ecodesign directive the use of frequency converters will increase. For frequency converters without all pole sine filter a shielded connection is needed. We recommend to order the EMC-KIT mounted.



REV DVV

ON-OFF service switch

For fans DVV/F400, F600 and DVV/120. Available on request for sizes 400 to 630 (serial at sizes 800 and 1000). The REV DVV is mounted outside on the cooling duct placed instead of terminal box outside on the cooling duct (DVV/F), while with DVV/120 it is mounted on the casing.

Service switch is 8 pole with 1 x NC and 1 x NO. Locking in OFF position possible (lock not supplied).

Connection of max. 7x2.5 mm² silicon cable on the switch is possible. Equipped with cable gland max. M25x1.5, size depending on cable from electric motor to service switch.

If electric motor ordered with PTC or thermal relay, service switch is supplied with additional cable gland M16x1.5.



S-DT2 SKT
S-DT2 DKT
S-DT2 GKT

2 speed switch

Switching and protecting unit star/triangle. For changing speed of three phase motors with 2 speed by star/delta switching. Automatic cut out of motor when thermal contact trip (overheating of motor). Reset by setting the main switch to 0 and restart.

Plastic casing for surface mounting, assembly without casing is possible on a mounting rail.

S-DT2		SKT	DKT	GKT
Voltage	V	400	400	400
Phase	~	3	3	3
Max. power load	kW	4	4	4
Connection		Y/D	Y/YY	Y/Y
Enclosure class	IP	54	54	54
WxHxD	mm	166x230x129		



S2S 160

Two speed switch

This two speed switch is available with casing for surface mounting: 1~change between two speeds with changing the different windings (auxiliary and main windings). Casing, plastic.

Note only for motors with wiring diagram no 20.

		S2S 160
Voltage	V	1-230
Current	A	10
Enclosure class	IP	54



S5S 100T1
S5S 100T3

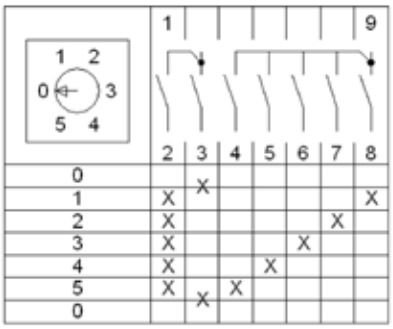
5-step switch

5-step switch for transformer TES. Imax=10A. To mount in a front door of a switch board.

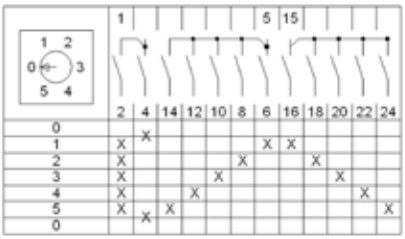
Contacts:
5 steps NO
1 auxiliary contact NO
1 auxiliary contact NO (impulse)

S5S 100		T1	T3
Voltage	V	230	400
Phase	~	1	3
Max. current	A	10	10
Width	mm	48	48
Height	mm	48	48
Depth	mm	103	128
Weight	kg	0.15	0.15

S5S 100T1



S5S 100T3





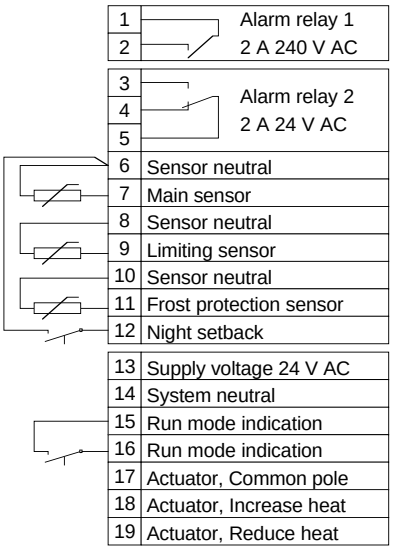
AQUA 24TF

Temperature controller

AQUA 24TF with room or supply air temperature control. The AQUA 24TF controls three-point actuators with a puls-pause signal where the ratio between on-time and off-time is proportional to the temperature offset. The controller has built-in sensor, external sensor can be connected. Use surface sensor TG-A 130 when frost protection or shut-down function is required. AQUA 24TF is suitable for control of valve actuator RVAZ4 24.

Cascade factor (CF) must be set to 1 for single sensor control. Minimum limit (Min) not active in single sensor control.

Parameter	Unit	Value
Voltage supply	V	24VAC +/-10%
Frequency	Hz	50/60
Power consumption		Max 5 VA
Permitted range for ambient temperature	°C	0...50
Permitted relative humidity, non condensating	%	90
Temperature range of adjustment	°C	0...30
Cascade factor (CF)		1...15
Enclosure class	IP	20
Weight	kg	0.25
WxHxD	mm	92x150x45



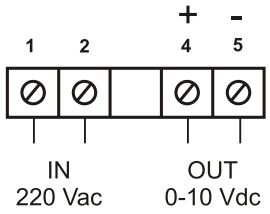


MTV 1/010

Controller

Speed controller with 0-10V input. Combined flush or surface mounting. For the manual control of speed and air flow of electrical fans with 0-10V input. The jetproof IP 54 enclosure is achieved with the included surface mounting case. (Flush-mounting without the surface mounting case, gives a splash proof IP 44 enclosure).

		MTV 1/010
Voltage supply	V	230 V
Output 0-10 V, Imax	mA	8
Enclosure class	IP	44
Weight	kg	0.2
Colour		white





S-ET 10, S-ET 10E

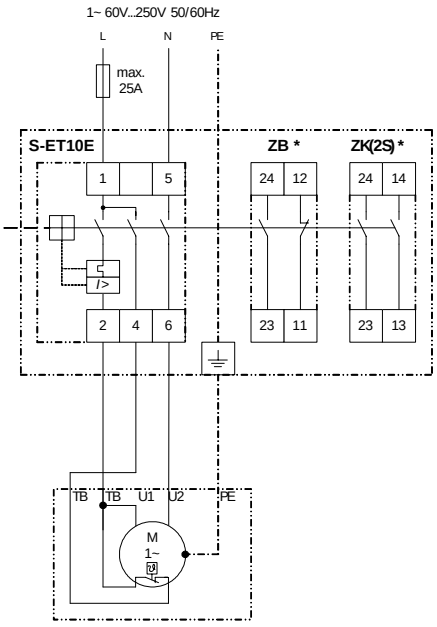
Motor protection, 1~

The S-ET 10 (for wall mounting) and S-ET 10E (for rail mounting) switches off the supply voltage to the motor when the thermal contact in the motor windings is tripped. The motor protector is connected to a 230V supply and also to the thermal contact in the motor. The motor protector is reset by pressing the black button as soon as the motor windings have cooled sufficiently. The motor protector can also be used in conjunction with a transformer. The S-ET has an alarm contact as an accessory. The alarm contact has a built-in potential-free contact for an external signal to indicate when the contact relay has been tripped.

S-ET		10	10E
Voltage	V	60...250	60...250
Current range	A	0,4...10	0,4...10
Rec. fuse	A	25	25
Ambient temp.	°C	-25...+55	-25...+55
Enclosure class	IP	55	20
Weight	kg	0.45	0.2
Width	mm	79	63
Height	mm	141	80
Depth	mm	80	76



Alarm contact must be ordered seperately!





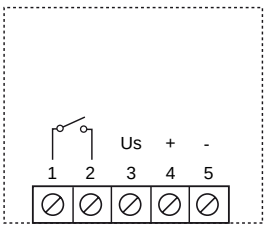
MTP 10

Controller

Potentiometer 10kΩ. Combined flush or surface mounting. For the manual control of speed and air flow of electrical fans with 0-10V output. The jetproof IP 54 enclosure is achieved with the included surface mounting case. (Flush-mounting without the surface mounting case, gives a splash proof IP 44 enclosure).

NB! EC only.

		MTP 10
Voltage supply	V DC	10
Control signal	kΩ	0...10
Working range	V	0...10
Contact		1 NO
Switching capacity		4A/250V
Enclosure class	IP	44
Weight	kg	0.2



Us = 0-10V
+ = 10V Supply Output signal
- = GND



STDT 16, STDT 16E

Motor protection, 3~

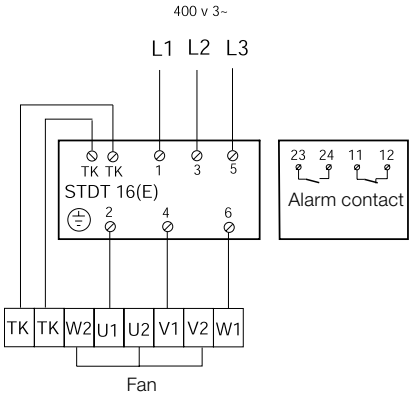
The STDT 16 (for wall mounting) and the STDT 16E (for rail mounting) and switches off the supply voltage to the motor when the thermal contact in the motor windings is tripped. The motor protector is connected to a 400V supply and also to the thermal contact in the motor.

The motor protector is reset by pressing the black button as soon as the motor windings have cooled sufficiently. The motor protector can also be used in conjunction with a transformer. An alarm contact (K) is available as an accessory. The alarm contact has an integral potential-free contact producing an external signal when the relay has been tripped.

STDT		16	16E
Voltage	V	60...400	60...400
Phase	~	3	3
Current range	A	10...16	10...16
Rec. fuse	A	80	80
Ambient temp.	°C	-25...+40	-25...+40
Enclosure class	IP	55	20
Weight	kg	0.6	0.35
Width	mm	80	54
Height	mm	150	80
Depth	mm	98	76



Alarm contact must be ordered seperately!





MSEX

Motor protection

Protective motor switch intended for use in conjunction with EX 140 and EX 180 fans. The motor protector is set to the rated current of the connected fan. The motor protector is mounted on a rail, 356 mm wide.

An MSEX-H auxiliary contact for the motor protector can be supplied, with an opening and closing switch. This auxiliary contact is fitted on to the front of the motor switch.



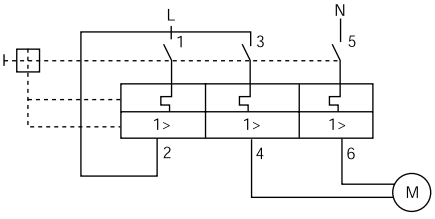
Enclosure MSEX-K is available as an accessory. This will fit both with and without an auxiliary contact. The enclosure is for surface mounting. Two output apertures at the top and bottom. The MSEX must not be placed in the EX zone!

MSEX		0.25-0.4	0.4-0.63
Max. power load	kW	0,09	0.12
Adjustm. range	A	0.25...0,4	0.4...0.63
Ambient temp.	°C	-25...+55	-25...+55
Enclosure	IP	20	20

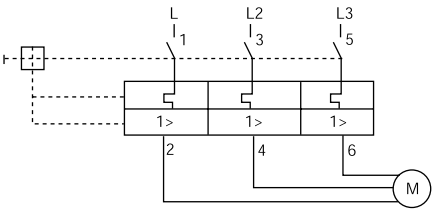
MSEX		0.63-1.0	1.0-1.6
Max. power load		0.25	0.57
Adjustm. range		0.63-1.0	1.0...1.6
Ambient temp.		-25...+55	-25...+55
Enclosure		20	20

MSEX		2.5-4.0	
Max. power load		0.9	
Adjustm. range		2.5...4	
Ambient temp.		-25...+55	
Enclosure		20	

Single phase



Three phase





AWE-SK

Motor protection

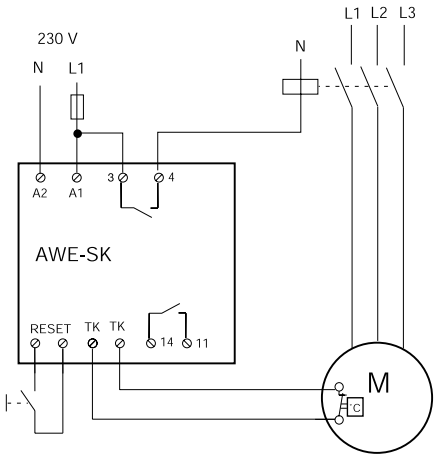
Thermal contact motor protection device for placing on a control panel. The AWE-SK is connected to the motor relay control circuit.

Function

If the thermal contact in the motor is tripped, the AWE-SK contact relay breaks the control circuit connecting with the motor, the warning light illuminates and the fan stops. The motor will still be without current after the thermal contact in the motor is closed. The motor protector is reset by pressing the red button marked "Reset" on the front panel, or by closing an external contact connected to the "Reset" connection block. The AWE-SK does not trip in the event of a mains power supply interruption.

The 14-11 connection block provides a potential-free alarm contact producing an external signal when the relay is tripped.

		AWE-SK
Voltage	V	0...230
Recommended fuse	A	4.0
Max. current	A	2.0
Ambient temperature	°C	0...40
Enclosure class	IP	20
Weight	kg	0.15
WxHxD	mm	48x96x42





HR1

Room humidistat

A humidistat for controlling exhaust air fans in response to the relative humidity. The humidistat uses human hair as the humidity sensor medium. The set-point can be anywhere between 10 and 95% RH. Base plate in black plastic and cover in white plastic.

The HR1 is supplied with a sliding cover over the set-point dial, which can be locked.

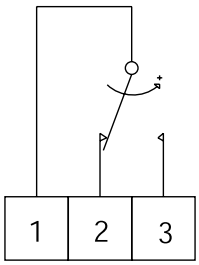
The humidistat should be mounted in a location with good air circulation and constant temperature and humidity. It should not be fitted on external walls, walls in direct sunlight, corners etc.

The humidistat's mounting holes make it suitable for fixing on to a terminal box with screws at 60 mm centres.

The humidistat should be precision-calibrated after it has been mounted, and should be recalibrated regularly. Dust and other matter should be removed with a soft brush at regular intervals.

Contacts 1 and 3 close when the air humidity exceeds the preset value.

		HR1
Setpoint	%RH	10...95
Differential	%RH	4% at 45
Switching capacity		250V/5A
Max. operating temp.	°C	40
Enclosure class	IP	21
Weight	kg	0.1
WxHxD	mm	83x136x37





TFR

Room temperature sensor

With PTC element. With over-voltage protection (R20°C ca 1.9 kΩ). The PTC element is supplied loose in the housing. The element is fitted in one of the cable conduits.

		TFR
Temp. range of adjustment	°C	-20...+60
Resistance at +20°C	Ω	1900
Enclosure class	IP	54
WxHxD	mm	75x75x37

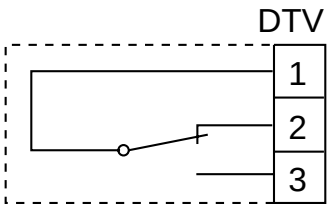


DTV

Pressure switch

Differential pressure switch for air and non-corrosive gasses.Relay contact data 250 V AC 5 A, change-over.

DTV		200	500
Pressure range	Pa	20...300	50...500
Media		Clean air	Clean air
Air temperature	°C	-20...+85	-20...+85
Switch. diff. press.	Pa	15Pa +/-5	25Pa +/-8
Max. current load	A	250V, 5A (0.8A)	
Enclosure class	IP	54	54
WxHxD	mm	88x81x60	88x81x60





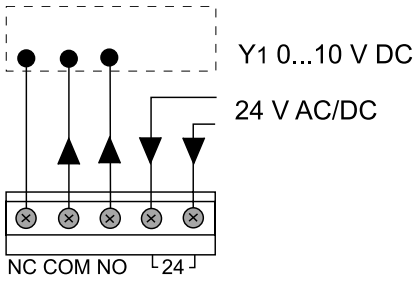
IR24-P

Presence detector

A detector that gives a signal when someone is present in the room under supervision. The detector has a pulse detecting function that minimizes the risk for false alarm. Settable output on/off delay. Intended for wall or ceiling mounting.

IR24-P is a presence detector designed for automatic ventilation control of HVAC systems.

		IR24-P
Voltage supply	V	24 V AC/DC
Ambient temperature	°C	-20...+50
Max. ambient humidity	%RH	95
Enclosure class	IP	40
Circuit-breaking relay	A	NC/NO
Switching capacity		24V DC/0,2A
Dimensions	mm	112x66x45



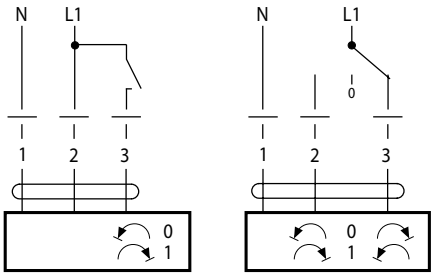


SM 230A

Actuator

The damper motor is made for the adjustment of dampers. The motor is for round and square shafts 10...20 mm. 1-wire-control (open/close) or 3-point-control. Direction of rotation reversible. Manual override with push-button. The max. torque is 20Nm for dampers up to 4 m² and a max. angle of rotation of 95° with adjustable mechanical limitation.

		SM 230A
Voltage	V	100...240
Frequency	Hz	50/60
Power consumption	W	2,5
Enclosure class	IP	54
Full stroke time	s	150
Perm. rel. humidity, non condens.	%	-30...+50
Weight	kg	1.05





SF 230A
SF 24A
SF 24A-SR
SF 24A-S2

Damper actuator

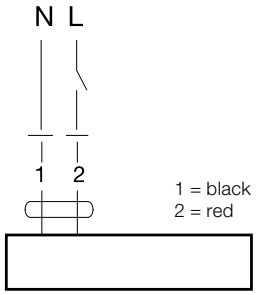
- For air dampers up to approx. 4 m2
- Torque 20 Nm
- Nominal voltage AC 230 V
- Control: Open-close

Spring return actuator with emergency function for adjusting air dampers in ventilation and air conditioning systems in buildings.

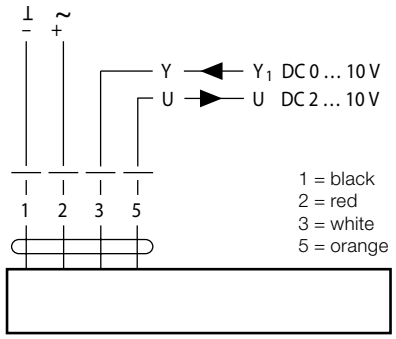
		SF 230A	SF 24A
Voltage	V	230	24
Frequency	Hz	50/60	50/60
Power consump.	W	6.5	5
Torque	Nm	20	20
Full stroke time		75s/20s	75s/20s
Enclosure class	IP	54	54
Ambient temp.	°C	-30...+50	-30...+50
Weight	kg	2.1	2.1

		SF24A-SR	SF24A-S2
Voltage	V	24	24
Frequency	Hz	50/60	50/60
Power consump.	W	5	5
Torque	Nm	20	20
Full stroke time		150s/20s	75s/20s
Enclosure class	IP	54	54
Ambient temp.	°C	-30...+50	-30...+50
Weight	kg	2.1	2.3

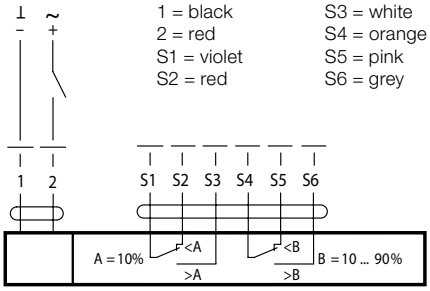
SF 230A, SF 24A

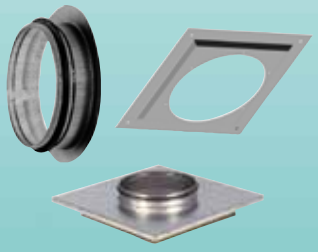


SF 24A-SR



SF 230A, SF 24A





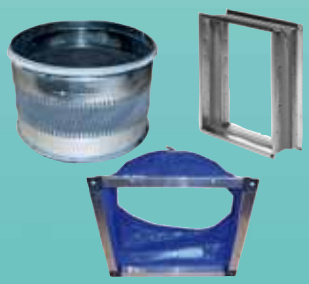
Flanges



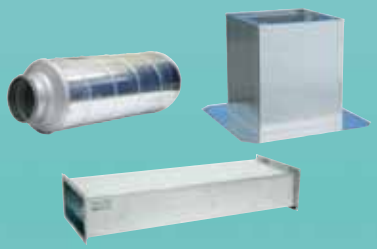
Anti-vibration mounts



Coolers



Flexible connections



Silencers



Roof sockets



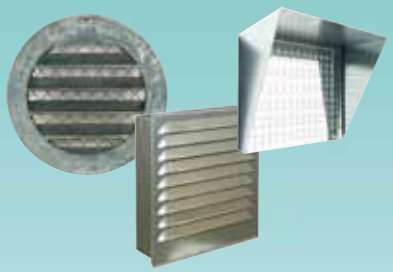
Shutters, dampers



Others



Mounting clamps/feet



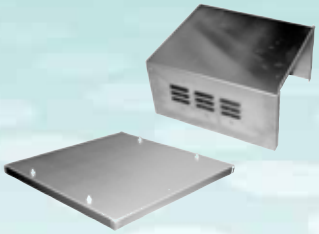
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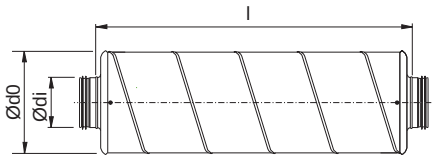
Roofs
WSD 370
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LDC

Silencer

Easily-fitted silencer for circular ducts, fitted with a connection that complies with the spiral duct standard. The LDC effectively reduces noise in the duct. Two silencers can be used together in installations where noise reduction is critical. For the most effective noise reduction, the silencer should be fitted immediately behind a fan or bend. The silencer should be used together with an insulated fan where there is a requirement for noise reduction both in the duct and in the surroundings as a whole. Insulation thickness 50 mm.



LDC	L nom	ød1	ød0	l	kg
100-300	300	100	200	360	2.28
100-600	600	100	200	660	4.09
100-900	900	100	200	960	5.18
100-1200	1200	100	200	1260	6.46
125-600	600	125	224	665	4.39
125-900	900	125	224	965	6.2
125-1200	1200	125	224	1265	7.47
150-600	600	150	250	600	5.37
160-600	600	160	260	670	5.37
160-900	900	160	260	970	7.48
200-600	600	200	300	685	6.9
200-900	900	200	300	985	9.74
250-600	600	250	355	600	8.55
250-900	900	250	355	900	11.7
315-600	600	315	415	600	11.8
315-900	900	315	415	900	16.3
355-900	900	355	560	900	25.2
400-900	900	400	600	900	24.3

Noise suppression dB (mid-frequency Hz)								
LDC	63	125	250	500	1k	2k	4k	8k
100-300	2	2	6	14	21	25	20	11
100-600	4	3	11	24	36	49	34	17
100-900	5	4	15	34	50	50	48	23
100-1200	6	5	19	45	50	50	50	29
125-600	3	3	9	23	30	40	22	14
125-900	4	4	12	33	45	50	30	17
125-1200	5	5	15	43	50	50	38	21
150-600	-	3	7	20	27	31	16	11
160-600	2	3	7	19	27	29	14	11
160-900	2	4	10	28	42	43	20	15
200-600	2	3	7	16	21	23	9	8
200-900	2	4	8	24	32	34	13	10
250-600	3	2	7	13	17	16	8	6
250-900	3	4	8	20	26	23	10	8
315-600	0	2	6	11	14	9	4	5
315-900	1	3	7	16	22	12	6	7
355-900	-	3	6	13	18	10	6	7
400-900	1	3	5	10	13	7	5	6

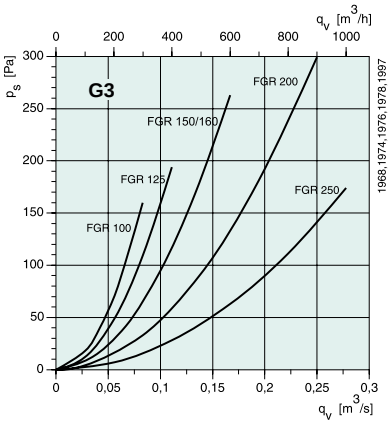


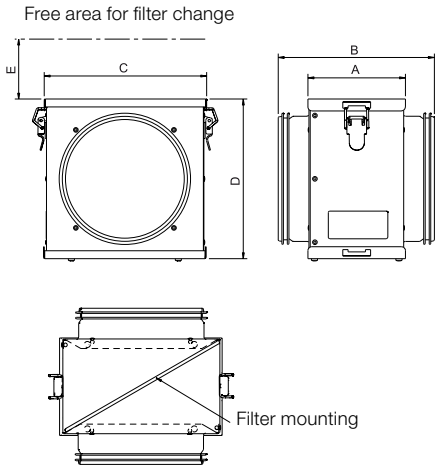
FGR

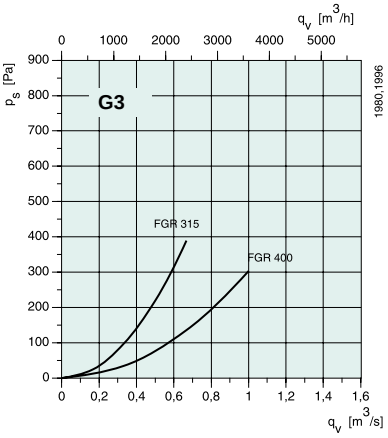
Filter cassette for circular ducts

The FGR filter cassette is fitted with a standard type G3 panel filter. The cassette housing is manufactured from galvanised sheet steel with rubber-sealed circular connections, toggle locks and disposable filters. Replacement PFR filters are sold in packs of five.

The filter cassette is suitable for use as a supply-air filter in industrial workshops. The recommended final pressure drop is 170 Pa for the G3 filter.







FGR	ø	A	B	C	D	E
100	100	123	199	205	201	190
125	125	123	199	205	201	190
150	150	123	199	205	201	190
160	160	123	199	205	201	190
200	200	123	199	302	297	280
250	250	123	239	302	297	280
315	315	123	239	350	345	330
355	355	123	239	454	450	435
400	400	123	259	454	450	435

Filter cassette	Panel filter (incl. in FGR)	Filter media
FGR 100	PFR 100-160	G3
FGR 125	PFR 100-160	G3
FGR 150	PFR 100-160	G3
FGR 160	PFR 100-160	G3
FGR 200	PFR 200	G3
FGR 250	PFR 250	G3
FGR 315	PFR 315	G3
FGR 355	PFR 355	G3
FGR 400	PFR 400	G3

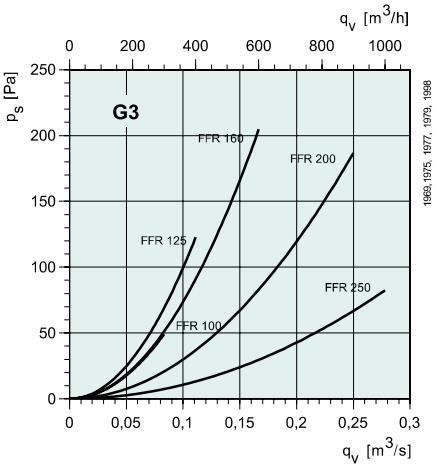


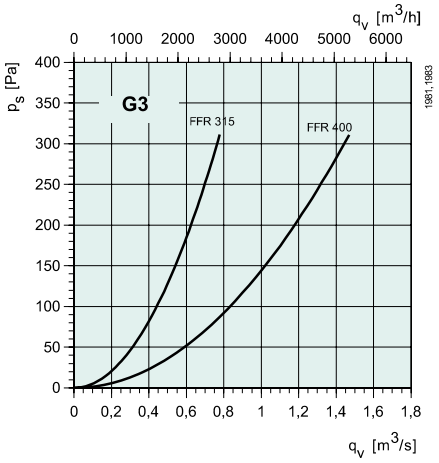
FFR

Filter cassette for circular ducts

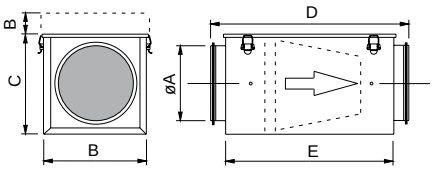
The FFR filter cassette is designed for bag filters of the G3, F5 or F7 standard filter types. The cassette is manufactured from galvanised sheet steel with rubber-sealed circular connections and locks with toggle fasteners.

The cassette is fitted with connections for connecting to a pressure sensor. The filters for FFR are BFR bag filters. Available in various filter classes and are ordered separately and supplied individually. The recommended final pressure drop is 170 Pa for the G3 filter, 200 Pa for the F5 filter and 250 Pa for the F7 filter.

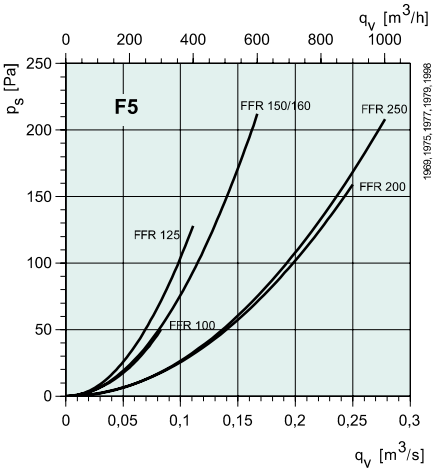


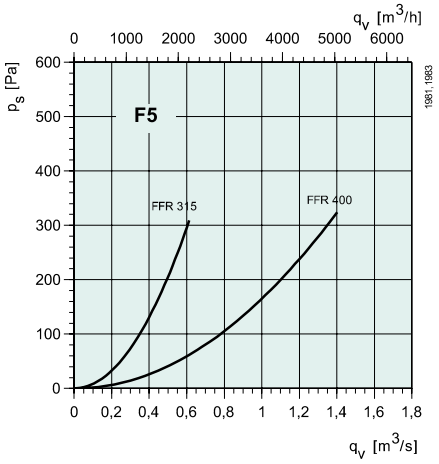


Free area for filter change

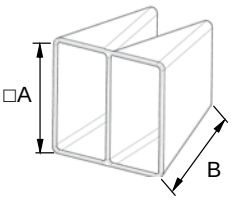


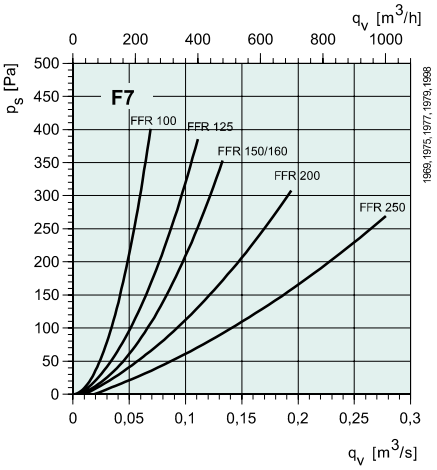
øA	B	C	D	E
100	200	203	522	450
125	200	203	522	450
150	200	203	522	450
160	200	203	522	450
200	245	248	530	450
250	295	298	584	500
315	345	348	634	550
355	445	448	780	650
400	445	448	782	650

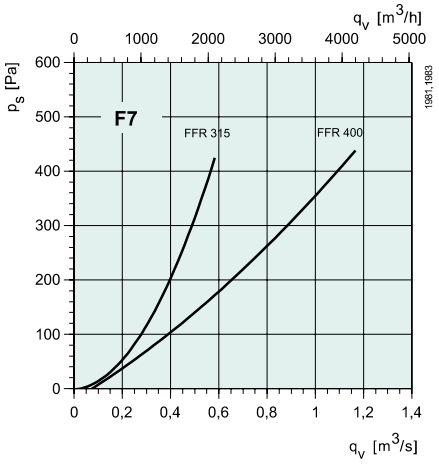




Filter cassette	Bag filter	Filter media
FFR 100	BFR 100-160	G3, F5, F7
FFR 125	BFR 100-160	G3, F5, F7
FFR 150	BFR 100-160	G3, F5, F8
FFR 160	BFR 100-160	G3, F5, F9
FFR 200	BFR 200	G3, F5, F10
FFR 250	BFR 250	G3, F5, F11
FFR 315	BFR 315	G3, F5, F12
FFR 355	BFR 355	G3, F5, F13
FFR 400	BFR 400	G3, F5, F14







Dimensions for filter classes G3/F5/F7 in mm:

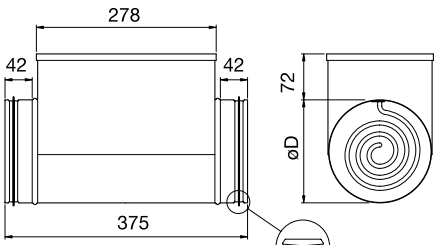
BFR	□A	B	No. of filter bags
100-160	187/187/188	250/250/235	2/2/3
200	232/232/233	250/250/235	2/2/3
250	282/282/283	300/300/285	2/2/4
315	232/232/233	350/350/330	3/3/5
315	432/432/433	450/450/420	3/3/6
400	432/432/433	450/450/420	3/3/6



CB

Electrical duct heater

Duct heater with spigot connection for standard spiral ducts. Manufactured from alu-zinc coated sheet steel with a heating element in stainless steel. The heater has integral overheating protection with a manual reset function. The CB heater has rubber seals on the connecting spigots. Suitable for control by room thermostat or Pulser. The minimum air volume is based on a minimum air velocity of 1.5 m/s. These duct heaters are designed for a maximum output air temperature of 40°C. The CB can be installed in a horizontal or vertical duct. In a horizontal duct, the connection box should be installed facing upwards, or rotated 90° to one side. Installation with the connection box facing downwards is not allowed.



øD = connection diameter

A = Heating elements
B = Overheat protection with automatic reset
C = Overheat protection with manual reset
E = Interlocking
F = All phase breaker
H = Thyristor type Pulser or TTC

Pulser page 334
TTC page 335
Sensors 338

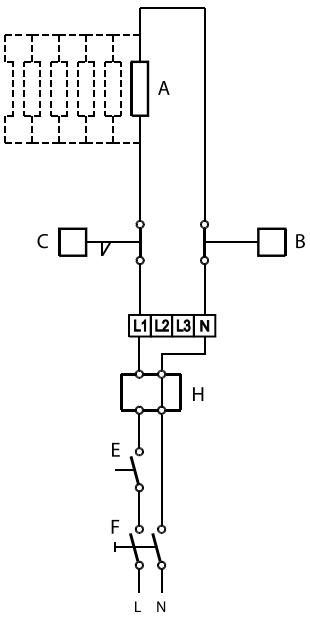
CB	100-0.4	100-0.6	125-0.6	125-1.2	125-1.8	150-1.2	150-2.1	150-2.7
Connection ø mm	100	100	125	125	125	150	150	150
Power [kW]	0.4	0.6	0.6	1.2	1.8	1.2	2.1	2.7
Voltage [V]	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~	230 1~
Current [A]	1.7	2.6	2.6	5.2	7.8	5.2	9.1	11.7
Min. airflow [m³/h]	45	45	70	70	65	100	100	100
Weight [kg]	2	2	2.5	2.5	2.5	2.5	3.2	3.0
Controlled by	Pulser	Pulser	Pulser	Pulser	Pulser	Pulser	Pulser	Pulser
Wiring diagram	CB-1	CB-1	CB-1	CB-1	CB-1	CB-1	CB-1	CB-1

CB	150-5.0	160-1.2	160-2.1	160-2.7	160-5.0	200-2.1	200-3.0	200-5.0
Connection ø mm	150	160	160	160	160	200	200	200
Power [kW]	5.0	1.2	2.1	2.7	5.0	2.1	3.0	5.0
Voltage [V]	400 2~	230 1~	230 1~	230 1~	400 2~	230 1~	230 1~	400 2~
Current [A]	12.5	5.2	9.1	11.7	12.5	9.1	13	12.5
Min. airflow [m³/h]	100	115	115	115	115	180	180	180
Weight [kg]	3.8	3	3.2	3.5	4.0	3.9	4.0	4.5
Controlled by	Pulser	Pulser	Pulser	Pulser	Pulser	Pulser	Pulser	Pulser
Wiring diagram	CB-2	CB-1	CB-1	CB-1	CB-2	CB-1	CB-1	CB-2

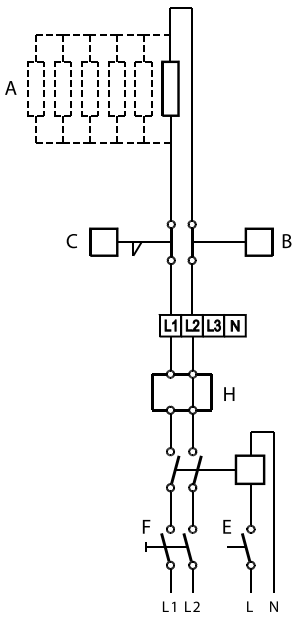
CB	250-3.0	250-6.0	250-9.0	315-3.0	315-6.0	315-9.0	315-12.0	355-6.0
Connection ø mm	250	250	250	315	315	315	315	355
Power [kW]	3.0	6	9	3	6	9	12	6
Voltage [V]	230 1~	400 2~	400 3~	230 1~	400 2~	400 3~	400 3~	400 2~
Current [A]	13	16	13	13	15	13	17.3	15
Min. airflow [m³/h]	280	280	280	430	430	430	430	550
Weight [kg]	4.8	5.2	6.2	6	6.3	7.3	7.6	7
Controlled by	Pulser	Pulser	TTC	Pulser	Pulser	TTC	TTC	Pulser
Wiring diagram	CB-1	CB-2	CB-3	CB-1	CB-2	CB-3	CB-4	CB-2

CB	355-9.0	355-12.0	400-6.0	400-9.0	400-12.0			
Connection ø mm	355	355	400	400	400			
Power [kW]	9	12	6	9	12			
Voltage [V]	400 3~	400 3~	400 2~	400 3~	400 3~			
Current [A]	13	17.3	15	13	17.3			
Min. airflow [m³/h]	550	550	700	700	700			
Weight [kg]	8.2	8.5	8	8.5	9.2			
Controlled by	TTC	TTC	Pulser	TTC	TTC			
Wiring diagram	CB-3	CB-4	CB-2	CB-3	CB-4			

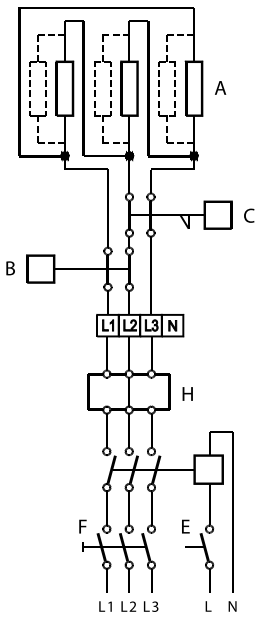
CB-1 230V~



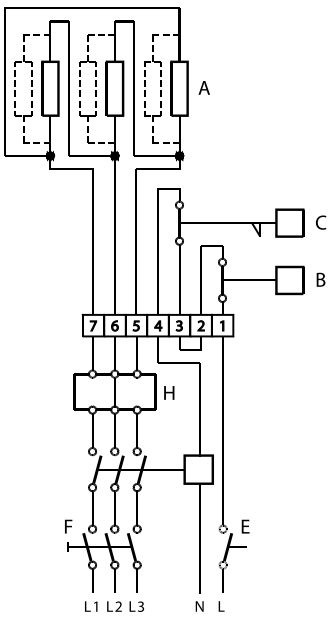
CB-2 400V 2~



CB-3 230V 3~ 400V 3~



CB-4 12kW, 400V 3~





CBM

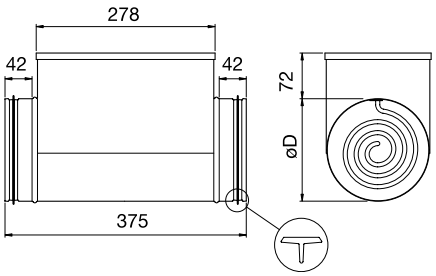
Duct heater with integral control equipment

Duct heater with spigot connection for standard spiral circular ducts. Manufactured from alu-zinc coated sheet steel with a heating element in stainless steel. The heater has integral overheating protection with a manual reset function. The CBM (except sizes 150 and 355) have rubber seals on the connecting spigots. The temperature is set on the cover of the duct heater. The unit is controlled by an integral electronic temperature regulator, using so-called time-proportional Pulse/Pause technology. This provides extremely precise temperature control. As a thyristor is used for adjusting the temperature, the unit has no moving parts. This means that it is silent and not susceptible to wear and tear. Terminals for interlocking the heater, via a pressure- and airflow guard are available in the terminal box. The minimum air volume is based on a minimum air velocity of 1.5 m/s. These duct heaters are designed for a maximum output air temperature of 40°C.

All CBMs are delivered with duct sensor TG-K330 (0-30°C) as standard.

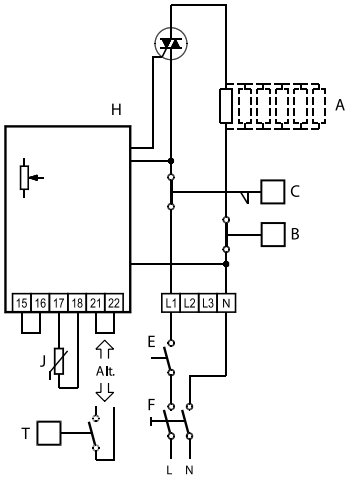
CBM	100-0.6	125-1.2	150-2.1	160-2.1	200-3.0	200-5.0	250-3.0	250-6.0
Connection ø mm	100	125	150	160	200	200	250	250
Power [kW]	0.6	1.2	2.1	2.1	3.0	5.0	3.0	6.0
Voltage [V]	230 1~	230 1~	230 1~	230 1~	230 1~	400 2~	230 1~	400 2~
Current [A]	2.6	5.2	9.1	9.1	13.1	12.5	13.1	15
Min. airflow [m³/h]	45	70	100	115	180	115	180	280
Weight [kg]	2.3	3	3.5	3.5	4.4	4.8	5	5.6
Wiring diagram	CBM-1	CBM-1	CBM-1	CBM-1	CBM-1	CBM-2	CBM-1	CBM-2

CBM	315-6.0	315-9.0	355-9.0	400-9.0				
Connection ø mm	315	315	355	400				
Power [kW]	6	9	9	9				
Voltage [V]	400 2~	400 3~	400 3~	400 3~				
Current [A]	15	13	13	13				
Min. airflow [m³/h]	421	430	550	700				
Weight [kg]	6.6	8	8.8	9.3				
Wiring diagram	CBM-2	CBM-3	CBM-3	CBM-3				

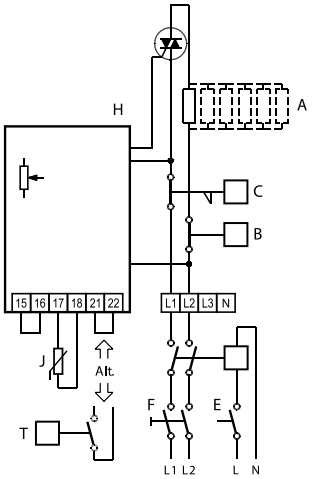


øD = connection diameter

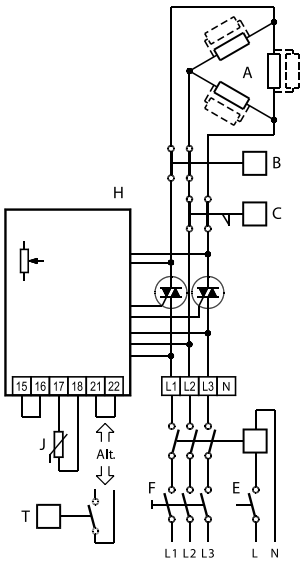
CBM-1 230V~



CBM-2 400V 2~



CBM-3 400V 3~



A = Heating elements
B = Overheat protection with automatic reset
C = Overheat protection with manual reset
E = Interlocking
F = All phase breaker
H = Thyristor type Pulser or TTC
J = Sensor
T = Air flow switch/Pressure switch

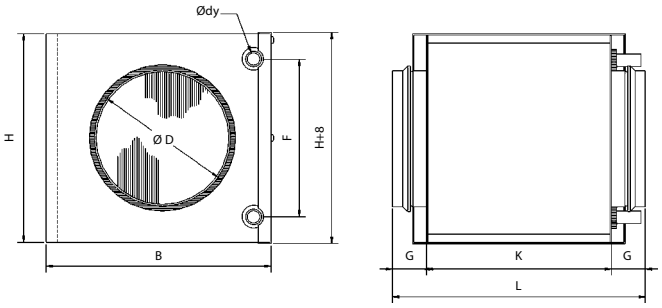


VBC

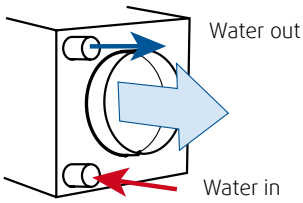
Water heating coil

Water-heating coil for heating air in ventilation systems with circular ducts. Aluzinc-coated casing, heat transmission element with copper tubes and aluminium fins. Removable cover for cleaning the unit.

The water-heating coil can be installed in a horizontal duct. Max operating temperature 150°C. Max operating pressure 1.6 MPa (16 Bar) 2- and 3-rows batteries.



VBC	øD	B	H	Ødy	F	G	K	L	kg
100-2	100	238	180	10	137	40	276	356	3.7
100-3	100	238	180	10	100	40	276	356	3.8
125-2	125	238	180	10	137	40	276	356	3.5
125-3	125	313	255	10	175	40	276	356	5.5
160-2	160	313	255	10	212	40	276	356	5.4
160-3	160	313	255	10	175	40	276	356	5.4
200-2	200	313	255	10	212	40	276	356	5.3
200-3	200	398	330	22	250	40	276	356	8.2
250-2	250	398	330	22	250	40	276	356	7.7
250-3	250	473	405	22	325	40	276	356	10.2
315-2	315	473	405	22	325	40	276	356	9.9
315-3	315	557	504	22	400	40	276	356	13.4
400-2	400	557	504	22	400	65	276	406	13.1
400-3	400	707	539	22	425	65	330	460	17.9
500-2	500	707	529	22	425	65	330	460	16.9

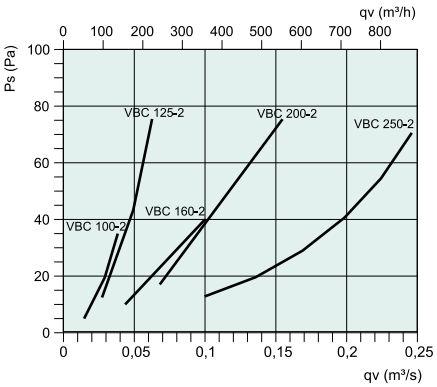


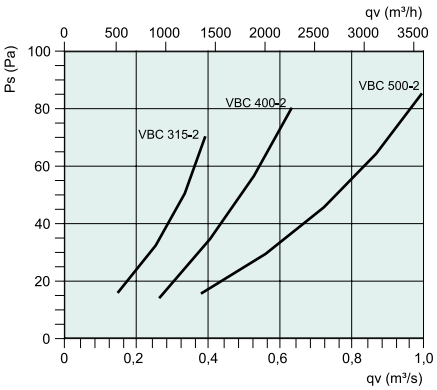
Coil calculation 2 rows

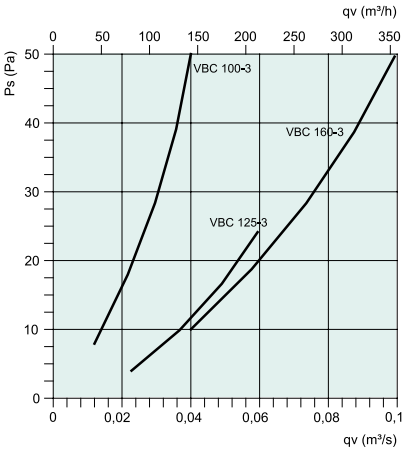
	VBC 100-2	VBC 125-2	VBC 160-2	VBC 200-2	VBC 250-2	VBC 315-2	VBC 400-2	VBC 500-2
Air flow (m^3/s)	0.04	0.06	0.1	0.15	0.25	0.39	0.63	0.9
Pressure drop (Pa)	35	72	40	73	68	69	77	45
ΔT air at T water 60/40, °C	16	13	19.9	17.3	17.5	18.1	17.7	19.4
Water flow rate (l/s)	0.01	0.01	0.03	0.04	0.07	0.11	0.18	0.28
Water speed (m/s)	0.15	0.2	0.4	0.6	0.5	0.5	0.6	0.7
Pressure drop (kPa)	0.1	0.1	3	5	3	3	4	6.6
Power (kW)	0.85	1.0	2.6	3.5	5.7	9.2	14.6	22.7
ΔT air at T water 90/70, °C	32.5	28.3	35.8	30.4	31.7	32	31	31
Water flow rate (l/s)	0.02	0.03	0.06	0.07	0.13	0.2	0.31	0.31
Water speed (m/s)	0.3	0.4	0.8	1.1	0.9	1	1.1	1.1
Pressure drop (kPa)	1	1	8	13	7	8	10	10
Power (kW)	1.7	2.2	4.6	6.1	10.3	16.3	25.5	25.5

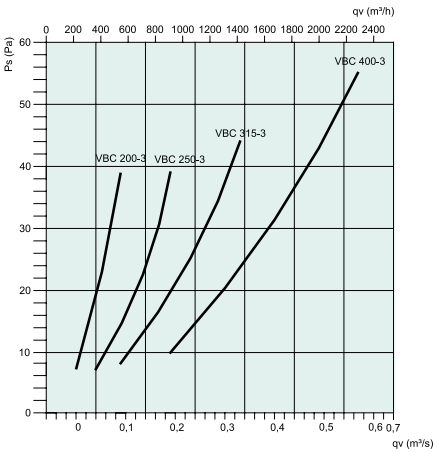
Coil calculation 3 rows

	VBC 100-3	VBC 125-3	VBC 160-3	VBC 200-3	VBC 250-3	VBC 315-3	VBC 400-3
Air flow (m^3/s)	0.04	0.06	0.1	0.15	0.25	0.39	0.63
Pressure drop (Pa)	39	17.2	41	29	31.2	35	36.3
ΔT air at T water 60/40, °C	25,9	33.4	29.3	30.7	30.5	30.2	30.3
Water flow rate (l/s)	0.02	0.03	0.05	0.07	0.12	0.19	0.3
Water speed (m/s)	0.24	0.47	0.68	0.54	0.59	0.69	0.74
Pressure drop (kPa)	0.85	5.33	11	5.36	6.23	8.28	10.10
Power (kW)	1.35	2.6	3.8	6	9.93	15.3	24.74
ΔT air at T water 90/70, °C	47.4	56.2	49.7	52.1	51.6	51	50.8
Water flow rate (l/s)	0.03	0.05	0.08	0.13	0.21	0.32	0.51
Water speed (m/s)	0.45	0.8	1.17	0.92	1.02	1.17	1.26
Pressure drop (kPa)	2.65	14	29.5	14.1	16.2	21.4	26.1
Power (kW)	2.46	4.38	6.46	10.17	16.8	25.87	41.6











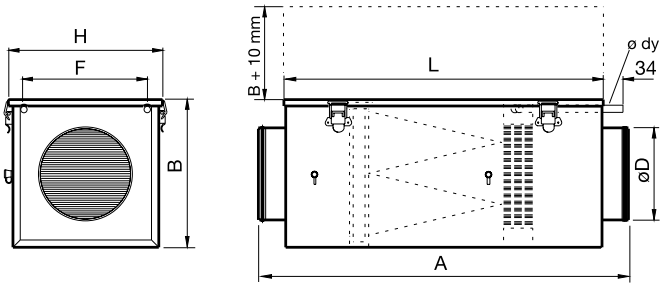
VBF

Water heating coil

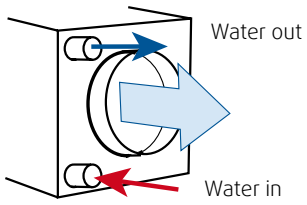
Water-heating coil with integral F5 bag filter for heating air in ventilation systems with circular ducts. Casing from galvanised sheet steel, with copper tubes and aluminium fins. Inspection cover which facilitates cleaning and replacing the filter.

The water-heating coil must be installed in a horizontal duct. The bag filter must always be fitted vertically. The VBF is fitted with connections for connecting to a filter monitor.

The Systemair fan selection programme includes a special selection programme for water-heating batteries. The recommended final pressure drop is 200 Pa.

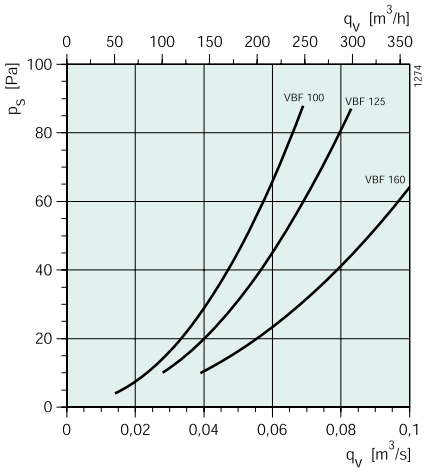


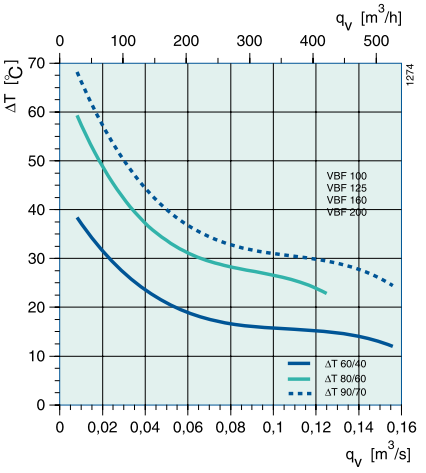
VBF	øD	A	B	H	L	ødy	F	kg	Bag filter	Filter class
100	100	665	254	266	599	22	213	8	BFR 200	G3, F5, F7
125	125	665	254	266	599	22	213	8	BFR 200	G3, F5, F7
160	160	665	254	266	599	22	213	8	BFR 200	G3, F5, F7
200	200	665	254	266	599	22	213	8	BFR 200	G3, F5, F7
250	250	795	354	366	699	22	313	12	BFR 315	G3, F5, F7
315	315	895	454	466	799	22	413	17	BFR 355	G3, F5, F7
355	355	920	454	466	799	22	413	17	BFR 355	G3, F5, F7
400	400	920	454	466	799	22	413	17	BFR 355	G3, F5, F7

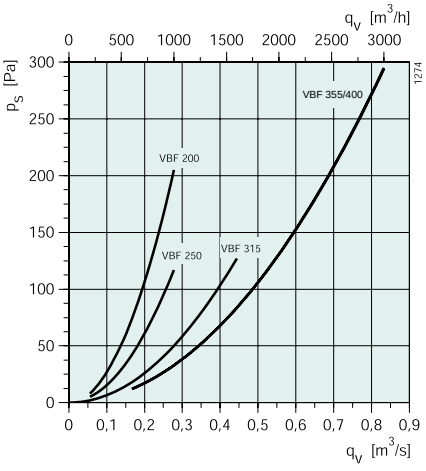


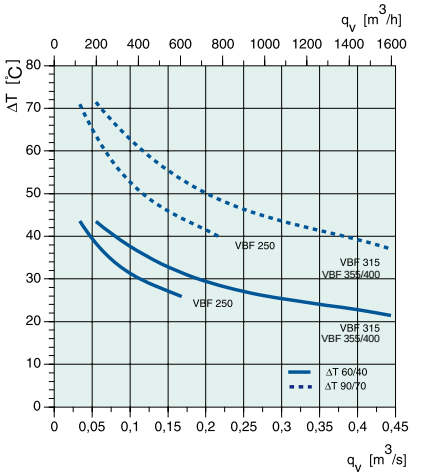
Coil calculation 2 rows

VBF	100	125	160	200	250	315	355/400
Air flow (m³/s)	0.04	0.05	0.12	0.16	0.17	0.28	0.44
Air velocity, (m/s)	1.2	1.6	3.5	4.6	1.8	1.7	2.7
ΔT air at T water 60/40, °C	23.3	20.9	14.3	12.6	25.9	26.2	21.5
Water flow rate (l/s)	0.01	0.02	0.03	0.03	0.06	0.11	0.14
Water speed (m/s)	0.1	0.1	0.2	0.2	0.5	0.4	0.5
Pressure drop (kPa)	0.1	0.2	0.4	0.5	3.5	1.6	2.6
Power (kW)	1.17	1.35	2.1	2.4	5.31	8.82	11.67
ΔT air at T water 90/70, °C	44	39.9	28.2	25	44.3	44.9	37.2
Water flow rate (l/s)	0.03	0.03	0.03	0.06	0.11	0.18	0.24
Water speed (m/s)	0.2	0.2	0.4	0.4	0.8	0.7	0.9
Pressure drop (kPa)	0.4	0.5	1.2	1.6	8.1	3.7	6.3
Power (kW)	2.2	2.58	4.13	4.76	8.97	15.11	20.18
Filter media	EU5	EU5	EU5	EU5	EU5	EU5	EU5







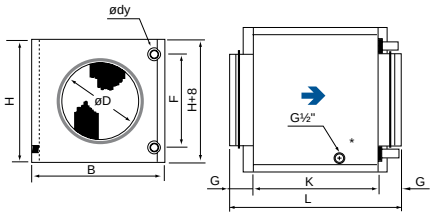




CWK

Water-cooling coil for circular ducts

Casing of galvanised sheet steel with copper tubes and aluminium fins. Inspection covers for easy cleaning and maintenance. Connection sleeves with rubber seal.
Max operating temperature 150°C
Max operating pressure 1.6 MPa (16Bar)



** Condensate drain*

CWK	øD	B	H	ødy	F	G	K	L	kg
100-3-2.5	100	251	180	10	100	40	276	356	4.4
125-3-2.5	125	326	255	10	175	40	276	356	6.5
160-3-2,5	160	326	255	10	175	40	276	356	6.7
200-3-2.5	200	411	330	22	250	40	276	356	9.4
250-3-2.5	250	486	405	22	325	40	276	356	11
315-3-2.5	315	560	504	22	400	40	276	356	14.3
400-3-2.5	400	710	529	22	425	65	330	460	19.5

Coil calculation

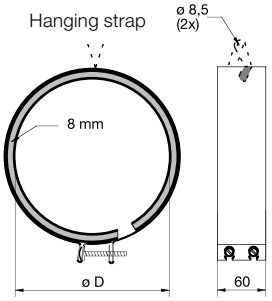
CWK	Air flow (m³/h)	Air velocity m/s	Air Pressure drop (Pa)	Air before (°C)	Air before (% RH)	Air after (°C)	Capacity (kW)	Water Flow (l/s)	Water Pressure drop (kPa)
100-3-2.5	54	2	7	25	50	14.3	0.2	0.01	< 0.5
	54	2	7	30	45	15.8	0.4	0.01	1
	100	3.5	22	25	50	16.4	0.3	0.01	1
	100	3.5	22	30	45	18.5	0.5	0.02	2
	145	5	58	25	50	17.5	0.4	0.02	1
	145	5	58	30	45	20.0	0.6	0.02	3
125-3-2.5	85	2	3	25	50	12.6	0.5	0.02	3
	85	2	3	30	45	13.5	0.7	0.03	5
	150	3	9	25	50	14.5	0.7	0.03	5
	150	3	9	30	45	15.7	1.1	0.04	10
	215	4.5	18	25	50	15.6	0.8	0.03	7
	215	4.5	18	30	45	17.0	1.4	0.05	16
160-3-2.5	145	2	9	25	50	14.4	0.7	0.03	4
	145	2	9	30	45	15.6	1.0	0.04	10
	250	3.5	24	25	50	16.1	0.9	0.04	8
	250	3.5	24	30	45	17.4	1.5	0.06	20
	355	5	45	25	50	17.0	1.1	0.04	11
	355	5	45	30	45	18.4	1.3	0.08	32
200-3-2.5	225	2	6	25	50	14.1	1.0	0.05	2
	225	2	6	30	45	15.3	1.6	0.06	5
	390	3.5	17	25	50	15.9	1.4	0.06	4
	390	3.5	17	30	45	17.3	2.3	0.09	9
	555	5	33	25	50	16.9	1.7	0.07	5
	555	5	33	30	45	18.4	3.1	0.12	15
250-3-2.5	360	2	6	25	50	14.2	1.6	0.06	2
	360	2	6	30	45	15.4	2.5	0.10	5
	630	3.5	18	25	50	16.0	2.2	0.09	4
	630	3.5	18	30	45	17.3	3.8	0.15	10
	900	5	34	25	50	17.0	2.7	0.11	6
	900	5	34	30	45	18.2	5.1	0.20	17
315-3-2.5	560	2	7	25	50	14.5	2.4	0.10	3
	560	2	7	30	45	15.4	3.9	0.16	7
	985	3.5	20	25	50	16.1	3.4	0.13	5
	985	3.5	20	30	45	17.2	6.1	0.24	14
	1410	5	39	25	50	17.0	4.3	0.17	8
	1410	5	39	30	45	18.1	8.3	0.33	25
400-3-2.5	900	2	9	25	50	15.2	3.4	0.14	2
	900	2	9	30	45	16.3	5.8	0.23	5
	1590	3.5	25	25	50	16.8	4.8	0.19	4
	1590	3.5	25	30	45	17.8	9.3	0.37	12
	2280	5	49	25	50	17.6	6.1	0.24	6
	2280	5	49	30	45	18.6	12.8	0.51	22



FK

Fast clamps

Mounting clips which facilitate the installation and removal of fans for service and cleaning. Made from galvanised sheet steel and fitted with an 8 mm neoprene lining which suppresses vibration and ensures a tight fit. The mounting clips are clamped together by two screws which allows for connecting ducts with a marginal difference in diameter.



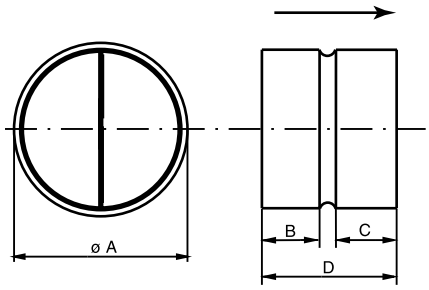
FK	øD mm
100	100
125	125
150	150
160	160
200	200
250	250
315	315
355	355
400*	400
450*	450
500*	500
* Note! Without hanging straps	



RSK

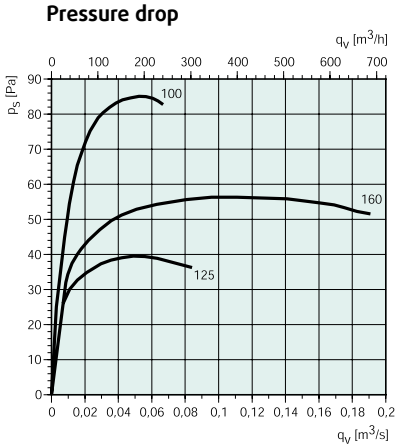
Back draft damper

Back draft damper for circular ducts, manufactured from galvanised sheet steel. The two blades are spring-loaded, which means that the damper can also be mounted vertically.



RSK	øA	D	B	C
100	100	80	24	33
125	125	100	33	44
150	150	100	34	43
160	160	120	42	55
200	200	140	55	62
250	250	140	54	62
315	315	140	50	65
355	355	197	75	75
400	400	197	75	75

Pressure drop





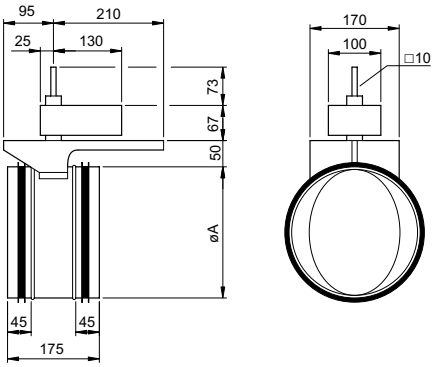
EFD

Circular shutter damper

Shutter damper EFD is a turn off damper. The damper is provided with 230 V motors with spring-return actuators. EFD are made in leakage performance class 3 according to EN 1751:1998 Annex C.2. Outdoor/exhaust air damper have the function to prevent the hot water coil to freeze.

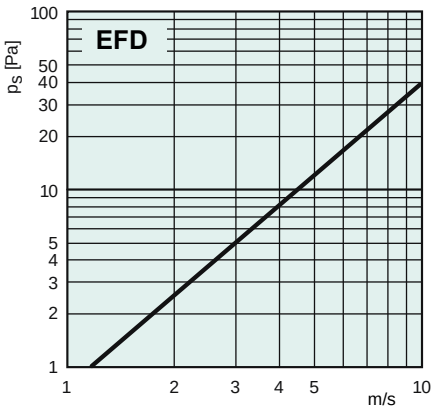
The EFD consists of a tubular housing equipped with a damper blade pivoting on an axle. The connection ends are equipped with silicon rubber sealing rings. The damper is made from hot-dip galvanised sheet steel. The EFD turn off damper is prepared for external insulation and has arrows showing the damper blade position.

We recommend preventative maintenance of the damper twice a year for optimum performance. If the damper gets dirty, the blade should be cleaned. The gasket sealing should be checked and the blade axle lubricated as necessary.



EFD	øA
160	160
200	200
250	250
315	315

Pressure drop

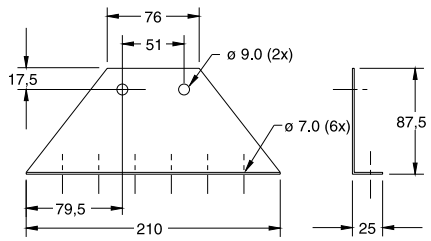


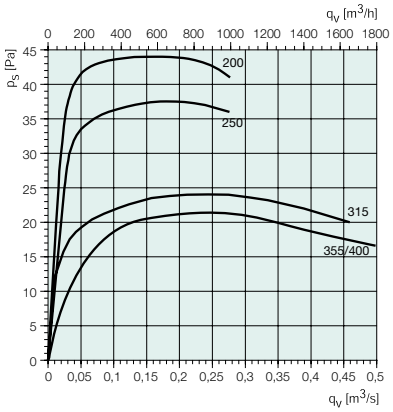


FKX

Mounting feet

2 pcs mounting feet include plate and screw. For EX 140 and 180, manufactured in galvanised steel plate.



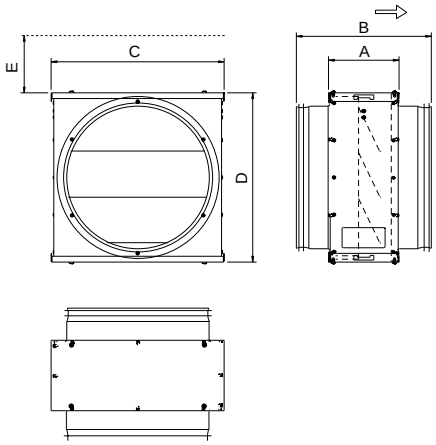




VKK

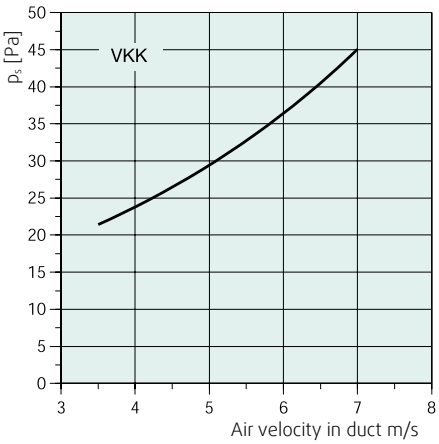
Back draft damper

Back draft damper for installation in horizontal ducts. The profiled vanes produce a strong upward force which reduces the air resistance. This means that the vanes opens fully at low air velocities as well. The box is manufactured from galvanised sheet steel. The damper inside the box is manufactured in weather-resistant and shock-proof nylon material. The robust construction ensures that the vanes will not become deformed or loose. Air velocity should not exceed 12 m/s.



VKK	ø	A	B	C	D	E
100	100	123	199	205	200	201
125	125	123	199	205	200	201
160	160	123	199	205	200	201
200	200	123	199	302	300	297
250	250	123	239	302	300	297
315	315	123	239	350	345	345
400	400	123	259	454	450	450

Pressure drop



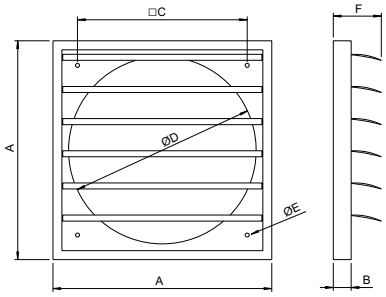


VK

Gravity louvre shutter

Louvre shutters for vertical mounting on a wall. The profiled vanes produce a strong upward force which reduces the air resistance. This means that the vanes opens fully at low air velocities as well.

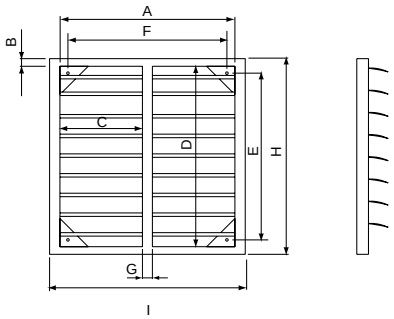
All the parts are manufactured in weather-resistant and shockproof nylon material (PVC containing special synthetic). The robust construction ensures that the vanes will not become deformed or loose. Above size 45, the vanes are fitted with a cast counterweight. Air velocity should not exceed 12 m/s. The louvre shutters are easy to install. Wall plugs and screws are included above size 15.



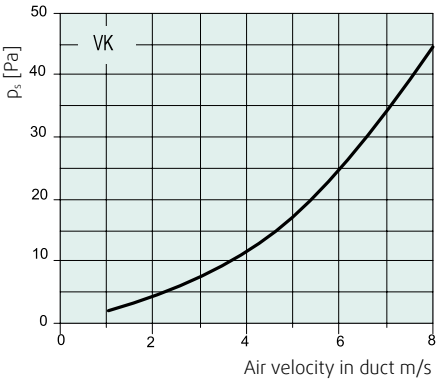
VK	A	B	C	D	E	F	G
10	142	15	103	96	5	46	3
12	164	12	115	117	5	38	4
15	178	20	130	152	4	50	5
20	245	20	190	210	5	50	6
25	299	25	235	260	5	70	5
30	347	26	274	310	5	70	6
35	397	26	310	360	5	70	7
40	460	26	364	423	5	65	8
45	501	31	395	460	5	70	6
50	549	31	445	510	5	95	7
56*	610	30	530	530	5	80	14(2x7)
63*	701	31	626	660	5	85	16(2x8)
71*	749	31	663	710	5	90	18(2x9)
100	1040	40	972	-	-	-	-

*side by side shutters. G = amount of vanes

VK 80



Pressure drop



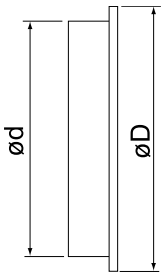


IGC

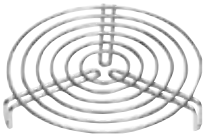
Intake grid

Intake grid for inside or outside installation. Connection diameters ø100-315 mm, and is manufactured from die-cast aluminium and supplied with a wire mesh.

øD = outside diameter
ød = connection diameter



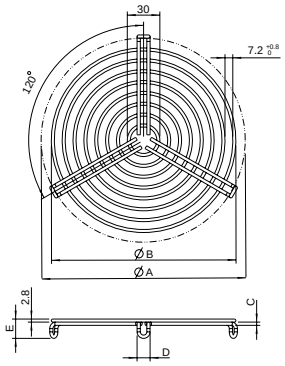
IGC	ød	øD
100	100	125
125	125	150
160	160	185
200	200	225
250	250	275
315	315	350



SG

Protection guard

Protection grille for duct fans, mounted with three screws.



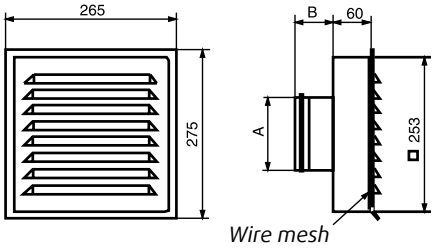
SG	øA	øB	C	D	E
100	100	90	3.4	11.8	24.3
125	125	110	3.4	11.8	24.3
150	150	150	3.4	11.8	24.3
160	160	150	3.4	11.8	24.3
200	200	190	3.4	11.8	24.3
250	250	250	3.4	11.8	24.3
315	315	310	3.8	12.6	24.7
355	355	350	3.8	12.6	24.7
400	400	390	3.8	12.6	24.7
450	450	450	3.8	12.6	24.7
500	500	490	3.8	12.6	24.7



IGK

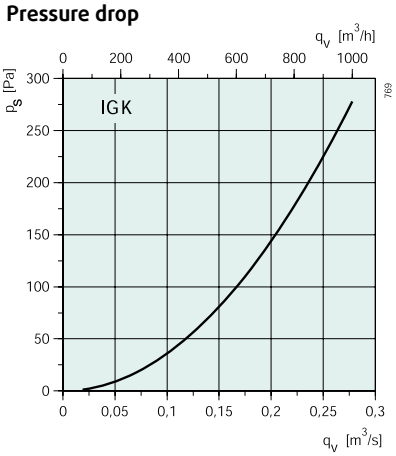
Intake grid

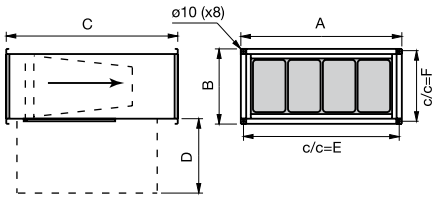
Intake grid manufactured from galvanised sheet steel with wall flange and wire mesh. Connection sleeve with rubber seal.



IGK	øA	B
100	100	37
125	125	37
160	160	37
200	200	41

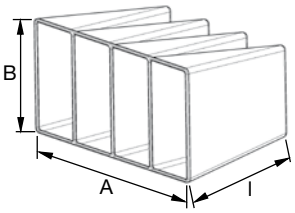
Pressure drop



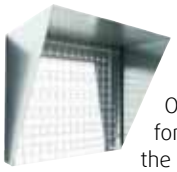


FFK	A	B	C	D	E	F
30-15	340	190	402	250	320	170
40-20	440	240	502	350	420	220
50-25	540	290	532	350	520	270
50-30	540	340	562	350	520	320
60-30	640	340	642	350	620	320
60-35	640	390	717	350	620	370
70-40	740	440	787	420	720	420
80-50	840	540	882	530	820	520
100-50	1040	540	882	530	1020	520

Filter cassette	Bag filter	Filter media
FFK 30-15	BFK 30-15	F5, F7
FFK 40-20	BFK 40-20	F5, F7
FFK 50-25	BFK 50-25	F5, F7
FFK 50-30	BFK 50-30	F5, F7
FFK 60-30	BFK 60-30	F5, F7
FFK 60-35	BFK 60-35	F5, F7
FFK 70-40	BFK 70-40	F5, F7
FFK 80-50	BFK 80-50	F5, F7
FFK 100-50	BFK 100-50	F5, F7



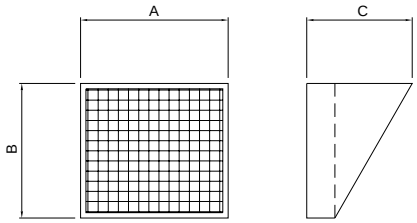
BFK	A	B	l	No. of filer bags
30-15	286/287	142/143	300/280	2/5
40-20	386/387	192/193	400/360	3/5
50-25	486/487	242/243	430/370	4/7
50-30	486/487	292/293	490/355	4/7
60-30	586/587	292/293	540/520	4/8
60-35	586/587	342/343	590/515	4/8
70-40	686/687	392/393	700/625	5/9
80-50	785/785	490/490	600/600	6/10
100-50	985/985	490/490	600/600	7/14



ORH

Outlet hood

Outlet protection to avoid foreign objects to enter into the unit. It consists of a galvanized steel frame fitting into the outlet spigot with a grill of the same material covering the total outlet surface.



Pos	KVD	A	B	C
1	7/7	273	249	52
2	9/7 & 9/9	339	305	52
3	10/8 & 10/10	367	330	52
4	12/9 & 12/12	427	382	52
5	5/8	290	124	52

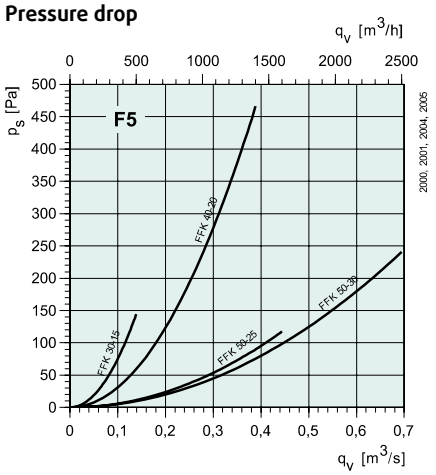


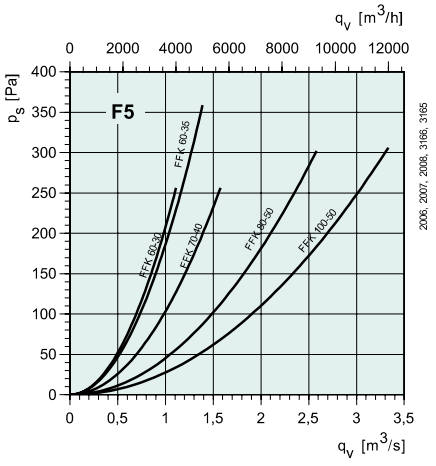
FFK

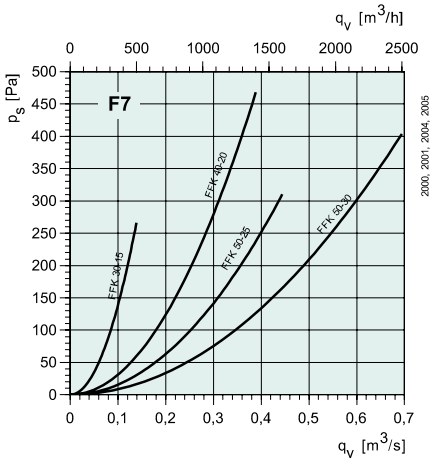
Rectangular filter cassette

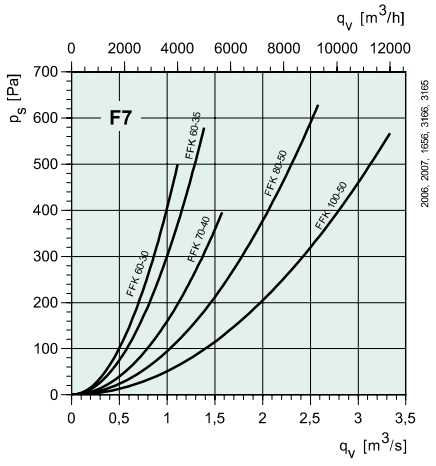
A filter cassette designed for bag filters standard type F5 or F7. The cassette housing is manufactured from galvanised sheet steel. It has a hinged cover underneath fitted with a quick release latch, which makes it easy to replace the filter. The filter cassette can be connected directly on to the duct and should always be fitted in a flat or vertical position. If fitted vertically, the direction of the air flow must be downwards so that the filter bags do not collapse. BFK filter, in the F5 or F7 filter classes, are to be ordered separately. The recommended final pressure drop is 200 Pa for the F5 filter and 250 Pa for the F7 filter. The cassette is fitted with connections for connecting to a pressure sensor.

Pressure drop











LDR

Silencer for rectangular ducts

Easily-fitted silencer immediately before or after the KE, KT, RS and RSI rectangular duct fans. Effectively suppresses noise transmitted to the duct. The silencer should be used together with an insulated fan where there is a requirement for noise suppression both in the duct and in the surroundings as a whole. All silencers are supplied with a universal flange suitable for PG flange 20 mm wide or Metu profile.

NB! Ensure that LDR silencer is mounted in the correct position. Failure to do this will result in air starvation and high pressure drop being experienced.

Pressure drop calculation for rectangular silencers

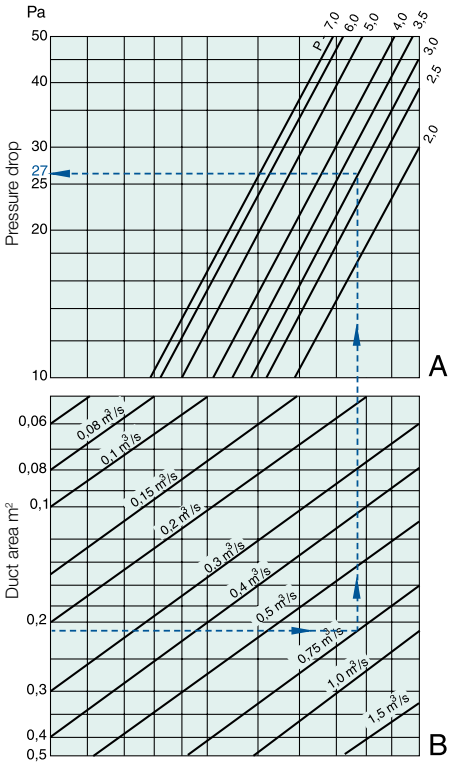
These calculations apply only if the silencer is connected to a duct at both ends.

Example: Calculation of pressure drop for the LDR 60-35 (with fan model RSI 60-35 M3~) using the diagram to the right.

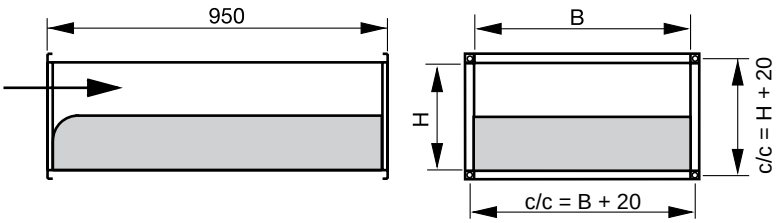
1. Start by defining the front area, see the table below.
2. Move horizontally to the right until you reach the designated air flow in diagram B.
3. Go up vertically to diagram A and the correct p value (see the table).
4. Then continue horizontally to the left and read off the pressure drop.

In this example, the pressure drop is 27 Pa.

	Front area m²	P
LDR 30-15	0.045	3.5
LDR 40-20	0.08	3.6
LDR 50-25	0.125	3.7
LDR 50-30	0.15	3.3
LDR 60-30	0.18	3.3
LDR 60-35	0.21	3.0
LDR 70-40	0.28	3.1
LDR 80-50	0.40	3.6
LDR 100-50	0.50	3.6



Noise suppression dB (mid-frequency Hz)							
LDR	125	250	500	1k	2k	4k	8k
30-15	7	15	18	25	25	19	19
40-20	5	9	15	23	16	12	10
50-25	10	15	25	25	20	15	12
50-30	8	15	20	31	17	14	11
60-30	8	15	20	31	17	14	11
60-35	7	13	17	18	13	10	8
70-40	7	11	14	14	10	8	6
80-50	6	8	10	11	8	6	3
100-50	6	8	10	11	8	6	3



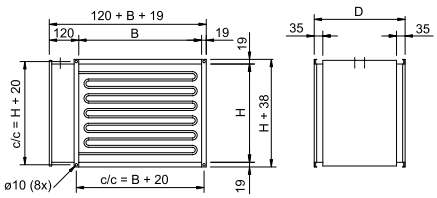
LDR	B	H	kg
30-15	300	150	10
40-20	400	200	13
50-25	500	250	17
50-30	500	300	19
60-30	600	300	21
60-35	600	350	23
70-40	700	400	27
80-50	800	500	34
100-50	1000	500	41



RB

Duct heater for rectangular ducts

Manufactured from alu-zinc coated sheet steel with a heating element in stainless steel. The heater has integral overheating protection with a manual reset function. Suitable for control by room thermostat or TTC. The minimum air volume is based on a minimum air velocity of 1.5 m/s. These duct heaters are designed for a maximum output air temperature of 40°C.



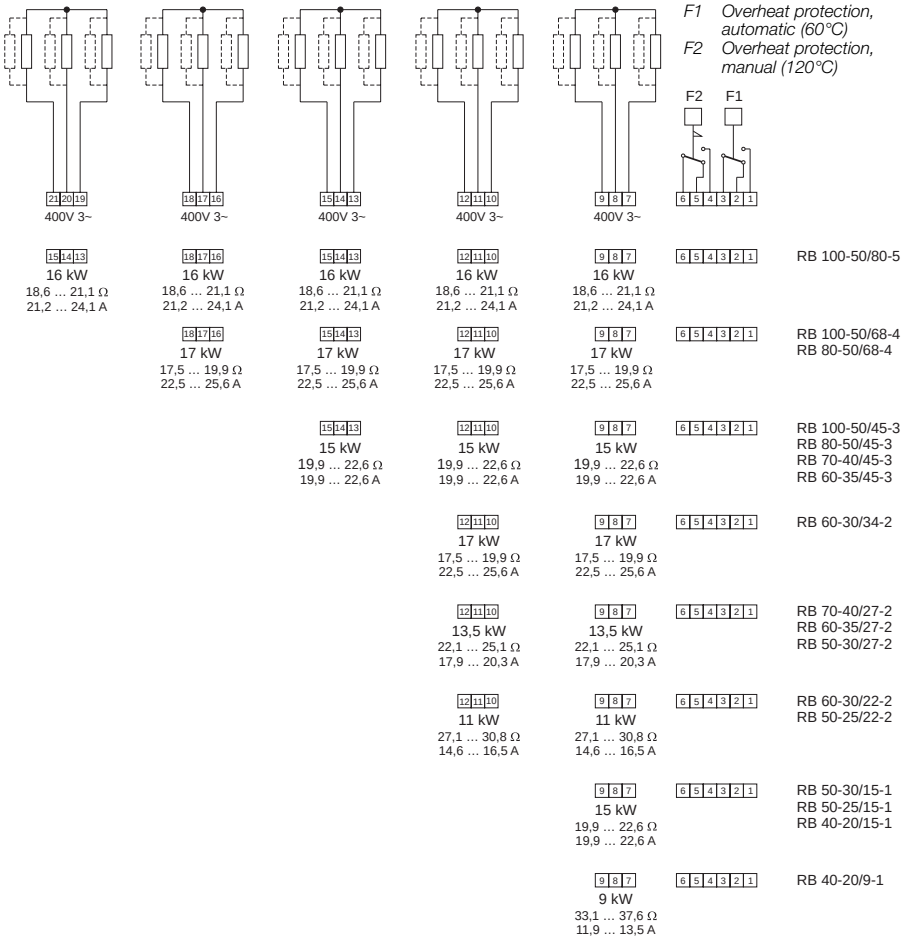
RB	B	H	D
40-20/9-1	400	200	370
40-20/15-1	400	200	500
50-25/15-1	500	250	370
50-25/22-2	500	250	500
50-30/15-1	500	300	370
50-30/27-2	500	300	500
60-30/22-2	600	300	500
60-30/34-2	600	300	500
60-35/27-2	600	350	370
60-35/45-3	600	350	500
70-40/27-2	700	400	370
70-40/45-3	700	400	370
80-50/45-3	800	500	370
RB 80-50/68-4	800	500	370
RB 80-50/68-4	1000	500	370
RB 100-50/68-4	1000	500	370
RB 100-50/80-5	1000	500	370

RB	40-20/9	40-20/15	50-25/15	50-25/22	50-30/15	50-30/27	60-30/22
Power [kW]	9	15	15	22	15	27	22
Voltage [V]	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~
Current [A]	13	22	22	31.8	22	39	31.8
Min. air flow [m³/h]	450	450	700	700	850	850	1000
Weight [kg]	9.2	16	12.7	19.9	15.6	23.9	24.9

RB	60-30/34	60-35/27	60-35/45	70-40/27	70-40/45	80-50/45	80-50/68
Power [kW]	34	27	45	27	45	45	68
Voltage [V]	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~	400 3~
Current [A]	49.1	39	65	39	65	65	98.2
Min. air flow [m³/h]	1000	1000	1000	1600	1600	1600	2200
Weight [kg]	30.6	23.1	30.6	23.1	30.3	30.5	39

RB	100-50/45	100-50/68	100-50/80
Power [kW]	45	68	80
Voltage [V]	400 3~	400 3~	400 3~
Current [A]	65	98.2	116
Min. air flow [m³/h]	2800	2800	2800
Weight [kg]	33.6	42.1	42.1

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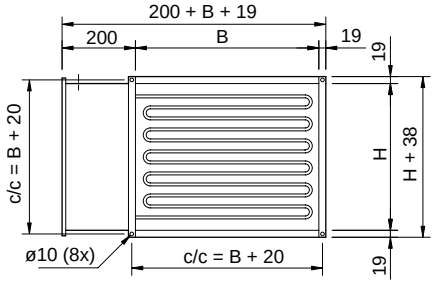


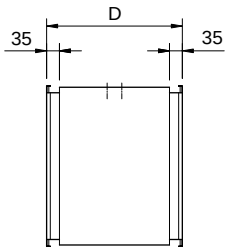
RBM

Duct heater for rectangular ducts

Duct heater with integral control equipment. Manufactured from alu-zinc coated sheet steel with a heating element in stainless steel. The heater has integral overheating protection with a manual reset function. The unit is controlled by an integral electronic temperature regulator, using so-called time-proportional Pulse/Pause technology. This provides extremely precise temperature control. As a thyristor is used for adjusting the temperature, the unit has no moving parts. This means that it is silent and not susceptible to wear and tear. The RBM is supplied with a complete and fully-connected control system including contactors and alarm relays. This minimises the installation cost. The external installation requirements are: mains power supply, control circuit, dial for setting required temperature, sensor and a possible alarm circuit. The minimum air volume is based on a minimum air velocity of 1.5 m/s. These duct heaters are designed for a maximum output air temperature of 40°C.

All RBM are delivered with a TG-R430 room sensor with adjustment of desired value.





RBM	B	H	D
40-20/9	400	200	500
50-25/15	500	250	500
50-30/15	500	300	500
60-30/27	600	300	500
60-35/27	600	350	500
70-40/27	700	400	500

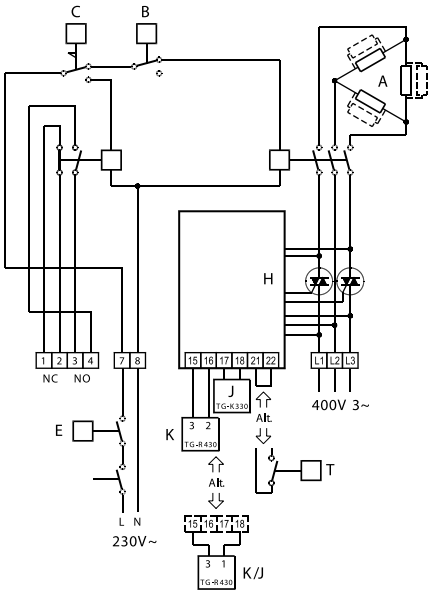
Calculation of required heating power
P=qv x air density x delta t

P = power in kW
q_v = air volume in m^3/s
air density = 1.2 kg/m^3 at 20°C
delta T = temperature difference

RBM	40-20/9	50-25/15
Power [kW]	9	15
Voltage [V]	400 3~	400 3~
Current [A]	13	22
Min. air flow [m^3/h]	450	700
Weight [kg]	19	20.2

RBM	50-30/15	60-30/27
Power [kW]	15	27
Voltage [V]	400 3~	400 3~
Current [A]	22	39
Min. air flow [m^3/h]	850	1000
Weight [kg]	21	26.4

RBM	60-35/27	70-40/27
Power [kW]	27	27
Voltage [V]	400 3~	400 3~
Current [A]	39	39
Min. air flow [m^3/h]	1200	1600
Weight [kg]	27	29.7



A = Heating elements
B = Overheat protection with automatic reset
C = Overheat protection with manual reset
E = Flow control
H = Thyristor (or TTC)
J = Sensor
K = Set value adjustment
K/J = Combined room sensor and set value adjustment
T = Air flow switch/Pressure switch

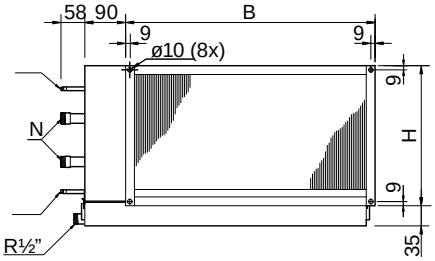
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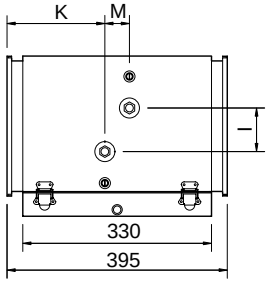


PGK

Cold water coil for rectangular ducts

Casing from galvanised sheet steel. Water-coil from copper tubes and aluminium fins. Air vent and drain valve included. Drip pan from stainless steel and condensate connection (R½"). Max working pressure 1.6 MPa (16 bar). For water connection left or right. Two inspection covers for cleaning and maintenance. Droplet separator DE as an accessory regardless of air direction. Recommended for air velocities from 2.5 m/s.





PGK	B	H	I	K	M	N
40-20-3	438	238	70	176	43	R 3/4
50-25-3	538	288	120	176	43	R 3/4
50-30-3	538	338	175	176	43	R 3/4
60-30-3	638	338	170	176	43	R 3/4
60-35-3	638	388	220	176	43	R 3/4
70-40-3	738	438	250	170	55	R1
80-50-3	838	538	340	170	55	R1
100-50-3	1038	538	350	170	55	R1

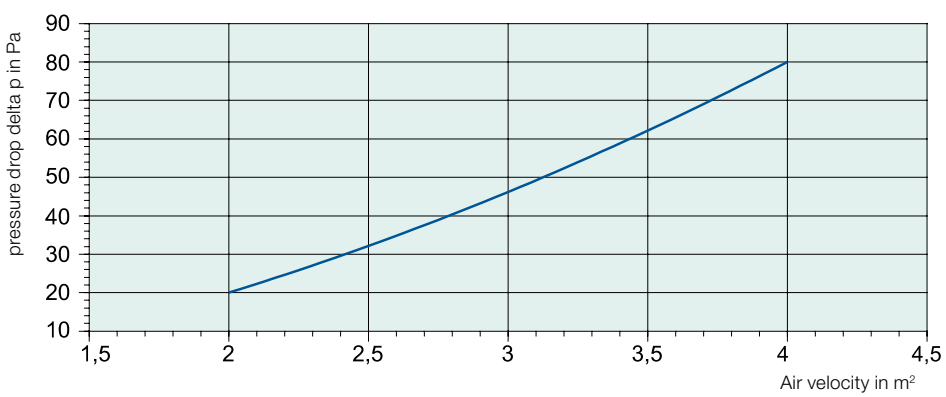


NB! Droplet separator DE must be ordered extra. Recommended for air velocities from 2.5 m/s.

Coil calculation, water temp 6/12°C

PGK	Air flow [m³/h]	Air velocity m/s	Air pressure drop (Pa)	Air before (°C)	Air before (% RH)	Air after (°C)	Capacity (kW)	Water flow (l/s)	Water pressure drop (kPa)
40x20-3-2.0	576	2	31	25	50	17.0	1.53	0.06	1
	576	2	36	30	45	19.0	2.50	0.10	3
	864	3	66	25	50	18.4	1.89	0.08	2
	864	3	72	30	45	20.2	3.26	0.13	5
	1152	4	113	25	50	19.2	2.20	0.09	2
	1152	4	119	30	45	20.8	4.15	0.17	7
50x25-3-2.0	900	2	31	25	50	17.0	2.38	0.09	2
	900	2	36	30	45	18.6	4.27	0.17	5
	1350	3	66	25	50	18.2	3.02	0.12	3
	1350	3	72	30	45	19.4	6.16	0.25	9
	1800	4	113	25	50	18.9	3.61	0.14	4
	1800	4	119	30	45	19.8	8.34	0.33	15
50x30-3-2.0	1080	2	31	25	50	17.1	2.83	0.11	1
	1080	2	36	30	45	18.8	4.93	0.20	4
	1620	3	66	25	50	18.4	3.56	0.14	2
	1620	3	72	30	45	19.7	6.94	0.28	7
	2160	4	113	25	50	19.1	4.22	0.17	3
	2160	4	119	30	45	20.1	9.40	0.37	12
60x30-3-2.0	1296	2	31	25	50	17.3	3.3	0.13	1
	1296	2	36	30	45	19.0	5.69	0.23	3
	1944	3	66	25	50	18.6	4.13	0.16	2
	1944	3	72	30	45	19.8	8.12	0.32	6
	2592	4	113	25	50	19.3	4.90	0.20	3
	2592	4	119	30	45	20.1	11.18	0.45	11
60x35-3-2	1512	2	31	25	50	17.3	3.86	0.15	1
	1512	2	36	30	45	19.0	6.64	0.26	3
	2268	3	66	25	50	18.6	4.82	0.19	2
	2268	3	72	30	45	19.8	9.48	0.38	6
	3024	4	113	25	50	19.3	5.72	0.23	3
	3024	4	119	30	45	20.1	13.05	0.52	11
70x40-3-2.0	1920	2	47	25	50	17.1	5.02	0.20	1
	1920	2	55	30	45	18.1	8.66	0.35	3
	2880	3	91	25	50	18.5	6.20	0.25	1
	2880	3	100	30	45	18.8	12.94	0.52	4
	3840	4	142	25	50	19.3	7.26	0.29	2
	3840	4	151	30	45	19.0	18.41	0.73	8
80x50-3-2.0	2743	2	47	25	50	17.1	7.20	0.29	1
	2743	2	55	30	45	17.6	13.59	0.54	3
	4115	3	91	25	50	18.4	9.04	0.36	1
	4115	3	100	30	45	18.0	21.61	0.86	6
	5486	4	142	25	50	19.0	10.82	0.43	2
	5486	4	151	30	45	18.6	28.41	1.13	10
100x50-3-2.0	3429	2	47	25	50	17.5	8.56	0.34	1
	3429	2	55	30	45	17.9	16.13	0.64	2
	5144	3	91	25	50	18.7	10.72	0.43	1
	5144	3	100	30	45	18.0	26.77	1.07	6
	6858	4	142	25	50	19.3	12.85	0.51	2
	6858	4	151	30	45	18.6	35.52	1.41	10

Pressure drop DE, droplet eliminator





DXRE

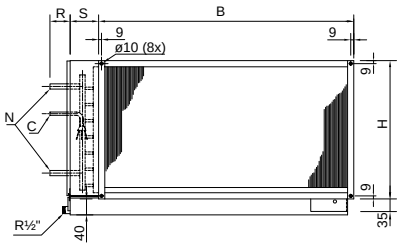
Rectangular duct cooling coil (DX)

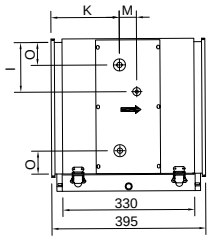
- Same model for left-hand or right-hand installation (reversible coil)
- Stainless steel condensate drip tray. A droplet eliminator can be fitted regardless of the direction of air flow
- Easily removable drip tray to simplify cleaning and inspection.

DXRE is recommended for central or decentral (zones) cooling of individual rooms.

The DXRE is intended for installation in a horizontal duct, with the air flow in either direction (reversible coil).

We recommend that a DE droplet eliminator (accessory) should be installed on the outlet side of the coil if the air velocity is in excess of 2.5 m/s. This prevents water droplets being entrained by the air flow out into the duct system. Maximum operating pressure 2.4 MPa (24 Bar).





DXRE	B	H	I	O	K
400x200-3-2.5	438	238	70	100	165
500x250-3-2.5	558	288	120	30	165
500x300-3-2.5	558	338	175	30	165
600x300-3-2.5	638	338	170	30	165
600x350-3-2.5	638	388	220	30	165
700x400-3-2.5	738	438	250	30	160
800x500-3-2.5	838	538	340	30	160
1000x500-3-2.5	1038	538	350	30	160

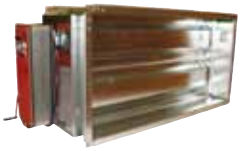
DXRE	M	N	S	R	C
400x200-3-2.5	60	19	90	105	1/2"
500x250-3-2.5	60	22	90	105	1/2"
500x300-3-2.5	60	22	90	105	1/2"
600x300-3-2.5	60	22	90	105	5/8"
600x350-3-2.5	60	22	90	105	5/8"
700x400-3-2.5	75	35	100	115	5/8"
800x500-3-2.5	75	35	100	115	5/8"
1000x500-3-2.5	75	35	100	115	5/8"

Coil calculation

Refrigerant R407C, 5 °C DXRE	Air flow (m³/h)	Air pressure drop (Pa)	Air in (°C)	Air in (% RH)	Air out (°C)	Output (kW)	Refrigerant flow (kg/h)	Refrigerant Pressure drop (kPa)
40x20-3-2.5	575	32	25	50	15,8	2,2	51	3
	575	36	30	50	18,8	3,2	75	6,1
	865	60	25	50	16,9	2,7	63	4,3
	865	68	30	50	20,4	3,9	90	8,7
	1150	91	25	50	17,5	2,8	65	4,9
	1150	107	30	50	21,2	4,4	104	11,3
50x25-3-2.5	900	32	25	50	15,8	3,4	80	3,2
	900	36	30	50	18,7	5	118	6,6
	1350	60	25	50	16,9	4,2	99	5
	1350	69	30	50	20,1	6,3	147	9,8
	1800	92	25	50	18	4,4	103	5,2
	1800	108	30	50	21,2	7,1	165	12,1
50x30-3-2.5	1080	32	25	50	15,5	4,3	101	6,1
	1080	36	30	50	18,3	6,4	149	11,9
	1620	62	25	50	16,6	5,4	126	8,8
	1620	70	30	50	19,8	7,9	186	17,6
	2160	97	25	50	17,3	6,3	147	11,6
	2160	110	30	50	20,9	8,9	208	21,7
60x30-3-2.5	1300	33	25	50	15,4	5,3	116	8,4
	1300	37	30	50	17,8	8,2	180	18,5
	1950	63	25	50	16,5	6,6	145	12,6
	1950	71	30	50	19,6	9,7	213	25,2
	2600	99	25	50	17,3	7,7	170	16,7
	2600	112	30	50	20,8	11	241	31,5
60x35-3-2.5	1510	32	25	50	15,5	6	131	7,5
	1510	36	30	50	18,4	8,7	192	12,8
	2270	62	25	50	16,7	7,5	164	10,1
	2270	70	30	50	19,8	11	242	18,6
	3025	97	25	50	17,4	8,6	189	12,5
	3025	110	30	50	21	12,4	272	22,6
70x40-3-2.5	2015	40	25	50	14,7	8,6	188	7,6
	2015	44	30	50	17,4	12,5	274	13,3
	3020	72	25	50	16,3	9,6	211	9
	3020	83	30	50	19,3	14,7	323	17,4
	4030	112	25	50	16,5	11,2	246	11,3
	4030	130	30	50	20,2	16,9	370	20
80x50-3-2.5	2880	39	25	50	14,6	12,4	272	8,8
	2880	44	30	50	17,3	18,1	398	15,7
	4320	73	25	50	16,2	14,1	309	10,6
	4320	84	30	50	19,1	21,8	477	21,2
	5760	113	25	50	16,4	16,2	356	13,2
	5760	131	30	50	20,2	24,5	538	25,9
100x50-3-2.5	3600	40	25	50	14,3	16,3	356	15,1
	3600	45	30	50	16,9	23,6	517	28
	5400	74	25	50	15,9	18,7	411	19
	5400	86	30	50	18,6	29,1	638	40,2
	7200	116	25	50	16,7	21,4	470	23,8
	7200	134	30	50	19,9	31,9	699	47

Refrigerant	R 410A	R 134A	R 404A	R 507A
Factor	1.01	0.93	1.00	0.97

Recalculation of the basic value with different refrigerants.

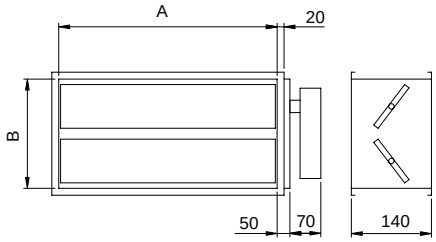


EFD

Shutter damper for rectangular ducts

EFD is a shut-off damper. The damper is provided with 24 V motors with spring-return actuators. EFD is manufactured to leakage performance class 3 according to EN 1751:1998 Annex C.2. Outdoor/exhaust air damper has the function to prevent the hot water coil from freezing and also prevent the cold air from cooling down the building if the unit stops.

The EFD multi-leaf damper comprises a number of opposed blades, swivelling on nylon bearings in a sheet metal framework. The blades are connected via a system of linkages (protected) on the outside of the frame. Maximum air temperature is 100°C.



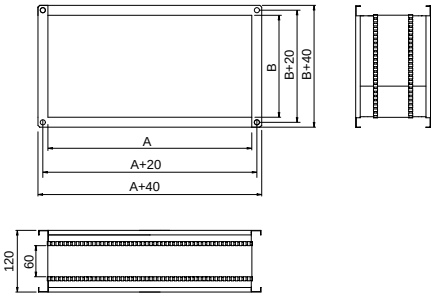
EFD	A	B
40-20	400	200
50-25	500	250
50-30	500	300
60-30	600	300
60-40	600	400
70-30	700	300
70-40	700	400
80-35	800	350
80-40	800	400
100-35	1000	350



DS

Rectangular flexible connections

Flexible lengths from 100 to 158 mm. Flange width 20 mm.



DS	A	B
30-15	300	150
40-20	400	200
50-25	500	250
50-30	500	300
60-30	600	300
60-35	600	350
70-40	700	400
80-50	800	500
100-50	1000	500

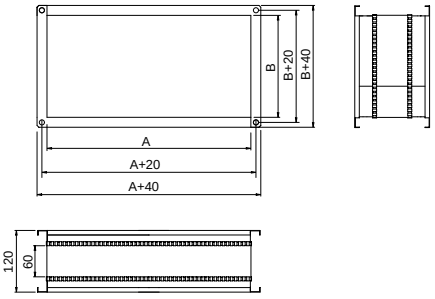


DS-EX

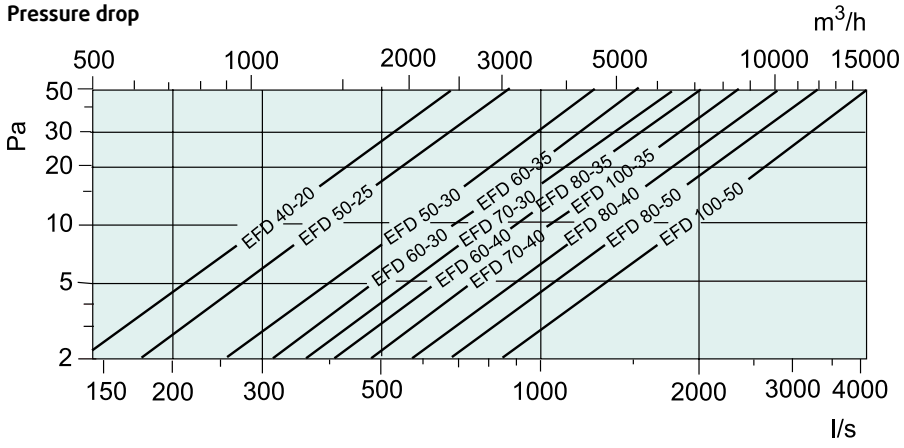
Rectangular flexible connections

Flexible connections for the KTEX. In accordance with ATEX guideline 94/9/EC, EX II 2/2 GD IIC TX. Fitted with flanges to match the fan. Flexible lengths from 100 to 158 mm. Flange width 20 mm.

DS-EX	A	B
30-15	300	150
40-20	400	200
50-25	500	250
50-30	500	300
60-30	600	300
60-35	600	350
70-40	700	400
80-50	800	500
100-50	1000	500



Pressure drop

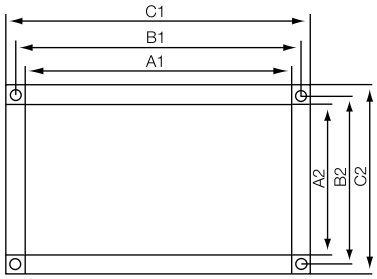




GFL

Counterflange

Used as a flange for mounting to the duct system. Manufactured from galvanised sheet steel. Suitable for rectangular ducts.



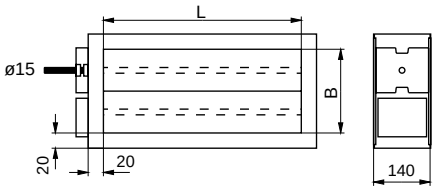
GFL	A1	A2	B1	B2	C1	C2
40-20	400	200	420	220	440	240
50-25	500	250	520	270	540	290
50-30	500	300	520	320	540	340
60-30	600	300	620	320	640	340
60-35	600	350	620	370	640	390
70-40	700	400	720	420	740	440
80-50	800	500	820	520	840	540



SRK

Volume control damper

A valve with the same flange system as rectangular duct fans. Air tightness class 2 or 3. The shutter valve consists of a number of blades which close towards each other. These are mounted inside a steel sleeve on bushes made of glass-fibre reinforced nylon. The blades are connected via a linkage on the outside of the steel-plate sleeve coupling. The linkage is protected so that the valve can be insulated together with the duct. The blades and sleeve coupling are manufactured from galvanised sheet steel.



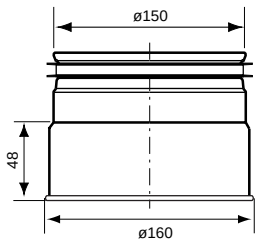
SRK	L	B
40-20	400	201
50-25	500	251
50-30	500	301
60-30	600	301
60-35	600	351
70-40	700	401
80-50	800	501
100-50	1000	501



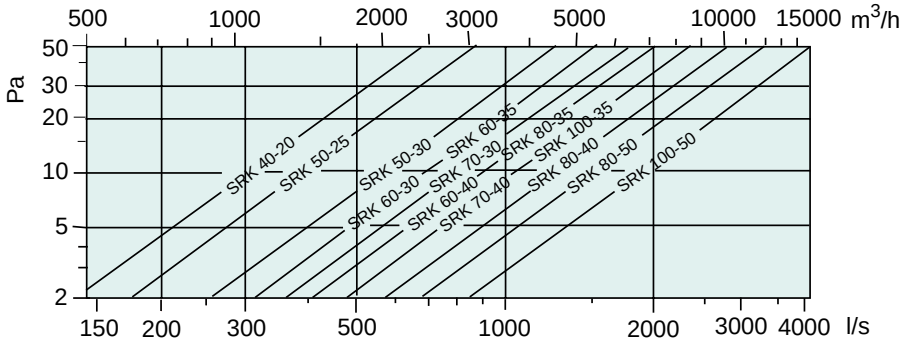
RED

Reduction

Pressed, concentric reducer with female coupling,with a 45° angle. This reducer is designed to meet demands for short installation length with low pressure drop and low internal noise generation.



Pressure drop



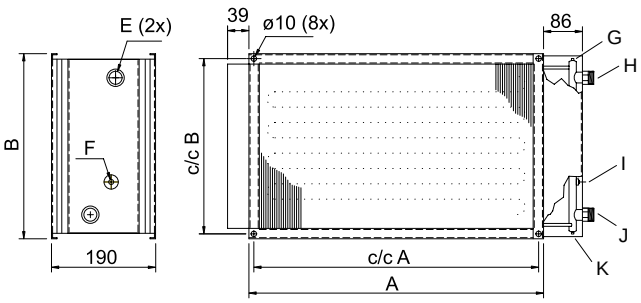


VBR

Water-heating coil

Water-heating coil for heating air in ventilation systems with rectangular ducts. Hot dip galvanized casing, heat transmission element with copper tubes and aluminium fins. In cold conditions, a frost protection device with sensor should be fitted to reduce the risk of damage from freezing. The water-heating coil can be installed in a horizontal duct.

VBR XX-XX-2 = Two pipe rows
VBR XX-XX-4 = Four pipe rows
VBR XX-XX-3 = Three pipe rows



F Thread G 1/4
G Airing
H Water out
I Connection for immersion sensor
J Water in
K Draining

VBR	A	c/c A	B	c/c B	E	kg
40-20-2	438	420	238	220	R¾''	5.5 kg
50-25-2	538	520	288	270	R¾''	7 kg
50-30-2	538	520	338	320	R¾''	8 kg
60-30-2	638	620	338	320	R¾''	9 kg
60-35-2	638	620	388	370	R¾''	10 kg
70-40-2	738	720	438	420	R 1''	12.5 kg
80-50-2	838	820	538	520	R 1''	16 kg
100-50-2	1038	1020	538	520	R 1''	18.5 kg

	A	c/c A	B	c/c B	E	kg
40-20-4	438	420	238	220	R¾''	7 kg
50-25-4	538	520	288	270	R¾''	9 kg
50-30-4	538	520	338	320	R 1''	10.5 kg
60-30-4	638	620	338	320	R 1''	11.5 kg
60-35-4	638	620	388	370	R 1''	13 kg
	A	c/c A	B	c/c B	E	kg
70-40-3	738	720	438	420	R 1''	15.5 kg
80-50-3	838	820	538	520	R 1''	19 kg
100-50-3	1038	1020	538	520	R 1''	22.5 kg

Max. operating temperature
Max. operating pressure, at water temp. 100°C 16 bar
Max. operating pressure, at water temp. 150°C 10 bar

Coil calculation on page 366

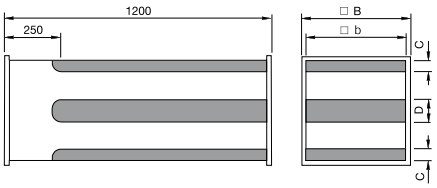


LDK

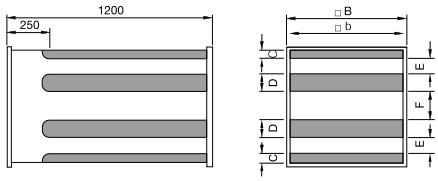
Silencer for square ducts

LDK is easily connected to our square duct fans type KDRE and KDRD.

Noise suppression can be decided with use of the diagram.



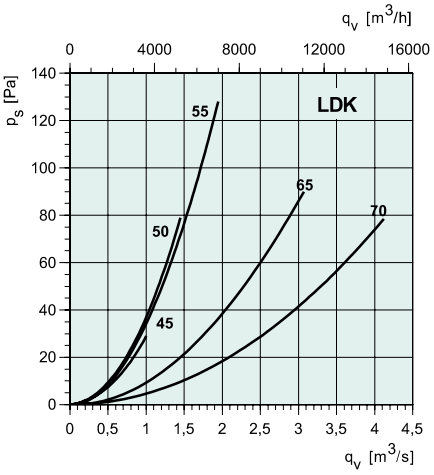
LDK	□b	□B	C	D
45	450	490	50	100
50	502	546	50	150
55	550	594	50	200



LDK	□b	□B	C	D	E	F
65	661	703	50	100	93	175
70	696	740	50	100	110	176

Noise suppression dB frequency band Hz							
LDK	125	250	500	1k	2k	4k	8k
45	5	8	13	12	8	7	7
50	7	8	13	12	9	8	7
55	9	9	13	12	10	9	8
65	6	7	14	13	9	8	7
70	5	7	19	24	23	15	10

Pressure drop



Coil calculation

VBR	Water temp. (in/out)	Air Flow (m^3/h)	Pressure drop (Pa)	ΔT	Capacity (kW)	Water Flow (l/s)	Pressure drop (kPa)
40-20-2	60/40°C	400	9	18.5	2.7	0.03	0.5
		1000	48	12.7	4.6	0.06	1
40-20-4		400	18	29.5	4.3	0.05	0.5
		1000	96	19.5	7.1	0.09	0.5
40-20-2	80/60°C	400	9	32.8	4.7	0.06	1
		1000	48	24.5	8.9	0.11	2
40-20-4		400	18	46.3	6.7	0.08	0.5
		1000	96	38.9	14.0	0.17	1
50-25-2	60/40°C	600	8	21.7	4.7	0.06	1
		1200	29	18.2	7.9	0.10	2
50-25-4		600	16	33.1	7.2	0.09	0.5
		1200	59	28.4	12.3	0.15	1
50-25-2	80/60°C	600	8	36.5	7.9	0.10	2
		1200	29	28.6	12.4	0.15	4
50-25-4		600	16	54.5	11.8	0.14	1
		1200	59	45.9	19.9	0.24	3
50-30-2	60/40°C	800	10	18.2	5.3	0.06	0.5
		2000	54	13.5	9.8	0.12	1
50-30-4		800	20	32.5	9.4	0.11	1
		2000	109	27.2	19.7	0.24	2
50-30-2	80/60°C	800	10	33.6	9.7	0.12	1
		2000	54	24.3	17.5	0.21	2
50-30-4		800	20	53.8	15.5	0.19	1
		2000	109	41.7	30.1	0.37	4
60-30-2	60/40°C	1000	11	19.2	6.9	0.08	1
		2500	58	15.4	13.9	0.17	2
60-30-4		1000	22	34.1	12.3	0.15	1
		2500	117	28.2	25.5	0.31	4
60-30-2	80/60°C	1000	11	34.3	12.4	0.15	1
		2500	58	24.4	22.1	0.27	4
60-30-4		1000	22	53.9	19.5	0.24	2
		2500	117	41.8	37.8	0.46	7
60-35-2	60/40°C	1200	11	18.7	8.1	0.10	0.5
		3000	61	15.0	16.3	0.20	2
60-35-4		1200	23	34.2	14.8	0.18	1
		3000	123	28.1	30.4	0.37	4
60-35-2	80/60°C	1200	11	33.9	14.7	0.18	1
		3000	61	24.1	26.1	0.32	3
60-35-4		1200	23	53.6	23.2	0.28	3
		3000	123	41.5	45.0	0.55	8
70-40-2	60/40°C	2000	31	20.1	14.5	0.18	1
		4000	94	16.0	23.2	0.28	1
70-40-3		2000	46	24.7	17.8	0.22	0.5
		4000	139	21.1	30.5	0.37	1
70-40-2	80/60°C	2000	31	34.7	25.1	0.31	1
		4000	94	25.1	36.3	0.44	3
70-40-3		2000	46	45.4	32.8	0.40	1
		4000	139	34.4	49.7	0.61	2
80-50-2	60/40°C	2500	25	21.1	19.0	0.23	0.5
		5000	77	17.2	31.1	0.38	1
80-50-3		2500	37	28.0	25.3	0.31	0.5
		5000	113	24.0	43.4	0.52	1
80-50-2	80/60°C	2500	25	36.8	33.3	0.41	1
		5000	77	26.9	48.6	0.59	2
80-50-3		2500	37	48.4	43.7	0.53	1
		5000	113	37.1	67.0	0.82	2
100-50-2	60/40°C	3000	23	24.8	26.9	0.32	1
		6000	72	18.4	40.0	0.48	2
100-50-3		3000	35	32.3	35.0	0.42	1
		6000	106	25.6	55.4	0.67	2
100-50-2	80/60°C	3000	23	38.4	41.6	0.51	2
		6000	72	28.2	61.1	0.75	4
100-50-3		3000	35	50.1	54.3	0.66	2
		6000	106	38.7	83.8	1.02	4

Data based on supply air temperature of 0°C.

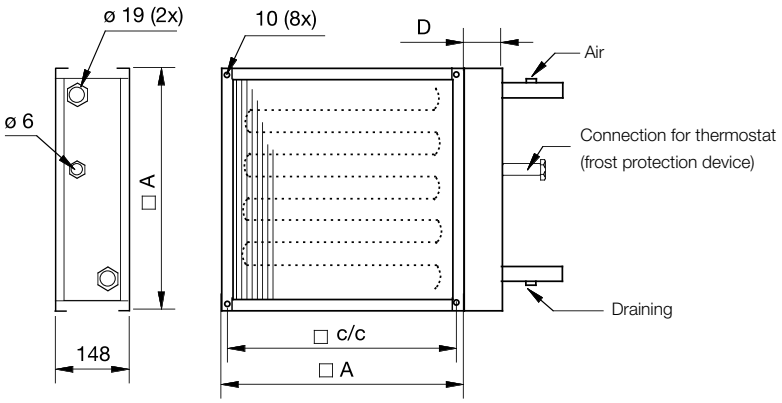


VBK

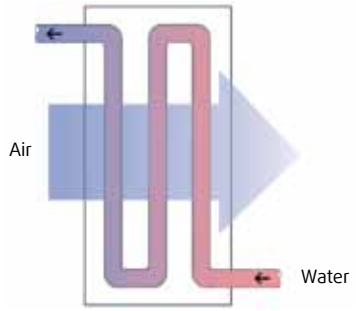
Water heating coil for square ducts

The casing is made of galvanised steel, the heat transmission elements are copper tubes with aluminium fins, and with copper pipes for connecting water inlet and outlet. If the VBK is to be used in very cold conditions it may be necessary to install a frost protection device.

The VBK is designed for horizontal mounting with the water connection to the right. For best results the air and water must be going through the coil in opposite directions. The water must be flowing upwards in order to facilitate airing of the coil. Software for determining the required dimensions for the desired output is available.



VBK	□A	c/c	□D	no. of rows
45	492	470	78	2
50	547	520	78	2
55	595	573	98	2
65	707	680	98	2



The air flow should be going in the opposite direction of the water.

Coil calculation

VBK	Water temp in/out	Air flow m³/h	Pressure drop Pa	DT °C	Capacity kW	Water flow l/s	Pressure drop kPa
45	60/40°C	1000	10	30,1	10,2	0,12	0,8
		2000	38	23	15,6	0,19	1,7
		2500	57	20,9	17,7	0,21	2,2
	80/60°C	1000	11	44,7	15,1	0,18	1,5
		2000	38	34,5	23,4	0,28	3,4
		2500	58	31,5	26,7	0,32	4,3
50	60/40°C	1200	10	31,5	12,8	0,15	1,4
		2400	35	24,2	19,7	0,23	3,1
		3000	53	22	22,4	0,27	3,9
	80/60°C	1200	10	46,1	18,8	0,22	2,6
		2400	36	35,8	29,1	0,35	5,8
		3000	54	32,7	33,3	0,40	7,4
55	60/40°C	2000	18	26,1	17,8	0,21	0,7
		4000	64	19,5	26,5	0,32	1,4
		5000	96	17,7	29,9	0,36	1,7
	80/60°C	2000	18	39,5	26,8	0,32	1,3
		4000	65	29,9	40,6	0,48	2,8
		5000	98	27,2	46,1	0,55	3,5
65	60/40°C	3600	27	24,6	30	0,36	1,5
		7200	99	18,2	44,5	0,53	3
		9000	150	16,5	50,2	0,60	3,7
	80/60°C	3600	28	36,8	49	54	2,8
		7200	101	27,7	67,6	0,81	5,9
		9000	152	25,1	76,5	0,91	7,3

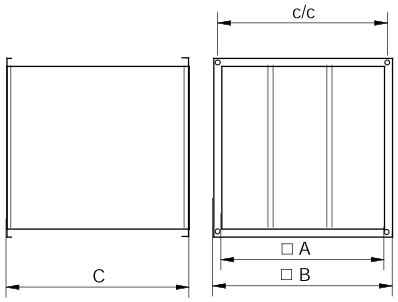
Data based on supply air temperature of 0°C



FFS

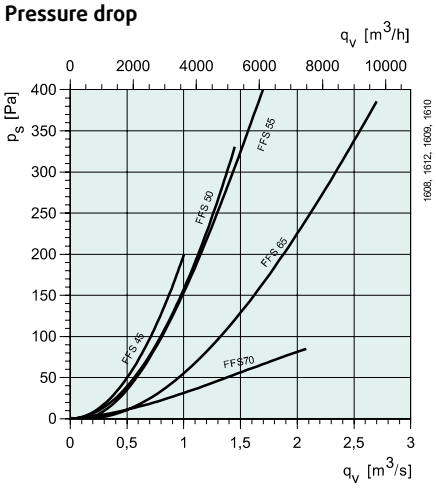
Filter cassette for square ducts

Filter cassette with a bag filter standard type F5 included. The cassette is made of galvanized steel with a hinged cover underneath fitted with a quick-release latch for easy change of filter. It can be connected directly to the duct. Connections for a pressure sensor are standard. The recommended final pressure drop is 200 Pa.



FFS	£A	c/c	□B	C
45	447	470	492	502
50	502	520	547	532
55	550	573	595	562
65	661	680	707	642
70	697	720	742	642

Pressure drop



Filter cassette	Bag filter (incl. in FFS)	Filter media
FFS 45	BFS 45	F5
FFS 50	BFS 50	F5
FFS 55	BFS 55	F5
FFS 65	BFS 65	F5
FFS 70	BFS 70	F5

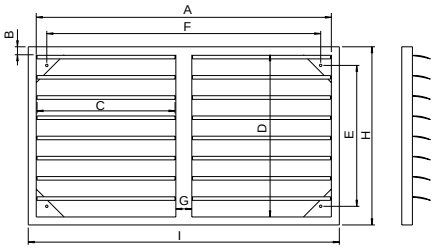


VK

Louvre shutter

Louvre shutters for vertical mounting on a wall. The profiled vanes produce a strong upward force which reduces the air resistance. This means that the vanes opens fully at low air velocities as well.

All the parts are manufactured in weather-resistant and shockproof nylon material (PVC containing special synthetic). The robust construction ensures that the vanes will not become deformed or loose. Air velocity should not exceed 12 m/s. The louvre shutters are easy to install. Wall plugs and screws are included.

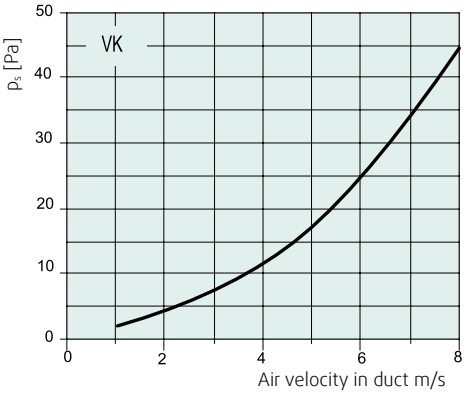


VK	A	B	C	D	E
40-20	455	15	452	255	215
50-25	555	15	552	305	265
50-30	555	15	552	355	315
60-30	655	15	2x309	355	315
60-35	655	15	2x309	405	365
70-40	755	15	2x359	455	415
80-50	846	15	2x405	555	515
100-50	1146	15	2x560	555	506

	F	G	H	I	J*
40-20	415	–	285	485	44
50-25	515	–	335	585	44
50-30	515	–	385	585	44
60-30	615	30	385	685	44
60-35	615	30	435	685	44
70-40	715	30	485	785	44
80-50	806	30	585	876	44
100-50	1097	28	585	1176	42

*J = thickness of frame

Pressure drop

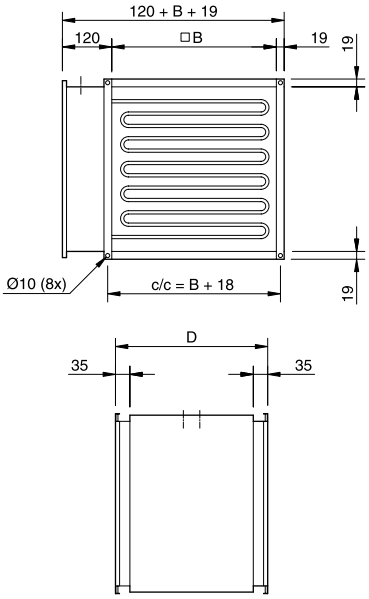




RBK

Electric duct heater for square ducts

Casing of alu-zink coated sheet metal with heating elements in stainless steel. The heater has built-in overheating protection with manual reset. Heat control by means of a controller TTC together with a TT-Slave (TT-S1) or TTC together with a TT-M Slave. Min.airflow is based on a min.air velocity of 1.5 m/s. The duct heater is dimensioned for a maximum outgoing temp. of 40°C.



RBK	□B	D
45	450	370
50	500	370
55	550	370
65	660	370

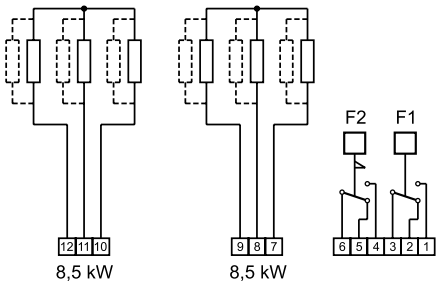
RBK		45/17	50/21
Power	kW	17	21
Voltage	V	400	400
Phase	~	3	3
Current	A	24.5	30
Min. airflow	m³/h	570	910
		55/33	66/39
Power	kW	33	39
Voltage	V	400	400
Phase	~	3	3
Current	A	48	56
Min. airflow	m³/h	890	1650

Calculation of required power

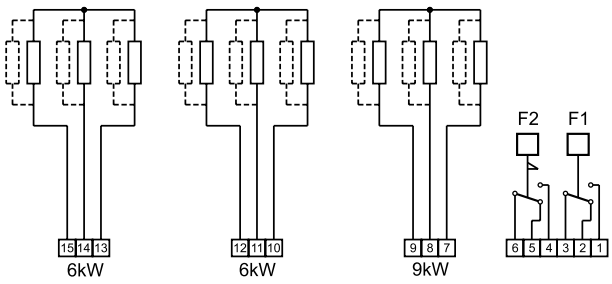
P = qv x air density x delta t

P = power (kW)
qv = air volume (m³/s)
air density = 1.2 kg/m³ at 20°C
delta t= temperature difference

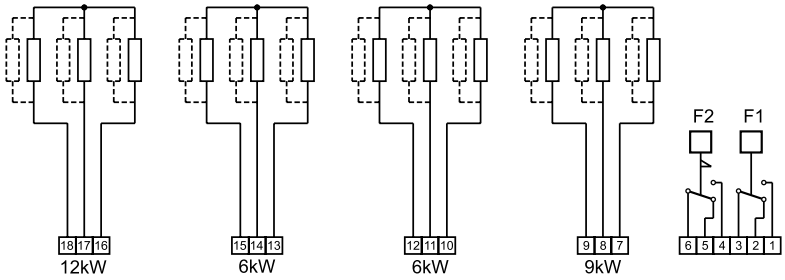
RBK-1 (18 kW, 400V 3~)



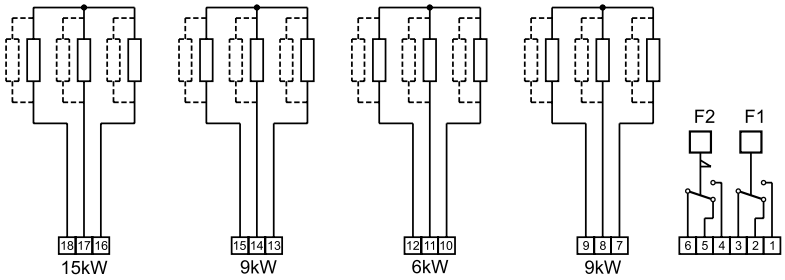
RBK-2 (21 kW, 400V 3~)



RBK-3 (33 kW, 400V 3~)



RBK-4 (39 kW 400V 3~)



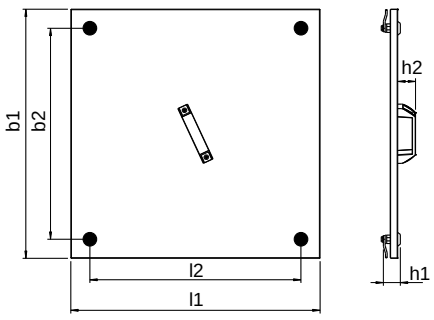
F1 = overheat protection, automatic reset (70°C)
F2 = overheat protection, manual reset (120°C)



SDM

Service door

For Multibox (MUB) or Thermo-Box (MUB-T). The door consists of double skin galvanised steel panels with a 20mm mineral wool insulation inside.



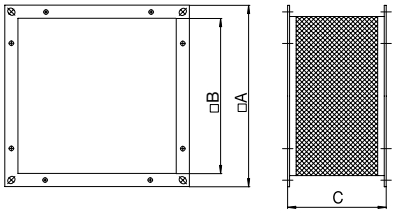
MUB	l1	l2	b1	b2	h1	h2
025	417	327	417	327	40	42
042	587	497	587	497	40	42
062	717	627	717	627	40	42



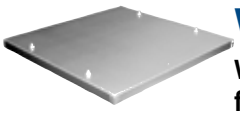
DSK

Flexible connections

Flexible connections for KDRE and KDRD. The connections fit exactly to the fan and are easily bolted to fan and duct.



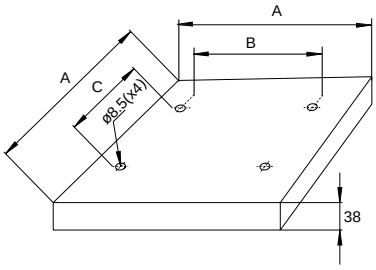
DSK	A	B	C
45	492	447	120
50	547	502	120
55	595	550	120
65	707	661	120
70	742	696	120



WSD

Wheather roof for Multiboxes

Made of seawater resistant aluminium. Edges are welded.



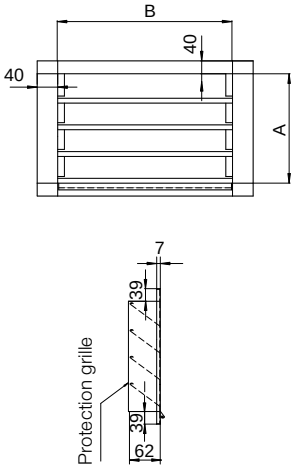
WSD	A	B	C
025	560	480	260
042	730	650	370
062	860	780	500
100	1060	980	700



WSG

Weather protection guard

Manufactured from galvanised steel. The protection guard includes a protection grille. Suitable for MUB Multiboxes.



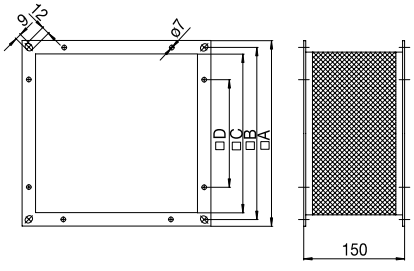
WSG	A	B
025	418	418
042	585	585
062	715	715
100	915	915



FGV

Flexible connection

Manufactured from aluminium with neoprene coated fabric. For temperature up to 60°C. On both sides there are holes for mounting to the duct system. Suitable for MUB.



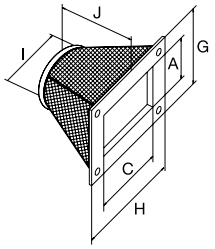
FGV	A	B	C	D
025/418-418	418	398	378	190
042/586-586	586	568	548	350
062/718-718	718	698	678	418
100/918-918	918	898	878	400



UGS

Flexible adaptor, square to round

Reduction from square to round. Aluminium frame and neoprene coated fabric. For temperature up to 60°C. The circular side has a locking ring for easy installation to the duct system. Suitable for MUB.



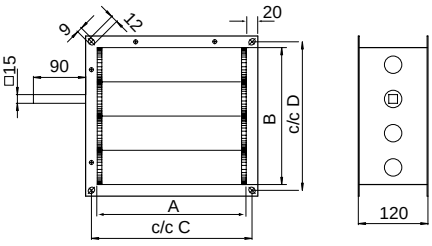
UGS	A/C	G/H	I	J
025/315	378	418	315	210
025/355	378	418	355	210
025/400	378	418	400	210
042/355	548	588	355	210
042/400	548	588	400	210
042/500	548	588	500	210
062/500	678	718	500	210
062/630	678	718	630	210



SRKG

Shutter for Multibox

SRKG is a cut-off shutter intended for use in ventilation systems. The shutter is designed with a number of blades which close towards each other, mounted in an aluminium frame. The blades are manufactured from aluminium.



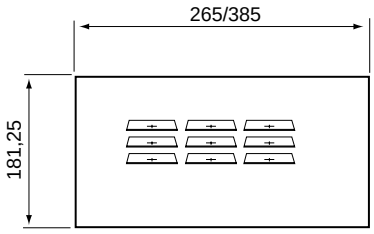
SRKG	A	B	c/c C	c/c D
016	548	236	568	256
025	378	378	398	398
030	678	236	698	256
042	548	548	568	568
062	678	678	698	698
100	878	878	898	898

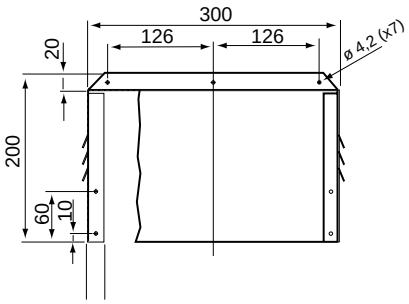


WSD-KBT

Weather roof for motor

Additional weather protection for the motor of thermo fans KBT and KBR, if mounted outside. Manufactured from seawater resistant aluminium. WSD KBT-1 suitable for KBT 160 - 180, KBR 315/355 4-pole,
WSD KBT-2 suitable for KBT 200 - 280, KBR 315/355 2-pole.







ISE/USE

Flexible connections

Flexible connections for the CE/CT, CKS and DKEX centrifugal radial fans. ISE supply connection is fixed with a strap to the spiral ducting. ISE: flex. length 100-158mm. USE: flex. length 65-120mm.

CE/CT, DKEX Size	Supply	Exhaust
200	ISE 200	USE 200
225	ISE 225/250	USE 225
250	ISE 225/250	USE 250
280	ISE 280/315	USE 280
315	ISE 280/315	USE 315
355	ISE 355/400	USE 355
400	-	USE 400
450	ISE 450	USE 450

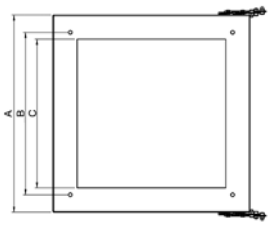
CKS Size	Supply	Exhaust
355	ISE 355/400	USE 280
400	ISE 500	USE 400 CKS
450	ISE 500	USE 355
500	ISE 500	USE 500 CKS
560	ISE 560	–



FTG

Tilting device for roof fans

For DVS/DVSI/DVC/DHS/DVN. With the tilting device FTG the roof fan is easy to open for service options. The open fan can be secured against unintended closing. The framework consists of galvanised steel and the hinges are made of stainless steel. For the connection of inlet accessory the adapter framework TDA is needed, which has to be ordered separately. The delivery includes mounting material. The tilting device is available for the sizes 310 up to 630. Preferrably to be ordered together with the fan, fully assembled.



FTG	A	B	C	for size
400	420	330	304	310/311
540	580	450	466	355/400
640	650	535	490	450/499/500
940	924	750	654	560/630



ALS-KBT

Drain for liquids that accumulate in the casing. For KBT/KBR. Accessory to be ordered together with the fan, to be assembled in the factory.



ASF/KB

Flexible connection

The ASF/KB is manufactured from galvanized steel, with neoprene coated fabric. It can be used for temperatures up to 120°C. The ASF/KB has double sealing on each side. Suitable for KBT/KBR.



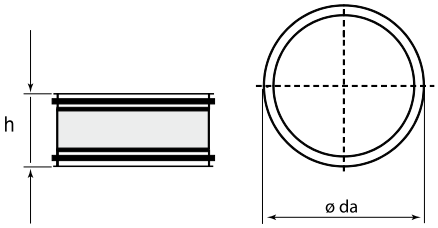
IS/US

Inlet/outlet flange

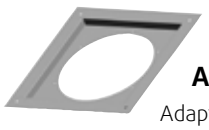
Flange for EX 140 including washers and screws. Manufactured from galvanized steel. Makes it possible to connect the fans to spiral duct.

Inlet	EX 140	EX 180
ø125	IS 1412	–
ø160	IS 1416	IS 1816
ø200	–	IS 1820

Outlet	EX 140	EX 180
ø125	US 1412	–
ø160	–	US 1816



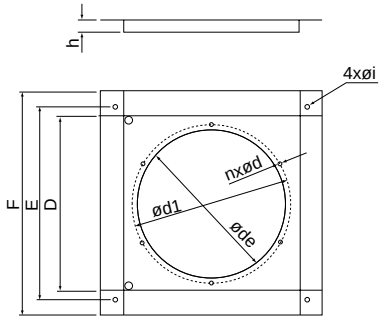
ASF	øda	h
200/KB	200	196
225/KB	225	199
250/KB	250	200
280/KB	280	200
315/KB	315	205
355/KB	355	210



TDA DV

Adapter

Adapter framework TDA for mounting of accessories together with tilting frame FTG. The framework consists of galvanized steel.



TDA DV	D	E	F	h
310/311	300	330	373	19
315 TFSK	362	450	474	35
355/400	450	464	543	20
450/500	486	535	619	35
560/630	650	750	793	15

	øi	nxød	øde	ød1
310/311	10	6x6.5	256	285
315 TFSK	12	6x6.5	256	285
355/400	12	6x9	405	438
450/500	12	6x9	405	438
560/630	14	8x9	570	605



TOB

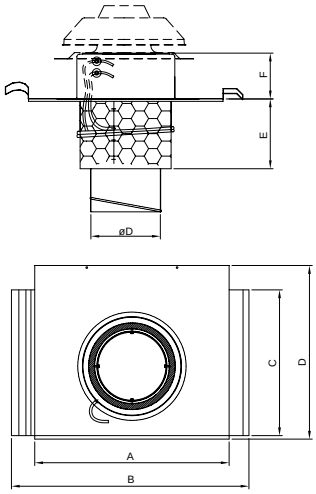
Profiled roof cover plate

The cover plate is shaped like a roof tile so that it can be fitted on to a standard double-lap concrete roof tile (type TOB 125-160) or on to two single-lap roof tiles (TOB 200-315). It is fitted at right angles to the roof cladding and can therefore be used on different roof pitches.

The cover plate is manufactured from powder-coated galvanised sheet steel. They are available in the standard colours of black, brick red and also uncoated. The spiral duct connected to the cover is insulated with 30 mm mineral fibre. The roof fan TFSR is fastened to the profiling plate with 4 screws, these screws are included in TOB.

3 m cable is included, as well as the TUB sealing-plate which is fitted on to the inside of the roof. This sealing-plate prevents water-damage via the roof aperture if there is leakage on the outside of the roof.

The sealing-plate should not be used if the roof is only covered with roofing felt.



TOB	A	B	C	D	E	F	øD
125-160	260	375	–	448	323	230	160
200-315	560	684	430	500	326	138	200



TUB/TUS

Roof sealing plate for TOB or TOS.



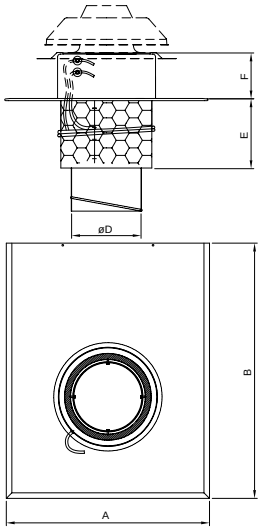
TOS

Flat roof cover plate

The cover plate is fitted at right angles to the roof cladding and can therefore be used on different roof pitches.

The cover plate is manufactured from powder-coated galvanised sheet steel. They are available in the standard colours of black, brick red and also uncoated. The spiral pipe connected to the cover is insulated with 30 mm mineral fibre. The roof fan TFSR is fastened to the profiling plate with 4 screws, these screws are included in TOS.

3 m cable is included, as well as the TUS sealing-plate which is fitted on to the inside of the roof. This sealing-plate prevents water-damage via the roof aperture if there is leakage on the outside of the roof. The sealing-plate should not be used if the roof is only covered with roofing felt.



TOS	A	B	E	F	øD
125-160	455	480	323	230	160
200-315	585	735	326	138	200

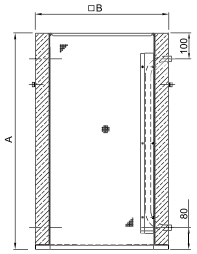


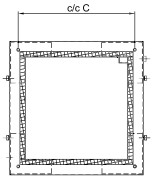
TG 300-800, 400-800

Roof curb

The brackets make it easy to fit the roof curb to the roof pitch. TG also has a silencer function. Manufactured from galvanised sheet steel and insulated with a 50 mm rockwool sheet and a perforated inner plate.

The roof curb is fitted with plastic piping and conduits for electric cables. Weight 24 kg.





TG	A	B	C
300-800	800	293	245
400-800	800	393	330

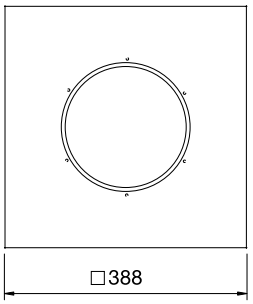
Hole measurement in roof = B+10 mm

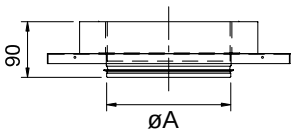


STG

Roof base plate

Accessory for the TG 400-800. Adapter for connection with ø125, 160 and 200 mm.





STG	øA
125	125
160	160
200	200

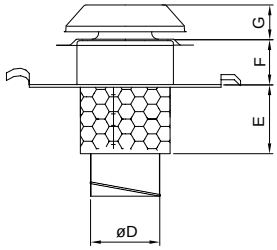


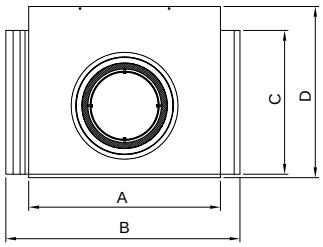
THB

Profiled roof cowl

This cowl is shaped to fit over a standard double-lap concrete roof tile (THB 160), or over two tiles (THB 200). The cowl is fitted at right angles to the roof cladding and can therefore be used on different roof pitches.

Manufactured from powder-coated, galvanised sheet steel, in the standard colours of black and brick red. The spiral pipe connected to the cover is insulated with 30 mm rockwool matting. The TUB sealing-plate, for fitting inside the roof, is included. This sealing-plate prevents water-damage via the roof aperture if there is leakage on the outside of the roof. The sealing-plate should not be used if the roof is only covered with roofing felt.





THB	A	B	C	D
160	260	375	448	448
200	560	684	430	500

	E	F	G	øD
	323	230	72	160
	326	138	76	200

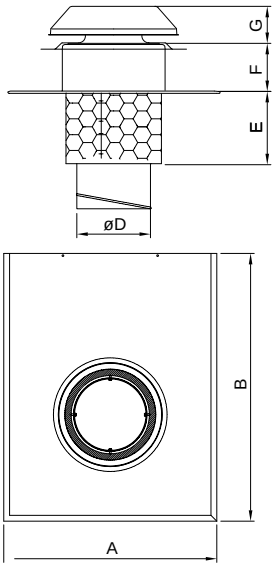


THS

Flat roof cowl

The cowl is fitted at right angles to the roof cladding and can therefore be used on different roof pitches.

Manufactured from powder-coated, galvanised sheet steel, in the standard colours of black and brick red. The spiral pipe connected to the cover is insulated with 30 mm rockwool. The TUS sealing-plate, for fitting inside the roof, is included. This sealing-plate prevents water-damage via the roof aperture if there is leakage on the outside of the roof. The sealing-plate should not be used if the roof is only covered with roofing felt.



THS	A	B	E	F	G	øD
160	455	480	323	230	72	160
200	585	735	326	138	76	200



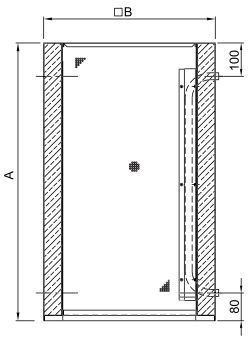
TG

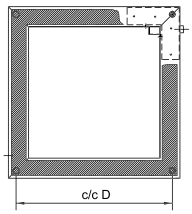
Roof curb

The brackets make it easy to fit the roof curb to the roof pitch, and also function as a silencer. Manufactured from galvanised sheet steel and insulated with a 50 mm rockwool sheet and a perforated inner plate.

The roof curb is fitted with plastic piping and conduits for electric cables.

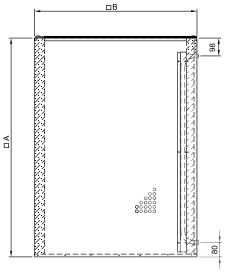
A roof curb with 100 mm insulation (corresponding to A60 insulation) is available on request.

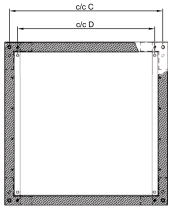




TG	A	B	D
540-800	800	494	450
640-800	800	594	535
540-1230	1230	494	450
640-1230	1230	594	535
1140-800	800	1094	1040

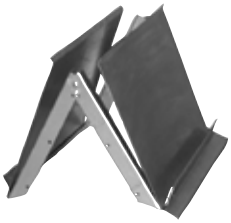
Hole measurement in roof = B+10 mm





TG	A	B	C	D
740-1200	1200	694	655	590
940-1200	1200	894	840	750

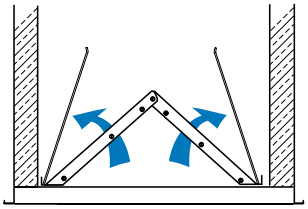
Hole measurement in roof = B + 10 mm

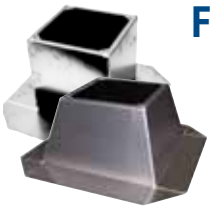


BTG

Back draft damper

Back draft damper designed for the TG 300-800, TG 400-500, TG 400-800 and TG roof curbs, which can be fitted as long as the roof curb is installed vertically. The frame and damper vanes are manufactured from galvanised sheet steel. The frame is screwed or riveted on to the roof curb's perforated inner casing.

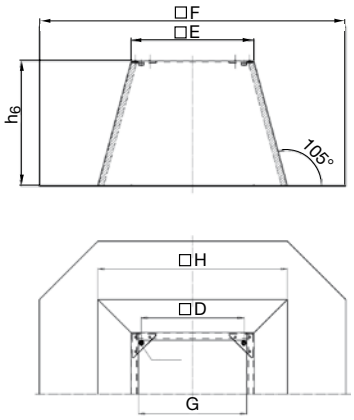




FDS

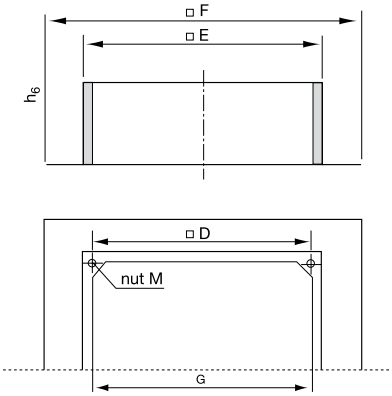
Flat roof socket

FDS is manufactured from seawater resistant aluminium and is supplied ready for assembly with insulation up to 100°C. Suitable for DVS/DHS, DVSI, DVN, DVNI, DVC, DVEX. Supplied with washers and screws.



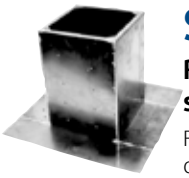
FDS	D	E	F	G
190/225	245	294	730	258
310/311	330	395	817	345
315M/L TFSK	450	478,5	898	430
355/400	450	555	977	505
450/499/500	535	625	997	565

	H	nut M	h6	
190/225	452	M6	300	
310/311	553	M6	300	
315M/L TFSK	638	M10	300	
355/400	713	M10	300	
450/499/500	783	M10	300	



FDS	D	E	F	G
560/630	750	895	1147	835
710	840	985	1300	925
800/900	1050	1205	1540	1145

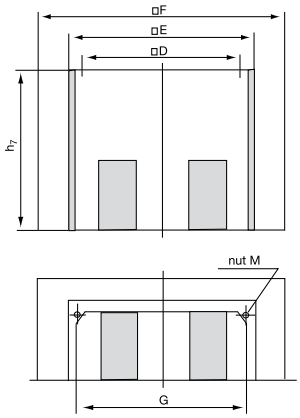
	nut M	h6		
560/630	M10	300		
710	M10	300		
800/900	M12	300		



SSD

Roof unit socket silencer

For special low noise requirements at the inlet side. The sound absorption at 250 Hz is in average 8 dB. The SSD is manufactured from seawater resistant aluminium. The sound absorbing material is abrasion resistant up to a velocity of 20 m/s. The baffles can be removed for service options. Suitable for DVS/DHS, DVSI, DVN, DVNI, DVC, TFSK and DVEX.

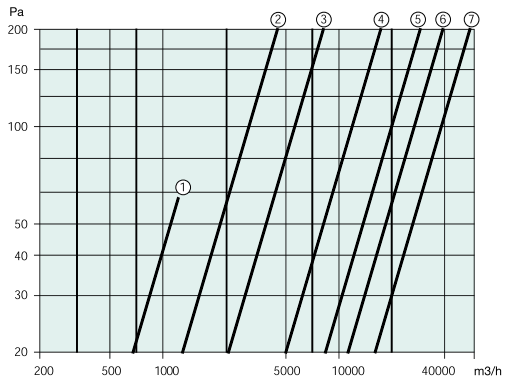


SSD	D	E	F	G
190/225*	245	294	571	258
310/311**	330	395	710	345
315M/L***	450	478	797	430
355/400	450	555	874	505
450/499/500	535	625	900	565
560/630	750	895	1200	835
710	840	985	1300	925
800/900	1050	1205	1540	1145

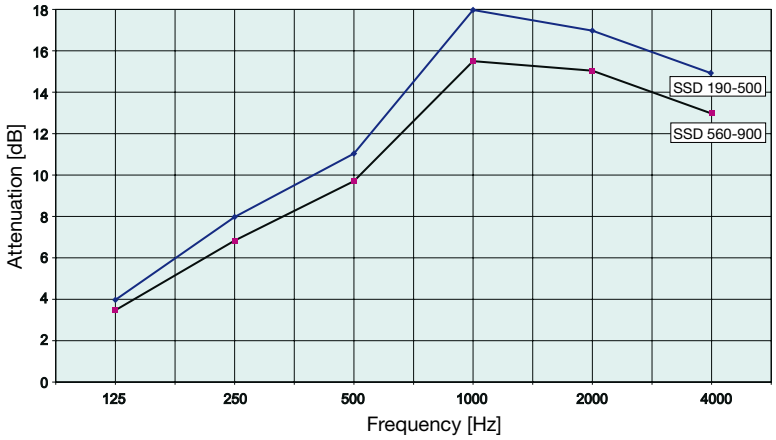
	nut M	h7	pressure drop no
190/225*	M6	400	1
310/311**	M6	500	2
315M/L***	M10	650	3
355/400	M10	650	3
450/499/500	M10	650	4
560/630	M10	700	5
710	M10	800	6
800/900	M12	1000	7

* *also suitable for TFSK 125 M/L*
** *also suitable for TFSK 160 and 200*
*** *suitable only for TFSK 315 M/L*

Pressure drop



SSD 190/225	1
SSD 310/311	2
SSD 315 TFSK	3
SSD 355/400	3
SSD 450/499/500	4
SSD 560/630	5
SSD 710	6
SSD 800/900	7

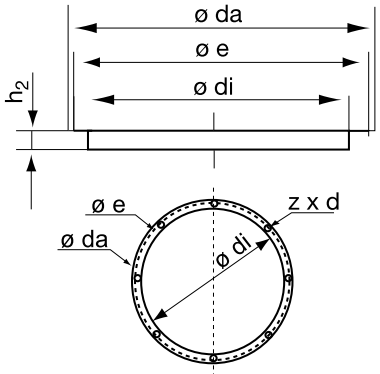




ASF

Inlet flange

Counterflange for connection to a duct system. Manufactured from galvanized steel. Suitable for DVS/DVSI, DHS, DVN/DVNI up to 120°C.



ASF	ø da	ø e	ø di	h2	z x d
190/225	235	213	183	25	6 x ø7
310/311	306	285	256	25	6 x ø7
355/500	464	438	402	30	6 x ø9
560/630	639	605	569	30	6 x ø9
710	708	674	634	30	6 x ø9
800/900	910	872	797	30	6 x ø10



CCM

Inlet connection MUB

Reduction from square to round for easy connection of accessories on the inlet side. The CCM is manufactured galvanized steel. The circular side has a double sealing for easy installation to the duct system.

This accessory should already be pre-assembled ex factory to the fan.



CCM

Circular connection, outlet MUB

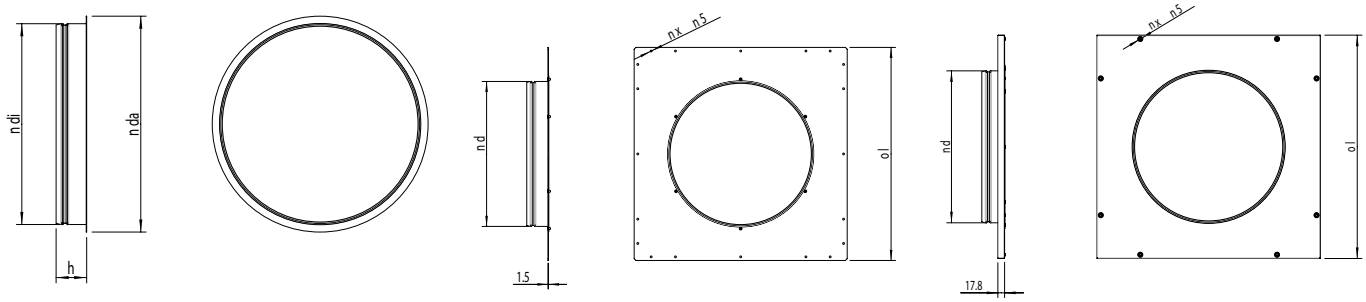
Reduction from square to round for easy connection of accessories on the outlet side. The CCM is manufactured galvanized steel. The circular side has a double sealing for easy installation to the duct system.



CCMI

Circular connection isolated, outlet MUB

Reduction from square to round for easy connection of accessories on the outlet side. The CCMI double skin panel with 20mm mineral wool insultion is from manufactured galvanized steel. The circular side has a double sealing for easy installation of the duct system.



CCM	ødi	øda	h
MUB042 d400	400	440	75
MUB042 d500	500	540	75
MUB062 d560	560	600	75
MUB062 d630	630	670	75

CCM	ød	øl
MUB042 d400	400	588
MUB042 d500	500	588
MUB062 d560	560	718
MUB062 d630	630	718

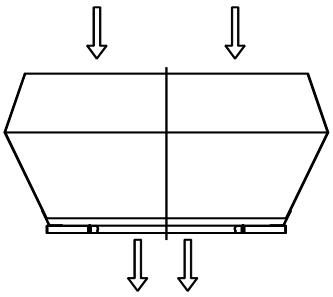
CCMI	ød	øl
MUB042 d400	400	588
MUB042 d500	500	588
MUB062 d560	560	718
MUB062 d630	630	718

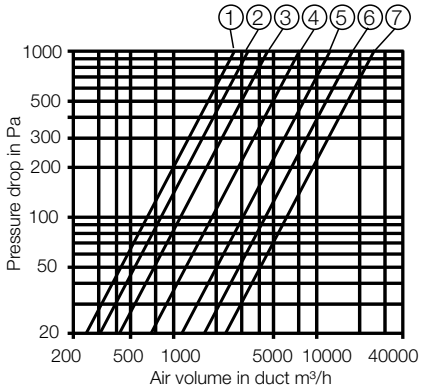
LGV/LGH

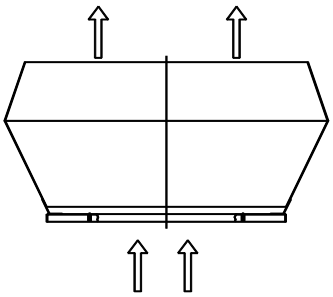
Roof cowl

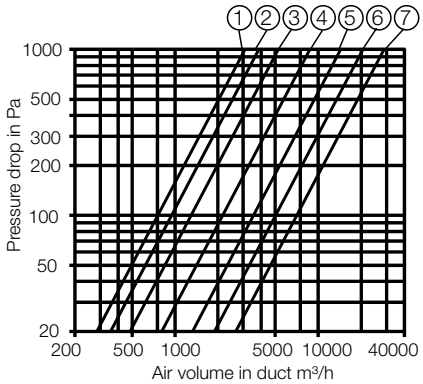
The roof cowl LGV/LGH as supply or exhaust cowl. Empty (no motor impeller) casing of model DVS/DHS/DVN roof fans. Dimensions are equivalent to the size of the roof fans.

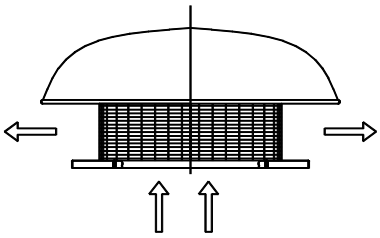
Pressure drop characteristic curve no.	
LGV 190/225	1
LGV 310/311	2
LGV 355/400	3
LGV 450/499/500	4
LGV 560/630	5
LGV 710	6
LGV 800/900	7

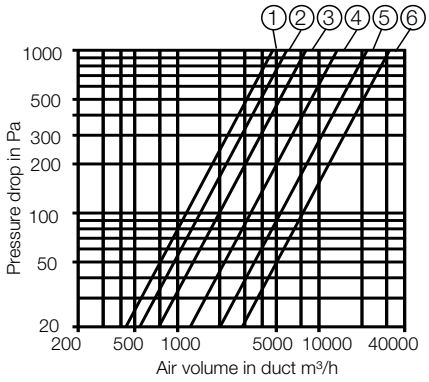


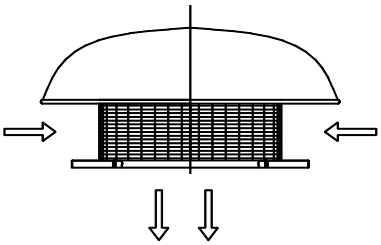


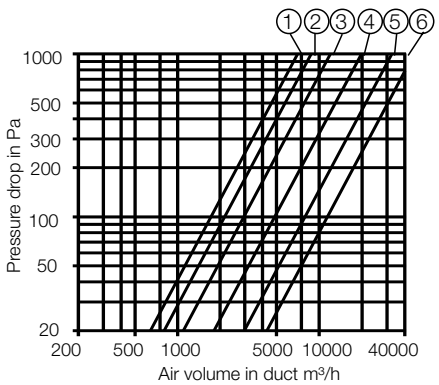














SSVE, SSVE/F

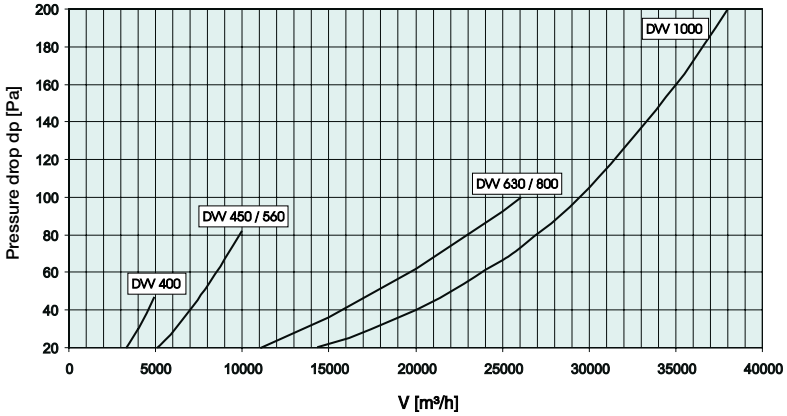
Roof socket silencer for DVV/120, DVV/F

The socket silencers SSVE/F are suitable for pitched roof constructions up to a max. angle of 20°. Angle can be adjusted on the silencer.

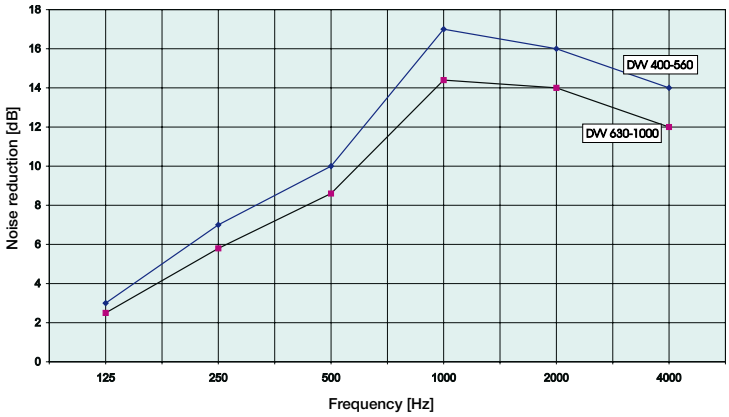
Casing manufactured from galvanized steel, insulation/baffles of mineral wool with a textile lining. For versions .../F (smoke extract) the baffles are secured with an additional metallic guard. The surface of the baffles is abrasion resistant. Silencers come complete with nuts at the bottom to fix further inlet-side accessories. Supplied with sealing between socket and fan.

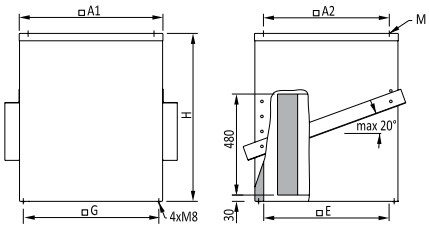
Attention! Automatic shutters VKVE/F, VKV/F cannot be installed into the silencer.

Pressure drop



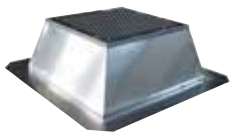
Noise reduction





SSVE, SSVE/F	□A1	□A2	M	□E	□G
400	535	460	12	447	496
450/560	685	600	12	597	646
630/800	975	880	16	884	936
1000	1120	1040	16	1029	1079

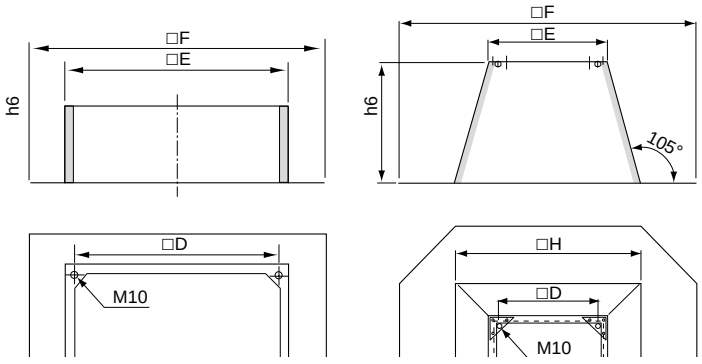
SSVE, SSVE/F	H	SSVE, kg	SSVE-F, kg
400	750	35	43
450/560	800	48	59
630/800	900	90	108
1000	950	111	133



FDG/F

Flat roof socket for DVG

Flat roof socket FDG/F is made of aluzinc steel sheet supplied with 40 mm mineral wool insulation with coated fabric. Additional guard for insulation protection. For use up to 400°C medium temperature. Inclusive sealing between fan and socket. Suitable for DVG-H, DVG-V.



FDG/F	D	E	F	G	H	nut M	h6	kg
315-355	450	555	977	505	713	M10	300	17
400-450	535	625	997	565	783	M10	300	20
500-560	750	895	1147	835	–	M10	300	35
630	840	985	1300	925	–	M10	300	39
800	1050	1210	1540	1120	-	M12	300	45

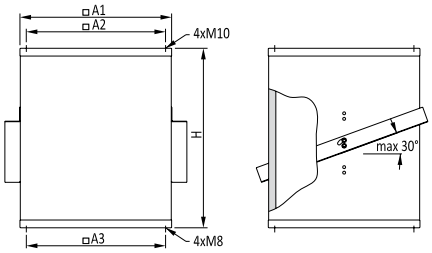


FDGE/F

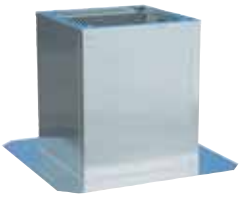
Roof socket for DVG

The roof sockets FDGE/F are suitable for pitched roof constructions up to a max. angle of 30°. Angle of supports and height above roof can be adjusted on the socket - 3 positions to fasten and rotate the supports.

Casing manufactured from aluzinc steel sheet, insulation of mineral wool with a textile lining. Insulation is secured with an additional metallic guard. The surface of insulation is abrasion resistant. Supplied with sealing between socket and fan.



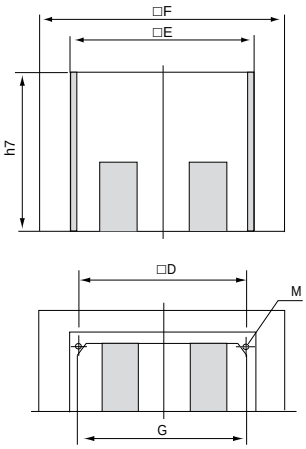
FDGE/F	A1	A2	A3	H	kg
315-355	562	450	526	1200	43
400-450	628	535	596	1200	48
500-560	898	750	866	1200	68
630	990	840	956	1200	74
800	1210	1050	1174	1200	92



SSG/F

Roof socket silencer for DVG

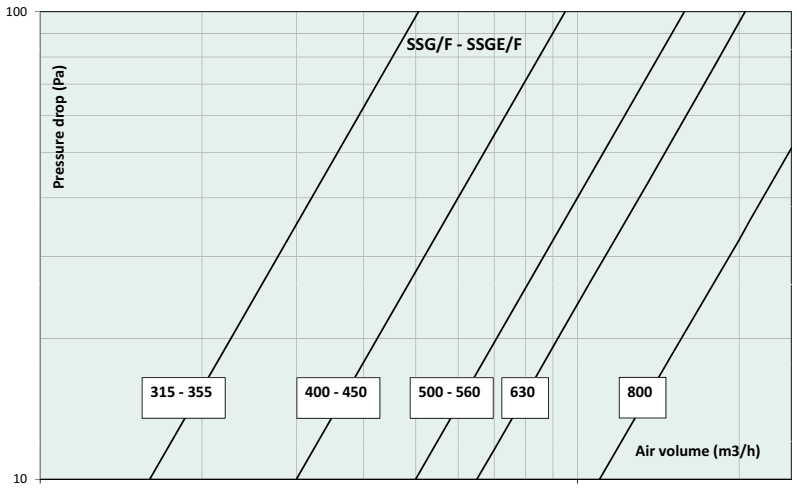
The socket silencers SSG/F are suitable for mounting on flat roofs. Casing made from aluzinc steel sheet, insulation/ baffles of mineral wool with textile lining. Insulation 40 mm thick on side walls is secured with an additional metallic guard. The sound absorption at 250 Hz is in average 8 dB. Silencers come complete with nuts at the bottom to fix further inlet side accessories. Supplied with appropriate high-temperature sealing between socket and fan. Suitable for DVG-H, DVG-V fans.



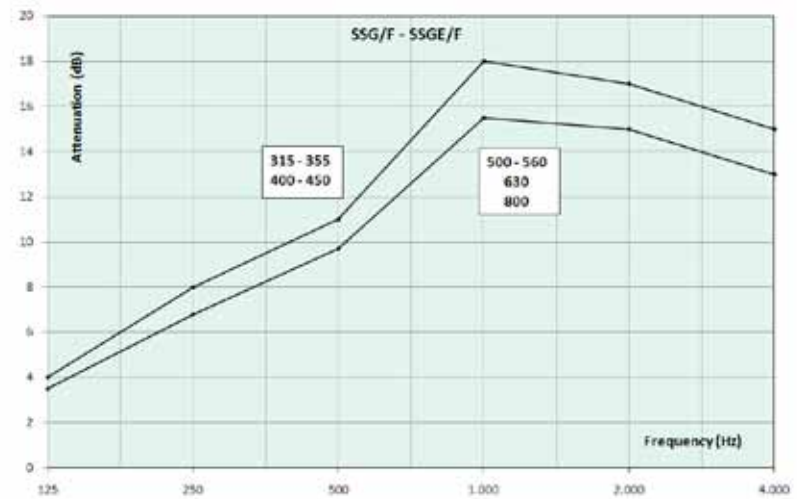
SSG/F	D	E	F	G
315/355	450	555	874	472
400/450	535	625	900	538
500/560	750	895	1200	808
630	840	985	1300	898
800	1050	1210	1540	1120

	nut M	h7	kg	
315/355	M10	650	41	
400/450	M10	650	46	
500/560	M10	700	72	
630	M10	800	90	
800	M12	1010	115	

Pressure drop



Sound attenuation



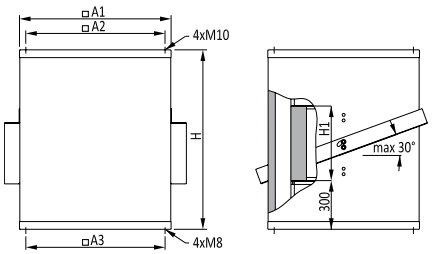


SSGE/F

Roof socket silencer for DVG

The socket silencers SSGE/F are suitable for pitched roof constructions up to a max. angle of 30°. Angle of supports and height above roof can be adjusted on the silencer - 3 positions to fasten and rotate the supports.

Casing manufactured from aluzinc steel sheet, insulation/baffles of mineral wool with a textile lining. The baffles are secured with an additional metallic guard. The surface of the baffles is abrasion resistant. Supplied with sealing between socket and fan.



SSGE/F	A1	A2	A3	H1	H	kg
315-355	562	450	526	370	1200	50
400-450	628	535	596	370	1200	55
500-560	898	750	866	390	1200	86
630	990	840	956	490	1200	98
800	1210	1050	1174	600	1200	135

Pressure drop and sound attenuation on page 378



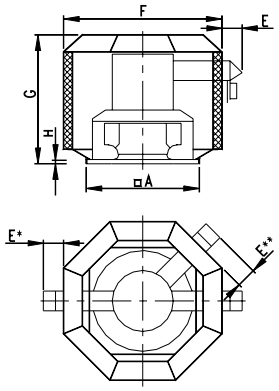
HSDV

Octagonal discharge silencer for DVV roof unit

From AlMg3, built as silencer to outlet, vertical exhaust ***(photo: DVV/F).*** Suitable for DVV/120, DVV/F400 and DVV/F600. Certified together with DVV/F according to EN 12101-3. With some additional details suitable also for DVV-Ex (only factory mounted possible). Insulation of 50 to 80 mm mineral wool with glass mat, perforated steel sheet for protection of insulation, holes for water outlet.

When ordered together with DVV fan, the marking of the fan is DVVI. Observe additional weight from table, when fitted to DVV. Fastened in the corners to the roof base (dimensions of roof base and position of bolts are the same as for DVV alone).

HSDV can be mounted instead of ordinary casing afterwards too (exception: DVV-Ex), but connection box rsp. service switch should be dismounted to fit the casing to cooling duct. New labels are needed. Noise attenuating 7 to 8 dBA.



HSDV	A	E	F	G	m kg	m1 kg
400	573	200	732	730	18	14
450/560	723	220	908	830	25	19
630	1023	175	1200	1050	45	30
800	1023	230	1432	1163	66	44
800 M,P 4 pole	1023	200	1516	1353	80	54
1000	1183	245	1660	1480	96	68
1000 M,P 4 pole	1183	314	1660	1480	96	40

HSDV	Suitable for DVV/F400, F600, DVV/120, DVV-Ex
400	DVV 400
450/560	DVV 450, 560, DVV-Ex 560
630	DVV 630-K, DVV 630, DVV-Ex 630-K, DVV-Ex 630
HSDV 800	DVV 800-K, DVV 800, DVV 800 M, P 6 pole, DVV-Ex 800-K, DVV-Ex 800
HSDV 800 M,P 4 pole	DVV 800D4-M, P, 4-8-M, P, 4-6-M, P
HSDV 1000	DVV 1000, DVV 1000D6-M, P, 6-8-M, P, DVV-Ex 1000
HSDV 1000 M,P 4 pole	DVV 1000D4-M, P, 4-8-M, P, 4-6-M, P

Note 1: m (kg) - weight of HSDV alone, without fan.

Note 2: m1 (kg) - additional weight of fan, when HSDV mounted instead of original casing.

Note 3: E for 1000-P 4 pole only (2 cooling ducts).*

*Note 4: E** for DVV 400 - 630 (cooling duct 45° to axis).*

Note 5: FSL snow load flaps for HSDV resp. DVVI on request.

Note 6: DVVI-Ex without cooling ducts, connection box on casing.

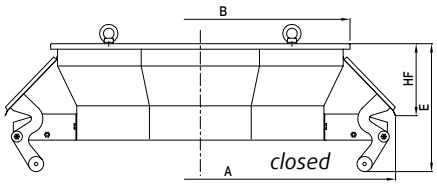


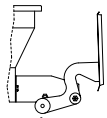
FSL

Flaps for snow load, DVV roof unit

Suitable for DVV smoke and heat extract fans. Smoke and heat extract unit DVV with FSL for buildings with snow load requirement SL 1000. Suitable for temperatures from ambient up to 600°C/2h.

- SL 1000 according to EN 12101-3.
- Flaps made from hot-dip galvanized steel sheet.
- Vertical exhaust.
- Tested according to EN 12101-3 at TU Munich for temperatures up to 600°C/2h.
- Recommended to order factory mounted on the fan.





opened

FSL	A	B	HF*	E	kg**
450	800	550	210	305	26
560	800	550	235	305	27
630	910	550	285	400	35
800 K 4 pole	1050	700	285	428	47
800	1050	700	285	428	50
800 M, P	1280	927	295	446	59
1000	1420	1090	273	466	66
1000 M, P 6 pole	1420	1090	273	466	67
1000 M, P 4 pole	1420	1090	273	466	68

* HF - additional height of DVV
** Additional weight of DVV, when FSL mounted

FSL	Suitable for DVV/F400, F600
450	DVV 450
560	DVV 560
630	DVV 630, DVV 630-K
800 K 4 pole	DVV 800D4-K, 4-8-K, 4-6-K
800	DVV 800D6, 6-8, 6-12, 6-K, 6-8-K, 6-12-K, 6-M
800 M, P	DVV 800D4-M, P, 4-8-M, P, 4-6-M, P
1000	DVV 1000D6, 6-8, 6-12, 8, 8-12
1000 M, P 6 pole	DVV 1000D6-M, P, 6-8-M, P
1000 M, P 4 pole	DVV 1000D4-M, P, 4-8-M, P, 4-6-M, P



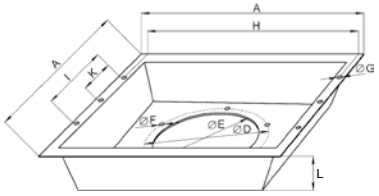
ASK, ASK/F, ASG/F

Plenum box

ASK, for mounting on SSD socket silencers to fix inlet accessories and duct system. Made of seawater resistant aluminium.

The plenum box **ASK/F** is used for connection of inlet accessories and duct system. The ASK/F is manufactured from galvanised steel. ASK/F can be used together with roof sockets (SSVE-SSVE/F, SSV-SSV/F, FDV-FDV/F), flexible connections (ASSV-ASSV/F, ASSV-EX) and shutters (VKV/F, VKVE/F, VKVM, VKSV-EX).

The plenum box **ASG/F** is used for connection of inlet accessories and duct system. The ASG/F is manufactured from aluzinc steel sheet. ASG/F can be used together with roof socket SSG/F, SSGE/F, FDGE/F, flexible connections ASSG/F and shutter VKG/F.



ASK	A	øD	øE	øF	øG
190/225	290	213	183	6xø7	4xø7
310/311	385	285	256	6xd7	4xd9
315 TFSK	474	285	256	6xø8	4xø9
355/400	551	438	402	6xø9	4xø9
450/500	621	438	402	6xø9	4xø9
560/630	891	605	569	8xø9	4xø9
710	981	674	634	8xø9	6xø9

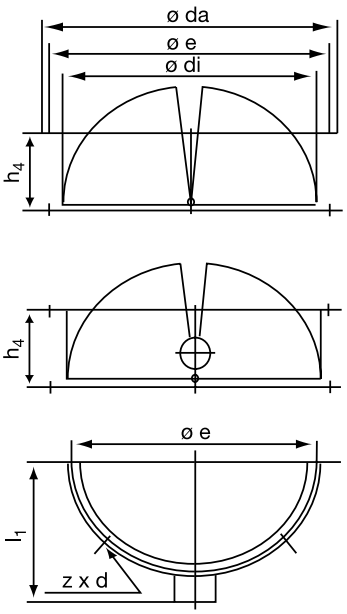
	H	I	K	L	kg
190/225	272	114	-	110	0.9
310/311	366	152	-	110	1.2
315 TFSK	449	179	-	110	2
355/400	526	214	-	110	2
450/500	596	241	-	110	2.2
560/630	866	235.5	233.5	110	3.9
710	956	508	254	110	5

ASK/F	A	øD	øE	øF	øG	H
400	522	356	322	8xM8	10	496
450	672	395	360	8xM8	10	646
560	672	438	404	12xM8	10	646
630	962	541	507	12xM8	10	936
800	962	674	636	16xM10	10	936
1000	1105	751	713	16xM10	10	1079

	I	K	L	n	kg	
400	-	125	200	1	6	
450	-	160	250	1	10	
560	-	160	250	1	10	
630	-	160	300	2	19	
800	-	160	350	2	19	
1000	-	180	350	2	24	

ASG/F	A	øD	øE	øF	øG
315-355	545	438	402	6xM8	4xø9
400-450	615	438	402	6xM8	4xø9
500-560	885	605	569	6xM8	6xø9
630	975	674	634	6xM8	6xø9
800	1205	872	800	8xM8	6xø9

	H	I	K	L	kg
315-355	526	214	–	200	5
400-450	596	241	–	200	5
500-560	866	471	235.5	250	13
630	956	508	254	300	17
800	1174	600	300	300	22



VKS/VKM	øda	øe	ødi	h4	l1	zxd
190/225	235	217	183	115	–	6x8x12
310/311	306	286	255	156	210	6xø10
355-500	464	438	406	220	290	6xø10
560/630	639	605	573	255	375	8xø10
710	708	674	638.5	250	400	8xø10
800/900	910	872	801	340	500	8xø10

VKS-EX	øda	øe	ødi	h4	l1	zxd
315	306	285	256	156	–	6xø7
355-500	464	438	402	220	–	6xø9
560/630	639	605	569	255	–	8xø9

VKSV-EX	øda	øe	ødi	h4	l1	zxd
630	584	541	504.5	255	–	12xø12
800	708	674	638	255	–	16xø12
1000	814	751	711.5	350	–	16xø12



VKS, VKM, VKS-EX, VKSV-EX

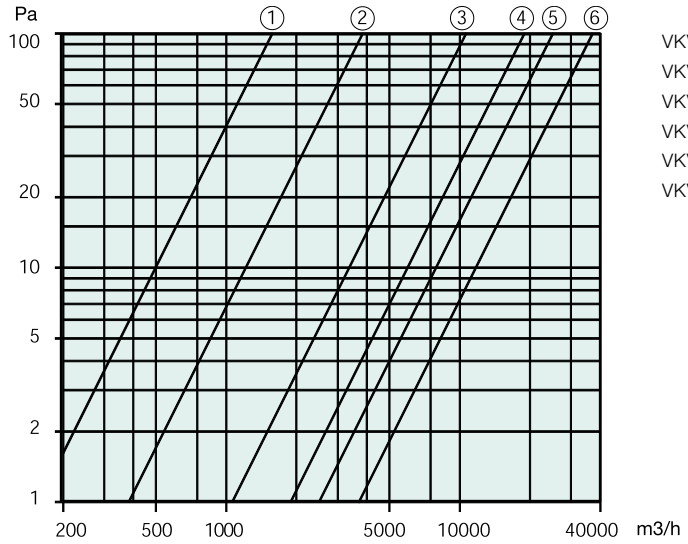
Automatic and motor driven shutter

The automatic shutter **VKS** consists of flanges manufactured from galvanized steel, and of shutter blades manufactured from seawater resistant aluminium. Suitable for DVS/DHS, DVSI, DVN.

VKM motor driven shutter consists of flanges manufactured from galvanized steel, and of shutter blades manufactured from seawater resistant aluminium. Is equipped with a servo motor (230V/50Hz/25W), which can be operated manually as well as through the automatic controllers of the air conditioning unit. While the motor is energized the shutter stays open. When separated from the supply the shutter will close automatically. Temperature approx 70°C. Suitable for DVS/DHS, DVSI, DVN.

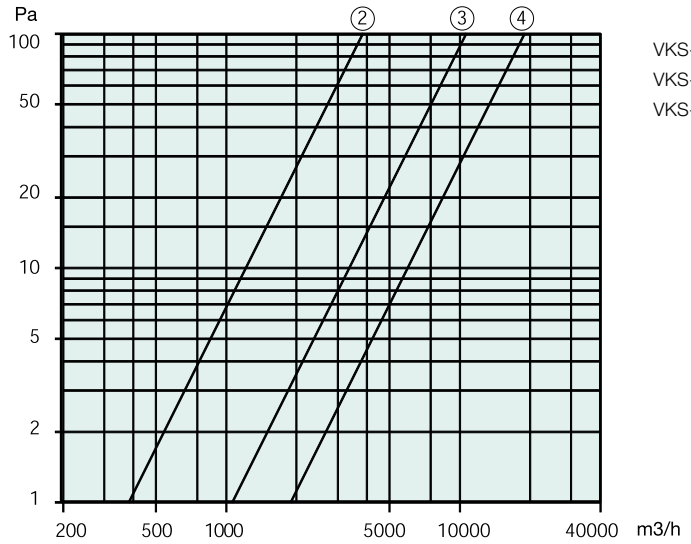
The automatic shutter **VKS-EX/VKSV-EX** consists of flanges manufactured from galvanized steel epoxy painted RAL 9005, and of shutter blades manufactured from painted galvanized steel RAL 9005.

Pressure drop VKS



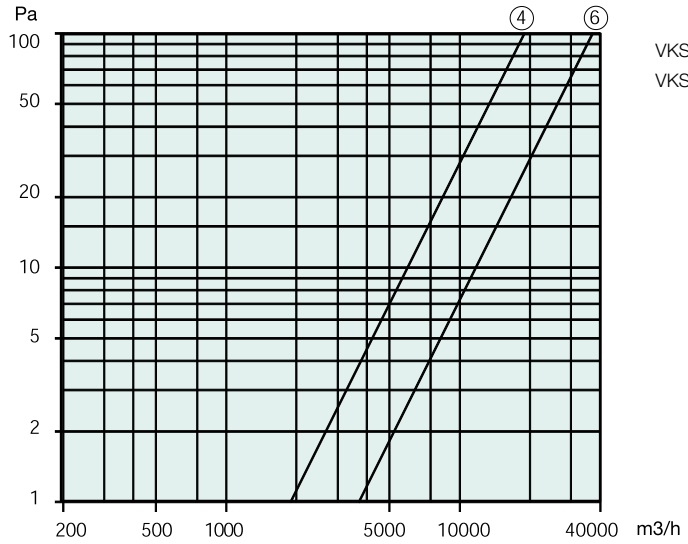
VKV/VKM 190/225	1
VKV/VKM 310/311	2
VKV/VKM 355/400	3
VKV/VKM 560/630	4
VKV/VKM 710	5
VKV/VKM 800/900	6

Pressure drop VKS-EX



VKS-EX 310/311	2
VKS-EX 355/500	3
VKS-EX 560/630	4

Pressure drop VKSV-EX



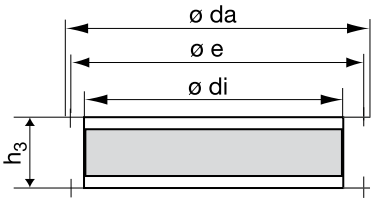
VKSV-EX 630	4
VKSV-EX 800/1000	6

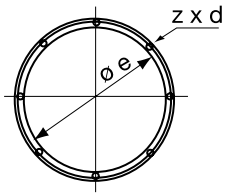


ASS

Flexible connection

Manufactured from galvanised sheet steel, with neoprene coated fabric. For temperature up to 70°C. Suitable for DVS/DHS, DVSI, DVN, DVNI, DVC, DVEX, DVV-EX.





ASS/ASS-EX	øda	øe	ødi	h3	zxd
190/225*	235	213	183	155	6xø7
310/311*	306	285	256	155	6xø7
355-500*	464	438	402	155	6xø9
560/630*	639	605	569	155	8xø9
710	710	674	634	155	8xø9
800/900	910	872	797	155	8xø10
ASSV-EX	**øda**	**ø e**	**ø di**	**h3**	**zxd**
630	584	541	504	155	12xø12
800	708	674	638	155	16xø12
1000	814	751	711	155	16xø12

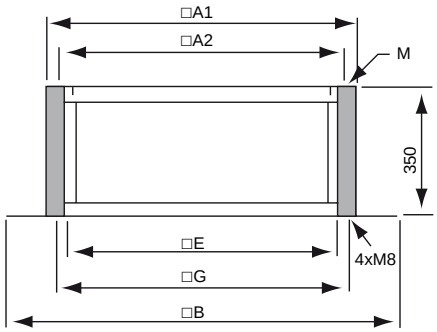
**ASS and ASS-EX*



FDV, FDV/F

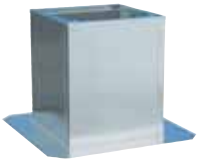
Flat roof socket for DVV/120, DVV/F

The flat roof socket FDV is manufactured from galvanized steel supplied with 40 mm mineral wool insulation with coated fabric. The sealing between fan and socket is provided.



FDV, FDV/F	A1	A2	B	M
400	535	460	720	12
450/560	685	600	870	12
630/800	975	880	1160	16
1000	1120	1040	1400	16

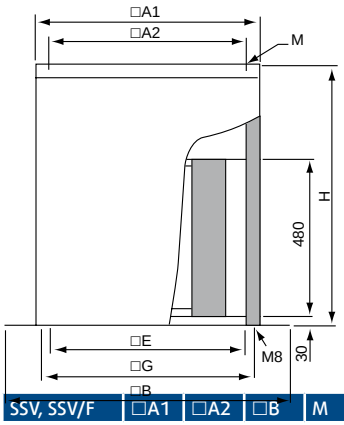
FDV, FDV/F	E	G	FDV kg	FDV/F kg
400	444	496	17	19
450/560	594	646	21	24
630/800	879	936	41	45
1000	1023	1079	52	63



SSV, SSV/F

Socket silencer for DVV/120, DVV/F

The socket silencers SSV are suitable for mounting on flat roofs. Casing manufactured from galvanized steel, insulation/baffles of mineral wool with a textile lining. For versions .../F (smoke extract) the baffles are secured with an additional metallic guard. The surface of the baffles is abrasion resistant. Silencers come complete with nuts at the bottom to fix further inlet-side accessories. Supplied with sealing between socket and fan. Attention! Automatic shutters VKVE/F, VKV/F cannot be installed into the silencer.



SSV, SSV/F	□A1	□A2	□B	M	H
400	535	460	720	12	750
450/560	685	600	870	12	800
630/800	975	880	1160	16	900
1000	1120	1040	1400	16	950

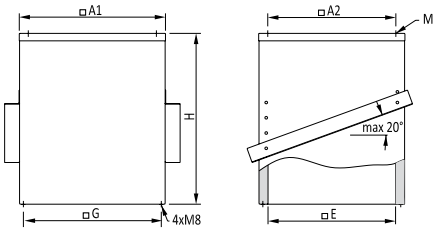
SSV, SSV/F	□E	□G	SSV kg	SSV/F kg	
400	444	496	35	39	
450/560	594	646	48	55	
630/800	879	936	95	107	
1000	1023	1079	123	136	



FDVE, FDVE/F

Roof socket for DVV/120, DVV/F

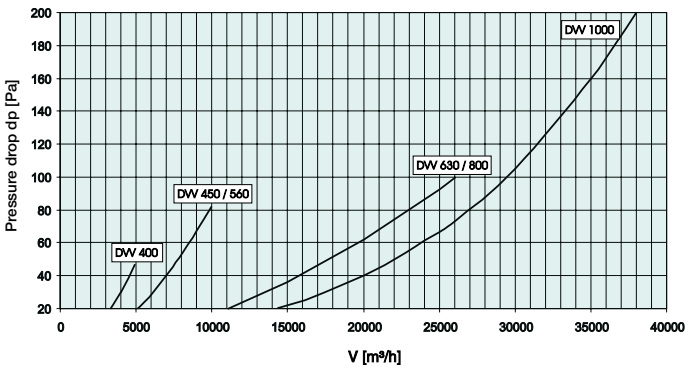
Flat or inclined roof socket up to 20° inclination. Manufactured from galvanized steel, supplied with insulation, mineral wool 40 mm with coated fabric. Sealing tape between fan and socket attached. Profiles adjustable up to 20°, to be adjusted to inclination of the roof at site.



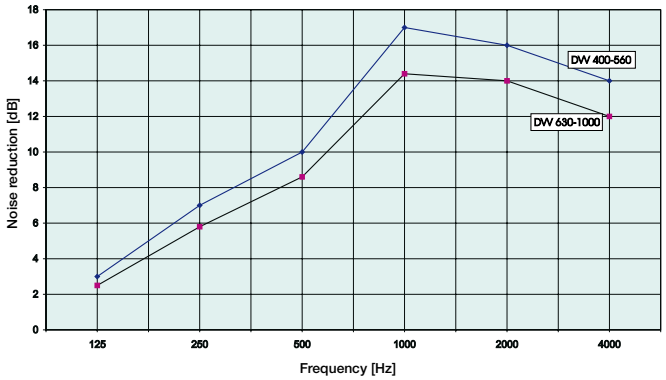
FDVE/FDVE/F	A1	A2	E	G
400	535	460	447	496
450/560	685	600	597	646
630/800	975	880	884	936
1000	1120	1040	1029	1079

FDVE/FDVE/F	H	M	FDVE kg	FDVE/F kg
400	750	12	32	37
450/560	800	12	41	47
630/800	900	16	73	86
1000	950	16	92	105

Pressure drop



Noise reduction

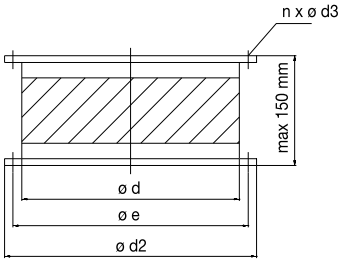




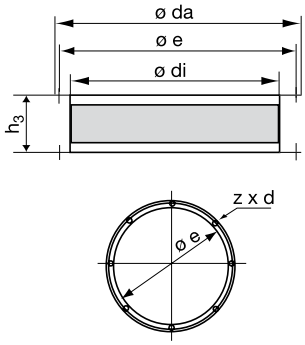
ASSV, ASSV/F, ASSV-EX

Flexible connection for DVV/DVV-EX roof unit

The flexible connections prevent transmission of eventual vibrations to the duct system. The flanges consist of galvanized steel. The flexible connecting piece consists of resistant neoprene in the standard version ASSV. The smoke extract version ASSV/F consists of aluminium-foil coated high temperature resistant glass fibre. The smoke extract version was tested together with the DVV range in accordance with EN 12101-3. ASSV/EX is manufactured from galvanised sheet steel, with neoprene coated antistatic fabric. For temperature up to 70°C. Suitable for DVV-EX.



ASSV (/F)	ød	øe	ød2	nxd3	kg
400	322	356	382	8X9.5	2.9
450	361	395	421	8X9.5	3.1
560	404	438	464	12X9.5	3.5
630	507	541	567	12X9.5	4.5
800	638	674	712	16X11.5	10.2
1000	715	751	795	16X11.5	11



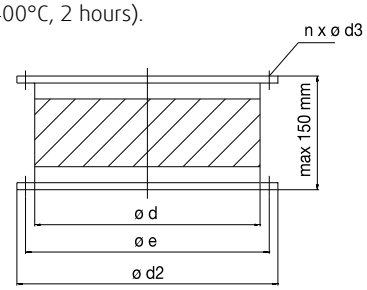
ASSV-EX	øda	øe	ødi	h3	zxd
630	584	541	504	155	12xø12
800	708	674	638	155	16x ø12
1000	814	751	711	155	16xø12



ASSG/F

Flexible connection for DVG roof unit

The flexible connections prevent transmission of eventual vibrations to the duct system. The flanges consist of galvanized steel. The smoke extract version ASSG/F consists of aluminium-foil coated high temperature resistant glass fibre. Suitable for the DVG range in accordance with EN 12101-3 (F400 - 400°C, 2 hours).



ASSG/F	ød	øe	ød2	nxd3	kg
315-450	402	438	475	6X9	4
500/560	569	605	652	8X9	7.5
630	638	674	723	8X9	10.2
800	797	872	910	8X10	12

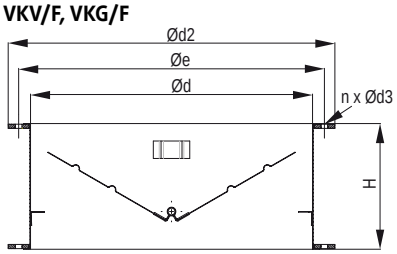


VKV/F, VKVE/F, VKG/F

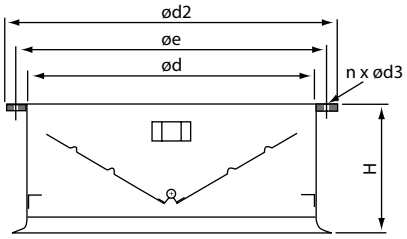
Automatic shutter

VKV/F and VKVE/F for roof fans DVV F400, F600 and 120° (not DVV-Ex), VKG/F for roof fans DVG. The casing and blades are manufactured from galvanized steel.

VKV/F, VKG/F



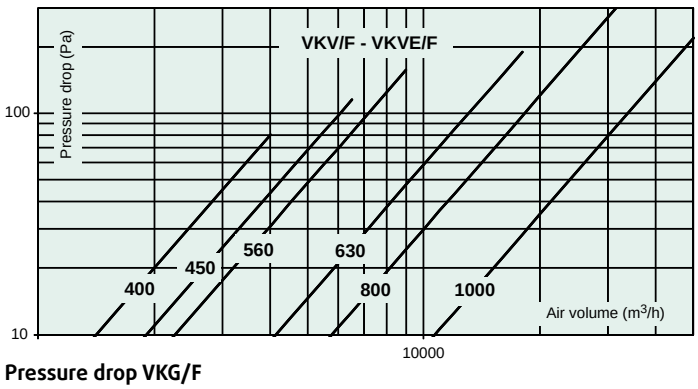
VKVE/F



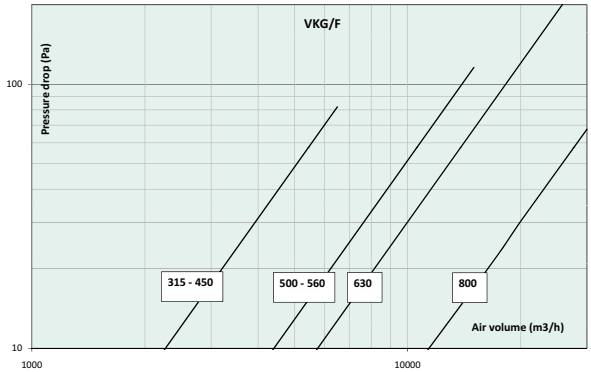
VKV/F, VKVE/F	ød	øe	ød2	H	nxød3	kg
400	322	356	386	160	8x9.5	4.3
450	360	395	425	175	8x9.5	5
560	404	438	468	180	12x9.5	6
630	507	541	571	250	12x9.5	9
800	636	674	712	290	16x11.5	15
1000	713	751	789	350	16x11.5	20

VKG/F	ød	øe	ød2	H	nxød3	kg
315-450	404	438	468	180	6x9	6
500-560	569	605	643	240	8x9	11
630	636	674	712	290	8x9	15
800	797	872	903	330	8X10	22

Pressure drop VKV/F - VKVE/F



Pressure drop VKG/F



Accessories

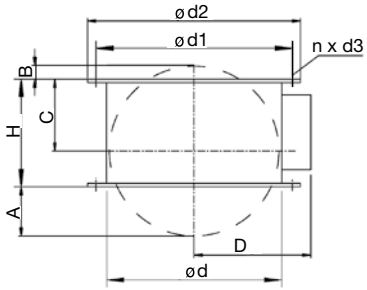


VKVM

Motorized shutter

VKVM motor driven shutter. Suitable for roof fans DVV/120. Temperature of use up to app. 70°C.

The flap of VKVM is made of galvanised steel. With direct coupled 230V/50Hz ON-OFF spring return actuator. The flap opens when applying supply voltage. If the power supply is interrupted, the flap closes. Manually operating possible.



VKVM	ød	ød1	ød2	nxød3	A
400	322	356	386	8x9.5	100
450	360	395	425	8x9.5	120
560	404	438	468	12x9.5	140
630	507	541	571	12x9.5	105
800	636	674	712	16x11.5	170
1000	713	751	789	16x11.5	210

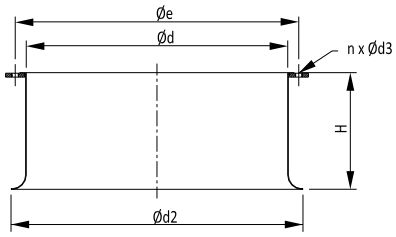
	B	C	D	H	kg
400	0	190	260	250	5.8
450	0	190	280	250	6.5
560	10	190	305	250	7.2
630	0	250	365	395	10.3
800	65	250	445	395	22
1000	105	250	485	395	25



ESDV

Inlet cone DVV

For use together with the roof fan DVV. To improve aerodynamic flow with free inlet. The inlet cone is manufactured from galvanised steel. Additional to VKV/F or to duct inlet.



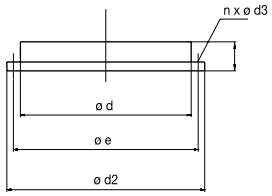
ESDV	ød	øe	ød2	H	nxød3	kg
400	322	356	369	160	8x9,5	4,3
450	360	395	407	175	8x9,5	5
560	404	438	451	180	12x9,5	5,7
630	507	541	586	250	12x9,5	9
800	636	674	716	290	16x11,5	15
1000	713	751	811	350	16x11,5	19



ASFV

Inlet flange

Counter flange for connection to a duct system or to the accessories. Manufactured from galvanized steel. Suitable for DVV, DVG fans and accessories.



ASFV	ød	øe	ød2	nxd3
400	322	356	390	8X9,5
450	361	395	428	8X9,5
V560/G315-450	402	438	475	12X9,5
630	505	541	577	12X9,5
G500-560	569	605	652	16X12
V800/G630	638	674	723	16X12
1000	712	751	802	16X12

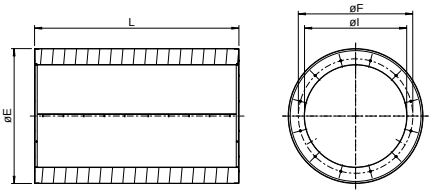
ASFV	kg	for DVV	for DVG
400	0,8	400	–
450	0,9	450	–
V560/G315-450	1.3	560	315-450
630	1.8	630	–
G500-560	2.1	–	500-560
V800/G630	2.4	800	630
1000	2.8	1000	–



RSA (F)

Silencer

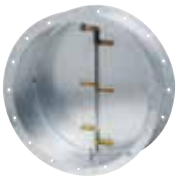
The RSA effectively reduces noise in the duct. For the most effective noise reduction, the silencer should be fitted immediately behind a fan or bend. For axial fans AXC.



RSA(F)	øI	øE	øF	AxB	L
315	315	455	355	8xM8	315, 472.5, 630
355	355	495	395	8xM8	355, 532, 710
400	400	540	450	8xM10	400, 600, 600
450	450	610	500	8xM10	450, 675, 900
500	500	660	560	12xM10	500, 750, 1000
560	560	720	620	12xM10	560, 840, 1120
630	630	790	690	12xM10	630, 945, 1260
710	710	870	770	16xM10	630, 945, 1260
800	800	1000	860	16xM10	800, 1200, 1600
900	900	1100	970	16xM12	900, 1350, 1800
1000	1000	1200	1070	16xM12	1000, 1500, 2000
1120	1120	1320	1190	20xM12	1120, 1680, 2240
1250	1250	1450	1320	20xM12	1250, 1875, 2500

Noise suppression dB frequency band Hz							
ØI/L	125	250	500	1 k	2 k	4 k	8 k
315/315	1	3	8	14	9	8	7
315/472.5	2	5	12	19	13	11	8
315/630	6	6	16	26	17	13	9
355/355	0	3	9	14	10	8	6
355/532	0	5	12	21	13	11	9
355/710	2	6	15	25	16	12	10
400/400	0	4	10	13	8	8	5
400/600	1	5	14	19	12	10	8
400/800	2	7	18	24	15	12	9
450/450	1	4	12	12	9	6	6
450/675	1	6	17	17	13	9	8
450/900	1	7	21	21	15	10	8
500/500	0	4	13	11	9	6	5
500/750	1	6	18	17	12	9	7
500/1000	2	8	23	21	14	11	8
560/560	0	4	14	11	8	5	4
560/840	2	7	20	15	11	8	5
560/1120	1	9	24	19	14	10	7
630/630	1	5	14	10	9	5	5
630/945	2	7	20	14	12	8	6
630/1260	2	9	25	17	14	10	7
710/710	1	5	12	9	7	5	5
710/1065	2	7	18	11	9	6	7
710/1420	4	9	24	14	11	8	8
800/800	3	7	9	8	6	5	4
800/1200	5	10	13	12	9	7	7
800/1600	6	13	22	14	10	9	7

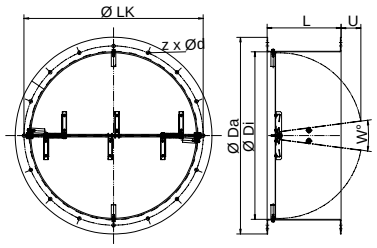
Noise suppression dB frequency band Hz							
ØI/L	125	250	500	1 k	2 k	4 k	8 k
900/900	3	7	13	8	6	5	4
900/1350	5	11	16	11	7	7	5
900/1800	6	14	23	13	9	7	6
1000/1000	3	8	12	8	4	4	4
1000/1500	5	12	17	10	6	6	5
1000/2000	6	16	23	12	7	7	6
1120/1120	3	8	13	7	5	4	3
1120/1680	5	12	18	8	6	5	4
1120/2240	6	15	23	10	7	6	6
1250/1250	3	9	13	7	4	4	3
1250/1875	6	12	17	8	5	5	4
1250/2500	8	17	22	10	6	6	5



LRK(F)

Automatic shutter

The casing and flaps are manufactured from galvanized steel. For axial fans AXC up to temperatures of 400°C/2h.



LRK(F)	øda	ødi	øLK	zxød
315	398	320.5	355	8xø10
355	438	359.5	395	8xø10
400	484	401.5	450	8xø12
450	534	450.5	500	8xø12
500	584	504.5	560	12xø12
560	664	565.5	620	12xø12
630	734	634.5	690	12xø12
710	812	711	770	16xø12
800	904	797.5	860	16xø12
900	1004	894	970	16xø15
1000	1105	1003.5	1070	16xø15
1120	1242	1122	1190	20xø15
1250	1350	1250.5	1320	20xø15

LRK(F)	L	U	W°	
315	250	–	0°	
355	250	–	5°	
400	250	–	5°	
450	250	13.6	5°	
500	250	35	15°	
560	250	64.8	15°	
630	250	101.2	15°	
710	350	39.3	15°	
800	350	83	15°	
900	350	134	15°	
1000	350	180	15°	
1120	350	245	15°	
1250	400	249	15°	

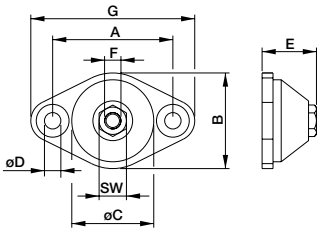


SD

Vibration damper

Rubber-metal-bearing for active and passive vibration- and impact sound isolation.

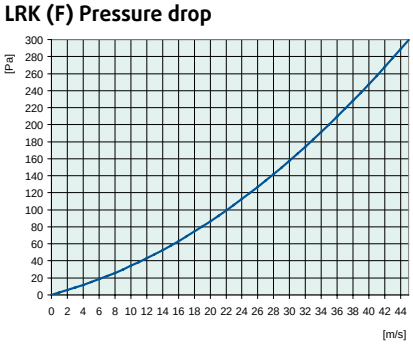
Suitable for temperatures from -40°C up to 70°C.

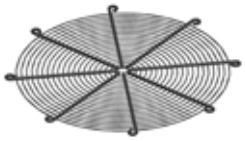


SD	A	B	øC	øD
315-450	45	35	30	6
500-630	70	50	45	9
710-1000	105	80	70	13

SD	E	F	G	SW
315-450	15	M6	60	11
500-630	27	M10	90	17
710-1000	45	M16	140	24

LRK (F) Pressure drop

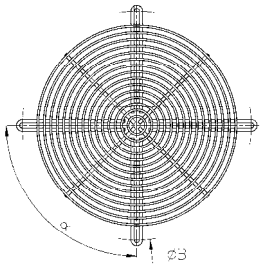




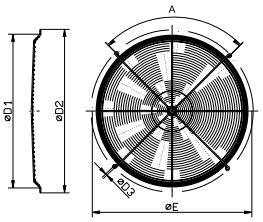
SG AR/ AXC, SG-AW

Protection guard

Finger protection guard for axial fans AR, AXC and sizes 710, 800 and 1000 for AW. Powder coated in black.



SG AR/AXC	øB	α	kg
315	355	45	0.5
355	395	45	0.8
400	450	45	1.5
450	500	45	2
500	560	30	1.3
560	620	30	1.4
630	690	30	1.7
710	770	22.5	2.5
800	860	22.5	3
900	970	22.5	2.5
1000	1070	22.5	5
1120	1190	18	3
1250	1250	18	6



SG AW	A	ød1	ød2	ød3	ØE
710	4x90°	782	856	9	835
800	4x90°	901	979	9	960
900	4x90°	1030	1134	9	1115
1000	4x90°	1110	1161	9	1140

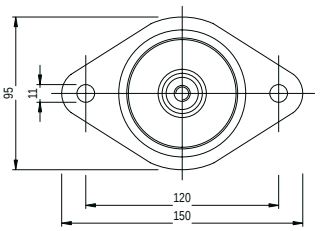


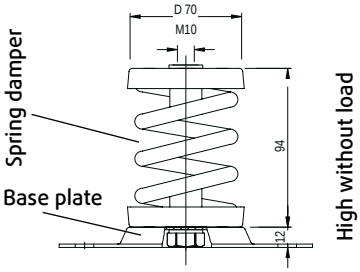
FSD

Spring-mount AXC/set

Spring damper for active and passive vibration- and impact sound isolation. Steel spring vibration isolators consist of two spring elements with M10 internal thread and a cylindrical screw spring designed according to DIN EN10270-1:2001.

For the selection of FSD the weight-force (in N) at the point of support and the oscillation frequency (1/min) is needed.





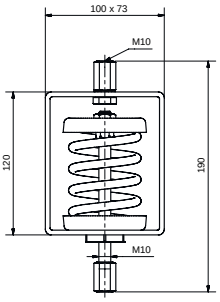


ZSD

Tension Load Spring damper

Spring damper for active and passive tensile vibration loads and sound insulation. Unit consists of a rectangular tube housing, a spring element and two connection nuts with M10 internal thread for threaded rods.

The cylindrical screw spring is designed according to DIN EN10270-1:2001.

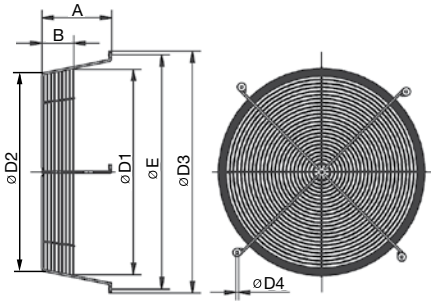


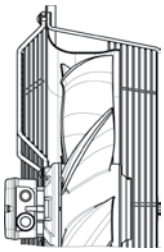


SG AW-D

Protection guard

For axial fans AW, to be mounted at the inlet side. Powder coated in black.





SG AW-D	A	B	øE	øD1
350	154	95	422	380
400	145	64	500	431
450	187	131	560	487
500	184	83	615	539
560	223	120	658	597
630	231	127	720	682
710	295	152	835	743

	øD2	øD3	øD4	
350	387	444	7	
400	424	522	7	
450	455	582	7	
500	522	637	7	
560	569	680	7	
630	677	742	7	
710	702	857	9.5	



Cable gland set

A2F/25/M25 EXD Cable Glands Ex d and Ex e

Suitable for use with normal unarmoured offshore and onshore cables. Included gasket and counter nut.

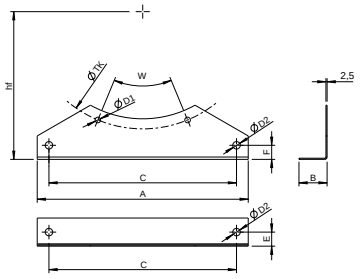


MFA-AR/ AXC

Mounting feet

For axial fans of range AR sileo and AXC. The mounting feet MFA-AR/AXC are manufactured from hot dip galvanized steel.

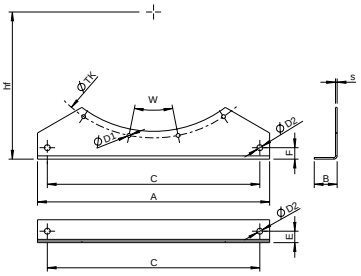
MFA 315-450



MFA AXC	A	B	C	E	F
315	315	60	265	30	25
355	355	60	305	30	25
400	400	60	350	30	25
450	450	60	400	30	30

	D2	TK	D1	W	hf
315	14	355	10	45	235
355	14	395	10	45	250
400	16	450	12	45	280
450	16	500	12	45	315

MFA 500-1250



MFA AXC	A	B	C	E	F	D2
500	500	70	440	35	45	16
560	560	70	500	35	35	16
630	630	70	570	35	35	16
710	710	70	650	35	35	18
800	800	80	730	40	40	18
900	900	80	830	40	40	18
1000	1000	80	930	40	40	18
1120	1120	80	1030	40	50	18
1250	1250	100	1180	50	50	18

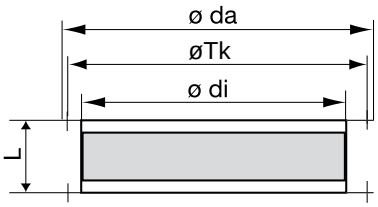
	s	TK	D1	W	hf
500	3.0	560	12	30	335
560	3.0	620	12	30	375
630	3.0	690	12	30	425
710	5.0	770	12	22.5	450
800	5.0	860	12	22.5	530
900	5.0	970	15	22.5	560
1000	5.0	1070	15	22.5	670
1120	5.0	1190	15	18	710
1250	5.0	1320	15	18	800

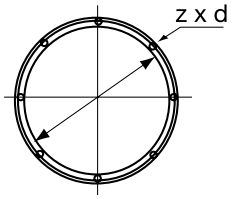


EV-AR/AXC
EV-EX/AXC

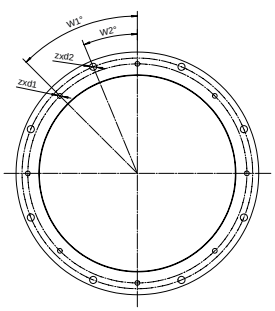
Flexible connections

For axial fans of range AR/AXC. The flexible connections consist of 2 counter flanges made of galvanized steel with flexible neoprene coated fabric in between.





EV-AR	øDa	øDi	L	zxød	øTK
200	250	201	153	4xø7	225
250	328	251	153	4xø10	280
315	390	322	153	8xø10	355
355	435	361	153	8xø10	395
400	480	402	154	8xø12	450
450	534	455	154	8xø12	500
500	585	505	154	12xø12	560
560	652	569	154	12xø12	620
630	723	638	154	12xø12	690
710	802	712	154	16xø12	770
800	890	797	155	16xø12	860
900	1005	903	162	16xø15	970
1000	1105	1003	165	16xø15	1070
1120	1225	1122	166	20xø15	1190
1250	1370	1250	165	20xø15	1320



EV/EX	øDa	øDi	øTK1	zxd1	W1°
315	390	322	355	8xø10	45
355	428	361	395	8xø10	45
400	475	402	438	12xø9.5	30
450	524	455	487	12xø9.5	30
500	577	505	541	12xø9.5	30
560	652	569	605	16xø12	22.5
630	723	638	674	16xø12	22.5
710	802	712	751	16xø12	22.5
800	890	797	837	24xø12	15
900	1000	894	934	24xø12	15

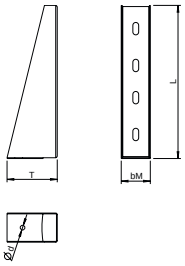
	øTK2	zxd2	W2°	L	s
315	-	-	-	154	1.5
355	-	-	-	154	1.5
400	450	8xø12	22.5	154	2.0
450	500	8xø12	22.5	154	2.0
500	560	12xø12	15	154	2.0
560	620	12xø12	30	154	2.0
630	690	12xø12	30	154	2.0
710	770	16xø12	11.25	154	2.0
800	860	16xø12	11.25	154	2.0
900	970	16xø14	11.25	154	2.5



MP

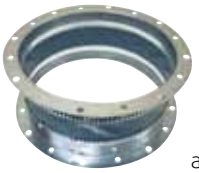
Mounting brackets

For vertical mounting of axial fans. Manufactured from hot dip galvanized steel. Four piece needed.



MP	L	T	bM	ød
315-355	369.5	128	70	17
400-450	444.5	128	75	17
500	535	133	80	17
560-630	743	133	120	17
710-800	693	133	120	17
900-1000	629	140	130	17
1120	695	157	120	17
1250	1038	157	150	17
560-800	493	136	120	17
710	794	133	120	17
900-1250	840	155	120	17
1120	991	157	120	17

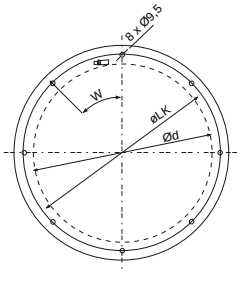
Depends on casing length of Axial fan AXC



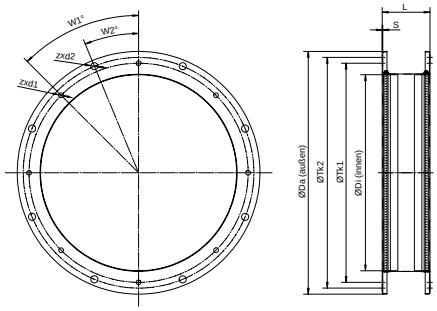
EVH

Flexible connection EVH 400°C

Flexible connection for axial fans AXC, for temperatures up to 400°C/2h.



EVH	øDa	ød	øLK	W°
315	390	322	355	45°
355	435	361	395	45°



EVH	øDa	øDi	øTK1	zxd1	W1°
250	328	251	280	8xø10	45
400	480	402	438	12xø9.5	30
450	534	455	487	12xø9.5	30
500	585	505	541	12xø9.5	30
560	652	569	605	16xø12	22.5
630	723	638	674	16xø12	22.5
710	802	712	751	16xø12	22.5
800	890	797	837	24xø12	15
900	1005	903	934	24xø12	15
1000	1105	1003	1043	24xø12	15
1120	1225	1122	1174	24xø12	15
1250	1370	1250	1311	24xø12	15

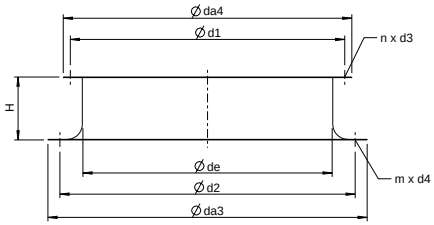
EVH	øTK2	zxd2	W2°	L	s
250	302	8xø10	90	154	1.5
400	450	8xø12	22.5	154	2
450	500	8xø12	22.5	154	2
500	560	12xø12	15	154	2
560	620	12xø12	15	154	2
630	690	12xø12	15	154	2
710	770	16xø12	11.25	154	2
800	860	16xø12	11.25	154	2
900	970	16xø15	11.25	154	2.5
1000	1070	16xø15	11.25	154	2.5
1120	1190	20xø15	9	154	2.5
1250	1320	20xø15	9	154	2.5



ESD-F

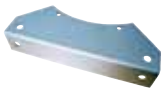
Inlet cone

The inlet cone is manufactured from galvanised steel



ESD-F	ød1	øde	ød2	øda3
315	355	320	395	438
355	395	359	450	484
400	450	401	500	534
450	500	450	560	584
500	560	504	620	664
560	620	565	690	734
630	690	634	770	812
710	770	711	860	904
800	860	797	970	1004
900	970	894	1070	1105
1000	1070	1003	1190	1242
1120	1190	1122	1320	1370
1250	1320	1250	1470	1533

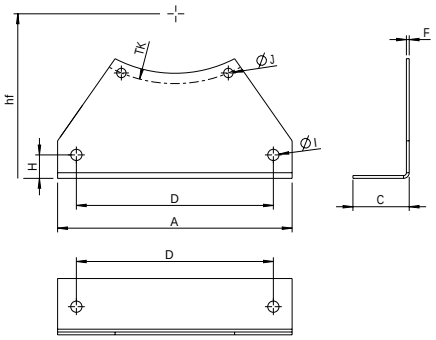
ESD-F	øda4	H	nxd3	nxd4
315	398	160	8xø10	8xø10
355	438	160	8xø10	8xø10
400	484	160	8xø12	8xø12
450	534	160	8xø12	12xø12
500	584	160	12xø12	12xø12
560	664	160	12xø12	12xø12
630	734	160	12xø12	16xø12
710	812	160	16xø12	16xø12
800	904	160	16xø12	16xø15
900	1004	160	16xø15	16xø15
1000	1105	160	16xø15	20xø15
1120	1242	160	20xø15	20xø15
1250	1370	160	20xø15	20xø15



MFA-AXCBF

Mounting feet

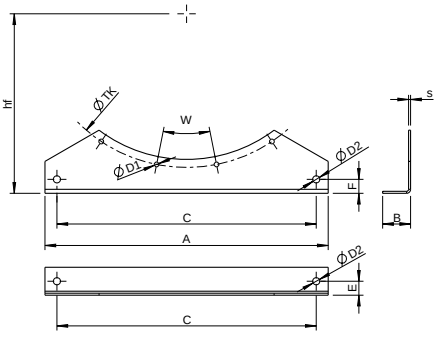
For axial fans range AXCBF.
The mounting feet MFA-AXCBF are manufactured from galvanized steel.



MFA-AXCBF	A	hf	C	D	E
250	250	250	60	210	35°
315	315	250	60	265	45°
400	400	315	60	350	45°
500	500	362	70	440	60°

	F	H	I	J	TK
250	3	25	4x12	2x10	149
315	3	25	4x14	2x10	355
400	3	30	4x16	2x10	450
500	3	42	4x16	4x12	560

MFA 630-800



MFA -AXCBF	A	B	C	E	F	D2
630	630	70	570	35	35	16
800	800	80	730	40	40	18

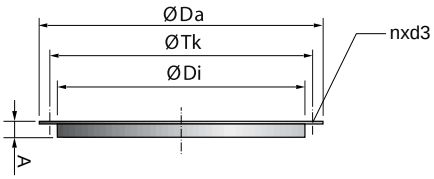
	s	TK	D1	W	hf
630	3.0	690	12	30	425
800	5.0	860	12	22.5	530



GFL-AR/AXC

Counterflange

For axial fans of type AR and AXC. The counterflange GFL-AXC is manufactured from galvanized sheet steel.



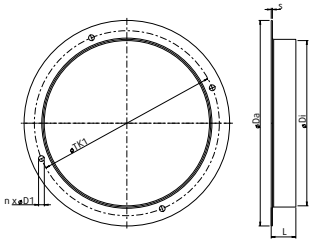
GFL-AR/AXC	øDa	øDi	øTk	A	nxd3
315	390	322	355	30	8xø10
355	435	361	395	30	8xø10
400	480	402	450	30	8xø12
450	534	455	500	30	8xø12
500	577	505	541	35	12xø12
560	652	569	620	35	12xø12
630	723	638	690	35	12xø12
710	802	712	770	35	16xø12
800	890	797	860	35	16xø12
900	1005	903	970	52	16xø15
1000	1105	1003	1070	55	16xø15
1120	1225	1122	1190	55	20xø15
1250	1370	1250	1320	55	20xø15



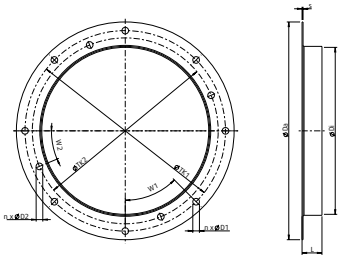
GFL-AR/AXCBF

Counterflange

The counterflange is manufactured from galvanized steel.



GFL-AR/AXCBF	øDa	øDi	øTk1	nxøD1	zxøD1	s
200	250	201	225	4xø7	30	1.5



GFL-AR/AXCBF	øDa	øDi	øTk1	zxøD1	W1°
250	328	251.5	302	8xø10	45

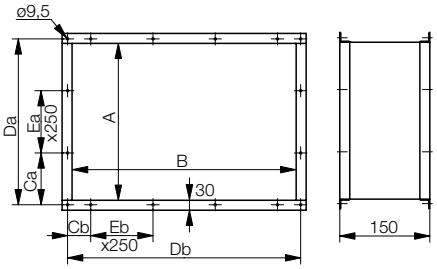
GFL-AR/AXCBF	øTk2	zxøD2	W2°	L	s
250	280	4x10	22.5	30	1.5



EPSN/EPIN

Rectangular flexible connection

Flexible connection (600°C/2h) for WVA/WVI. The EPIN is a rectangular flexible connection for the outside of WVA/WVI smoke and heat extract fans. Fit to outlet connection IN. To avoid vibrations from the fan to the duct system. Applicable up to +/- 1000 Pa in cold condition and up to 600°C/2h. Exclusive sealing tape and fasteners.



EPSN	A	B	Ca	Cb	Da
400	315	500	175.5	268	351
450	355	500	195.5	268	391
560	355	630	195.5	208	391
630	450	710	243	248	486
800	630	900	208	93	666
1000	800	1180	43	233	836

	Db	Ea	Eb	kg	
400	536	-	-	6	
450	536	-	-	7	
560	666	-	1	8	
630	746	-	1	9	
800	936	1	3	14	
1000	1216	3	3	23	

EPIN	A	B	Ca	Cb	Da
400	250	500	286	268	286
450	250	710	286	248	286
560	280	710	158	248	316
630	355	800	195,5	43	391
800	400	1120	218	203	436
1000	630	1400	208	98	666

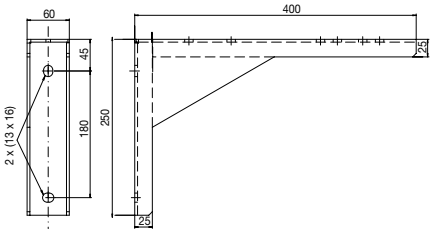
	Db	Ea	Eb	kg	
400	536	-	-	6	
450	746	-	1	7	
560	746	-	1	8	
630	836	-	3	9	
800	1156	-	3	12	
1000	1446	1	5	22	



WBK

Wall mounting bracket

For KBT/KBR close to the wall. Manufactured from galvanised steel. The corners are welded. Available in pairs. Suitable for KBT/KBR.

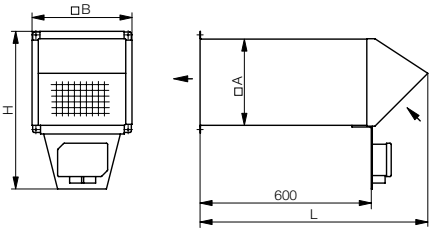




ZHZ

Cooling duct for WVI

The cooling duct ZHZ is manufactured from galvanized steel insulated with mineral wool. Has to be connected through the outside wall of the building. With protective cover for the cable leading to the terminal box.



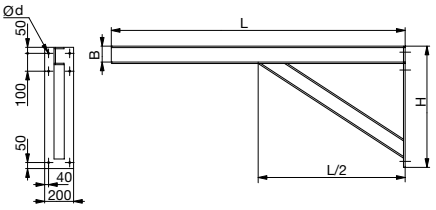
ZHZ	A	B	L	H
400/450	200	240	700	365
560/630	225	265	712	390
800/1000	250	290	725	460



WBK-W

Wall mounting bracket

For the smoke extract fan WVA/WVI. Manufactured from powder-coated steel, RAL 7032. The delivery is in pairs.



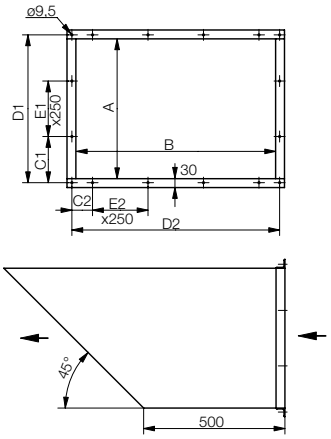
WBK-W	L	H	ød	B	kg
400	938	450	14	80	20
450	1014	500	14	80	22
560	1105	500	18	80	23
630	1305	600	18	80	28
800	1570	600	18	80	31
1000	1650	650	18	100	38



IN

Outlet connection for WVA/WVI

The outlet connection IN is manufactured from hot-dip galvanized steel, with a protection guard. For mounting on the outlet of the fan WVI, if the outlet leads directly through the outside wall. For the type WVA as rain protection. Exclusive sealing tape and fasteners.



IN	A	B	C1	C2	D1
400	250	500	286	268	286
450	250	710	286	248	286
560	280	710	158	248	316
630	355	800	195.5	43	391
800	400	1120	218	203	436
1000	630	1400	208	98	666

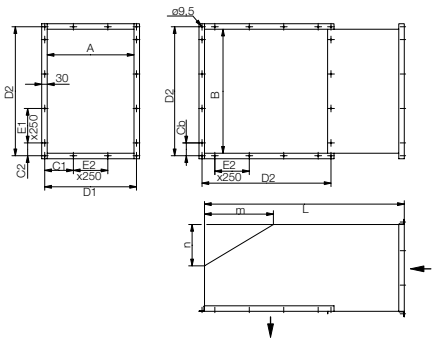
	D2	E1	E2	kg	
400	536	-	-	15	
450	746	-	1	19	
560	746	-	1	20	
630	836	-	3	24	
800	1156	-	3	32	
1000	1446	1	5	53	



SN

Inlet connection for WVA/WVI

The inlet connection SN is manufactured from hot-dip galvanized steel. For mounting on the inlet of the fan. The inlet flange of the fan is rectangular. The inlet connection can be rotated by 90°. Exclusive sealing tape and fasteners.



SN	A	B	C1	C2	D1	D2
400	315	500	175.5	268	351	536
450	355	500	195.5	268	391	536
560	355	630	195.5	208	391	666
630	450	710	243	248	486	746
800	630	900	208	93	666	936
1000	800	1180	43	233	836	1216

	E1	E2	L	m	n	kg
400	-	-	800	300	150	20
450	-	-	850	300	150	22
560	-	1	950	300	150	27
630	-	1	1100	400	200	35
800	1	3	1450	500	300	55
1000	3	3	1500	700	400	72



BDS

Back draught shutter

Back draught shutter for bathroom fans.

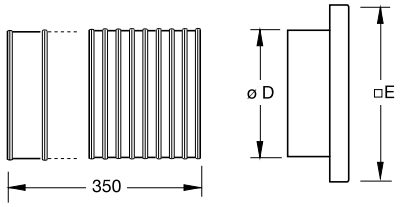
BDS	Length
100	55 mm
120	62 mm
150	77 mm

BVK



Wall vent kit

Wall lead-through BVK. Consist of a flexible duct manufactured in aluminium and a wallgrid.



BVK	□E	øD
	140	100
120	160	125
150	180	150



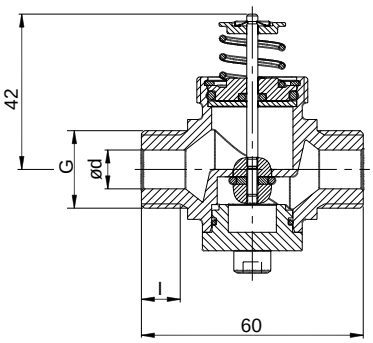
ZTV/ZTR

Water valve/heating water, 2/3-way

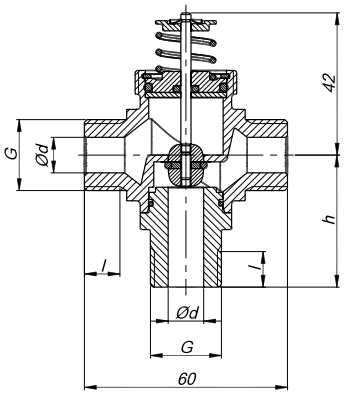
ZTV/ZTR is a 2 and 3-way control valve to control the hot water to the heating coil. They are intended for use together with the RVAZ4 24A actuator.

Technical data		
Flow charac.		Percental increase
Media temp.		1...+110°C
Media		Hot, cold, glycol mixed (max. 30% glycol)
Stroke		5 mm
Leakage		0% in closed position
Pressure class		PN16 (1.6MPa)
Rangeability		50:1
Mat.	Body	Brass
	Spindle	Stainless steel
	Seat	Brass
O-ring		EPDM

ZTV

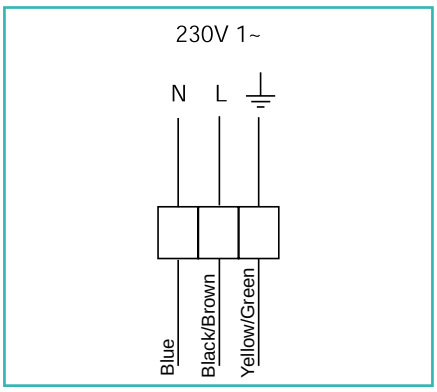


ZTR

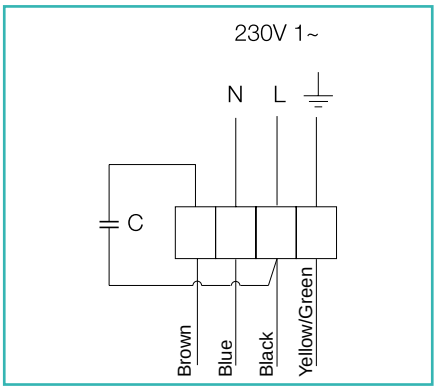


ZTV/ZTR	Connection	G	l	h (only ZTR)
15-0.25	DN15	1/2"	9	40
15-0.4	DN15	1/2"	9	40
15-0.6	DN15	1/2"	9	40
15-1.0	DN15	1/2"	9	40
15-1.6	DN15	1/2"	9	40
20-2.0	DN20	3/4"	12.5	40
20-2.5	DN20	3/4"	12.5	40
20-4.0	DN20	3/4"	11.5	50
20-6.0	DN20	3/4"	11.5	50

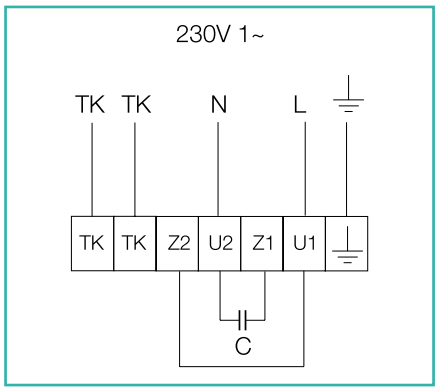
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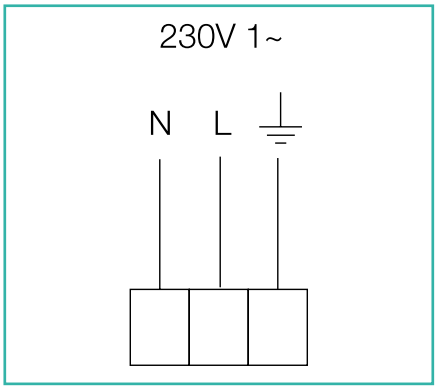
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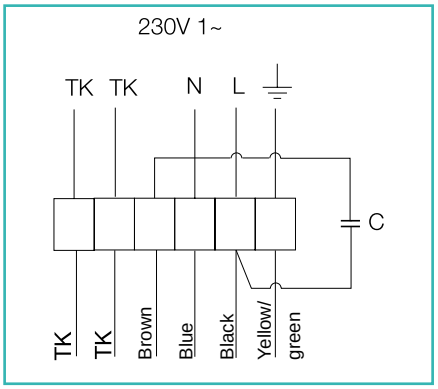
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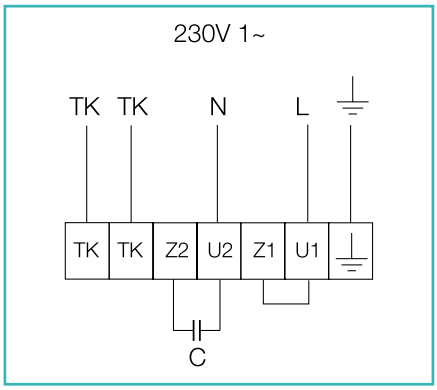
4



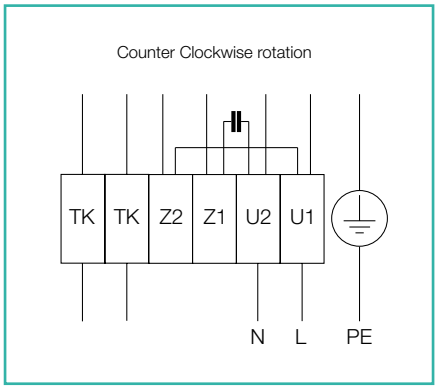
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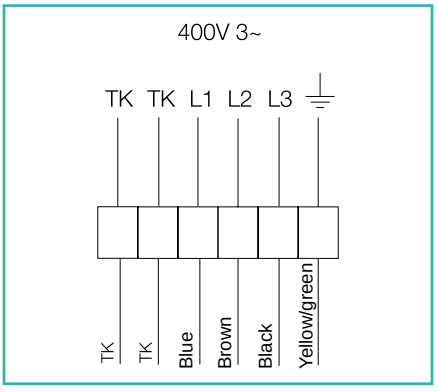
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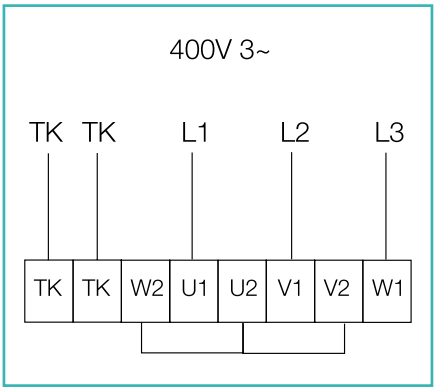
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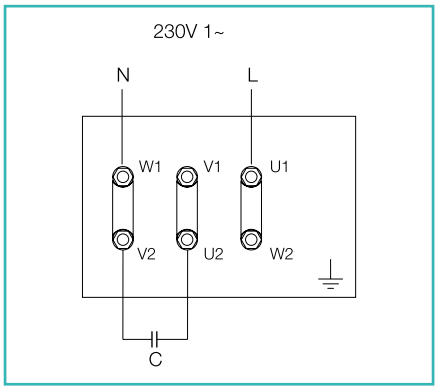
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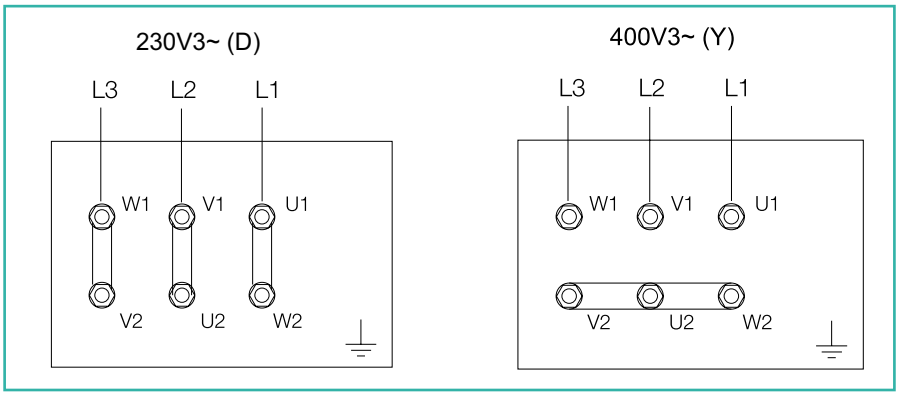
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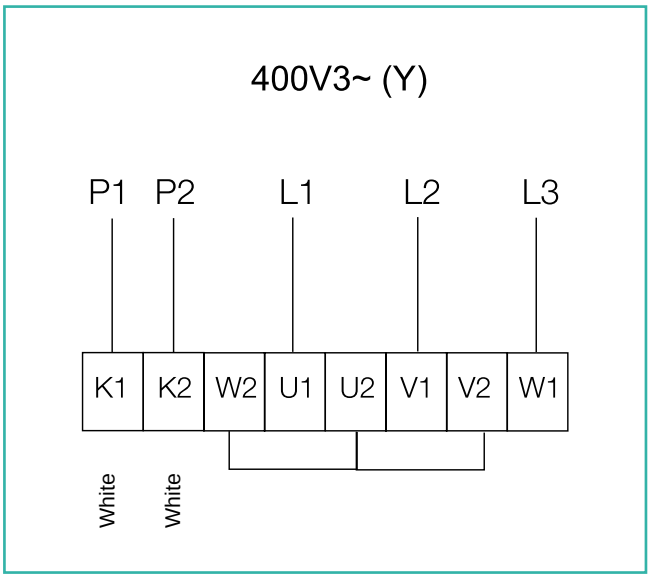
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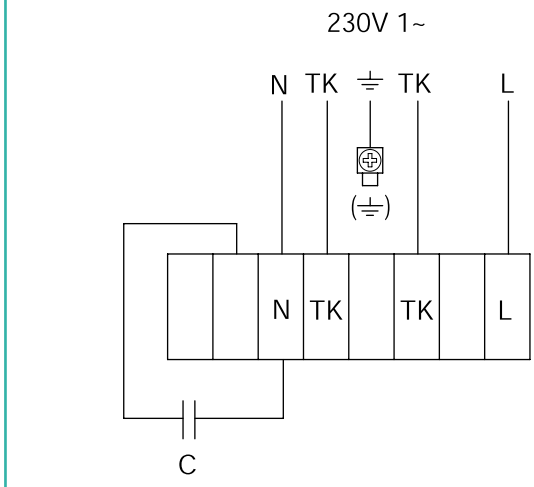
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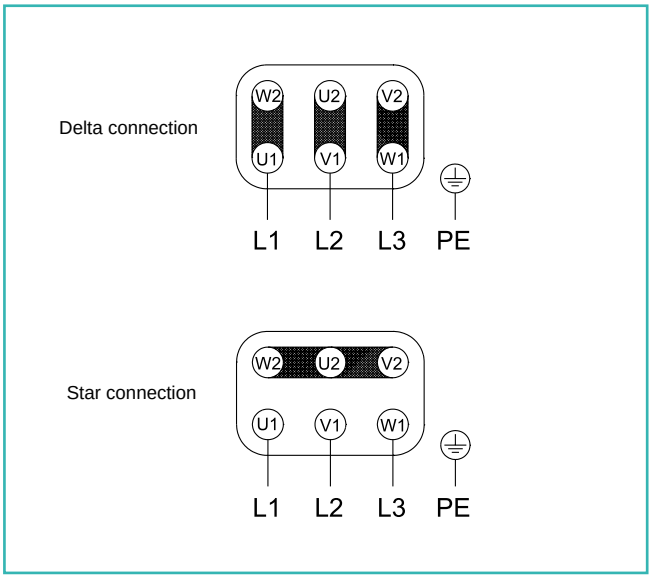
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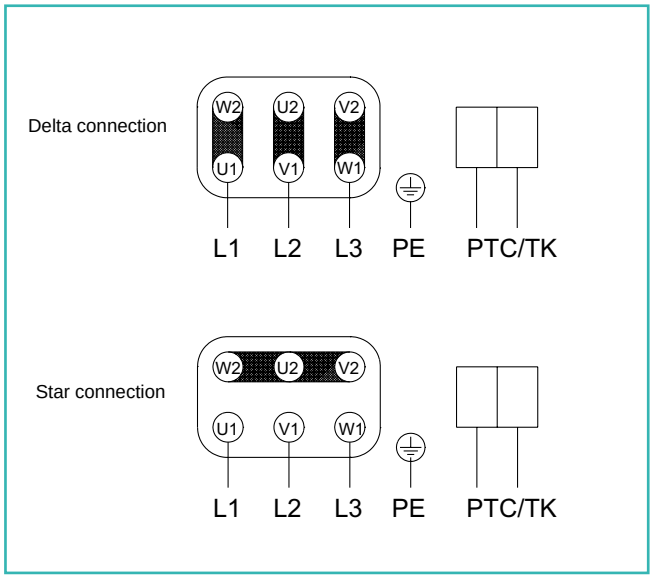
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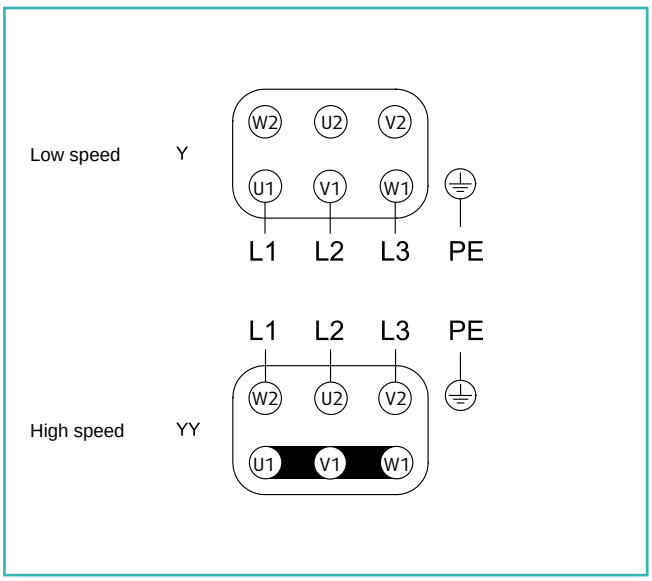
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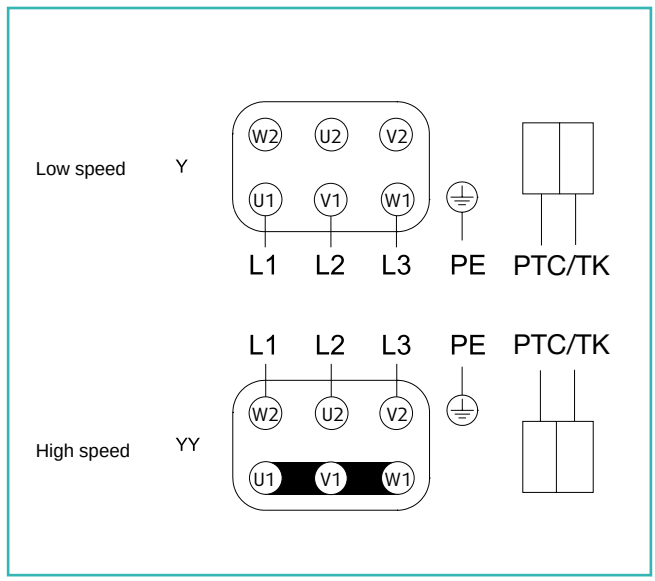
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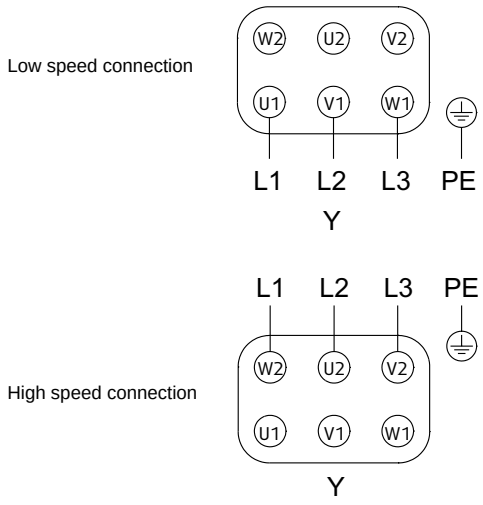
14a



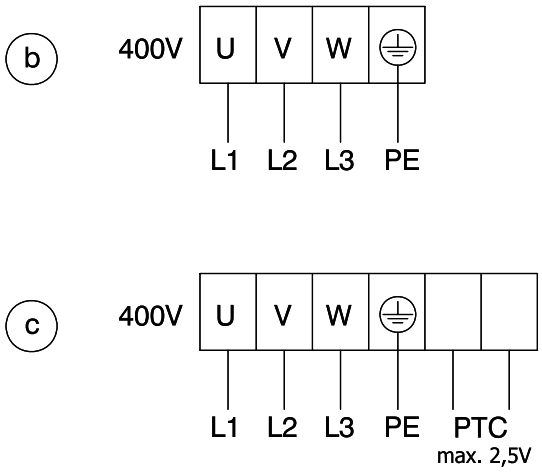
14b



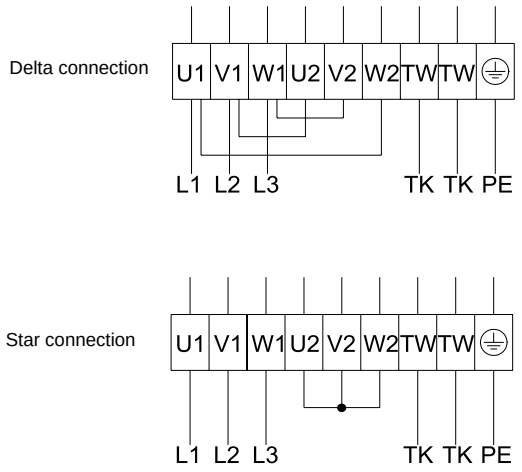
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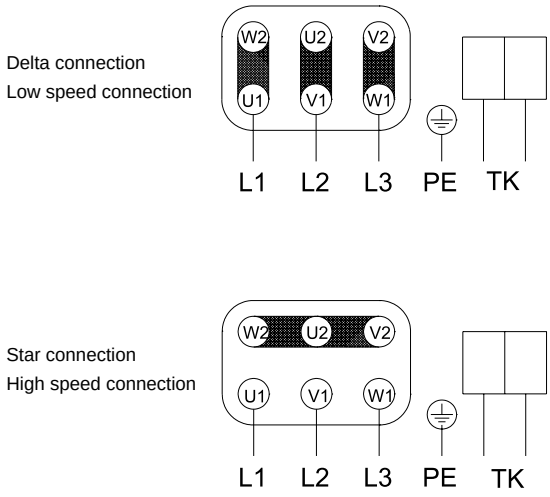
15b, c



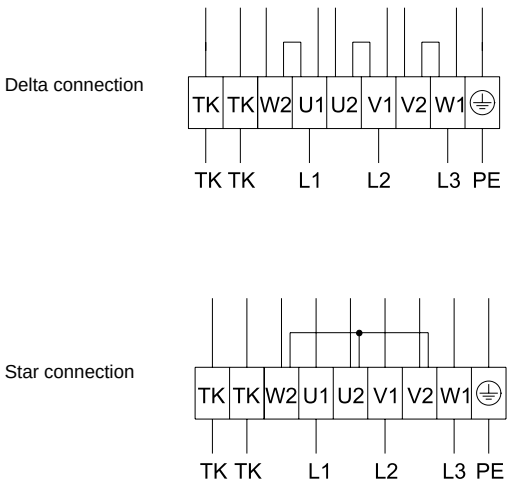
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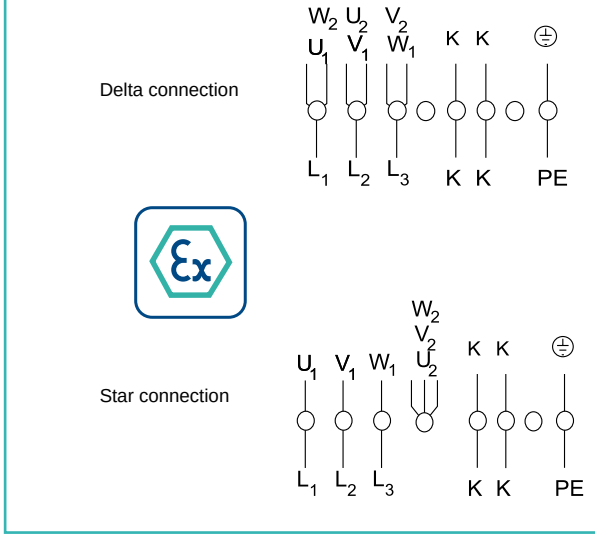
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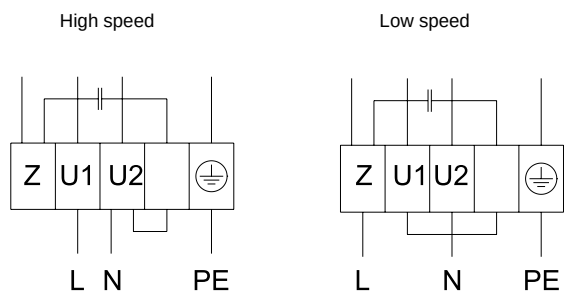
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19

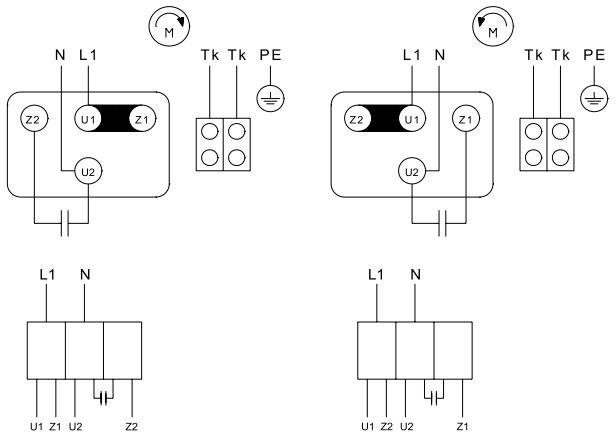


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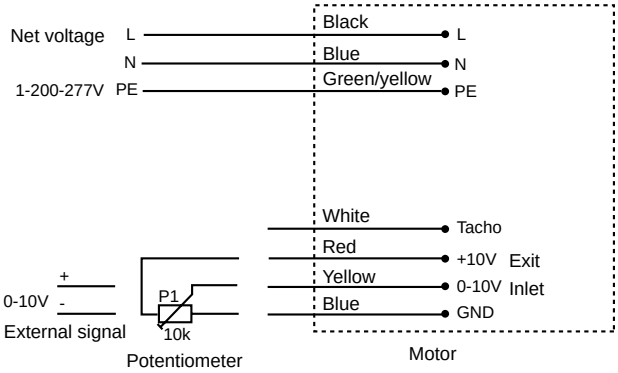


U1 = blue
U2 = black
Z = brown

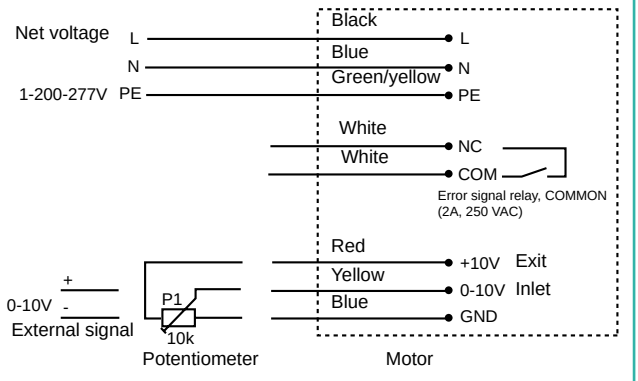
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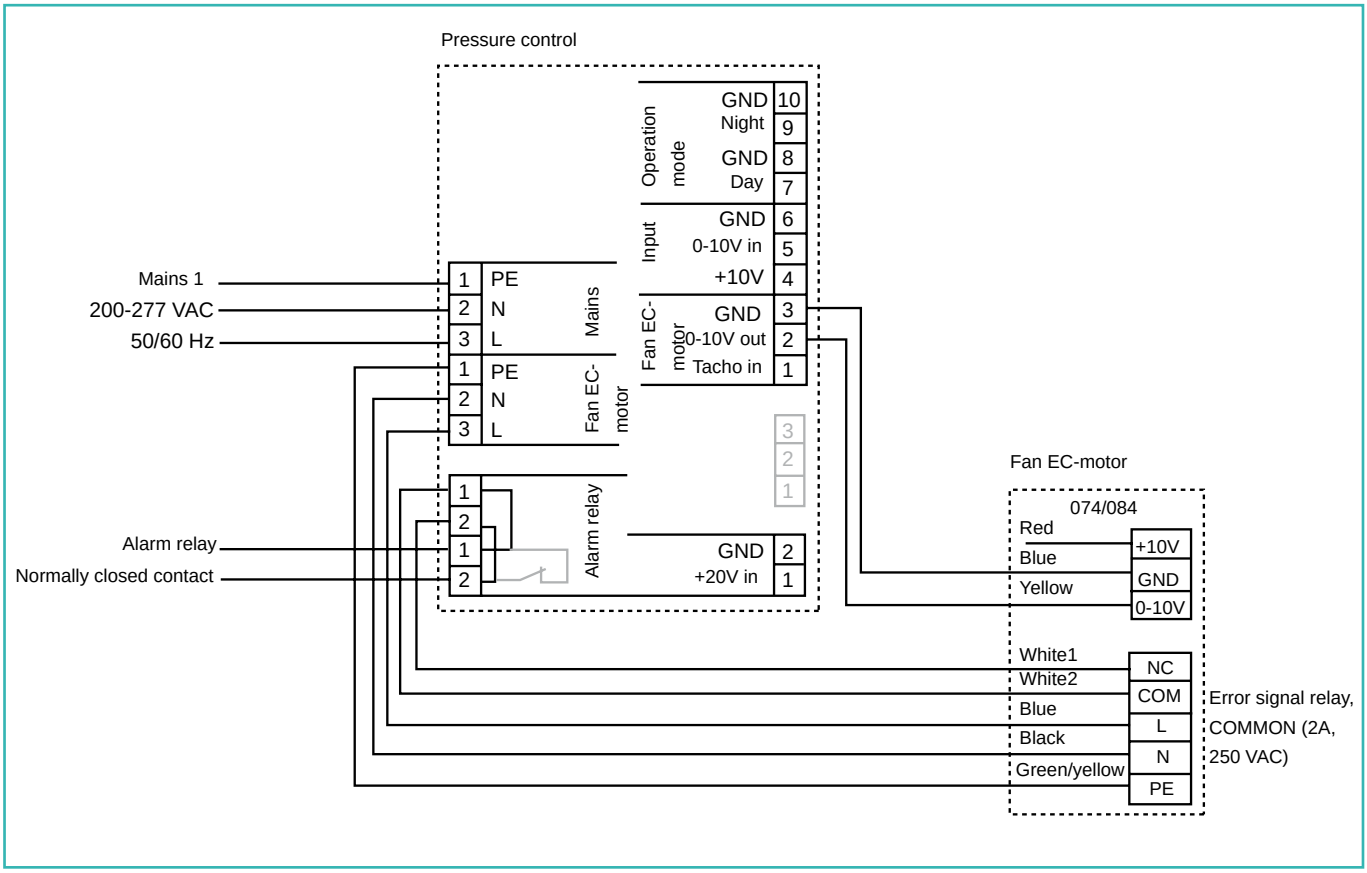
23a



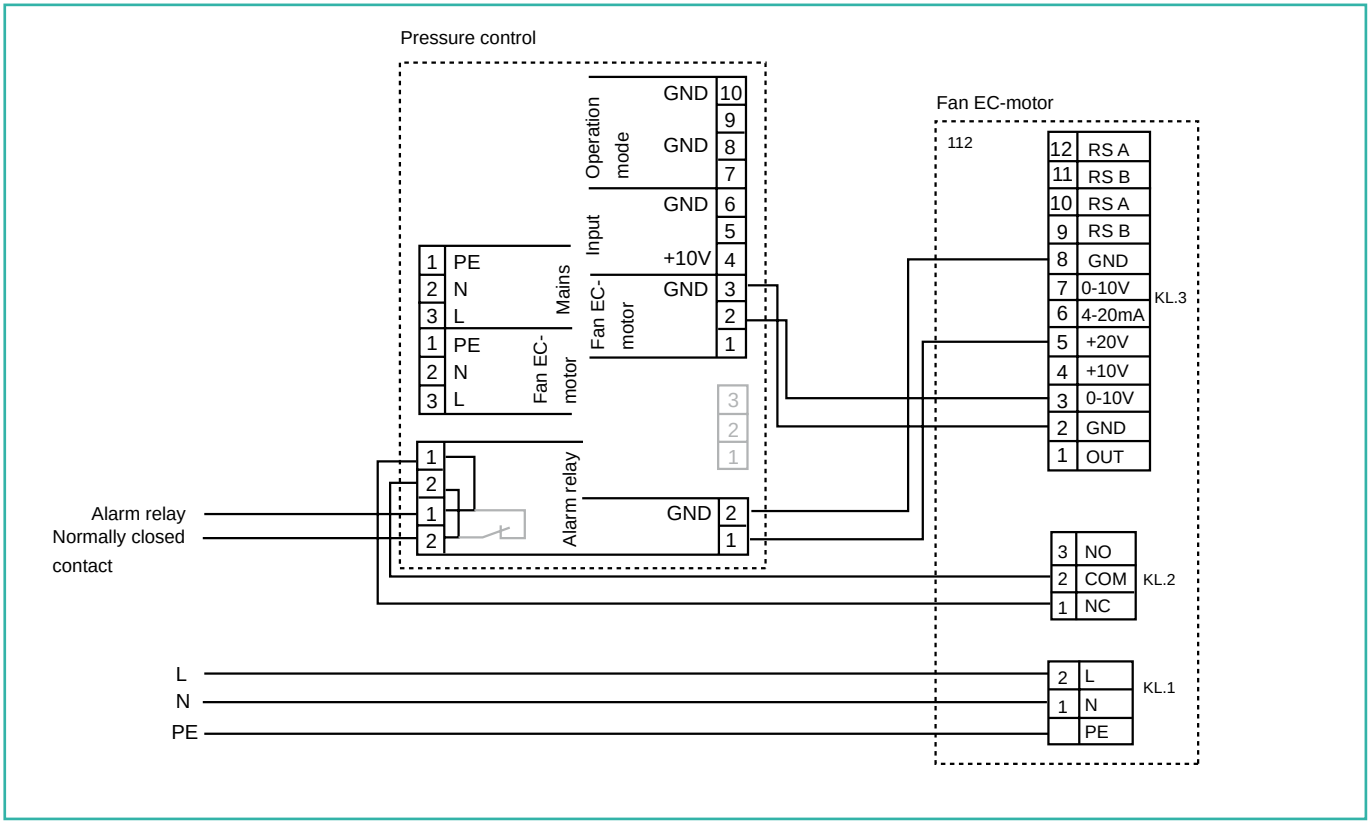
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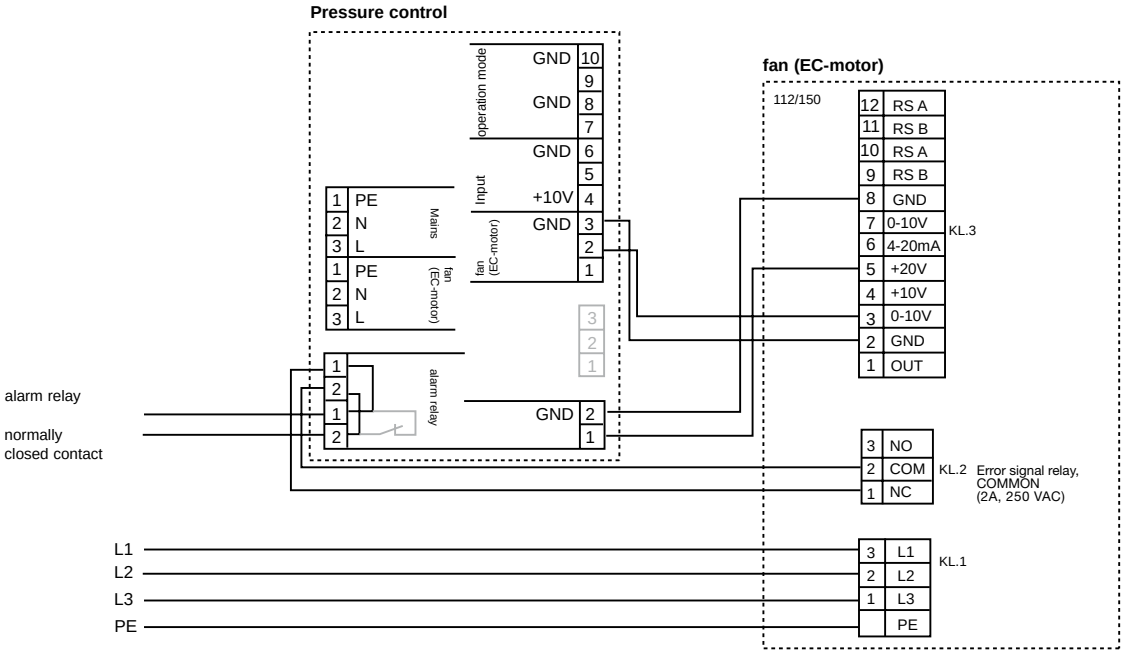
24


Pressure control
Operation mode
GND Night 10
9
GND Day 8
7
Input
GND 6
0-10V in 5
+10V 4
Fan EC-motor
GND 3
0-10V out 2
Tacho in 1
Mains 1
200-277 VAC
50/60 Hz
1 PE
2 N
3 L
Mains
1 PE
2 N
3 L
Fan EC-motor
3
2
1
Alarm relay
1
2
1
2
Alarm relay
Normally closed contact
GND 2
+20V in 1
Fan EC-motor
074/084
Red +10V
Blue GND
Yellow 0-10V
White1 NC
White2 COM
Blue L
Black N
Green/yellow PE
Error signal relay, COMMON (2A, 250 VAC)

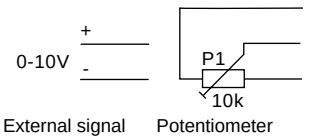
25


Pressure control
Operation mode
GND 10
9
GND 8
7
Input
GND 6
5
+10V 4
Fan EC-motor
GND 3
2
1
1 PE
2 N
3 L
Mains
1 PE
2 N
3 L
Fan EC-motor
3
2
1
Alarm relay
1
2
1
2
Alarm relay
Normally closed contact
GND 2
1
Fan EC-motor
112
12 RS A
11 RS B
10 RS A
9 RS B
8 GND
7 0-10V
6 4-20mA
5 +20V
4 +10V
3 0-10V
2 GND
1 OUT
KL.3
3 NO
2 COM
1 NC
KL.2
L
N
PE
2 L
1 N
PE
KL.1

26

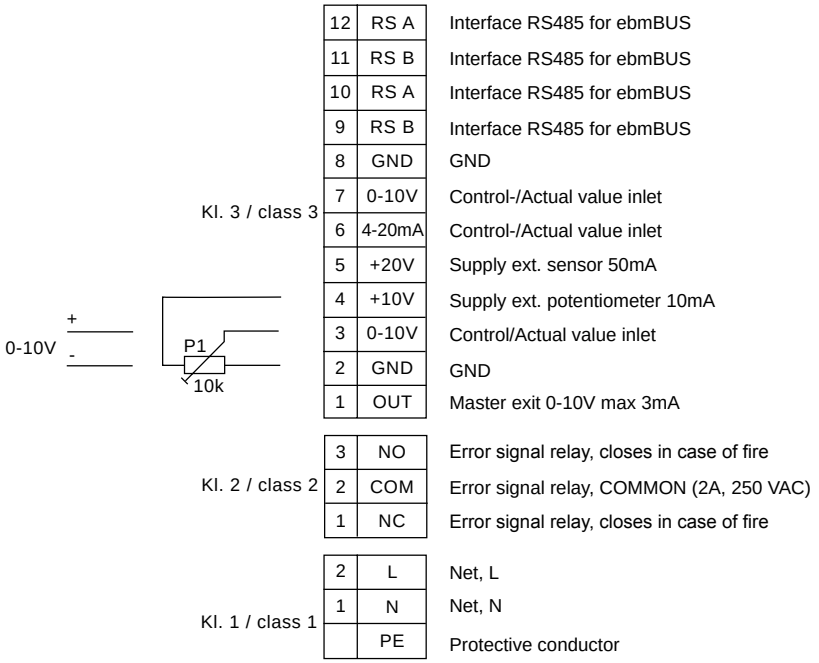


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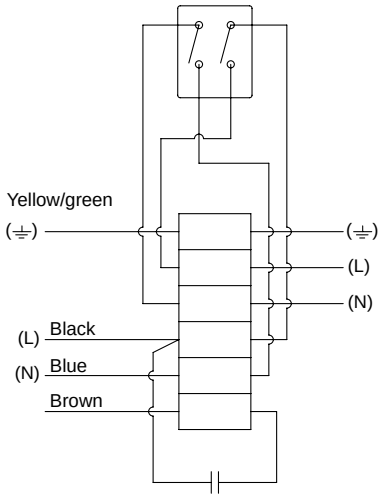


Kl. 3 / class 3	12	RS A	Interface RS485 for ebmBUS
	11	RS B	Interface RS485 for ebmBUS
	10	RS A	Interface RS485 for ebmBUS
	9	RS B	Interface RS485 for ebmBUS
	8	GND	GND
	7	0-10V	Control-/Actual value inlet
	6	4-20mA	Control-/Actual value inlet
	5	+20V	Supply ext. sensor 50mA
	4	+10V	Supply ext. potentiometer 10mA
	3	0-10V	Control/Actual value inlet
	2	GND	GND
	1	OUT	Master exit 0-10V max 3mA
Kl. 2 / class 2	3	NO	Error signal relay, closes in case of fire
	2	COM	Error signal relay, COMMON (2A, 250 VAC)
	1	NC	Error signal relay, error signal relay, closes in case of fire
Kl. 1 / class 1	3	L1	Net, L1
	2	L2	Net, L2
	1	L3	Net, L3
		PE	Protective conductor

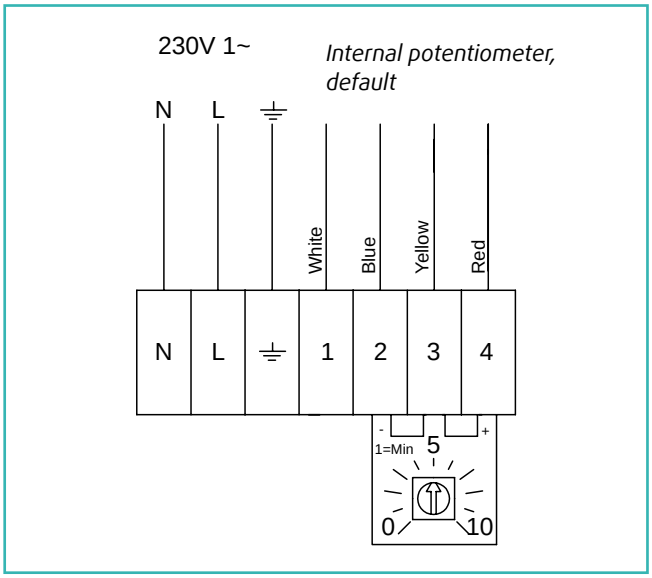
28


0-10V
+
-
P1
10k
Kl. 3 / class 3
12 RS A Interface RS485 for ebmBUS
11 RS B Interface RS485 for ebmBUS
10 RS A Interface RS485 for ebmBUS
9 RS B Interface RS485 for ebmBUS
8 GND GND
7 0-10V Control-/Actual value inlet
6 4-20mA Control-/Actual value inlet
5 +20V Supply ext. sensor 50mA
4 +10V Supply ext. potentiometer 10mA
3 0-10V Control/Actual value inlet
2 GND GND
1 OUT Master exit 0-10V max 3mA
Kl. 2 / class 2
3 NO Error signal relay, closes in case of fire
2 COM Error signal relay, COMMON (2A, 250 VAC)
1 NC Error signal relay, closes in case of fire
Kl. 1 / class 1
2 L Net, L
1 N Net, N
PE Protective conductor

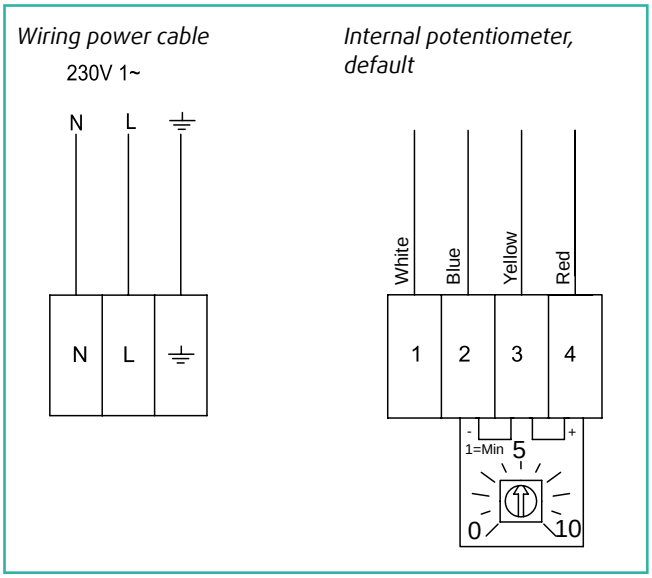
29


Yellow/green
(⏚)
(⏚)
(L)
(N)
(L) Black
(N) Blue
Brown

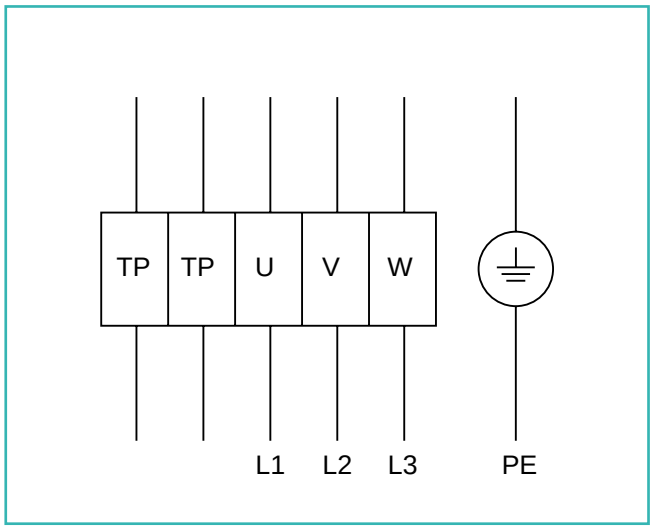
41


230V 1~
Internal potentiometer, default
N
L
White
Blue
Yellow
Red
N
L
1
2
3
4
1=Min
5
0
10

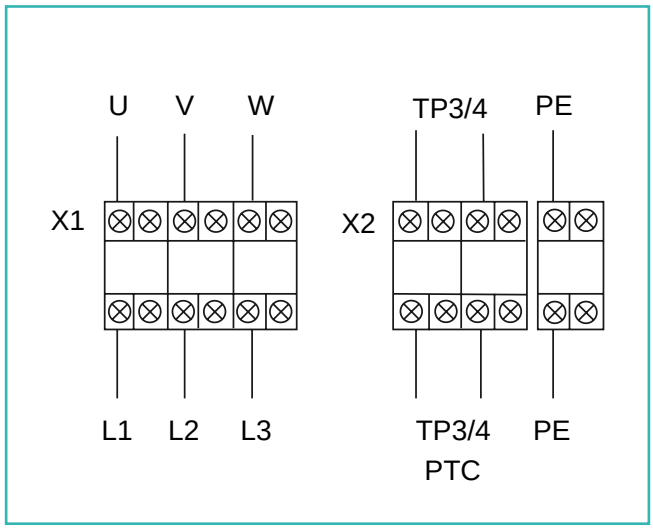
42


Wiring power cable
230V 1~
Internal potentiometer, default
N
L
N
L
White
Blue
Yellow
Red
1
2
3
4
1=Min
5
0
10

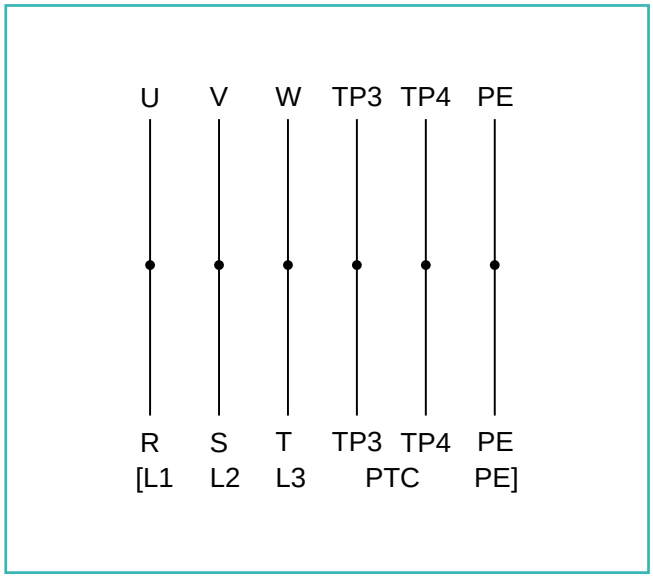
43


TP
TP
U
V
W
L1
L2
L3
PE

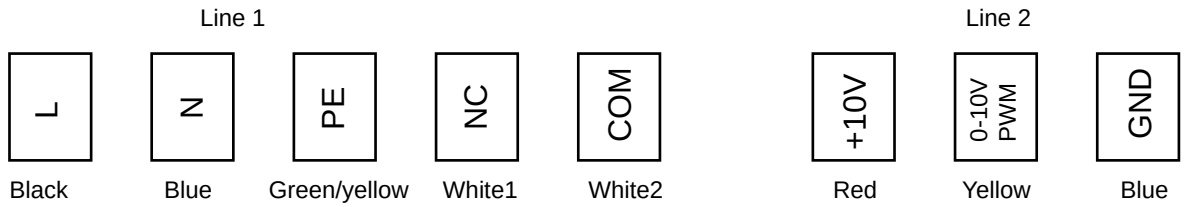
44


U
V
W
X1
L1
L2
L3
TP3/4
PE
X2
TP3/4
PE
PTC

45


U
V
W
TP3
TP4
PE
R
[L1
S
L2
T
L3
TP3
TP4
PTC
PE
PE]

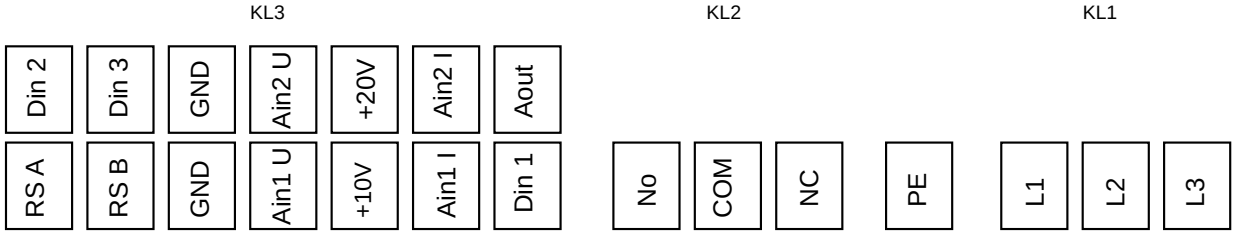
46



Line	Connection	Colour	Assignment/function
1	L	Black	Mains 50/60 Hz, phase
	N	Blue	Mains 50/60 Hz, neutral
	PE	Green/yellow	Protective earth
	NC	White1	Alarm relay, break for failure
	COM	White2	Alarm relay, COMMON

Line	Connection	Colour	Assignment/function
2	+10V	Red	Voltage output +10V max 1.1 mA
	0-10V/PWM	Yellow	Control input (Impendence 100 kΩ)
	GND	Blue	Protective earth

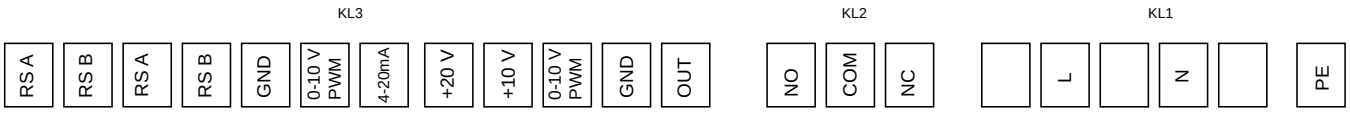
47



Connector	Connection	Assignment/function
KL1	L3	Mains, L3
	L2	Mains, L2
	L1	Mains, L1
PE	PE	Protective earth
KL2	NC	Alarm relay, break for failure
	COM	Alarm relay, COMMON (2A, 250 VAC, AC1)
	NO	Alarm relay, make for failure

Connector	Connection	Assignment/function
KL3	Din1	Digital input (enabling/disabling of electronics). Enabling: Pin open or applied voltage 5...50 VDC. Disabling: Bridge to GND or applied voltage < 1 VDC.
	Ain1 I	Analogue set value input, 4-20 mA (impedance 100Ω), only to be used as alternative to terminal Ain1 U
	+10V	Supply for external potentionmeter, 10 VDC (±3%) max. 10 mA.
	Ain1 U	Analogue set value input, 0-10V (impedance 100 kΩ), only to be used as alternative to terminal Ain1 I.
	GND	GND
	RSB	RS485 interface for MODBUS RTU; RS B
	RSA	RS485 interface for MODBUS RTU; RS A
	Aout	Analogue output 0-10V max 5 mA, reading of current motor speed/current motor control factor.
	Ain2 I	Analogue actual value input, 4-20 mA (impedance 100 kΩ), only to be used as alternative to terminal Ain2 U.
	+20 V	Supply for external sensor, 20 VDC (+25%/-10%) max 40 mA.
	Ain2 U	Analogue actual valve input, 0-10 V (impedance 100kΩ), only to be used as alternative to terminal Ain2 I.
	GND	GND
	Din3	Digital input 3 (switch normal/inverse). The preset effective direction of the integrated controller can be selected via BUS or via digital input normal//inverse. Normal: Pin open or applied voltage 5...50 VDC. Inverse: Bridge to GND or applied voltage < VDC.
	Din2	Digital input 2 (switch day/night). The preset set of parameters can be selected via BUS or digital input day/night. Day: Pin open or applied voltage 5...50 VDC. Night: Bridge to GND or applied voltage < 1 VDC.

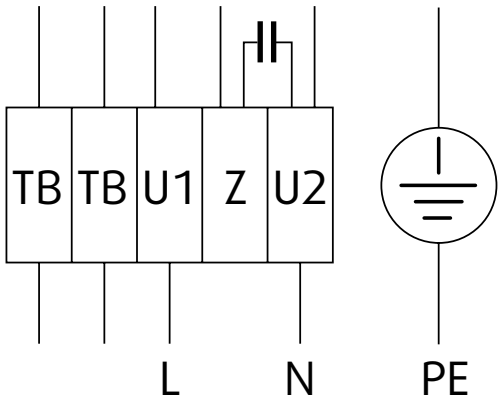
48



Connector	Connection	Assignment/function
KL3	OUT	Master output 0-10 V max 3 mA.
	GND	GND
	0-10V/PWM	Control/Actual valve input (impedance 100 kΩ).
	+10V	Supply for external potentiometer, 10 VDC (+10%) max 10 mA
	+20V	Supply for external sensor, 20 VDC (+20%/-10%) max 50 mA
	4-20 mA	Control/actual valve input
	0-10V/PWM	Control/actual valve input
	GND	GND
	RSB	RS485 interface for ebmBUS; RS B
	RSA	RS485 interface for ebmBUS; RS A
	RSB	RS485 interface for ebmBUS; RS B
	RSA	RS485 interface for ebmBUS; RS A

Connector	Connection	Assignment/function
PE	OE	Protective earth
KL1	N	Mains 50/60Hz, neutral
	L	Mains 50/60Hz, phase
KL2	NC	Alarm relay, break for failure
	COM	Alarm relay, COMMON (2A, 250 VAC, AC1)
	NO	Alarm relay, make for failure

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A

ALS-KBT 371
AQUA 24TF 341
AR sileo 170
ASF 375
ASF/KB 371
ASFV 384
ASK, ASK/F, ASG/F 380
ASS 381
ASSG/F 383
ASS-P 285
ASSV, ASSV/F, ...383
ASSV-EX 383
AWE-SK 342
AW-EX 226
AW sileo 168
AXC 180
AXC(B) 266
AXCBF 186
AXCBF-EX 234
AXC-EX 230

B

BDS 390
BF 316
BF-W 314
BTG 374
BVK 390

C

Cable gland set 386
CB 350
CBF 316
CBM 351
CCM 375
CCM 375
CCMI 375
CE 288
CKS 296
CO2RT 330
CO2RT-R-D 330
CT 292
CWK 354
CXE/AV 323
CXE/AVC 322

D

DHA sileo 130
DHS/DVS/DVSI 146
DHS/DVS/DVSI sileo 138
DKEX 212
DS 363
DS-EX 363
DSG 330
DSK 370
DTV 343
DVC/DVCI 132
DVEX 216
DVG/F 250
DVG-V, H 400D4V/400 256
DVN/DVNI 152
DVP 280
DVV 158
DVV-EX 220
DVV/F 244
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E

EC-Vent control board 329
EC-Vent room unit 330
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EFD rectangular 363
EMC KIT REV 340
EPSN/EPIN 389
ESD-F 388
ESDV 384
EV-AR/AXC 387
EV-EX/AXC 387
EVH 388
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