

Topvex FC

Compact air handling unit with high heat recovery efficiency



Topvex FC



High efficient counter flow heat exchanger

- High heat- and cool-recover efficiency
- > 80% dry efficiency (EN 308) at nominal airflow
- No mixing of clean and used air in the unit
- Automatic summer operation
- Cooling recovery
- 100% bypass

Integrated/pre-programmed control system

- Efficient energy saving functions
- Demand control
- Communication possibilities: Built-in web, Cloud, Modbus, BACnet and Exoline

CAV or VAV airflow control are available as accessories.

Large inspection doors for easy maintenance

- All main components are easy removable
- Separate, easy access, electrical box facilitates commissioning and service
- The electrical box can be tilted 90°
- Slide doors possible as accessories

Topvex FC is a "plug & play" compact air handling unit with low energy use and high heat recovery efficiency. At nominal airflow the dry efficiency is > 80% (EN 308). Highly energy efficient EC fans and low internal pressure drops secure the low energy use. A counter flow heat exchanger is used when it is necessary to separate extract and supply air and also enables the complete unit design to be very flat. Topvex FC is available in 3 sizes covering the airflow range from 300 – 2800 m³/h. The integrated control system makes the units easy to install and commission.

The double skinned wall construction with 40 mm mineral insulation is manufactured in Aluzinc plated sheet metal (AZ185) that gives corrosive class C4 (industrial and coastal areas with moderate salinity). Large inspection doors and easy removable main components simplify maintenance and service.

The counter-flow heat exchanger is supplied with a sectioned 100% bypass facility. An exchanger damper is closing the airflow thru the counter flow heat exchanger during defrosting and in the summer season, avoiding undesirable heat recovering.

The automatic demand controlled defrost function is activated in the early stage of the ice creation and only as long as there is ice. Automatic calibration ensures the accuracy.

The water condensate drainage pipe is to be connected on the side of the unit.

Technical Data

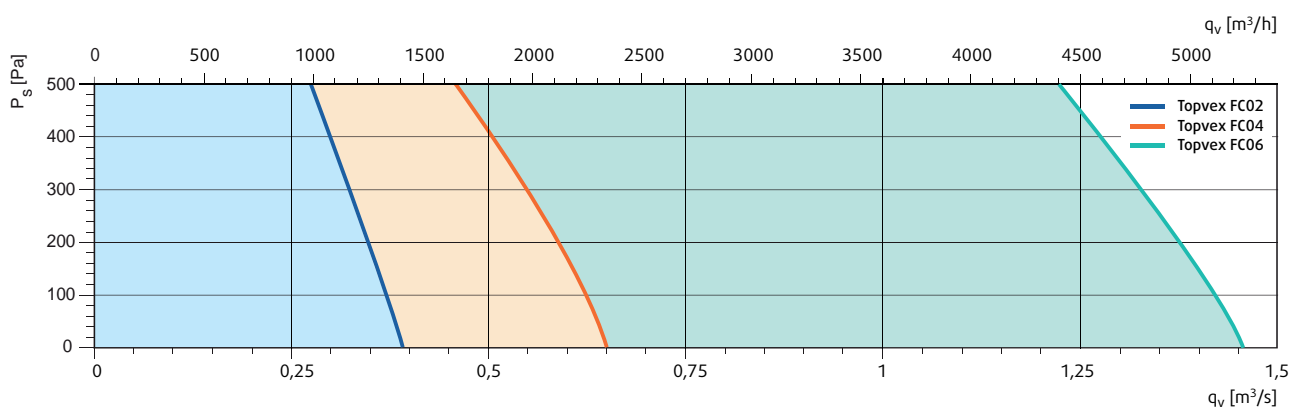
	FC02		FC04		FC06	
	EL	HW* / No heater	EL	HW* / No heater	EL	HW* / No heater
Voltage	V 400	230	400	230	400	400
Frequency	Hz 50	50	50	50	50	50
Phase	~ 3	1	3	1	3	3
Input power, fan motor(s)	W 2 x 520	2 x 520	2 x 768	2 x 768	2 x 2.567	2 x 2.567
Input power, electrical heating battery	kW 5.01	-	10	-	15	-
Recommended fuse	A 3 x 13	10	3 x 25	10	3 x 35	3 x 10
Filter, supply air	F7	F7	F7	F7	F7	F7
Filter, extract air	M5	M5	M5	M5	M5	M5

*EL: reheater, electric

*HW: reheater, water

Working range

Topvex FC02, FC04, FC06



Accessories

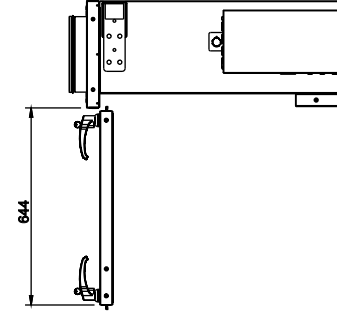
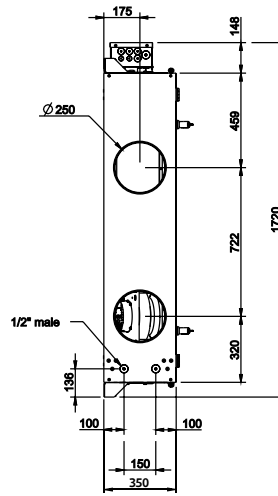
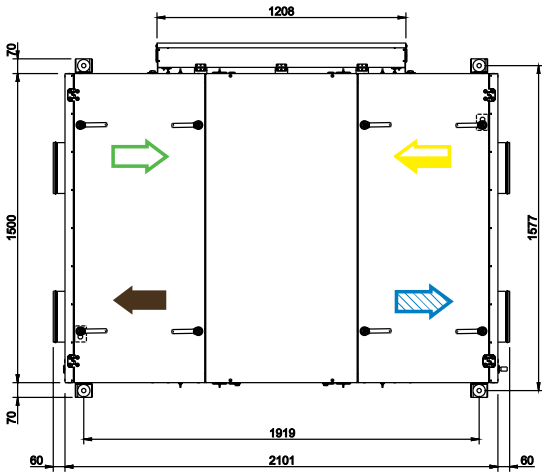
Quick selection matrix

Accessories	Topvex FC02	Item No.	Topvex FC04	Item No.	Topvex FC06	Item No.
Flex. connector	ASF 250/KB	2716	DS 50-25	1542	DS 60-30	1547
Shut-off damper	EFD 250	203915	EFD 50-25	6905	EFD 60-30	6906
Actuator	RVAZ4 24A	9862	RVAZ4 24A	9862	RVAZ4 24A	9862
Valve, 2-way	ZTV 15-1,0	9823	ZTV 15-1,0	9823	ZTV 15-1,6	9823
Valve, 3-way	ZTR 15-1,0	9672	ZTR 15-1,0	9672	ZTR 15-1,6	9673
Cooling battery, water	PGK 40-20-3-2,0	6604	PGK 60-30-3-2,0	6610	PGK 60-35-3-2,0	6612
Cooling battery, DX coil	DXRE 40-20-3-2,5	7951	DXRE 60-30-3-2,5	7955	DXRE 60-35-3-2,5	7956
Silencer	LDC 250-900	5196	LDR-B 50-25	9236	LDR-B 60-30	9240
Outdoor temperature sensor	TG-UH/PT1000	35203	TG-UH/PT1000	35203	TG-UH/PT1000	35203
Duct sensor	TG-KH/PT1000	202705	TG-KH/PT1000	202705	TG-KH/PT1000	202705
Room temperature sensor	TG-R5/PT1000	5404	TG-R5/PT1000	5404	TG-R5/PT1000	5404
CO ₂ Room sensor, digital	CO2RT-R-D	6993	CO2RT-R-D	6993	CO2RT-R-D	6993
CO ₂ Room sensor, 0-10V	CO2-Sensor W.	14905	CO2-Sensor W.	14905	CO2-Sensor W.	14905
CO ₂ Duct sensor	CO2-Sensor K.	14906	CO2-Sensor K.	14906	CO2-Sensor K.	14906
Presence detector	IR24-PC	7288	IR24-PC	7288	IR24-PC	7288
Filter F7	BFT FC02 F7	209604	BFT FC04 F7	209602	BFT FC06 F7	209600
Filter M5	BFT FC02 M5	209605	BFT FC04 M5	209603	BFT FC06 M5	209601
Filter G3	BFT FC02	209656	BFT FC04 G3	209655	BFT FC06 G3	209654
Set of sliding rails*	SDK FC02	112627	SDK FC04	112628	SDK FC06	112663
Constant volume regulation	Topvex CAV-Set	124518	Topvex CAV-Set	124518	Topvex CAV-Set	124518
Pressure constant regulation	Topvex VAV-Set	124197	Topvex VAV-Set	124197	Topvex VAV-Set	124197
Touchdisplay	S-ED-TOUCH	208998	S-ED-TOUCH	208998	S-ED-TOUCH	208998
Room control panel	S-ED-RU-DFO	27989	S-ED-RU-DFO	27989	S-ED-RU-DFO	27989
Signal amplifier	E0R230K E3-DSP	27413	E0R230K E3-DSP	27413	E0R230K E3-DSP	27413

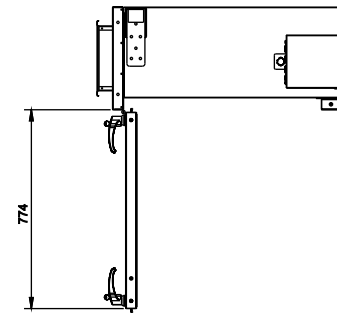
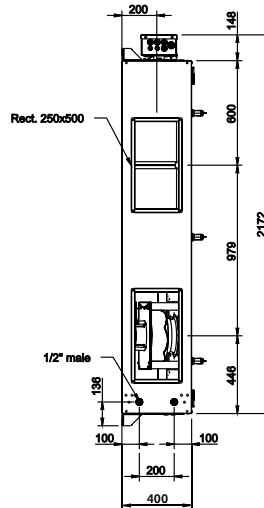
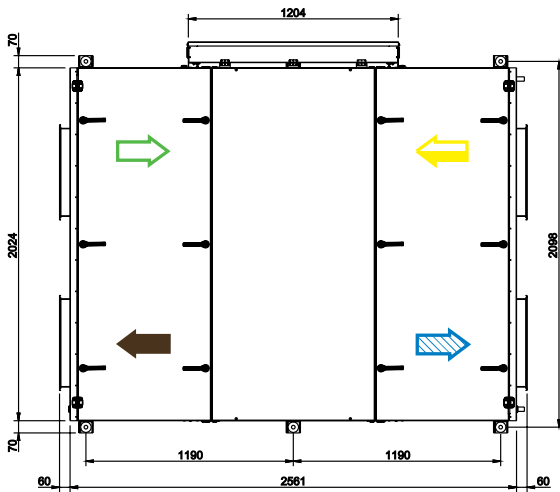
*Unit height: + 65 mm

Dimensions

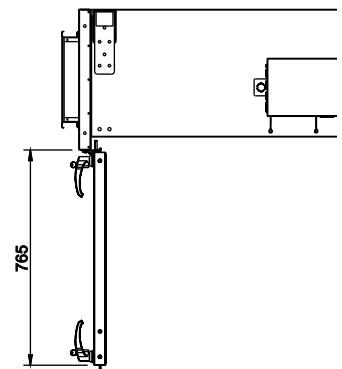
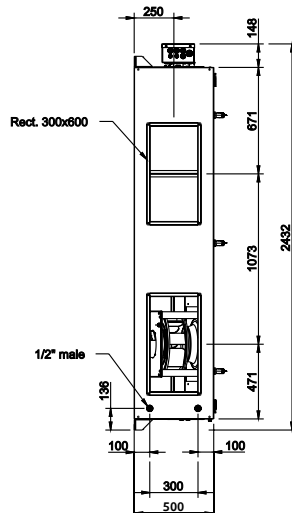
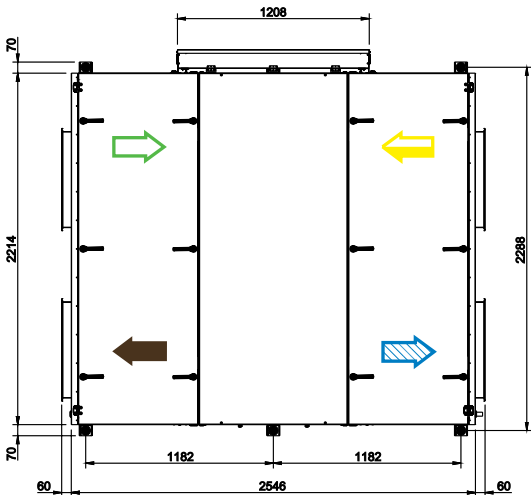
Right hand version
Topvex FC02



Right hand version
Topvex FC04



Right hand version
Topvex FC06

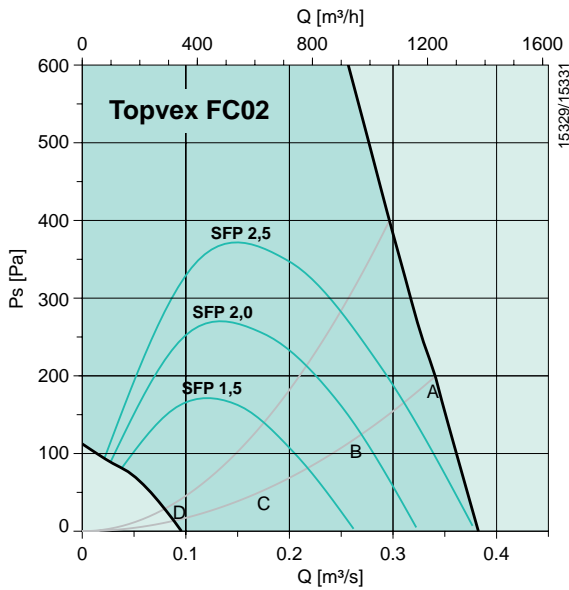


➡ = Supply
 ➡ = Exhaust
 ➡ = Extract
 ➡ = Outdoor

Performance

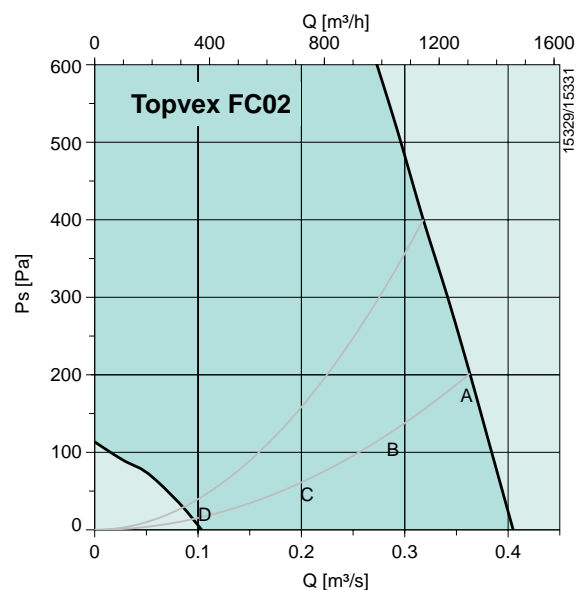
Supply

Topvex FC02



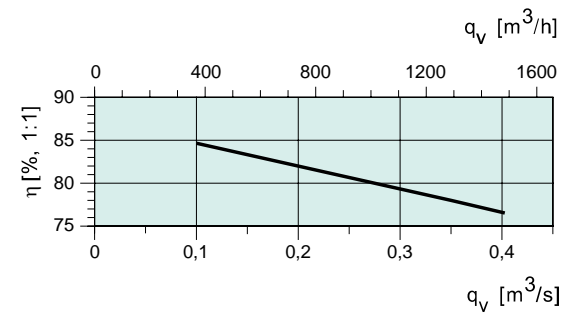
Extract

Topvex FC02



Supply

Sound power (L_w), dB(A) - Mid-frequency band, Hz										
	Step	Tot	63	125	250	500	1k	2k	4k	8k
A	10V	89	63	68	75	85	82	83	77	76
B	6,7V	84	62	63	81	75	75	76	72	68
C	4,9V	74	52	58	67	66	67	69	63	57
D	2,8V	59	46	52	51	50	52	52	38	28



Extract

Sound power (L_w), dB(A) - Mid-frequency band, Hz										
	Step	Tot	63	125	250	500	1k	2k	4k	8k
A	10V	64	53	54	54	60	58	52	39	26
B	6,7V	60	56	50	50	52	52	46	34	22
C	4,9V	51	42	44	47	43	44	37	27	21
D	2,8V	41	35	37	31	30	30	22	17	21

SFP = Specific Fan Power (kW/m³/s)

The SFP value stated applies to the complete unit.

Thermal efficiency

With air ratio 1:1 and according to EN308.

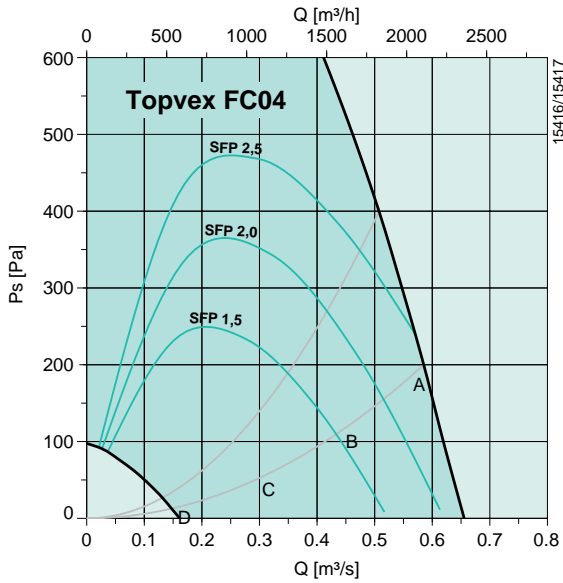
Sound data

The sound data tables indicate the sound power level L_{WA} , which should not be confused with the sound pressure level.

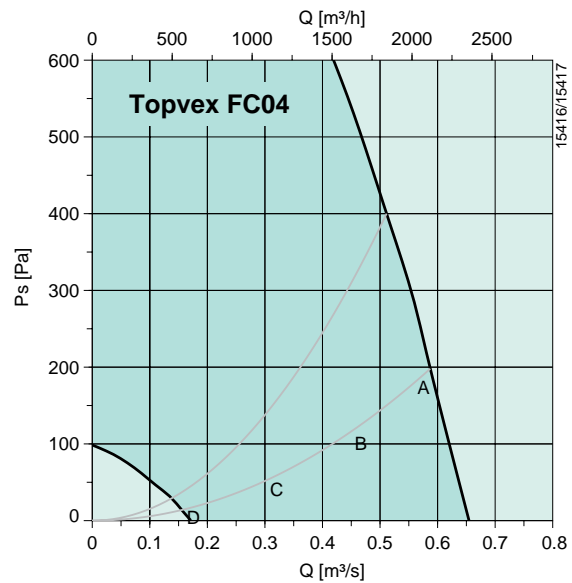
Surrounding

Sound power (L_w), dB(A) - Mid-frequency band, Hz										
	Step	Tot	63	125	250	500	1k	2k	4k	8k
A	10V	66	41	52	53	65	51	50	44	39
B	6,7V	59	41	47	56	54	45	44	39	32
C	4,9V	51	30	42	47	46	36	37	31	23
D	2,8V	38	24	36	31	30	22	20	16	19

Supply
Topvex FC04



Extract
Topvex FC04



Supply

Sound power (L_w), dB(A) - Mid-frequency band, Hz										
	Step	Tot	63	125	250	500	1k	2k	4k	8k
A	10V	92	66	71	87	84	86	83	77	72
B	6,7V	85	58	67	81	77	78	75	68	65
C	4,8V	77	50	73	68	66	69	66	58	52
D	2,6V	58	45	49	50	51	53	48	39	28

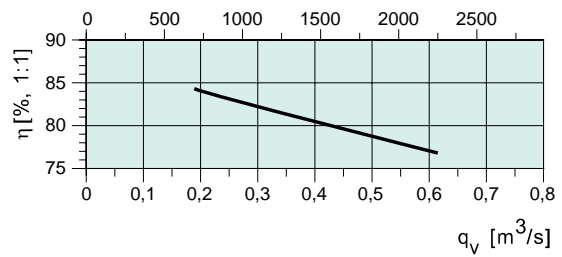
Extract

Sound power (L_w), dB(A) - Mid-frequency band, Hz										
	Step	Tot	63	125	250	500	1k	2k	4k	8k
A	10V	69	60	62	66	60	56	49	42	34
B	6,7V	65	53	58	63	53	50	42	34	27
C	4,8V	60	47	59	48	43	41	34	24	22
D	2,6V	47	43	44	32	30	26	18	18	21

Surrounding

Sound power (L_w), dB(A) - Mid-frequency band, Hz										
	Step	Tot	63	125	250	500	1k	2k	4k	8k
A	10V	67	56	58	66	55	53	50	46	42
B	6,7V	65	45	54	65	48	46	43	38	35
C	4,8V	60	38	60	50	38	37	33	28	24
D	2,6V	41	36	37	33	23	21	17	19	21

q_v [m³/h]



SFP = Specific Fan Power (kW/m³/s)

The SFP value stated applies to the complete unit.

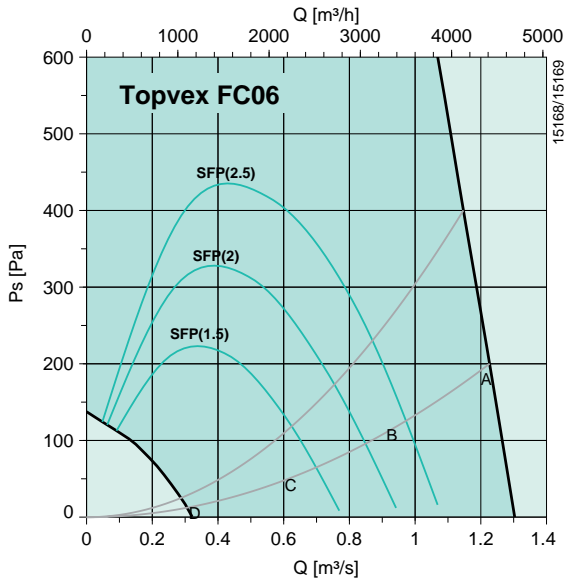
Thermal efficiency

With air ratio 1:1 and according to EN308.

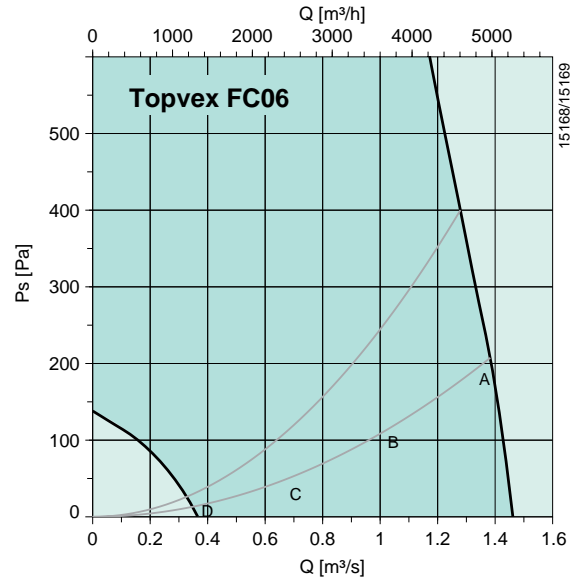
Sound data

The sound data tables indicate the sound power level L_{wA} , which should not be confused with the sound pressure level.

Supply
Topvex FC06

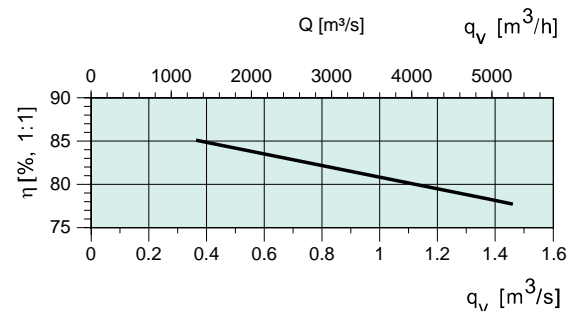


Extract
Topvex FC06



Supply

Sound power (L_w), dB(A) - Mid-frequency band, Hz										
	Step	Tot	63	125	250	500	1k	2k	4k	8k
A	10V	100	83	80	94	94	95	92	87	80
B	7,5V	92	74	74	87	84	87	84	78	71
C	5,3V	81	61	67	76	73	76	72	66	58
D	3,2V	64	49	56	56	55	59	54	47	37



Extract

Sound power (L_w), dB(A) - Mid-frequency band, Hz										
	Step	Tot	63	125	250	500	1k	2k	4k	8k
A	10V	76	67	68	73	70	64	57	48	41
B	7,5V	69	59	61	67	61	57	49	40	30
C	5,3V	62	50	59	56	50	45	39	28	22
D	3,2V	49	41	48	36	35	31	24	19	22

SFP = Specific Fan Power (kW/m³/s)

The SFP value stated applies to the complete unit.

Thermal efficiency

With air ratio 1:1 and according to EN308.

Sound data

The sound data tables indicate the sound power level L_{WA} , which should not be confused with the sound pressure level.

Surrounding

Sound power (L_w), dB(A) - Mid-frequency band, Hz										
	Step	Tot	63	125	250	500	1k	2k	4k	8k
A	10V	74	63	67	71	65	61	58	54	51
B	7,5V	68	56	61	66	55	53	50	45	42
C	5,3V	60	42	56	57	44	42	39	34	29
D	3,2V	45	30	44	36	27	26	22	17	15

