Specification data

Maxi

Air Handling Unit

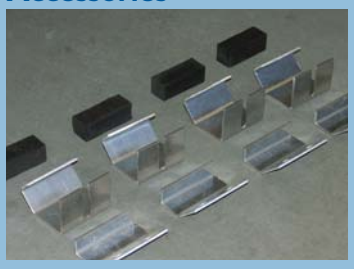
Airflow range 1100-2000 m³/h

Updated 090112

Systemair

Heat Recovery Unit
Maxi

Accessories



Maxi 1100

Maxi is a series of heat recovery units for offices, shops, daycare centres, schools and similar premises. The units are delivered complete with controls ready to run. Maxi units have a low overall height.

It could not be easier!

The units are delivered pre-programmed,tested and ready for installation. Just connect the units to the ducting, connect any external component connect the power supply, set time and fan-speed and the installation is ready.
It could not be easier!

Low overall height

Maxi units are well suited for many premises like schools, daycare centres and many more. The unique design with double duct connections for outdoor air and exhaust air makes the units very compact, with low overall height. They are also easy to install. Using the suspension device UDM, the Maxi 1100, 1500 and 2000 EL with electric heater can be installed in a false ceiling. To further simplify the use when mounted in a false ceiling, the hinges can be split, and the panels opened either as doors or as lift-off panels. Units mounted on a floor should be mounted using rubber vibration dampers, VDM, to avoid vibrations from the unit transferring to the building. This also makes sure that noise levels are kept low.

General

Maxi units are delivered enclosed in shrink-wrap plastics mounted on pallets. The controls are pre-set and tested at the factory. Any cables to external components should be connected to terminals in the connection space. The same applies to valve actuators for heating coils.

Measurement and control accuracy

The temperature sensors operate with an accuracy of +/- 0.4 K. The accuracy of the controlled temperature is the same.

Casing

The unit casing is made of galvanised sheet steel, isolated with 50 mm

mineral wool. The units have large doors which simplifies inspection and service. The control panel is connected with 10 metres of cable (included).

Maxi with by-pass

Air handling units Maxi, size 1500 and 2000 are split into two blocks, and a by-pass duct available as a third module. This simplifies the transportation of the units into the building sites. The controls are simply wired up using quick-lock connectors between the blocks.

Fans

Maxi units are equipped with direct driven radial fans with external rotor motors. The fans have forward curved blades, and give low noise levels. The fans are selected for optimum performance regarding airflow, noise and efficiency. A built-in transformer controls the fan in two speeds.

Heating coil – water

The heating coil is placed in front of the supply air fan. The coil is mounted so that the connection pipes are accessible through the long side of the unit, and are easy to connect. The water coils consist of a galvanised steel frame and aluminium fins. For venting the coil, we recommend that a venting nipple is connected in the pipe-works outside the unit. The coil has a frost protection surface sensor.

Heating battery – electric

The electrical battery is manufactured with steel heating rods in front of the fan. The heater has automatic as well as manual overheat protection. The battery has been developed to give comfortable temperatures even at low external temperatures (see page 15). The heating power is controlled using a triac power controller (pulser type), to achieve the desired temperatures. The temperature set-point is set at the control panel. With pulser control, a smooth and stable temperature can be achieved.

Cooling battery – water

A duct cooler can be connected and controlled from the air handling unit controls. The controls can deliver an analog signal for an external DX-cooler or a valve for a chilled water coil.

Filters

Maxi units are delivered with bag filters as standard, filter class EU 7, with bag filters in class EU 3 or EU 5 available separately. The filters are placed in front of the heat exchanger, air heater and fan. The starting pressure drop for Maxi 1100 units is 90 Pa, for Maxi 1500 100 Pa, and Maxi 2000 140 Pa. The final pressure drop is 200-220 Pa for all sizes.

Heat-exchanger

The Maxi is equipped with an aluminium heat exchanger with corru-

gated plates. The heat transfer between the plates is improved by the turbulence which is created by the surface. The turbulenece is created without dust gathering and creating changes in air speed. The heat exchanger plates have been designed to make optimum use of the full heat exchanger surface. The efficiency at balanced air flows can exceed 70 %.

Defrosting with stopped fan

Maxi units without by-pass ducts can be set-up to defrost the heat exchanger by stopping the supply air fan. Supply air fan will stop when the exhaust air fall below the defrosting temperature and restarts in pre-determined intervals.

By-pass function

The Maxi 1100 has a built-in by-pass of the heat exchanger, and for the Maxi 1500 and 2000 a by-pass duct is available as an accessory.

For Maxi units with by-pass defrosting is achieved by leading the cold outdoor air through the by-pass, by-passing the heat exchanger. The by-pass duct is opened and closed via a motorized damper. At defrosting, the supply air fan runs at low speed.

The by-pass duct is also used summer-time to avoid unwanted heat recovery during summertime.

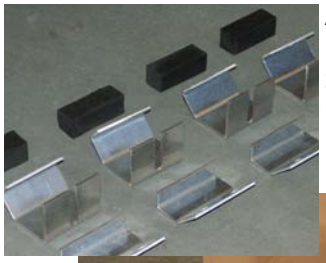
Condensate drain

Maxi units have a condensate drain through the short side of the unit, which is used when the units are floor mounted. For false ceiling mount of the EL versions, there is a condensate drain in the middle of the inspection side of the unit.

Duct connections

The Maxi in size 1100 has double circle ducts with connection 200 for outdoor and exhaust air, and circular connection diameter 315 for supply and extract.

Maxi 1500 and 2000 has rectangular connections, intended for circular connections using the adapter set OKM (accessories). With the adapter set OKM, the units have 4 circular connections ø250 for outdoor and



Adapter set OKM, suspension device and vibration dampers.

extract air, and 2 circular connectins ø315 for supply and exhaust air. All circular connections have rubber sealings. The concept with two ducts for outdoor and extract air, makes it possible to achieve the lowest possible overall height. It also makes the installation simpler when exhaust air ducts need be connected going out in both directions from the unit. Finally, the design makes the air distribution over internal components such as filters, heat exchangers and air heaters the best possible, making use of the full surface.

Controls

Maxi units are delivered complete with controls, including 10 metres of cable for the controls panel. The cable is not allowed to lengthen. The controls panel is menu controlled and easy to use. The buttons are logical and the panel has indicators for operation and alarm.

Display

The illuminated display has 4 rows of 20 characters each, and 17 different languages are available. The background illumination is normally switched off, and is activated by pushing one of the buttons. The illumination is then switched off again after a period of inactivity.

LEDs

The alarm LED is marked with a symbol.
The "write enable" LED is marked with a symbol.

Push-Buttons

All functions can be set (configured) by using the information in the display and the push-buttons on the controller.

Log in

The menu system works with two different user levels, depending on if the information should be displayed or changed. In the first level it is only possible to read parameters and settings. In the second level, it is also possible to change the settings in the controller.

Timer settings

SCP has a week-based timer function, which means that the operation of the unit can be set individually for each week day. The clock has an automatic summer/winter-time change over.

Running periods

Each day has two separate running periods. For each period, the airflow can be set to normal, reduced or fan stopped. Start-up of the unit is always done with reduced speed. After a pre-set time, the speed is switched over to normal, if normal operation is programmed.

Manual control

(hand/auto position). The unit can be controlled manually (switched off, reduced speed or normal speed), and then the week-based timer function is switched off. The heater and heat recovery out-puts can also be manually controlled between 0 and 100 %. The same applies to any accessories connected. A very useful function when commissioning the unit.

Alarms

At an alarm, the LED starts flashing. The LED flashes as long as there are any alarms which have not been acknowledged. The LED emits a steady light, if there are alarms which have been acknowledged, but are still active. The alarm list shows type of alarm, date and time when the alarm occurred. The units have a common alarm signal available at terminals (24 V AC, 0.5 A).

Width = 115 mm
Height = 94 mm
Depth = 26 mm

Communication

EXOline and Modbus Port 1, insulated via a built-in RS-485 contact. Optional communication models for TCP/IP or LON are available.

Description of functions, Systemair SCP

Maxi units are pre-configured for exhaust air control but can be configured for the following temperature controllings:

- Supply air control
- Extract air temperature control (cascade)
- Room air temperature control (cascade, accessory room air temperature sensor T6-RS/PT 1000 is necessary.)
- Outdoor compensation (when using supply air control)
- Outdoor temperature controlled change-over between supply-, extract- and room air control. This function can be used to be able to use supply air control at winter-time, and to use room- or extract air temperature control at summer-time together with air cooling.

Frost protection (when using hot water air heaters). When there is a risk of freezing in the hot water coil, the control valve is forced open to prevent freezing. If there is still a risk of freezing, the unit is stopped and the outdoor/exhaust air damper (accessories) is closed.

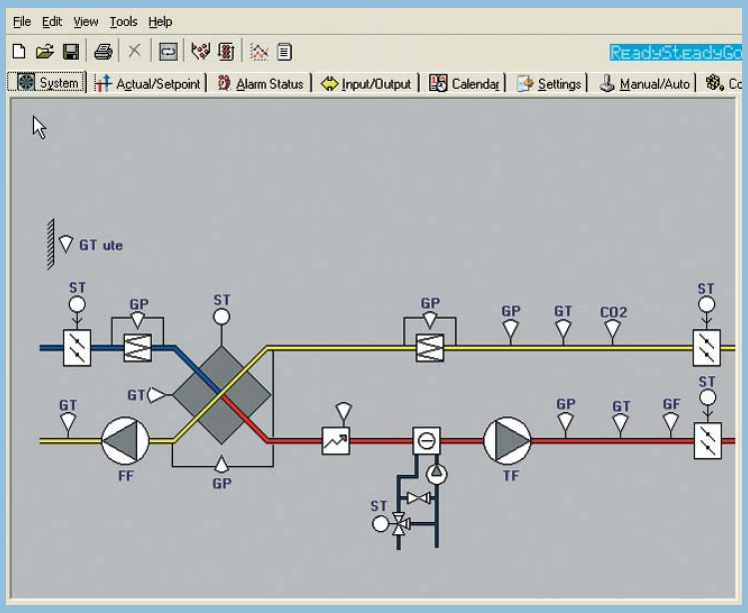
Water temperature control with idle unit (when using hot water air heaters). When the unit is turned off, the control valve of the air heater is controlled to maintain a pre-set temperature at the frost protection sensor.

Defrosting of heat exchanger
Defrosting with stopped fan
Maxi units without by-pass duct is defrosting by stopping and restarting the supply air fan with pre-determined intervals.

Defrosting with by-pass (accessory by-pass duct necessary for Maxi 1500 and 2000)
For Maxi units with by-pass defrosting is achieved by leading the cold outdoor air through the by-pass, by-passing the heat exchanger. The by-pass duct is opened and closed via a motorized damper. During the defrosting cycle the supply air fan is running on reduced air flow.

Free cooling (accessory of the type TG-R6/PT1000, wall-mounted outdoor sensor, TG-R5/PT1000 room sensor and by-pass damper are necessary). Free cooling is used at summer-time to cool down the building at nights using cool outdoor air, and thereby reducing the need for cooling at daytime. Free cooling is normally started at midnight if the unit is switched off, if the day temperature outdoors has been higher than pre-set value (22°C), and if the outdoor air temperature at start-time is less than a pre-set value (18°C).

Tempeature efficiency measurement (accessory TG-KH/PT1000 exhaust air sensor necessary). This function calculates the temperature efficiency of the heat exchanger in percent when the heat exchanger is working at full heat recovery.



Transformer fan control
The fans are controlled in two speeds using transformers and the built-in clock of the controller. Start-up of the units is always done at reduced speed. After a pre-set time, the unit switches to high speed if that has been programmed in the clock.

Filter pressure switches
Differential pressostats mounted across the units supply- and exhaust air filter gives an alarm when the pressure drop across the filter exceeds a pre-set value and the filter should be changed.

Fan Pressure switch
A differential pressostat mounted across the units supply air fan gives an alarm if the pressure increase is lower than a pre-set value and the controller is at low- or high speed at the same time.

Outdoor and exhaust air dampers
Outdoor- and exhaust air dampers are opened when the supply air fan is started.

Fire alarm
When there is a fire alarm, the unit can be configured either for stopping or for running.

Extended or forced running using an external signal
The units have a potential free digital input at a terminal for extended or forced running using an external signal, e.g. an external timer, PIR, CO2-sensor or similar sensor with a volt free contact.

E-Tool

E-Tool is a PC-based commissioning software with a graphical user-interface. Download for free at

When using E-Tool it is possible to download and store configurations, view the In/Outputs in real-time and also updating the software program. (Accessory of the type E-Tool cable, ETC, is necessary).

E-Tool simplifies the:
Commissioning: Set the configuration (Airflow, temperature, control mode, week schedule etc.) at the Office and go to the unit to download it.
Troubleshooting: Connect the E-Tool and have a good overview on all of the menus e.g. read all the in and output values (temperature sensors, control signals, alarm inputs etc.) at the same time.

It is also possible to run real-time diagrams, store them on the computer and maybe analyse them later at the office.

E-Tool is available in English and Swedish.

Accessories

	1100 EL/HW	1500 EL/HW	2000 EL/HW
E-tool cable	ETC	ETC	ETC
Spring return damper*	EFD 315	EFD 315	EFD 315
Valve actuator for HW	HWRO	HWRO	HWRO
Valve, 2-way	TVTA 202	TVTA 452	TVTA 452
Valve, 3-way	TVTA 203	TVTA 453	TVTA 453
Duct adapter	–	OKM 1500/2000	OKM 1500/2000
Combi-Cowl	THM	THM	THM
Combi-Grille	VGM	VGM	VGM
Cooler, cold water	CWK 315	CWK 315	CWK 315
Silencer, supply/exhaust	LDC 315	LDC 315	LDC 315
Silencer, extract/outdoor**	LDC 200	LDC 250	LDC 250
Timer	T 120	T 120	T 120
Room temperature sensor	TG-R5/PT1000	TG-R5/PT1000	TG-R5/PT1000
Outdoor sensor, wall mount	TG-R6/PT1000	TG-R6/PT1000	TG-R6/PT1000
Exhaust air sensor, duct	TG-KH/PT1000	TG-KH/PT1000	TG-KH/PT1000
Filter EU3	BFM 1100-3	BFM 1500/2000-3	BFM 1500/2000-3
Filter EU5	BFM 1100-5	BFM 1500/2000-5	BFM 1500/2000-5
Filter EU7	BFM 1100-7	BFM 1500/2000-7	BFM 1500/2000-7
By-pass duct	–	BP 1500/2000	BP 1500/2000
Vibration damper	VDM 1100	VDM 1500/2000	VDM 1500/2000
Suspension device for EL	UDM 1100	UDM 1500/2000	UDM 1500/2000

* *N.B. One damper to be mounted on the exhaust and one on the supply air duct.*

** *N.B. Maxi has two ducts for extract and outdoor air. One to two dampers for exhaust/outdoor air can be connected depending on the need.*

Quick selection matrix, accessories

Function	Necessary accessory	Designation
By-pass control*	By-pass duct (Maxi 1500, 2000)	BP 1500/2000
By-pass de-frosting*	By-pass duct (Maxi 1500, 2000)	BP 1500/2000
Shut-off dampers*	1 pcs. extract air and 1 pcs. supply	EFD
Floor mounted unit	Vibration damper	VDM
False ceiling mount	Suspension device EL	UDM
Control of water coil	Valve and actuator	HWRO and TVTA
Room air control	Room sensor without dial	TG-R5/PT1000
Free cooling	Outdoor sensor, wall mounted and room sensor	TG-R6/PT1000 and TG-R5/PT1000
Temp. efficiency measurement	Exhaust air sensor, duct	TG-KH/PT1000

* *Recommended*

Accessories

Damper for out door air

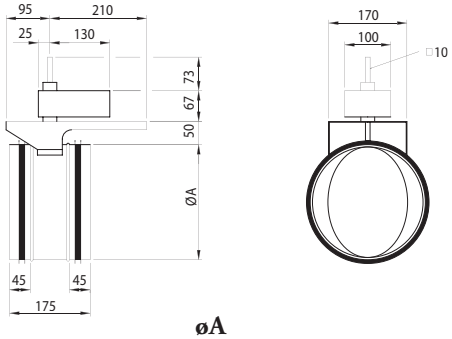
The shutter damper EFD is provided with 24V AC motors with spring-return actuators. EFD are made in leakage performance class 3 according to EN 1751:1998 Annex C.2. Outdoor air dampers are used to prevent coils from freezing and also prevent cold air to chill down the building if the unit stops. EFD is connected to terminals in the electrical connection box.

The damper consists of a tubular housing equipped with a damper blade pivoting on an axle. The blade fits into the circular duct. The connection ends are equipped with silicon rubber sealing rings. The damper is made from hot-dip galvanised sheet steel. The EFD is prepared for external insulation and has arrows showing the damper blade position.

Maintenance

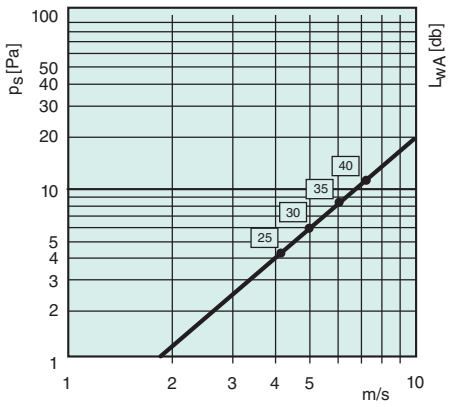
We recommend preventive maintenance of the damper twice per year for optimum performance. If the damper gets dirty, the blade/s should be cleaned. The gasket sealing should be checked and the blade/s axle/s lubricated as necessary.

Dimension circular damper



	øA
EFD-315	315

Pressure drop circular damper



Sound power level, L_w

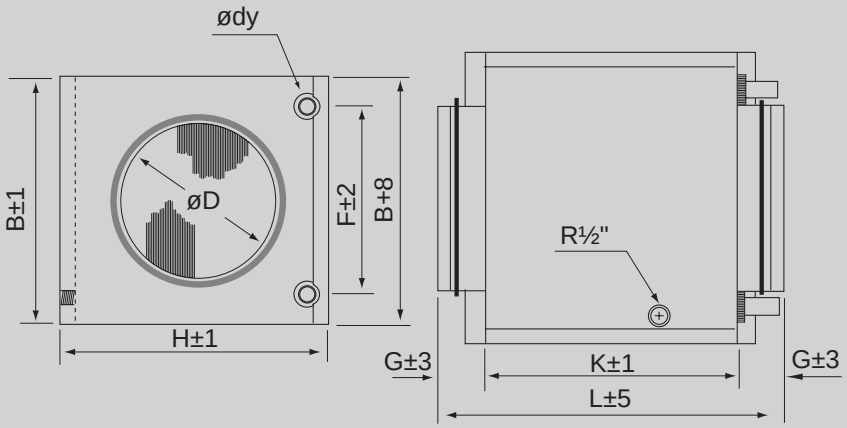
L_w L_w(dB) = L_{pA} + K_{ok} (L_{pA} = diagram K_{ok} = table) correction factor K_{ok}

	Mid-frequency band, Hz						
	125	250	500	1k	2k	4k	8k
EFD 315 (90°)	7	3	-3	-8	-13	-18	-18

Sound power level measured in accordance with ISO 3741and ISO 5135 by Sveriges Provnings- och Forskningsinstitut (the Swedish National Testing and Research Institute).

Cooling battery – water

CWK, cold water-cooling battery 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 working pressure 1.6 MPa (16 bar).

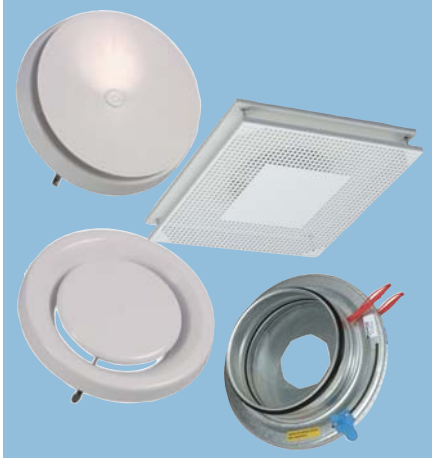


	øD	B	H	ødy	F	G	K	L	kg
CWK 315-3-2,5	315	479	548	22	400	40	300	440	16

Technical data CWK

			Water temperature 6/12°C					
CWK	Air-flow	Air pressure drop	Air before	Air before	Air after	Capacity	Water flow	Water pressure drop
315-3-2,5	560	7	25	50	14,5	2,4	0,10	3
	560	7	30	45	15,4	3,9	0,16	7
	985	20	25	50	16,1	3,4	0,13	5
	985	20	30	45	17,2	6,1	0,24	14
	1410	39	25	50	17,0	4,3	0,17	8
	1410	39	30	45	18,1	8,3	0,33	25
	m³/h	Pa	°C	%RH	°C	kW	l/s	kPa

Air terminal devices

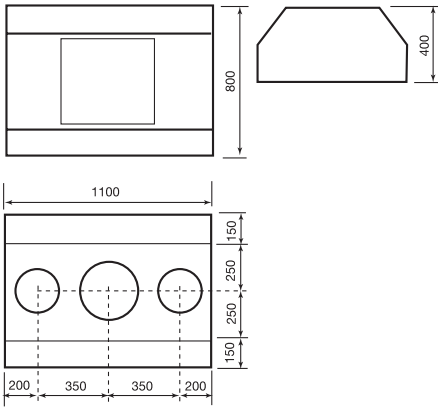


Systemair offers a good range of diffusers and air volume control devices to provide a complete installation for good indoor climate as well as modern design.

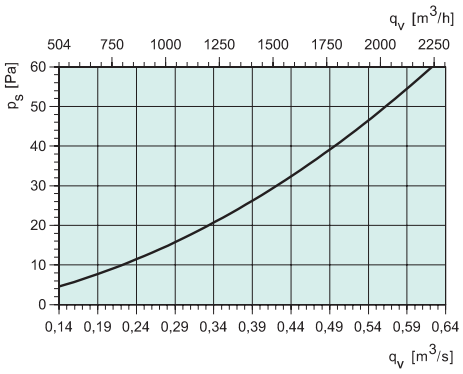
Intake grids THM and VGM

The THM roof cowl is suitable for use with the Maxi 1100/1500/2000 units. The roof cowl has 2 x ø250 mm connections for outside air plus 1 x ø315 mm spigot connection for exhaust air. The cowl is manufactured from plastic-coated sheet steel. It is fitted onto a sleeve connection previously installed on the roof.

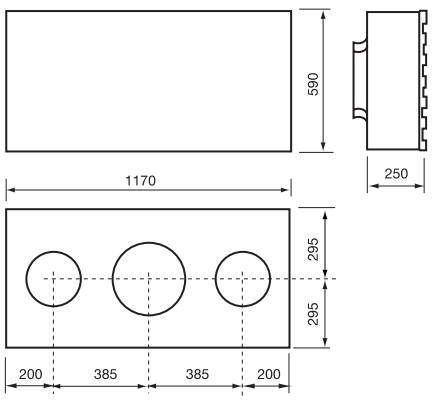
Dimensions THM

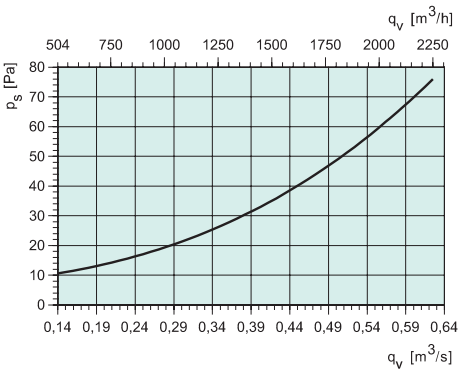


The VGM grill is suitable for use with the Maxi units. The grille is combined with connections for outside air and exhaust air. The connections are for standard ducts. For the outside air there are 2 x ø250 mm spigot connections. For exhaust air there is 1 x ø315 mm spigot connection. The grille is manufactured from weather-proof plastic. It is fitted by removing the front and screwing the back panel to the wall.



Dimensions VGM

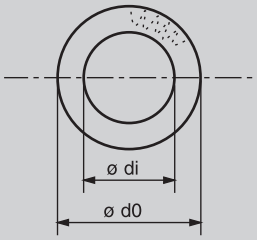




Silencer LDC

LDC effectively reduces noise in the duct. See table below.

Dimensions LDC



LDC	L*	ødi	ød0	Weight, kg
200-600	600	200	315	7
200-900	900	200	315	10
250-900	900	250	355	12,2
315-900	900	315	450	15

** L = Length*

Noise attenuation dB (mid-frequency Hz)

	Fits to	125	250	500	1k	2k	4k	8k
LDC 200-600	1100 Extract/Outdoor	4	9	17	22	29	25	18
LDC 200-900	1100 - " -	7	13	24	31	44	31	20
LDC 250-900	1500/2000 - " -	6	11	21	27	39	25	19
LDC 315-900	Maxi Supply/Exhaust	5	9	18	23	32	20	18

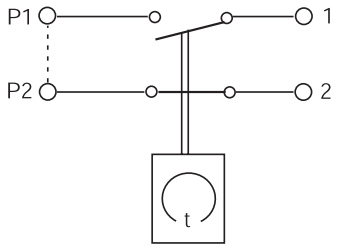
Timer

Timer with 120-minute operating time. Supplied with flange for fitting into equipment housing. Casing for surface mounting is available as an extra. One switch for closing and one for breaking circuits. A link can be used to produce a change-over function. The timer makes a quiet ticking sound when connected.

Technical data

Voltage	230V AC
Frequency	50 Hz
Maximum load	250V, 10A 2A induc.
Connecting time	120 min
W x H x D	80 x 80 x 25

Wiring T 120



HWRO – valve motor, water valve

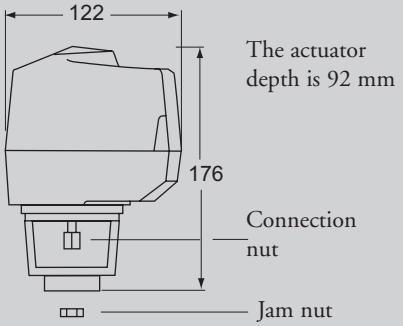
A microprocessor based actuator controlled by a 0...10 V signal from SCP. The actuator has automatic stroke adjustment.

Technical data

Supply voltage	24 V AC
Control signal	0...10 V
Transformer size	6 VA
Stroke	20 mm
Stroke time	5 s/mm
Force	450 N
Ambient temp.	0...50°C
Storage temp.	-40...+60°C
Ambient humidity	5...95% RH
Cable connection	Terminal block
Degree of protec.	IP54

This product confirm to the EMC standard CENELEC EN50081-1 and EN50082-1.

Dimensions HWRO



NB! The actuator and the valve have an overlap of approx 15 mm when connected.

TVTA – Water valve/heating water, 2/3-way

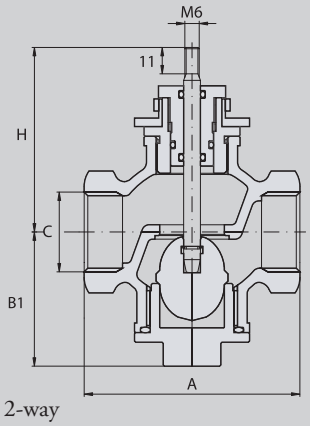
TVTA is a 2- and 3-way control valve to control the hot water to the heating battery. TVTA are intended for use together with the HWRO actuator.

Technical data

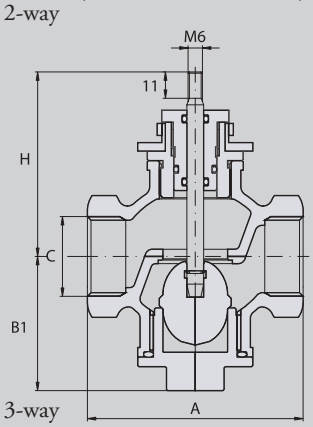
Max. differential pressure 1,6 Mpa.

Flow charac.	Square
Media temp.	-5...+185°C
Media	Hot, cold, glycolmixed water or steam
Connection	Metric female threaded
Stroke	15 mm
Max leakage	0,1 % of kv
Pressure rat.	PN16
Rangeability.	50:1
Mat: Body	Rg5 gun metal SS 5204
Mat: Cone	Rg5 gun metal SS 5204
Stem	Stainless steel
Packing box	Self-adjusting teflon

Dimensions TVTA



2-way

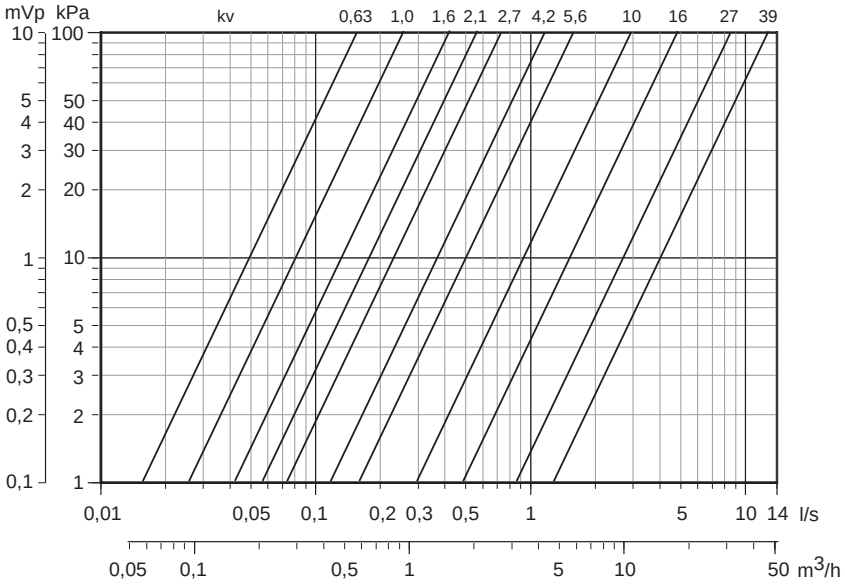


3-way

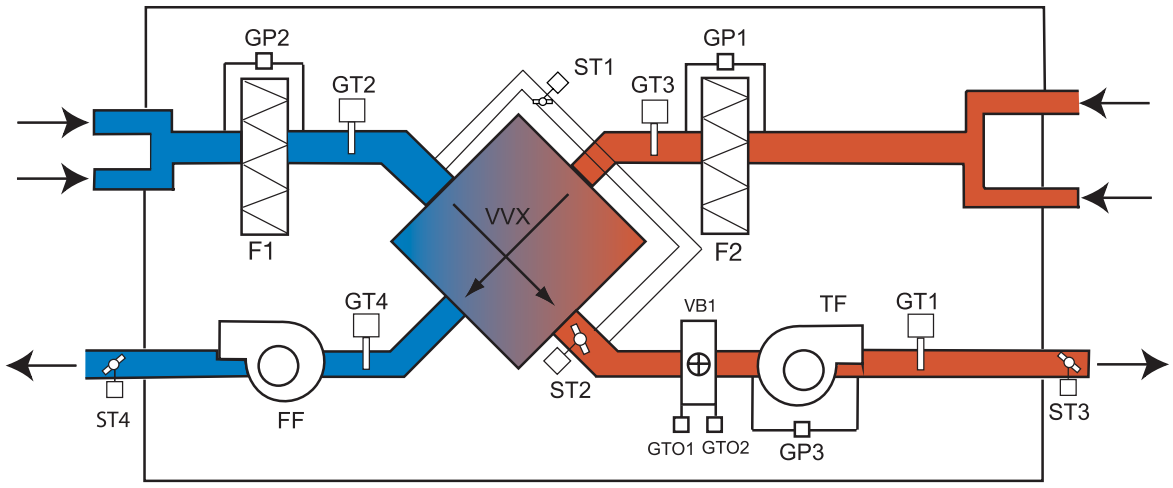
TVTA

A	B1	B2	C	H	Weight
70	52	57	G½"	71	1,3 kg

Pressure drop TVTA



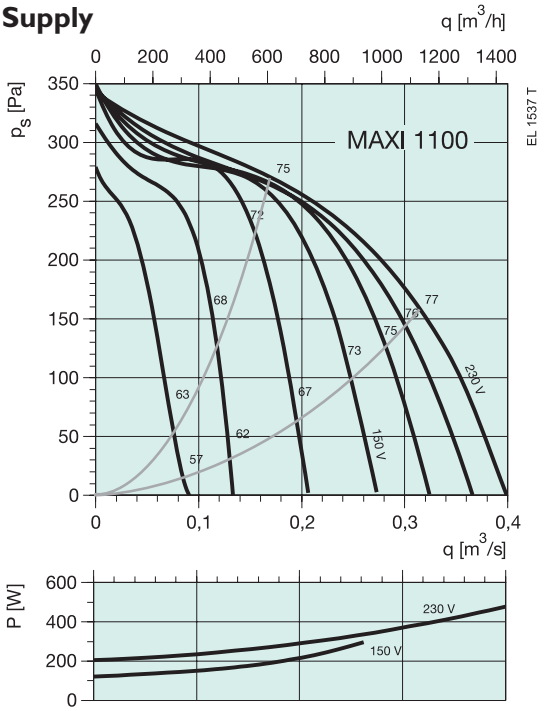
Explanatory sketch



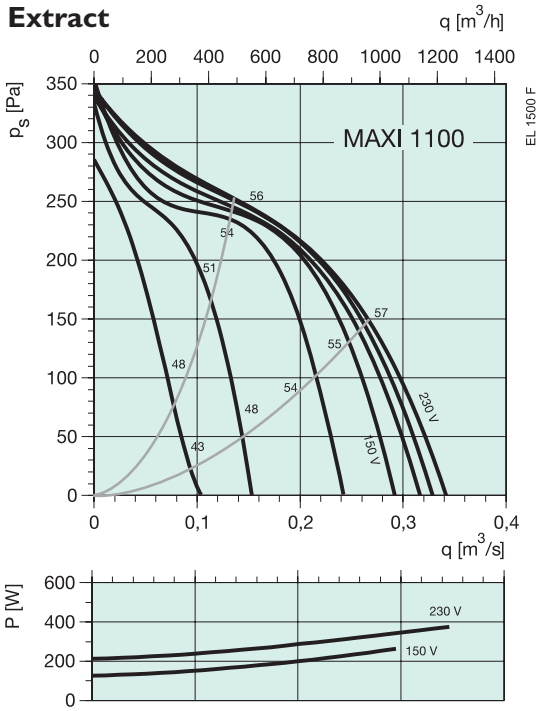
FF	Exhaust-air fan
TF	Supply-air fan
F1	Supply-air filter
F2	Exhaust-air filter
GT1	Supply-air sensor
GT2	Outside-air sensor
GT3	Exhaust-air sensor
GT4	Defroster sensor
GTO1	Overheating thermostat/Frost protection thermostat
GTO2	Emergency thermostat
GP1	Pressure switch, extract-air filter
GP2	Pressure switch, supply-air filter
GP3	Pressure switch, fan
VVX	Heat exchanger
ST1	Damper with motor, for bypass duct (accessory Maxi1500, 2000)
ST2	Damper with motor, for heat exchanger
ST3	Cut-off damper with motor, for supply-air (accessory)
ST4	Cut-off damper with motor, for exhaust-air (accessory)
VB1	Heating battery – electric

Performance

Supply



Extract



Maxi 1100

Supply

		Octave band, Hz							
L_{wA} outlet, dB(A)	Tot	63	125	250	500	1k	2k	4k	8k
Max. 230 V	75	63	64	68	68	69	65	63	56
Half 150 V	73	58	59	65	66	68	64	61	53

Measuring point: 230V q = 0.21 m^3/s 150V q = 0.26 m^3/s

Extract

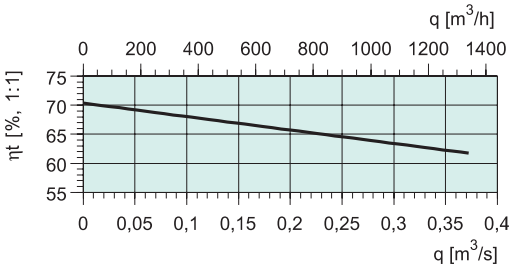
		Octave band, Hz							
L_{wA} inlet, dB(A)	Tot	63	125	250	500	1k	2k	4k	8k
Max. 230 V	56	44	53	47	50	42	40	39	34
Half 150 V	55	39	53	46	49	41	35	28	21

Measuring point: 230V q = 0.18 m^3/s 150V q = 0.24 m^3/s

Surroundings

		Octave band, Hz							
L_{wA} outlet, dB(A)	Tot	63	125	250	500	1k	2k	4k	8k
Max. 230 V	54	45	51	50	39	42	35	27	21
Half 150 V	53	40	51	49	38	41	30	16	8

Measuring point: 230V q supply = 0.21 m^3/s q extract = 0.18 m^3/s
150V q supply = 0.26 m^3/s q extract = 0.24 m^3/s



Thermal efficiency

With air ratio 1:1 and air humidity at 50%.

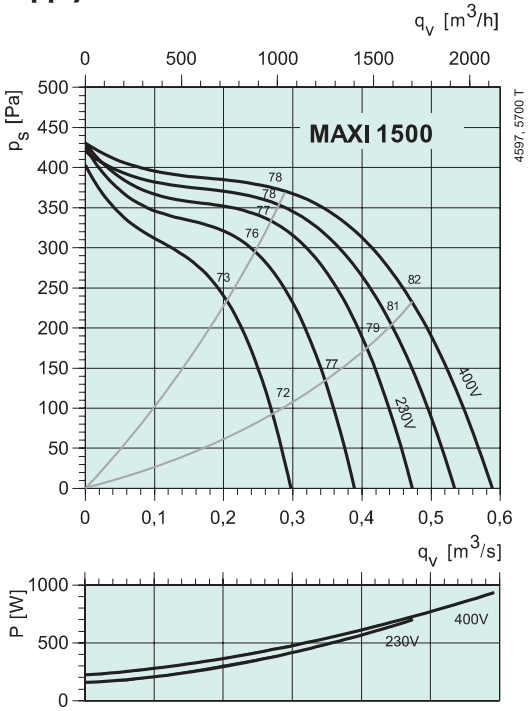
Sound data

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

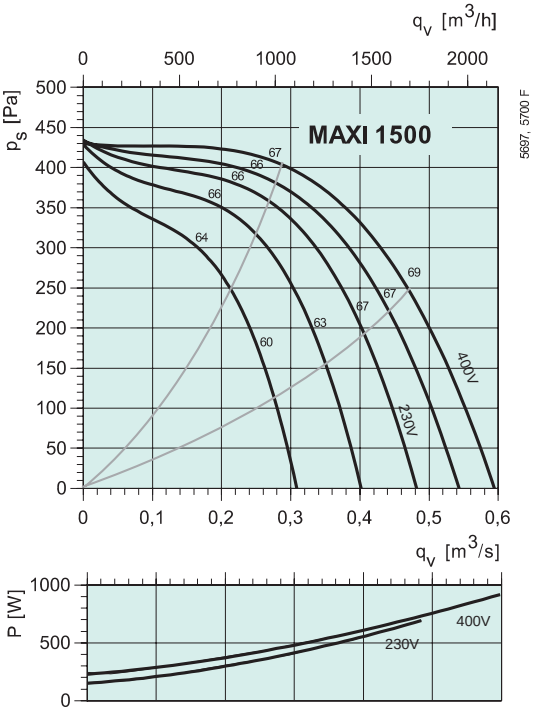
Systemair

Performance

Supply air



Extract air



Maxi 1500

Supply air

		Octave band, Hz								
		Tot	63	125	250	500	1k	2k	4k	8k
L_{wA} fresh air	dB(A)	68	60	64	63	58	52	51	58	45
L_{wA} supply air	dB(A)	78	60	72	72	70	67	66	70	64

Measuring point: q = 0.25 m^3/s, p_s = 394 Pa

Extract air

		Octave band, Hz								
		Tot	63	125	250	500	1k	2k	4k	8k
L_{wA} extract air	dB(A)	67	58	62	59	57	52	52	60	47
L_{wA} exhaust air	dB(A)	79	58	70	72	71	71	69	73	67

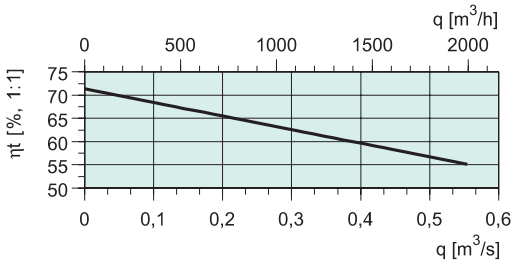
Measuring point: q = 0.26 m^3/s, p_s = 425 Pa

Surrounding

		Octave band, Hz								
		Tot	63	125	250	500	1k	2k	4k	8k
L_{wA} surrounding	dB(A)	60	45	55	55	49	46	47	53	45

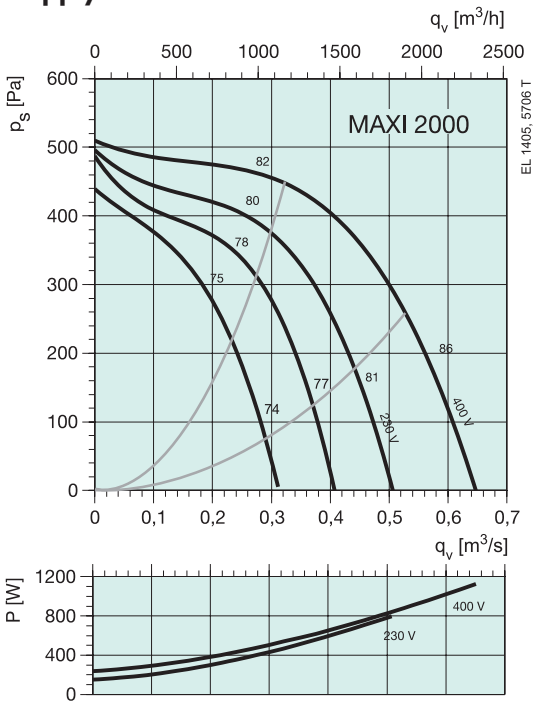
Measuring point:
Supply q_v = 0.25 m^3/s, p_s = 394 Pa
Extract q_v= 0.26 m^3/s, p_s = 425 Pa

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

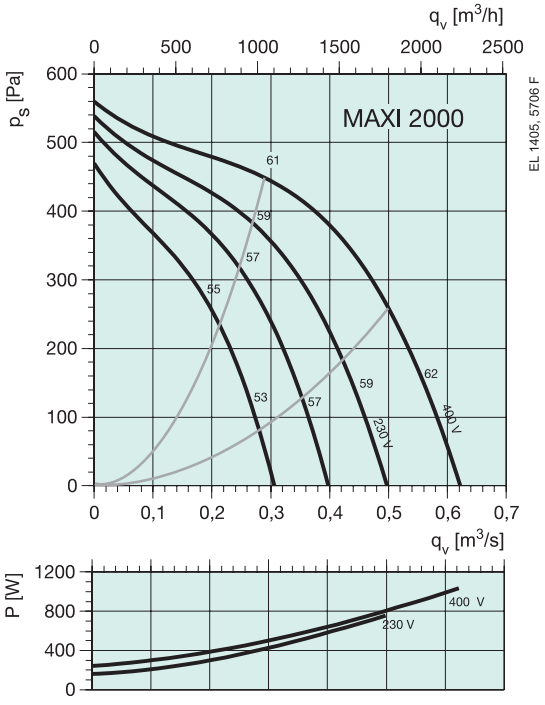


Thermal efficiency
With air ratio 1:1 and air humidity at 50%.

Supply air



Extract air



Maxi 2000

Supply air

		Octave band, Hz								
		Tot	63	125	250	500	1k	2k	4k	8k
L_{wA} fresh air	dB(A)	62	50	54	57	58	54	47	35	23
L_{wA} supply air	dB(A)	82	66	71	75	74	77	70	68	61

Measuring point: q = 0.28 m³/s, p_s = 480 Pa

Extract air

		Octave band, Hz								
		Tot	63	125	250	500	1k	2k	4k	8k
L_{wA} extract air	dB(A)	61	52	55	54	55	49	42	36	41
L_{wA} exhaust air	dB(A)	83	64	73	75	75	80	71	69	62

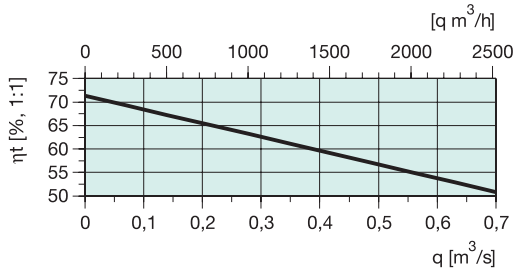
Measuring point: q = 0.30 m³/s, p_s = 454 Pa

Surrounding

		Octave band, Hz								
		Tot	63	125	250	500	1k	2k	4k	8k
L_{wA} surrounding	dB(A)	61	40	51	56	49	56	53	51	47

Measuring point:
Supply q_v = 0.28 m³/s, p_s = 480 Pa
Extract q_v = 0.30 m³/s, p_s = 454 Pa

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

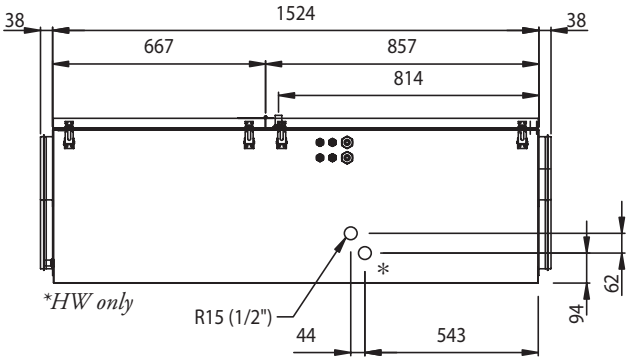


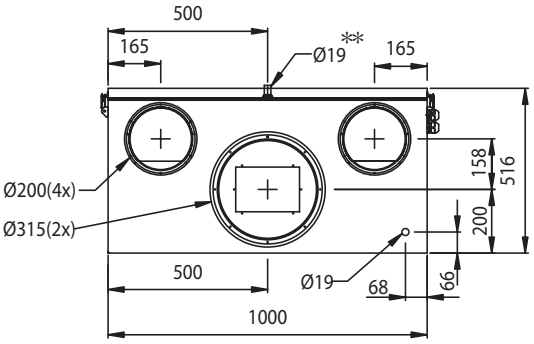
Thermal efficiency
With air ratio 1:1 and air humidity at 50%.

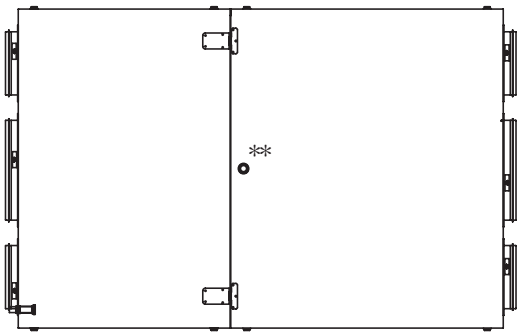
Systemair

Measure

Maxi 1100

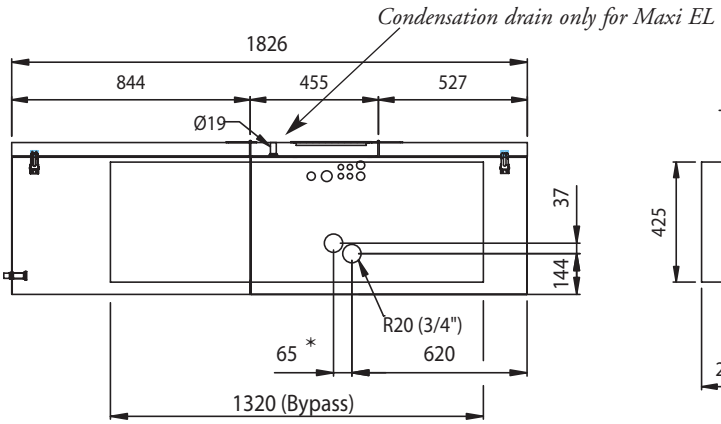




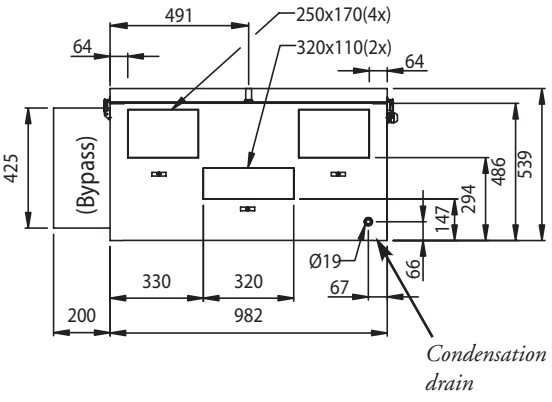


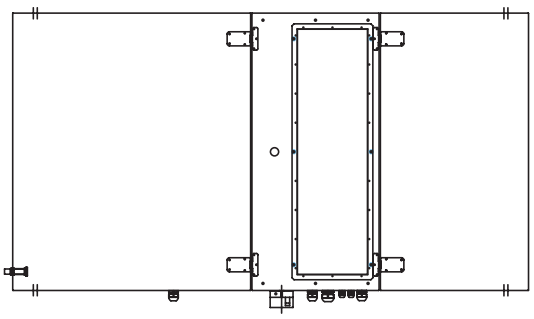
**Condensation drain only for Maxi EL

Maxi 1500, 2000



* Water connection for the HW unit after-heater: R20(3/4")





Technical data

		Maxi 1100 EL/HW	Maxi 1500 EL	Maxi 2000 EL
Voltage/Frequency	V/50Hz	400/230	400	400
Phase	-	3/1	3	3
Input power, motors	W	2x492	2x776	2x1080
Input power, heater battery	kW	5	9	9
Main fuse	A	16/10	25	25
Weight	kg	120	200	200
Filter, supply- and exhaust air		EU7	EU7	EU7

Heater battery, electric*

	Maxi 1100 EL				Maxi 1500 EL			Maxi 2000 EL			
Capacity, kW	5	5	5	5	9	9	9	9	9	9	9
Airflow, m³/h	583	715	957	1100	1050	1300	1500	1050	1300	1740	2000
Outdoor	Supply °C				Supply °C			Supply °C			
0	36	31	26	24	36	31	28	36	31	26	24
-10	31	26	21	19	31	26	23	31	26	21	19
-20	26	21	16		26	21	18	26	21	16	
-30	21	16			21	16		21	16		
-40	16				16			16			

* An extract air temperature of 20°C and a heat exchanger efficiency of 50% has been used for the calculations above. In practice the heat exchanger efficiency or extract air temperature may be higher, which may give a few degrees higher supply air temperatures than in the table above.

Hot water coil*

		Maxi 1100 HW				Maxi 1500 HW				Maxi 2000 HW			
Water temp.		60/40	70/50	80/60	90/70	60/40	70/50	80/60	90/70	60/40	70/50	80/60	90/70
Air flow m³/h	1100	1100	1100	1100	1100	1500	1500	1500	1500	2000	2000	2000	2000
Outdoor air temp. 0°C													
Supply air temp.	0°C	26.4				27.4				25.6			
Water flow	l/s	0.075				0.108				0.133			
Pressure drop	kPa	1.81				2.76				4.04			
Capacity	kW	6.2				8.9				10.9			
Outdoor air temp -10°C													
Supply air temp.	°C	24.7				25.2				23.5	29.5		
Water flow	l/s	0.09				0.126				0.153	0.204		
Pressure drop	kPa	2.54				3.66				5.29	5.9		
Capacity	kW	7.4				10.4				12.6	16.8		
Outdoor air temp -20°C													
Supply air temp.	°C	22.3	28.8			22.9	29.4			20.9	27		
Water flow	l/s	0.102	0.132			0.142	0.183			0.173	0.225		
Pressure drop	kPa	3.21	5.05			4.62	4.84			4.48	7.06		
Capacity	kW	8.4	10.9			11.7	15.1			14.3	18.5		
Outdoor air temp -30°C													
Supply air temp.	°C	20	26.5			20.6	27.1			18.4	24.5	29.7	
Water flow	l/s	0.114	0.144			0.159	0.2			0.194	0.245	0.29	
Pressure drop	kPa	3.94	5.95			5.68	5.7			5.52	5.91	7.84	
Capacity	kW	9.4	11.9			13.1	16.5			16	20.2	23.8	
Outdoor air temp -40°C													
Supply air temp.	°C	17.6	24.1	29.8	25.3	18.2	24.8	30.4	36	15.9	22	27.2	32.5
Water flow	l/s	0.126	0.156	0.183	0.209	0.176	0.217	0.253	0.29	0.214	0.266	0.311	0.356
Pressure drop	kPa	4.75	6.92	6.79	8.52	4.58	6.62	6.11	7.63	6.65	6.86	8.9	11.15
Capacity	kW	10.4	12.8	15	17.1	14.5	17.8	20.7	23.6	17.7	21.9	25.5	29

* An extract air temperature of 20°C and a heat exchanger efficiency of 50% has been used for the calculations above. In practice the heat exchanger efficiency or extract air temperature may be higher, which may give a few degrees higher supply air temperatures than in the table above.