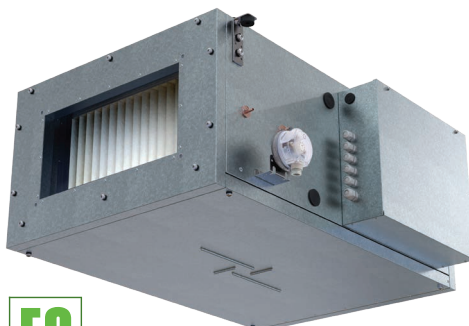


Series  
**VENTS MPA  
700 W EC A31**



Series  
**VENTS MPA  
1000-4000 W EC A31**



Air supply units with the air flow up to **4950 m<sup>3</sup>/h** in the sound- and heat-insulated casing

■ **Description**

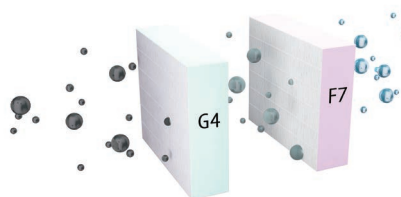
Air supply MPA EC unit is a complete ventilation unit for air filtration, air heating and supply to premises.

■ **Casing**

Steel casing covered with aluzinc coating internally filled with 30 mm heat- and sound-insulating layer made of mineral wool.

■ **Filter**

The unit is equipped with a Coarse 60%/G4 filter. An ePM10 90%/F7 class filter is optionally available.



■ **Heater**

Water heater is used for heating of supply air in cold season.

■ **Fans**

The units are equipped with high-efficient EC-motors with an external rotor and a centrifugal impeller.

■ **Mounting**

The air handling unit is mounted on the floor, suspended to the ceiling or mounted on the wall using brackets.



The unit can be mounted either in service spaces or in main premises (above a false ceiling, in a niche or on a surface).

All electrical connections are made through the terminal block located in the junction box.

It is necessary to provide access to the unit for service and filter cleaning.

■ **Control and automation**

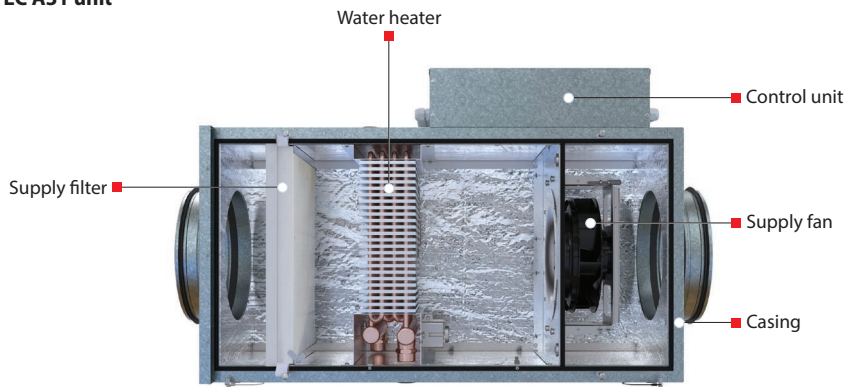
The **MPA W EC** units are equipped with integrated control system. The A31 controller allows integrating the unit into the **Building Management System (BMS)**. Remote control panel is not included in the delivery set and is available as specially ordered accessory.

Functions	A31
	A30
Wired control panel	
	A32
Wired control panel	
Unit on / off	+
Fan speed control and setting	+
Filter clogging indication and control	Pressure sensor
Week schedule	+
Electric heater protection with auto restart	+
Electric heater protection with manual restart	+
Supply temperature control	+
Outer temperature sensor	+
Water heater frost protection	+
Return temperature sensor	+
Air damper control	+
Alarm indication	+
BMS Connection	ModBUS (RTU)
Humidity sensor	0-10 V or NO
CO <sub>2</sub> Sensor	0-10 V or NO
Exhaust fan control	on / off
Three-way valve control	+
Circulation pump control	+
Condensing unit control	0-10 V

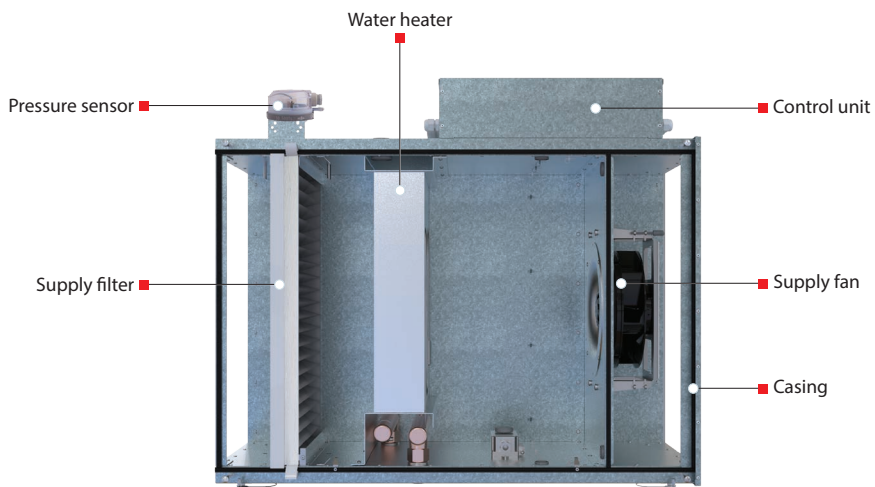
**Designation key**

Series	Rated air flow [m <sup>3</sup> /h]	Heater	Motor type	Modification	Controller type
<b>MPA:</b> air handling unit	700; 1000; 1500; 2000; 3000; 4000	<b>W:</b> water	<b>EC:</b> electronically-commutated motor	<b>L:</b> left <b>R:</b> right	<b>A31</b>

**Design of the MPA 700 W EC A31 unit**

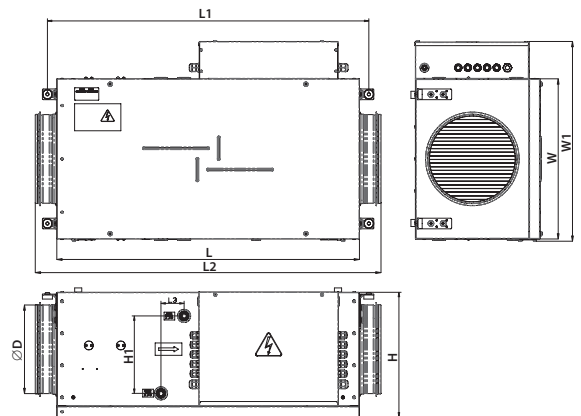


**Design of the MPA 1000-4000 EC A31 unit**

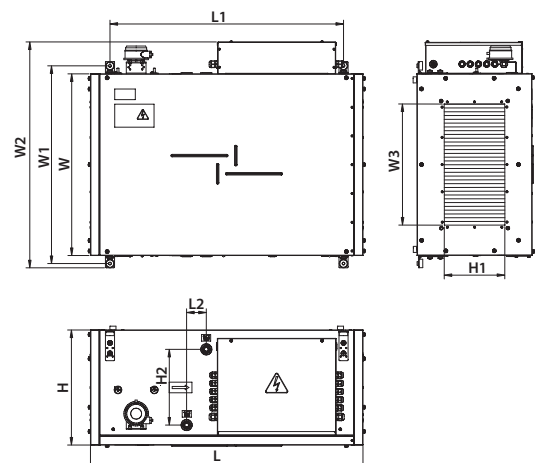


**Overall dimensions**

Model	Dimensions [mm]								
	ØD	L	W	H	L1	L2	L3	W1	H1
MPA 700 W EC A31	250	850	460	350	903	972	65	565	218



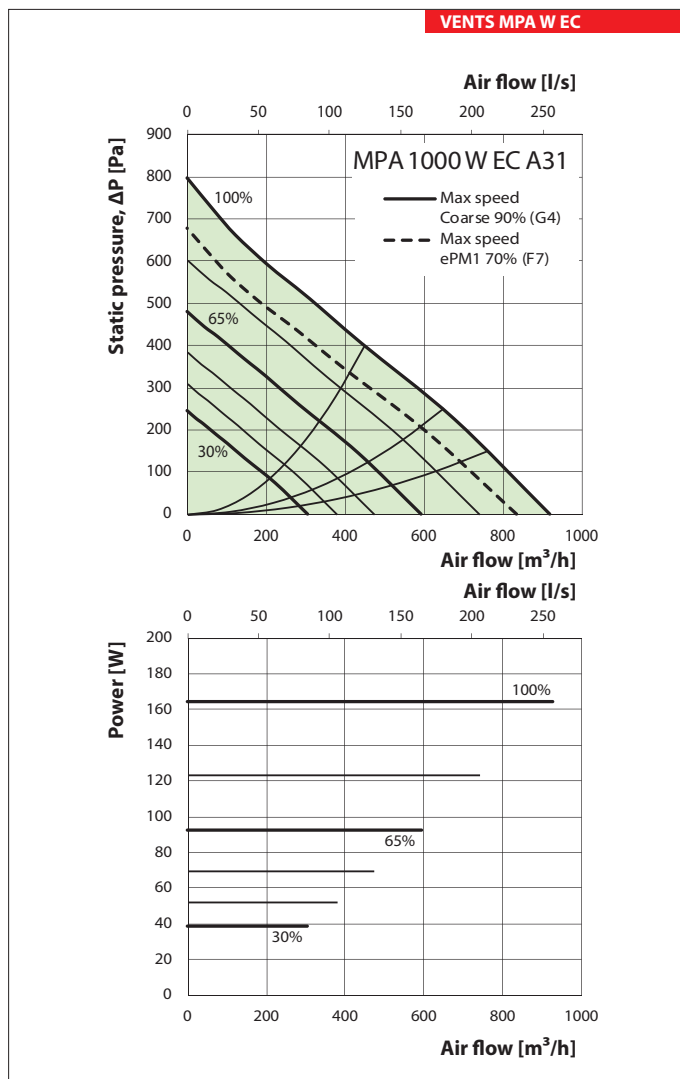
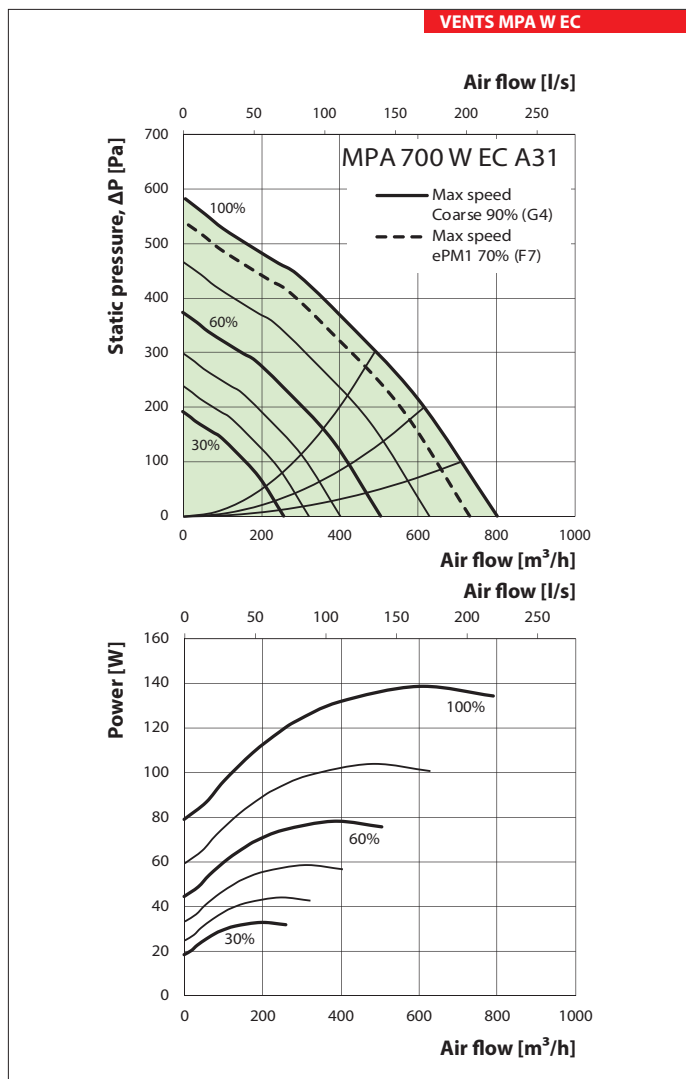
Model	Dimensions [mm]										
	L	W	H	L1	L2	W1	W2	W3	H1	H2	
MPA 1000 W EC A31	900	600	380	770	65	653	746	400	200	250	
MPA 1500 W EC A31	900	700	440	770	65	754	847	500	250	318	
MPA 2000 W EC A31	900	700	440	770	65	754	847	500	300	318	
MPA 3000 W EC A31	1200	800	500	1070	65	853	944	600	300	368	
MPA 4000 W EC A31	1200	940	550	1070	65	993	1087	700	400	380	



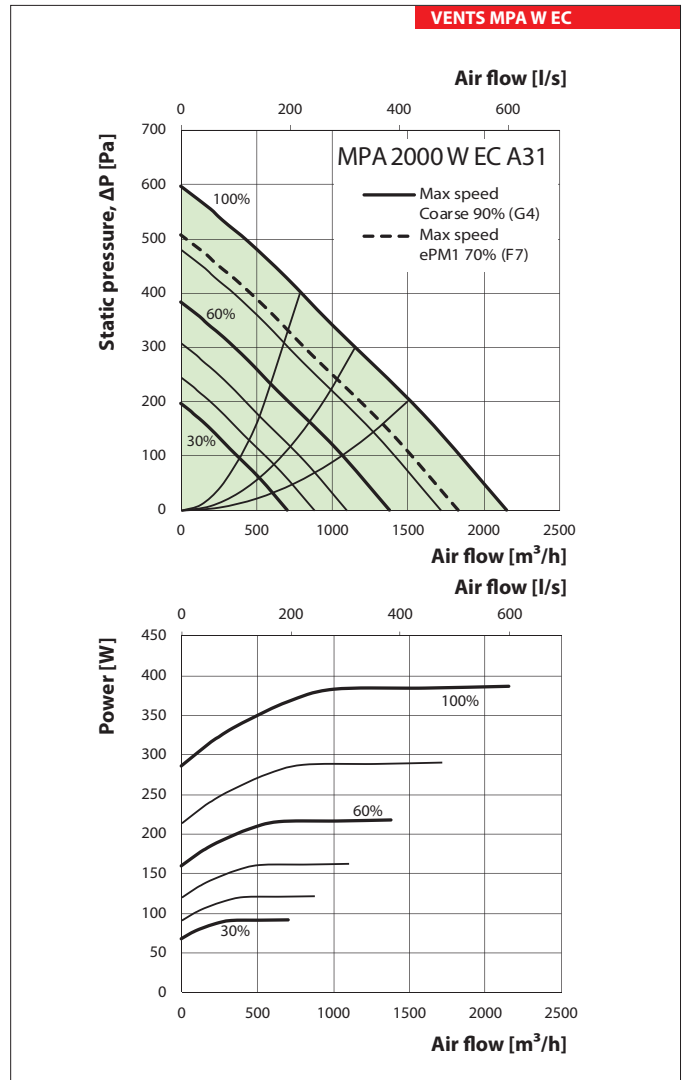
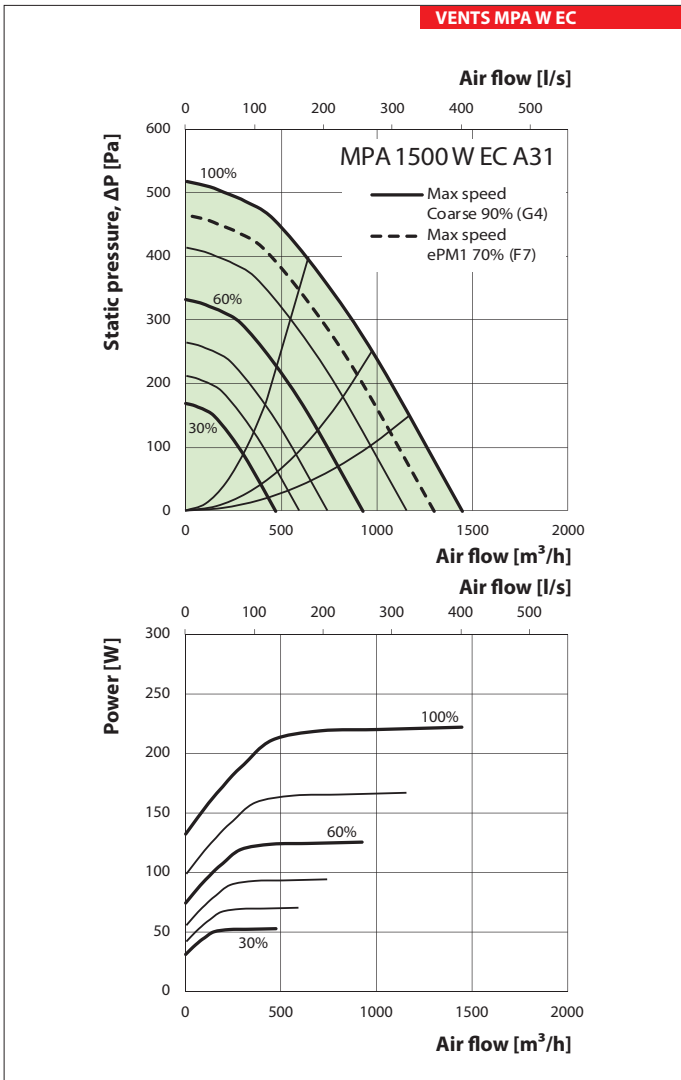
## SUPPLY UNITS

### Technical data

	MPA 700 W EC A31	MPA 1000 W EC A31
Supply voltage [V/50 Hz]	1~230	
The number of water heater rows	4	
Connection diameter of the heat exchanger [in]	3/4	1
Maximum fan power [kW]	0.139	0.165
Maximum fan current [A]	1.05	1.23
Maximum air flow [m <sup>3</sup> /h]	800	920
Maximum water temperature [°C]	150	150
Sound pressure level through the casing at a distance 3 m [dBA]	44	48
Transported air temperature [°C]	-30...+40	
Casing material	Aluzinc	
Insulation	30 mm, mineral wool	
Filter	Coarce 90% / G4 (option ePM1 70% / F7)	
Air duct connection dimensions [mm]	250	400 x 200
Weight [kg]	27	35



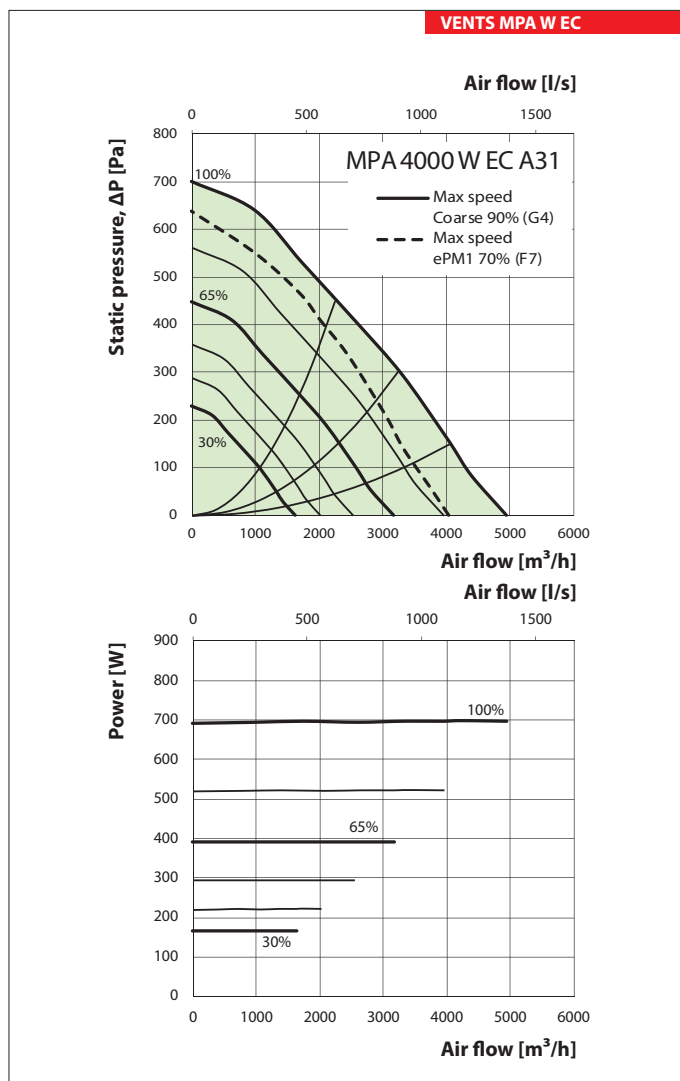
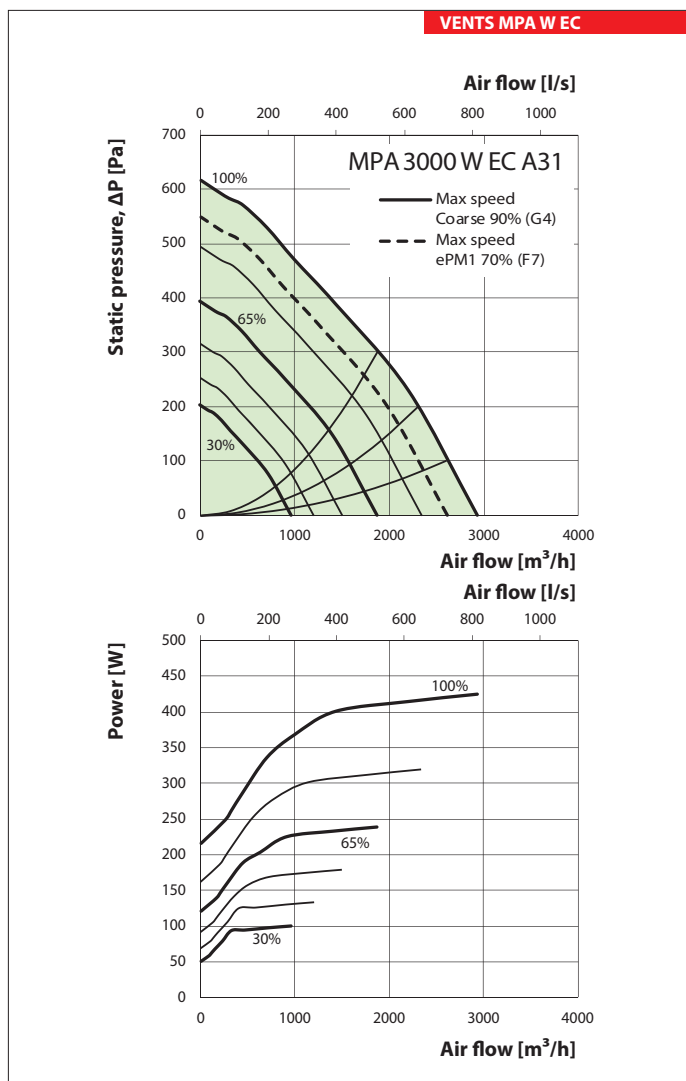
	MPA 1500 W EC A31	MPA 2000 W EC A31
Supply voltage [V/50 Hz]	1~230	1~230
The number of water heater rows	4	4
Connection diameter of the heat exchanger [in]	1	1
Maximum fan power [kW]	0.222	0.387
Maximum fan current [A]	1.6	1.7
Maximum air flow [m <sup>3</sup> /h]	1445	2150
Maximum water temperature [°C]	150	150
Sound pressure level through the casing at a distance 3 m [dBA]	49	53
Transported air temperature [°C]	-30...+40	
Casing material	Aluzinc	
Insulation	30 mm, mineral wool	
Filter	Coarse 90% / G4 (option ePM1 70% / F7)	
Air duct connection dimensions [mm]	500 x 250	500 x 300
Weight [kg]	49	45



## SUPPLY UNITS

### Technical data

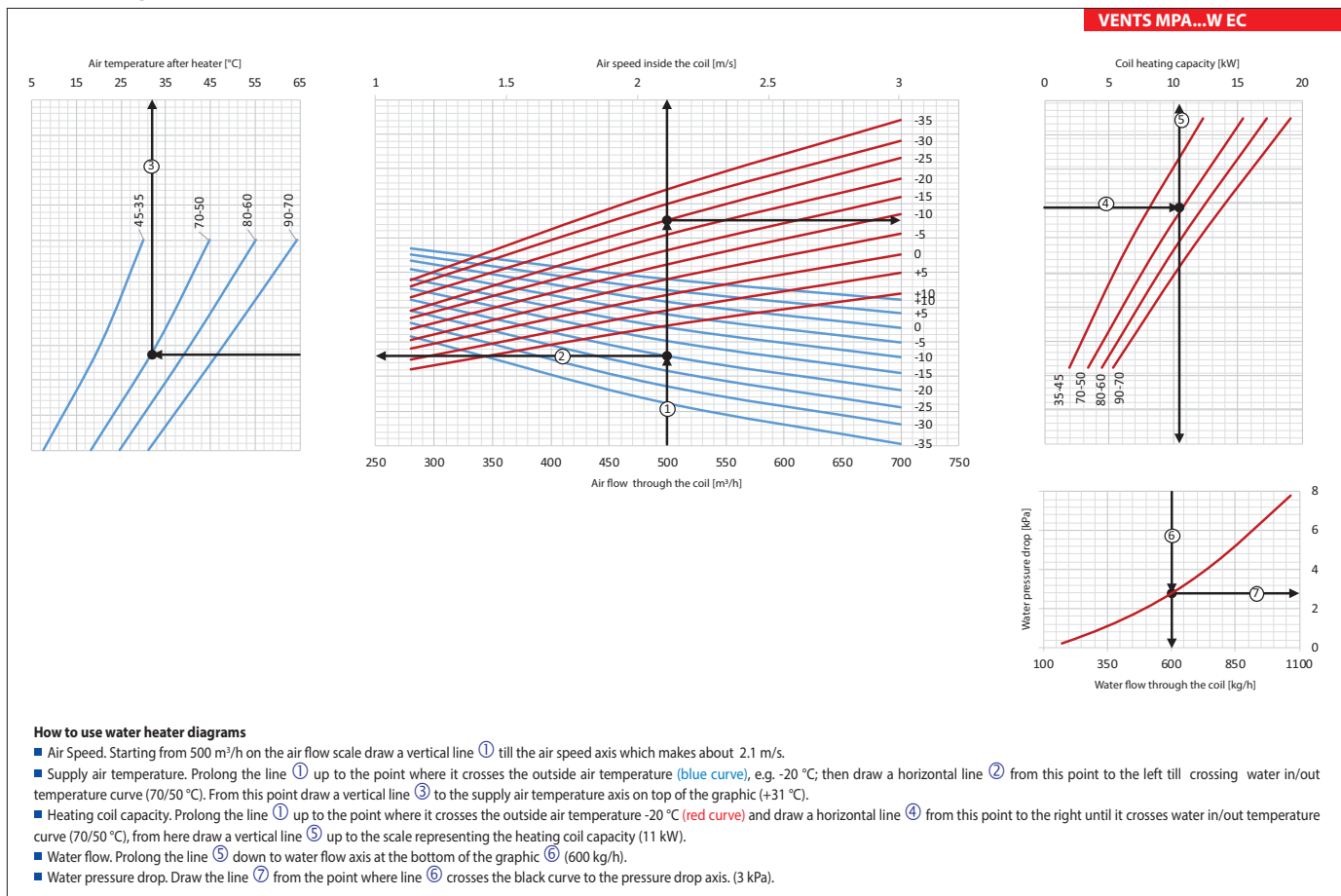
	MPA 3000 W EC A31	MPA 4000 W EC A31
Supply voltage [V/50 Hz]	1~230	1~230
The number of water heater rows	4	4
Connection diameter of the heat exchanger [in]	1 1/8	1 3/8
Maximum fan power [kW]	0.425	0.698
Maximum fan current [A]	1.8	1.06
Maximum air flow [m <sup>3</sup> /h]	2930	4950
Maximum water temperature [°C]	150	150
Sound pressure level through the casing at a distance 3 m [dBA]	52	54
Transported air temperature [°C]	-30...+40	
Casing material	Aluzinc	
Insulation	30 mm, mineral wool	
Filter	Coarce 90% / G4 (option ePM1 70% / F7)	
Air duct connection dimensions [mm]	600 x 300	700 x 400
Weight [kg]	50	58



**Accessories for air handling units**

Model	Filter Coarce/G4	Filter ePM1/F7	Flexible connector	Silencer	Air Damper	Electric actuator	
MPA 700 W EC A31	SF 384x287x48 Coarse 90% / G4	SF 384x287x48 ePM1 70% / F7	VVG 250	SR 250	KRV 250	TF230	TF24
MPA 1000 W EC A31	SF 536x316x48 Coarse 90% / G4	SF 536x316x48 ePM1 70% / F7	VVG 400x200	SR 400x200	RRV 400x200		
MPA 1500 W EC A31	SF 536x316x48 Coarse 90% / G4	SF 536x316x48 ePM1 70% / F7	VVG 500x250	SR 500x250	RRV 500x250		
MPA 2000 W EC A31	SF 636x376x48 Coarse 90% / G4	SF 636x376x48 ePM1 70% / F7	VVG 500x300	SR 500x300	RRV 500x300		
MPA 3000 W EC A31	SF 734x435x80 Coarse 90% / G4	SF 734x435x80 ePM1 70% / F7	VVG 600x300	SR 600x300	RRV 600x300		
MPA 4000 W EC A31	SF 874x485x80 Coarse 90% / G4	SF 874x485x80 ePM1 70% / F7	VVG 700x400	SR 700x400	RRV 700x400		

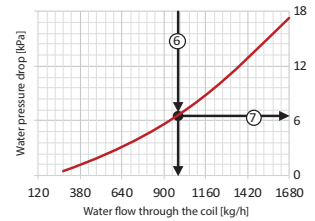
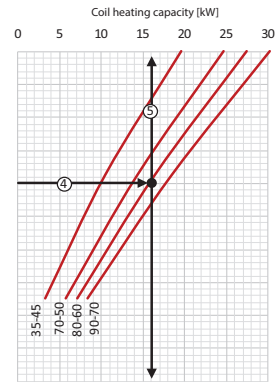
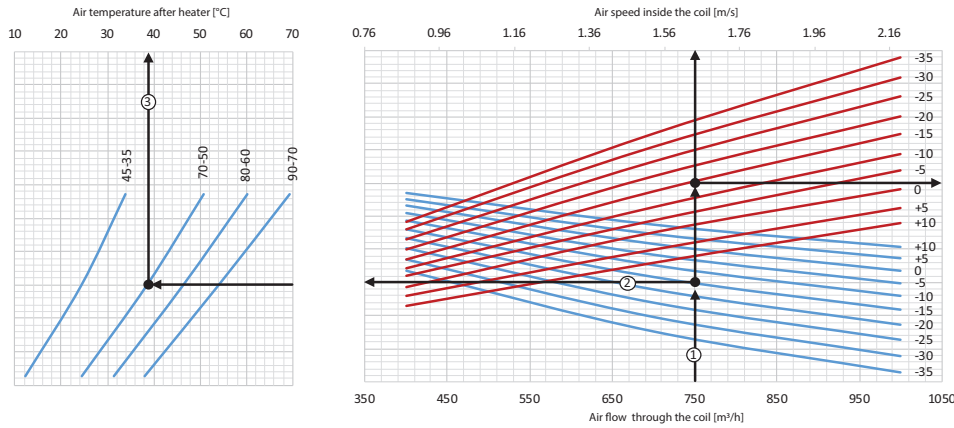
**Hot water coil parameters MPA 700 W EC A31**





Hot water coil parameters MPA 1000 W EC A31

VENTS MPA...W EC

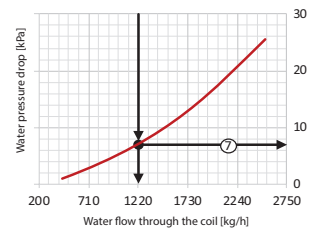
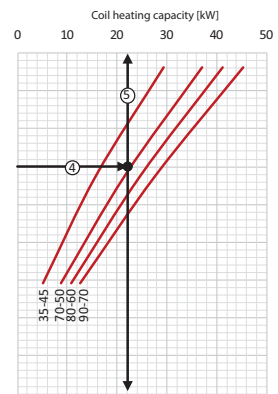
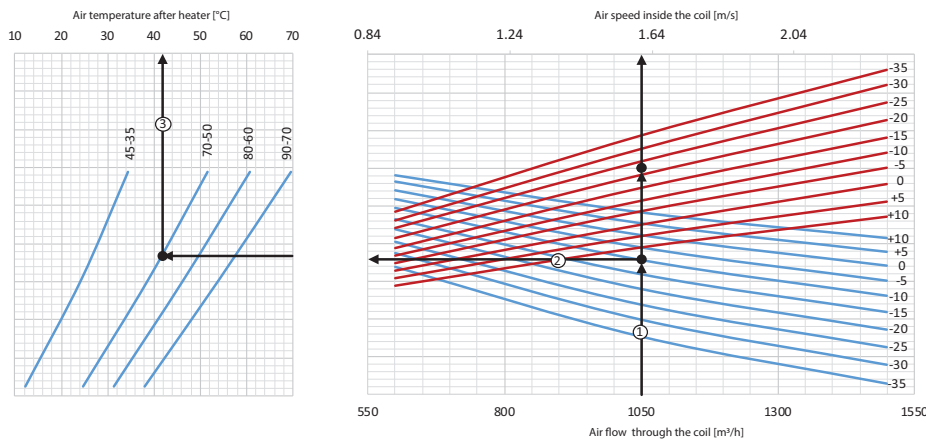


How to use water heater diagrams

- Air Speed. Starting from 750 m<sup>3</sup>/h on the air flow scale draw a vertical line ① till the air speed axis which makes about 1.6 m/s.
- Supply air temperature. Prolong the line ① up to the point where it crosses the outside air temperature (blue curve), e.g. -15 °C; then draw a horizontal line ② from this point to the left till crossing water in/out temperature curve (70/50 °C). From this point draw a vertical line ③ to the supply air temperature axis on top of the graphic (+39 °C).
- Heating coil capacity. Prolong the line ① up to the point where it crosses the outside air temperature -15 °C (red curve) and draw a horizontal line ④ from this point to the right until it crosses water in/out temperature curve (70/50 °C), from here draw a vertical line ⑤ up to the scale representing the heating coil capacity (16 kW).
- Water flow. Prolong the line ⑤ down to water flow axis at the bottom of the graphic ⑥ (1000 kg/h).
- Water pressure drop. Draw the line ⑦ from the point where line ⑥ crosses the black curve to the pressure drop axis. (6 kPa).

Hot water coil parameters MPA 1500 W EC A31

VENTS MPA...W EC

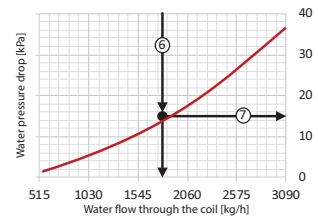
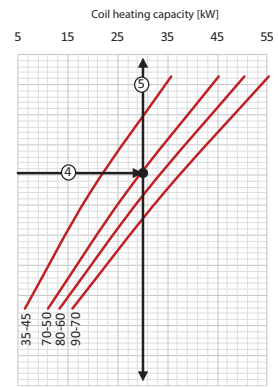
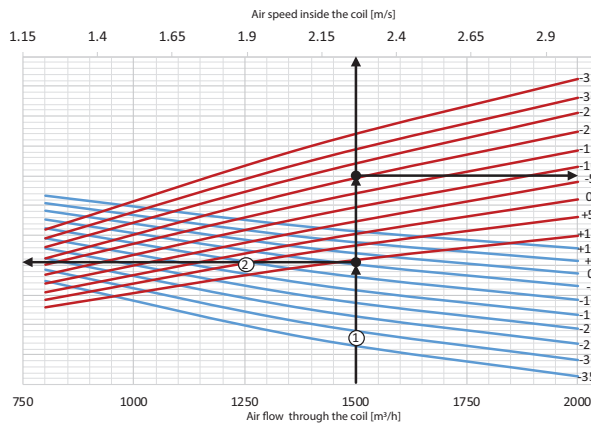
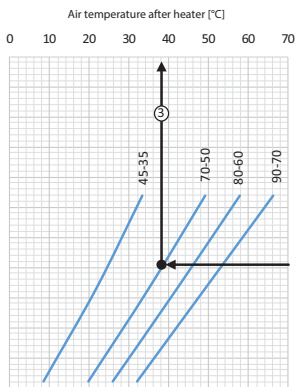


How to use water heater diagrams

- Air Speed. Starting from 1050 m<sup>3</sup>/h on the air flow scale draw a vertical line ① till the air speed axis which makes about 1.6 m/s.
- Supply air temperature. Prolong the line ① up to the point where it crosses the outside air temperature (blue curve), e.g. -10 °C; then draw a horizontal line ② from this point to the left till crossing water in/out temperature curve (70/50 °C). From this point draw a vertical line ③ to the supply air temperature axis on top of the graphic (+41 °C).
- Heating coil capacity. Prolong the line ① up to the point where it crosses the outside air temperature -15 °C (red curve) and draw a horizontal line ④ from this point to the right until it crosses water in/out temperature curve (70/50 °C), from here draw a vertical line ⑤ up to the scale representing the heating coil capacity (22 kW).
- Water flow. Prolong the line ⑤ down to water flow axis at the bottom of the graphic ⑥ (1220 kg/h).
- Water pressure drop. Draw the line ⑦ from the point where line ⑥ crosses the black curve to the pressure drop axis. (8.5 kPa).

### Hot water coil parameters MPA 2000 W EC A31

VENTS MPA...W EC

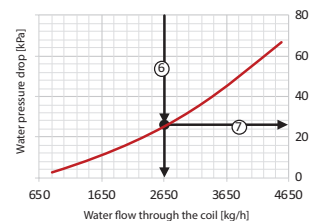
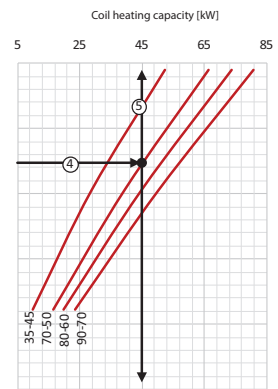
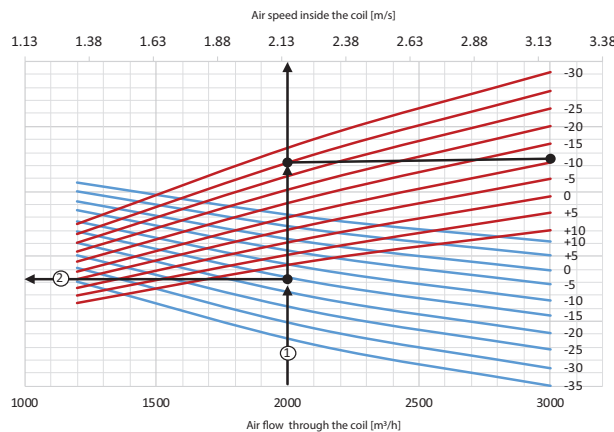
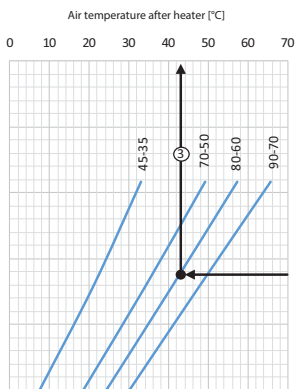


#### How to use water heater diagrams

- Air Speed. Starting from 1500 m<sup>3</sup>/h on the air flow scale draw a vertical line ① till the air speed axis which makes about 2.25 m/s.
- Supply air temperature. Prolong the line ① up to the point where it crosses the outside air temperature (blue curve), e.g. -5 °C; then draw a horizontal line ② from this point to the left till crossing water in/out temperature curve (70/50 °C). From this point draw a vertical line ③ to the supply air temperature axis on top of the graphic (+38 °C).
- Heating coil capacity. Prolong the line ① up to the point where it crosses the outside air temperature -15 °C (red curve) and draw a horizontal line ④ from this point to the right until it crosses water in/out temperature curve (70/50 °C), from here draw a vertical line ⑤ up to the scale representing the heating coil capacity (30 kW).
- Water flow. Prolong the line ⑤ down to water flow axis at the bottom of the graphic ⑥ (1750 kg/h).
- Water pressure drop. Draw the line ⑦ from the point where line ⑥ crosses the black curve to the pressure drop axis. (15 kPa).

### Hot water coil parameters MPA 3000 W EC A31

VENTS MPA...W EC



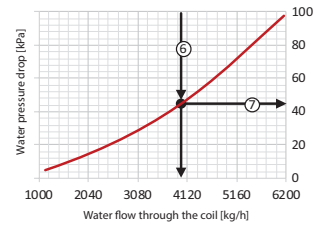
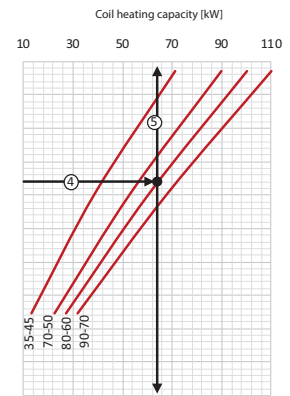
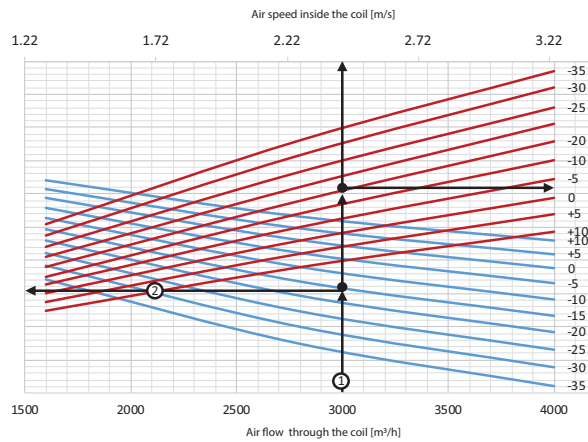
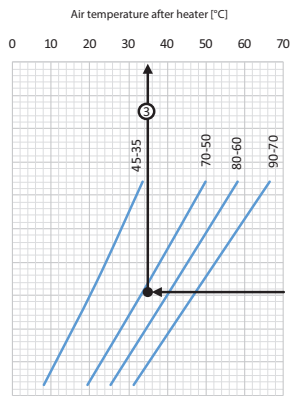
#### How to use water heater diagrams

- Air Speed. Starting from 2000 m<sup>3</sup>/h on the air flow scale draw a vertical line ① till the air speed axis which makes about 2.2 m/s.
- Supply air temperature. Prolong the line ① up to the point where it crosses the outside air temperature (blue curve), e.g. -15 °C; then draw a horizontal line ② from this point to the left till crossing water in/out temperature curve (80/60 °C). From this point draw a vertical line ③ to the supply air temperature axis on top of the graphic (+43 °C).
- Heating coil capacity. Prolong the line ① up to the point where it crosses the outside air temperature -15 °C (red curve) and draw a horizontal line ④ from this point to the right until it crosses water in/out temperature curve (80/60 °C), from here draw a vertical line ⑤ up to the scale representing the heating coil capacity (45 kW).
- Water flow. Prolong the line ⑤ down to water flow axis at the bottom of the graphic ⑥ (2650 kg/h).
- Water pressure drop. Draw the line ⑦ from the point where line ⑥ crosses the black curve to the pressure drop axis. (24 kPa).



Hot water coil parameters MPA 4000 W EC A31

VENTS MPA...W EC



How to use water heater diagrams

- Air Speed. Starting from 3000 m<sup>3</sup>/h on the air flow scale draw a vertical line ① till the air speed axis which makes about 2.5 m/s.
- Supply air temperature. Prolong the line ① up to the point where it crosses the outside air temperature (blue curve), e.g. -15 °C; then draw a horizontal line ② from this point to the left till crossing water in/out temperature curve (70/50 °C). From this point draw a vertical line ③ to the supply air temperature axis on top of the graphic (+35 °C).
- Heating coil capacity. Prolong the line ① up to the point where it crosses the outside air temperature -20 °C (red curve) and draw a horizontal line ④ from this point to the right until it crosses water in/out temperature curve (80/60 °C), from here draw a vertical line ⑤ up to the scale representing the heating coil capacity (65 kW).
- Water flow. Prolong the line ⑤ down to water flow axis at the bottom of the graphic ⑥ (4100 kg/h).
- Water pressure drop. Draw the line ⑦ from the point where line ⑥ crosses the black curve to the pressure drop axis. (45 kPa).