

EPO-V

Electric air heaters

EPO-V series electric heaters are used universally for the duct heating of air in ventilation systems, and for circulation heating in hot-air heating systems.

The heaters are installed in a duct connected to DUPLEX series ventilation units with heat recovery.

EPO-V heaters are available in two versions:

- circular with capacity from 0,9 kW to 12,0 kW
- rectangular with capacity from 6,0 to 54,0 kW

EPO-V series heaters contain the following as a standard:

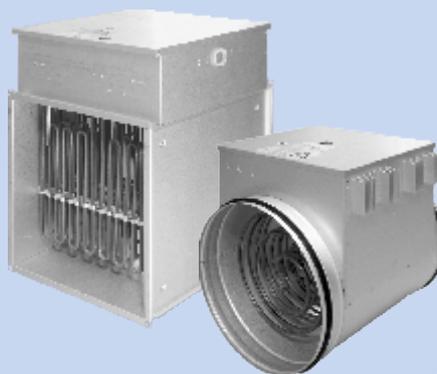
- Heating elements
- A built-in return protective thermostat for switching off the control circuit when the temperature exceeds +60 °C
- A built-in manual protective thermostat for switching off the control circuit when the temperature exceeds +100 °C (manual reset)
- Control electronics allowing to switch on the electric heater via a 6–24 V DC control signal.

Warning:

EPO-V series electric heaters are designed only for normal environments. The heaters have the degree of protection IP 44. Mounting position restrictions – see overleaf. The heater may be thermally insulated, the cover must remain permanently accessible. Cooling elements on the device must remain without thermal insulation.

The heaters must be positioned at a safe distance from flammable and easily combustible materials according to relevant regulations, and must be installed on a nonflammable material.

The heaters comply with CSN EN 60335-1 A11, A1 and CSN EN 60335-2-30 A1.



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Inlet air must not contain dust, impurities and corrosive substances. The air flow direction must follow the arrow on the heater (no return air flow may occur in the heater).

Connection to the mains must be made in accordance with valid regulations and standards and is subject to inspection.

Operating temperature is up to +40 °C at relative humidity up to 80 %.

The switching in of the heater should be only possible when the following conditions are met:

- Supply fan is in operation (interlocking)
- Run-down time for the cooling of heating elements exists (see the table)
- Minimum air flow rate is obtained (see the table)

TECHNICAL DATA

	Type	Size	Voltage *1) [V]	max. capacity [kW]	Reduced capacity *2) [kW]	Recommended protection [A]	Supply line size for cable CYKY *3)	min. air flow rate *4) [m ³ h ⁻¹]	min. run-down time of fans [s]
EPO-V 125 / 0,9	circular	ø125	1x 230 V ~	0,9	-	6	3J x 1,5	70	0
EPO-V 160 / 1,6	circular	ø160	1x 230 V ~	1,6	-	10	3J x 1,5	110	0
EPO-V 200 / 2,0	circular	ø 200	1x 230 V ~	2,0	-	10	3J x 2,5	170	0
EPO-V 200 / 3,0	circular	ø200	1x 230 V ~	3,0	-	16	3J x 2,5	170	60
EPO-V 250 / 2,0	circular	ø250	1x 230 V ~	2,0	-	10	3J x 2,5	170	0
EPO-V 250 / 3,0	circular	ø250	3x 400 V ~	3,0	-	3x 10	5J x 2,5	270	60
EPO-V 315 / 3,0	circular	ø315	3x 400 V ~	3,0	-	3x 10	5J x 2,5	270	60
EPO-V 315 / 6,0	circular	ø315	3x 400 V ~	6,0	-	3x 10	5J x 2,5	430	60
EPO-V 315 / 9,0	circular	ø315	3x 400 V ~	9,0	-	3x 16	5J x 2,5	430	60
EPO-V 315 / 12,0	circular	ø315	3x 400 V ~	12,0	-	3x 20	5J x 4	430	60
EPO-V 300 x 300 / 15,0	rectangular	300 x 300	3x 400 V ~	15,0	10	3x 25	5J x 4	490	60
EPO-V 500 x 250 / 6,0	rectangular	500 x 250	3x 400 V ~	6,0	-	3x 10	5J x 2,5	430	60
EPO-V 500 x 250 / 10,5	rectangular	500 x 250	3x 400 V ~	10,5	-	3x 20	5J x 4	680	60
EPO-V 500 x 300 / 24,0	rectangular	500 x 300	3x 400 V ~	24,0	16,0	3x 40	5J x 6	810	60
EPO-V 500 x 400 / 33,0	rectangular	500 x 400	3x 400 V ~	33,0	26,5/21,0	3x 63	4J x 10	1 100	60
EPO-V 600 x 300 / 9,0	rectangular	600 x 300	3x 400 V ~	9,0	-	3x 16	5J x 2,5	430	60
EPO-V 600 x 300 / 13,5	rectangular	600 x 300	3x 400 V ~	13,5	-	3x 25	5J x 4	970	60
EPO-V 600 x 500 / 45,0	rectangular	600 x 500	3x 400 V ~	45,0	37,5/30,0	3x 80	4J x 16	1 650	60
EPO-V 630 x 355 / 6,0	rectangular	630 x 355	3x 400 V ~	6,0	-	3x 10	5J x 2,5	430	60
EPO-V 630 x 500 / 12,0	rectangular	630 x 500	3x 400 V ~	12,0	-	3x 25	5J x 4	980	60
EPO-V 630 x 710 / 15,0	rectangular	630 x 710	3x 400 V ~	15,0	-	3x 25	5J x 4	980	60
EPO-V 800 x 500 / 54,0	rectangular	800 x 500	3x 400 V ~	54,0	45,0/36,0	3x 100	4J x 25	2 200	60

Notes: *1) The heaters are intended for a TN-C-S, TN-C supply.

*2) Capacity reduction is carried out at the producer's plant on request.

*3) The recommended dimensions correspond with the basic method of laying and arrangement of cables and the number of cables (separate and horizontal laying, open installation and ambient temperature of 30 °C). **The dimensioning of supply cables must be adapted to local regulations.**

*4) The minimum air flow rate is based on the minimum air velocity of 1.5 m/s. For heaters over 30kW minimum air velocity of 2.5 m/s.

DESIGN SOFTWARE



For the design of EPO-V series electric heaters take advantage of a specialized design software available on our website www.atrea.eu, or on our mailing address on request.

Atrea[®]

UNIT VENTILATORS & HEAT RECOVERY

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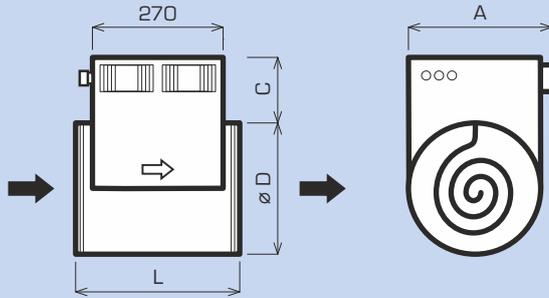


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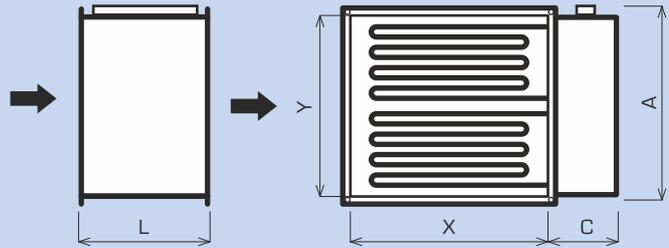
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DIMENSIONAL DRAWING

CIRCULAR



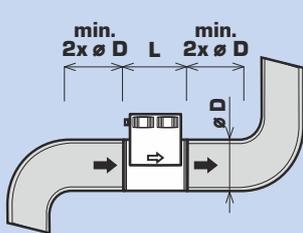
RECTANGULAR



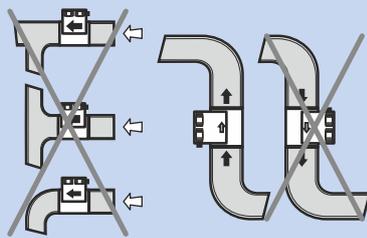
Type	ø D (mm)	X x Y (mm)	L (mm)	A (mm)	C (mm)	Weight (kg)
EPO-V 125 / 0,9	125	-	390	145	80	2,5
EPO-V 160 / 1,6	160	-	390	180	80	3,0
EPO-V 200 / 2,0	200	-	390	220	80	4,0
EPO-V 200 / 3,0	200	-	390	220	80	4,0
EPO-V 250 / 2,0	250	-	390	270	80	4,5
EPO-V 250 / 3,0	250	-	390	270	80	5,0
EPO-V 315 / 3,0	315	-	390	335	80	6,5
EPO-V 315 / 6,0	315	-	390	335	80	7,0
EPO-V 315 / 9,0	315	-	390	335	80	7,5
EPO-V 315 / 12,0	315	-	390	335	80	8,5
EPO-V 300 x 300 / 15,0	-	300 x 300	300	340	120	15,0
EPO-V 500 x 250 / 6,0	-	500 x 250	300	290	120	15,0
EPO-V 500 x 250 / 10,5	-	500 x 250	300	290	120	20,0
EPO-V 500 x 300 / 24,0	-	500 x 300	300	400	120	32,0
EPO-V 500 x 400 / 33,0	-	500 x 400	400	500	120	38,0
EPO-V 600 x 300 / 9,0	-	600 x 300	300	340	120	20,0
EPO-V 600 x 300 / 13,5	-	600 x 300	300	340	120	26,0
EPO-V 600 x 500 / 45,0	-	600 x 500	400	600	120	47,0
EPO-V 630 x 355 / 6,0	-	630 x 355	300	400	120	20,0
EPO-V 630 x 500 / 12,0	-	630 x 500	300	540	120	25,0
EPO-V 630 x 710 / 15,0	-	630 x 710	300	750	120	30,0
EPO-V 800 x 500 / 54,0	-	800 x 500	400	600	120	53,0

INSTALLATION CONDITIONS

DUCT NETWORK

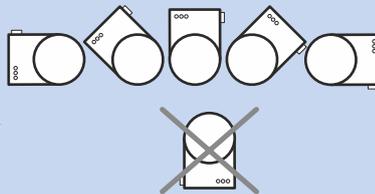


The straight duct length in front of and behind the heater must be at least the same as two diameters. On rectangular heaters the straight duct length must be at least the same as the diameter of the duct. Within this section there must be no cross-sectional increases or decreases, duct junctions or bends.

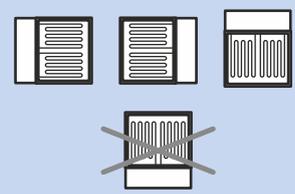


ACCEPTABLE POSITIONS OF THE TERMINAL BLOCK

CIRCULAR



RECTANGULAR



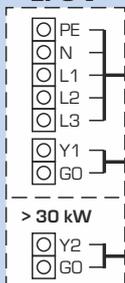
Provided that the above conditions are met, two heaters may be arranged in series one after the other.

When the heater is positioned horizontally, the cabinet of the control unit must always be above the heater or on its side, not below the heater.

The supply duct to humid or aggressive environments must be fitted with a spring return damper and there must be no return air flow through the heater.

ELECTRICAL CONNECTION

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Heater supply: ~ 230 V or 2x 400 V or 3x 400 V / 50 Hz
- For the recommended front-end protection and the cross-section of the CYKY supply cable see the table overleaf

Heater operation switch-on: digital signal (on / off)
6-24 V DC (Y1 = positive voltage, GO = ground)

Switch-on of the operation of the 2nd stage of heaters with capacity over 30 kW:
digital signal (on / off) 6-24 V DC (Y2 = positive voltage, GO = ground)

When an EPO-V heater is used together with a DUPLEX unit with built-in control, this control ensures that all conditions for the safe operation of the heater are met.

If an EPO-V heater is used separately or with another air handling appliance, its operation is only possible provided that the conditions specified overleaf are met.