

DESCRIPTION

The CV circular electric duct heaters are used for heating the ventilation air supplied to individual rooms and zones, with individually controlled temperatures. In correctly designed system, they can also heat the entire building. Circular electric duct heaters are also used for preheating or reheating for ventilation units. The duct heaters are available with built-in electronic regulator or for external control. An electronic flow monitor is also available, if required.

The casing is made of aluzinc-coated steel sheet. The duct heaters conform to air tightness class C to EN 1751. The junction box includes the necessary terminal blocks for the electrical connections. The duct connection is suitable for insertion mounting in circular ducts. The CV is produced to degree of protection IP43 to special order (not the –MQU and –MTU versions). All CV heaters have two overheating protections, one of which is with automatic reset and the other one with manual reset. All models can be equipped with a built-in relay with potential-free alarm contacts that indicate loss of power supply or tripping of the manually resettable overheating protection. Furthermore, all models with built-in control can also be supplied with a built-in electronic flow monitor. The flow monitor continually monitors the air flow and shuts down the heater if the air velocity drops below 1.5m/s, thus avoiding overheating. When the air velocity again exceeds 1.5m/s, the heater will automatically be switched on. A built-in regulator ensures simple installation, which lowers the installation cost and reduces the risk of incorrect wiring. Since control is electronic, it is entirely silent and sustains a minimum of water. The following models are available with built-in regulator:

- -MQU(L), -MTU(L), for one sensor;
- -MQEM(L), -MTEM(L), for two sensors;
- -MQXL, -MTXL, for 0...10V control signal.

The duct heaters can also be delivered without built-in regulator, and an external regulator must then be added. The following models are available for external regulator:

- -M(L);
- -E(L);
- -R(L).

Optional execution:

- other materials – the casing can be made of stainless steel, EN 1.4301, or of stainless acid-proof steel, EN 1.4404;
- anti-condensation insulation – the inside of the junction box is provided with additional 4mm thick insulation;
- degree of protection – the duct heaters can be made to degree of protection IP55 instead of the standard IP43 version (not –MQU and –MTU);
- duct heater with an outlet temperature higher than 40°C – available only in a rectangular version with circular connection;
- sizes larger than 400mm – available only in a rectangular version with circular connection;
- outputs higher than 12kW – available only in a rectangular version with circular connection;
- strengthened electrical insulation – available only in a rectangular version with circular connection.

Model's description

CV heaters		Description
MQU	circular electric duct heater with built-in control equipment for a room or a duct sensor	Duct heater with built-in temperature regulator for room or duct sensor. The heater can be reset for external set point adjustment or for set point adjustment on the heater cover. It also has a built-in electronic flow monitor which simplifies the installation since it can be installed "stand alone". The sensor and the set point adjuster are available as separate accessories.
MTU		Same as above but without built-in electronic flow monitor.
MQUL MTUL		Same as above but with built-in relay with potential-free alarm contacts that indicate loss of power supply or tripping of the manually resettable overheating protection.
MQEM	circular electric duct heater with built-in control equipment for two sensors and one min/max supply air sensor	Duct heater with built-in control equipment for room sensor with set point adjuster type TG-R340 and supply air sensor TG-K360. The required room air temperature is set on the adjuster TG-R430. The minimum and maximum supply air temperatures are set on the duct heater circuit board. This model has a built-in electronic flow monitor which simplifies the installation since it can be installed "stand alone". The sensor and the nearest set point adjuster are available as separate accessories.
MTEM		Same as above but without built-in electronic flow monitor.
MQEML MTEML		Same as above but with built-in relay with potential-free alarm contacts that indicate loss of power supply or tripping of the manually resettable overheating protection.
MQXL	circular electric duct heater with built-in control equipment for external 0...10V control signal	Duct heater with built-in control equipment for 0...10V control signal. This model has also a built-in electronic flow monitor which simplifies the installation since it can be installed "stand alone". The heater has a built-in relay with potential-free alarm contacts that indicate loss of power supply or tripping of the manually resettable overheating protection.
MTXL		Same as above but without built-in electronic flow monitor.
M	circular electric duct heater for external control equipment	Suitable control by PULSER or TTC type regulator. The overheating protection is reset manually on the duct heater cover. Ratings up to and including 9000W.
ML		Same as above but with built-in relay with potential-free alarm contacts that indicate loss of power supply or tripping of the manually resettable overheating protection.
R	circular electric duct heater for external control equipment	The built-in manual overheating protection is manually reset remotely by an external type RSI/RSU reset button with indicating lamp. The lamp will light up when the overheating protection has tripped. For 230V, a PULSER 220 R can be used which, in addition to the ordinary control functions, also has a built-in reset button and indicating lamp. For 400V, a PULSER or TTC and an external RSI/RSU reset button are used.
E		Suitable control by type TTC regulator. The built-in manual overheating protection are single-pole and must be connected to an external operating circuit. Rating of 12000W.

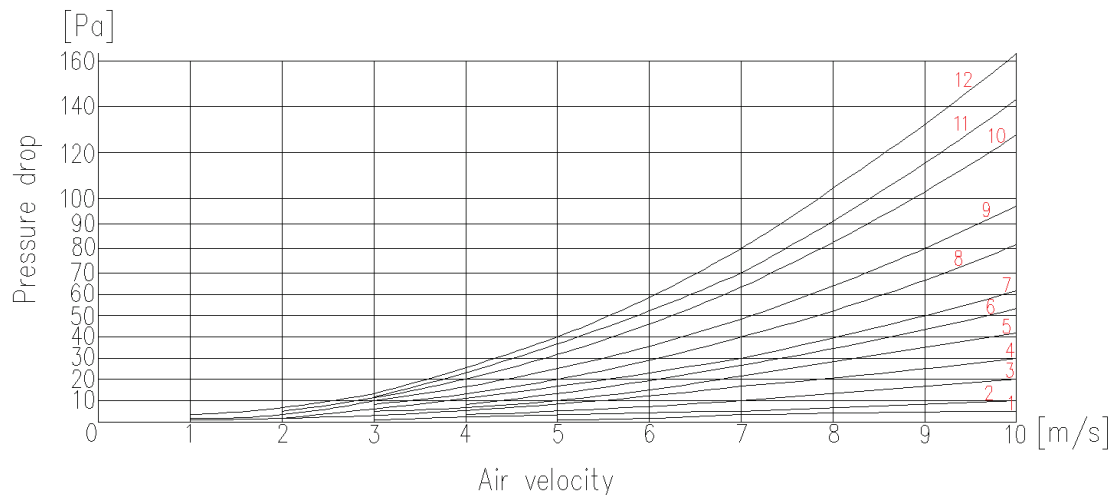
TECHNICAL SPECIFICATION

Size		CV10	CV12	CV16	CV20	CV25	CV31	CV40
Diameter		100	125	160*	200	250	315	400**
Minimum air flow rate [m ³ /h]		43	70	110	170	270	415	690
Rating	Voltage							
300W	230V~		x ³	x ²				
400W	230V~	x ³						
600W	230V~	x ³	x ⁵	x ³	x ²	x ¹		
900W	230V~		x ⁷	x ⁴	x ²	x ²	x ¹	
1200W	230V~		x ⁸	x ⁵	x ³	x ²	x ¹	
1500W	230V~		x ⁹	x ⁶	x ³	x ³	x ²	
1800W	230V~		x ¹⁰	x ⁶	x ⁴	x ³	x ²	
2100W	230V~			x ⁷	x ⁴	x ³	x ²	
2700W	230V~			x ⁸				
3000W	230V~				x ⁶	x ⁴	x ³	x ²
3000W	400V2~				x ⁶	x ⁴	x ³	x ²
3300W	400V2~			x ⁹				
5000W	400V2~			x ¹²	x ⁸	x ⁶	x ⁴	x ³
6000W	400V2~				x ⁹	x ⁷	x ⁴	x ³
5000W	400V3~			x ¹²				
6000W	400V3~				x ⁹	x ⁷	x ⁴	x ³
9000W	400V3~					x ⁹	x ⁶	x ⁴
12000W	400V3~					x ¹⁰	x ⁷	x ⁵

*Also available with 150mm dia. Delivered without rubber seals

**Also available with 355mm dia. Delivered without rubber seals.

- 1 – see pressure drop curve 1 7 – see pressure drop curve 7
 2 – see pressure drop curve 1 8 – see pressure drop curve 8
 3 – see pressure drop curve 3 9 – see pressure drop curve 9
 4 – see pressure drop curve 4 10 – see pressure drop curve 10
 5 – see pressure drop curve 5 11 – see pressure drop curve 11
 6 – see pressure drop curve 6 12 – see pressure drop curve 12



DIMENSIONS

