

Thyristor Modulating Electric Duct Heater

CBM Circular Electric Duct Heaters



Systemair NZ is a wholly-owned subsidiary of global HVAC leader Systemair Group. With 28 production facilities and sales organisations in 50+ countries, Systemair Group and Systemair NZ are **#ByYourSide**.

Simplicity and reliability:

The values and business concepts of Systemair Group are core; manufacture and market high-quality ventilation products. Based on our Group business concept and values, and with our customers in focus, we aim to be your most efficient and helpful partner in mastering your indoor air quality challenges.

Selection software:

We save you time and money with our fansSelect selection software and REVit plugin. Transposition errors caused by manually entering BIM data is a thing of the past.

Green Ventilation:

As the Green Ventilation solutions leader, our products have outstanding energy efficiency combined with well-thought-out material consumption and production methods. We actively develop solutions and techniques such as heat recovery, night cooling, and demand-control-ventilation for the New Zealand building market.

Quality and customer experience:

Your customer experience is always our priority. When you need an indoor air quality solution, we manage the process with you from quote to despatch. Our Customer Service Group is with you for the long-haul, just like our fans.

Testing:

We don't cut corners. Manufactured to the highest standard, we test every fan before leaving the factory for quality and performance. On-site acceptance testing is available by request.





- 6 sizes Ø 150-400 mm
- Output range 2-9kW
- Temperature sensor supplied with duct heater
- Integrated regulator (standard) or external feedback control (on request)
- Two integrated overheating protection devices
- Enclosed stainless tubular heating elements
- Minimising energy dissipated

CBM Circular Electric Duct Heaters

CBM circular electric duct heaters are used to heat the ventilation air for various rooms and areas with individually controlled temperatures. Circular electric duct heaters are also used for pre-heating or post-heating in air handling units and heat recovery units. The duct heaters have an integrated electronic regulator and are supplied with temperature sensors. They are also available with an external feedback control on request.



Unique Design

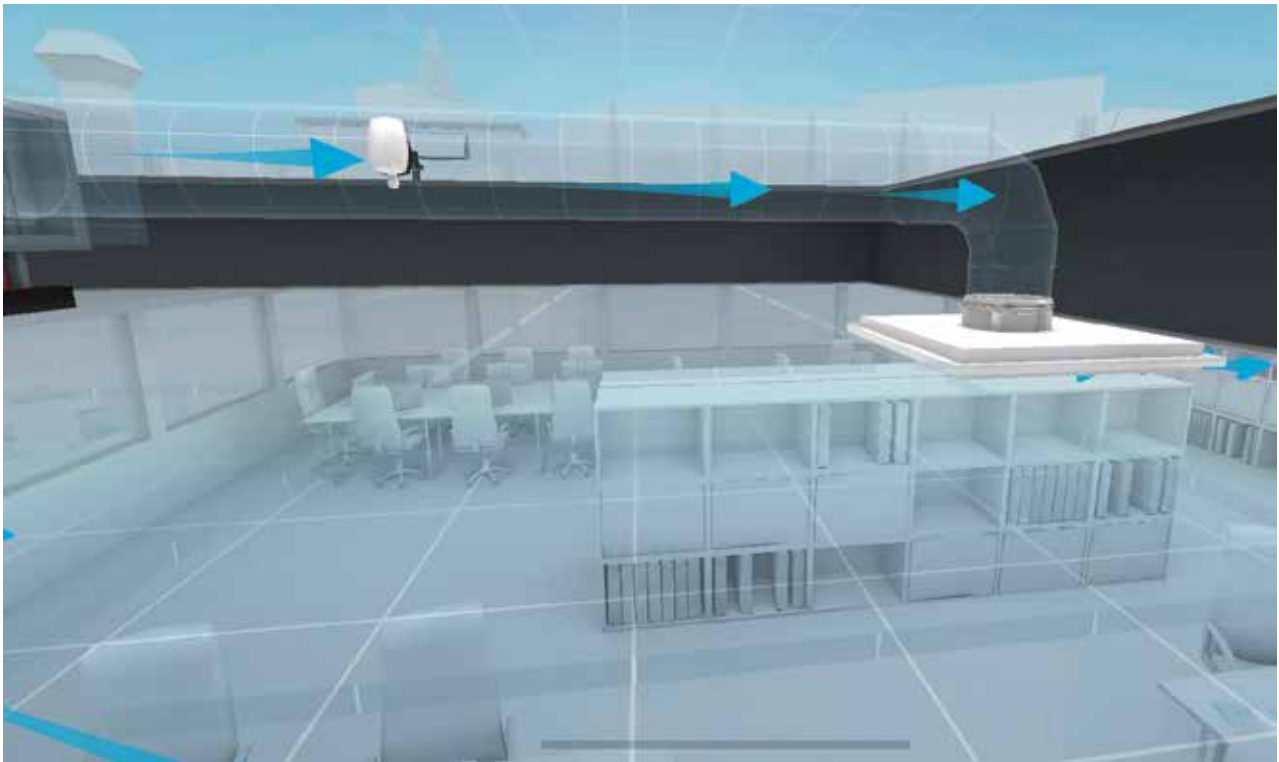
The casing is made of **Aluzinc-coated sheet steel** and the heating elements of **stainless steel, C4 anti corrosion class**. The junction box contains all the terminals required for electrical connection. The duct connection is suitable for push-in assembly in round ducts. All duct heaters are manufactured with an IP44 degree of protection. The design is accordance with AS/NZS3102-2002. The heaters are tested and in compliance with IEC60335.1 and IEC60335.2-30.

Overheating Protection

All models in the CBM series come with two overheating protection devices, one with an automatic reset at 70°C and the other with a manual reset at 110°C. These are connected in series with the heating elements upon delivery and therefore no connection to any external relay required. This provides increased security and lower installation costs. All duct heaters feature a reset button for the overheating protection on the heater cover.

Air Velocity

The duct heaters are manufactured for a minimum air velocity of 1.5 m/s.



Integrated Regulator

All duct heaters come with an integrated regulator which makes installation simple. This reduces both the installation cost and the risk of misconnections. **The regulator is electronic and regulates the output using a triac with so-called time-proportional control (pulse/pause technology).** This results in very accurate temperature control. Since feedback control is performed electronically and no mechanical contactor, its operation is completely noiseless and minimize wear and tear.

Duct Sensors

All duct heaters supplied with TG-K330 duct sensor. The duct sensor to be mounted in the outlet of duct heater to sensing the supply air temperature. The temperature setting can be adjusted on the heater cover.



TG-R430 as setpoint adjuster and room sensor

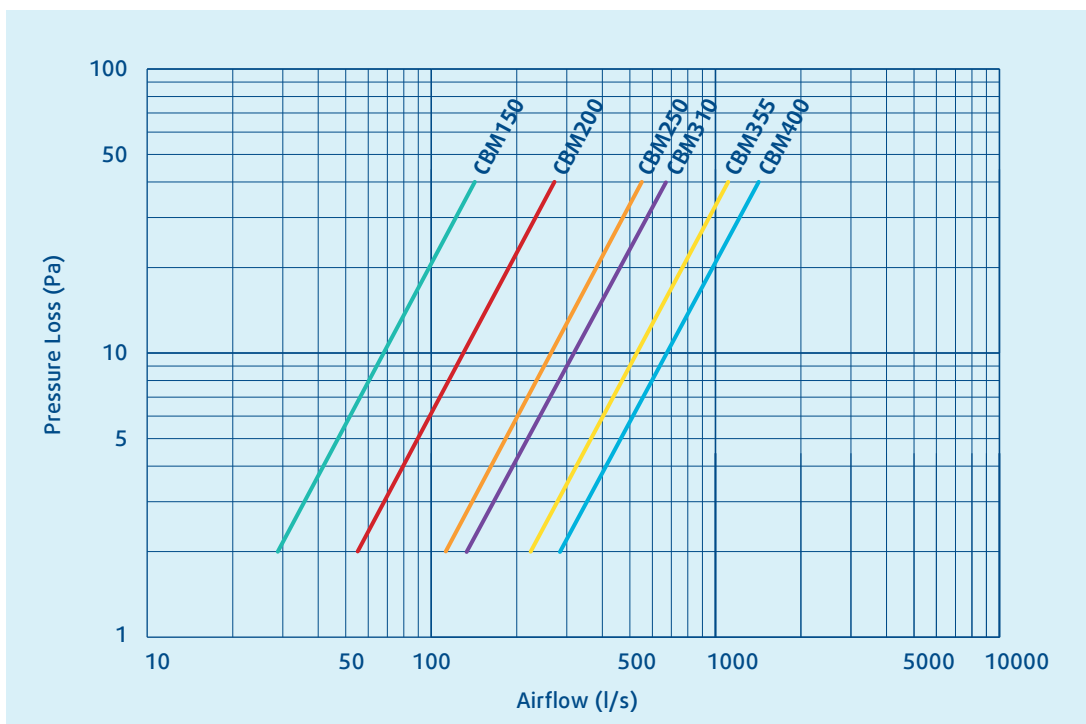


TG-K330 as sensor

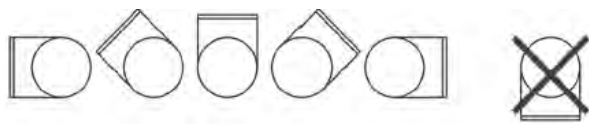
Technical Data

CBM		150-2,1	200-3,1	250-3,0	315-9,0	355-9,0	400-9,0
Art. no.		5481	7593	7595	5485	5486	5487
Connection ØD	mm	150	200	250	315	355	400
Voltage	V	230/1-	230/1-	230/1-	400/3-	400/3-	400/3-
Power	kW	2.1	3	3	9	9	9
Current	A	9.1	13.1	13.1	13	13	13
Weight	kg	3.3	4.3	4.8	7.5	8	8.5
Min. airflow	l/s	30	50	80	120	150	200
Wiring diagram		CBM-1	CBM-1	CBM-1	CBM-3	CBM-3	CBM-3

Pressure Drop Chart



Installation



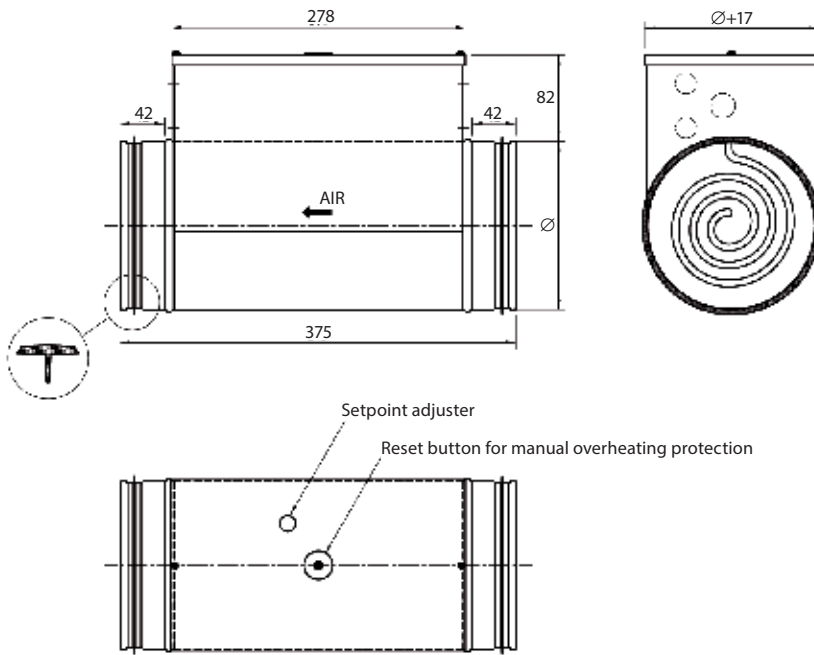
These duct heaters can be mounted in horizontal or vertical ducts. The air flow through the duct heater must follow the air direction arrow on the duct heater. In horizontal ducts, the junction box must be installed pointing up or rotated to the sides by up to 90°. Installation with the junction box pointing down is not allowed. **The distance to or from a duct bend, fan, damper, etc. must be at least equal to twice the connection diameter.**

Interlocking with Fan/Air Flow

Electric duct heaters must always be installed in such a way that they are interlocked with the fan that blows air into the duct or with the air flow streaming through the heater. The power feed to the duct heater must be cut off, should the fan be shut off or if the air flow ceases.

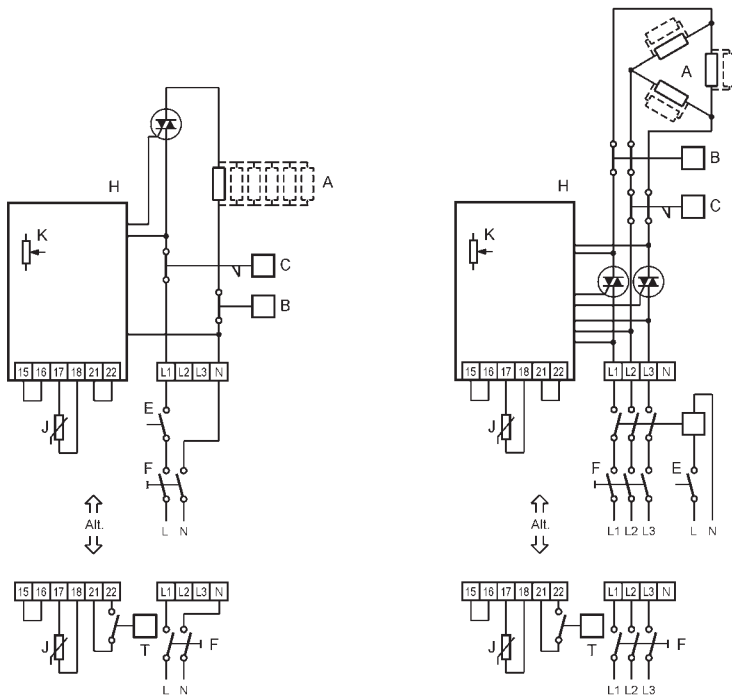
All CBM duct heaters have a dry contact input that opens to disable the heater. The dry contact can be a pressure switch or flow switch, or from a Building Management System.

Dimensions



Wiring Diagram

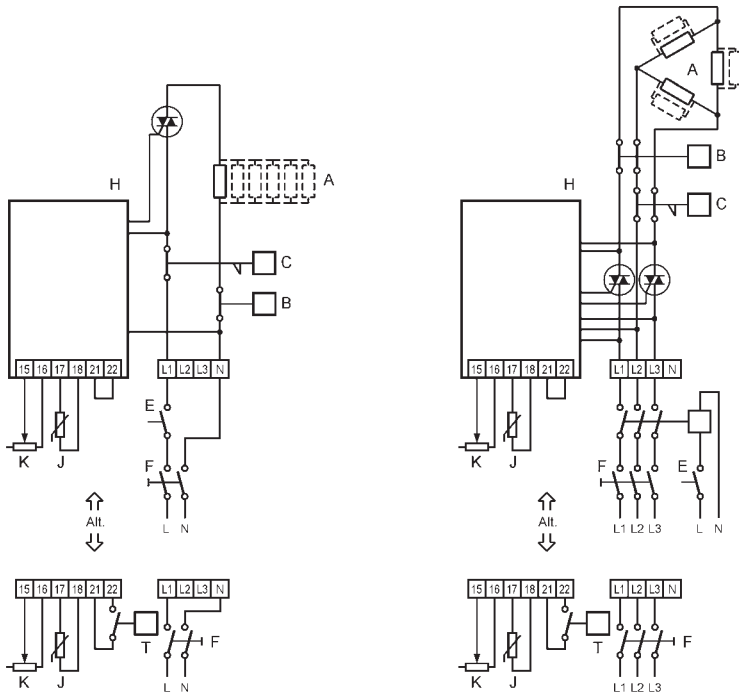
Option1: Internal Temperature Setting



CBM-1i (230V~)

CBM-3i (400V 3~ / 230V 3~)

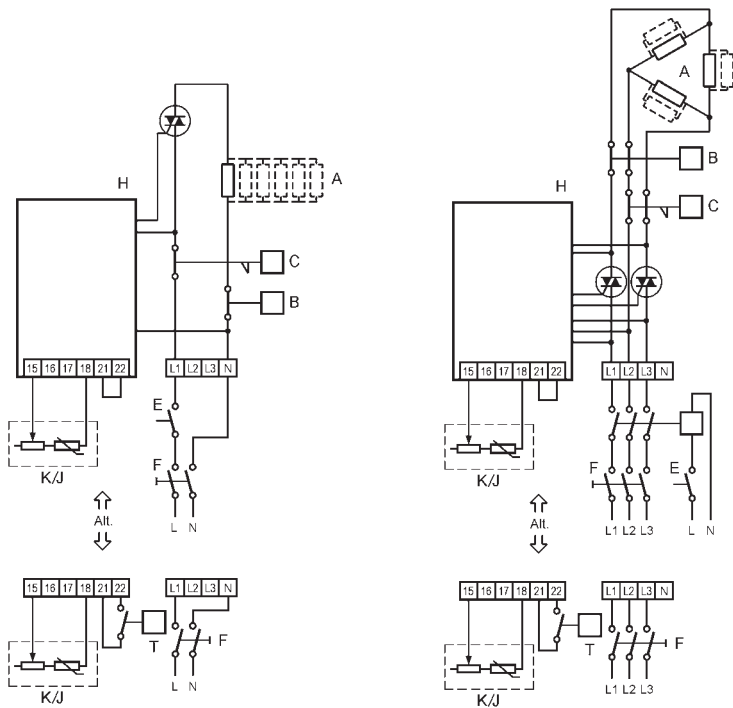
Option2: External Temperature Setting



CBM-1e (230V~)

CBM-3e (400V 3~ / 230V 3~)

Option3: External Temperature Setting with Room Sensor



CBM-1e (230V~)

CBM-3e (400V 3~ / 230V 3~)



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