Electric duct heater

OMH duct heaters are designed to heat clean air in ventilation systems and to preheat air handling units. Corrosion resistant casing with excellent thermal reflectivity is made from AluZinc. Duct connection is with rolled rubber seals, duct heater elements are made from stainless steel. To ensure safety in duct heaters are installed 2 protection thermostats and screw terminals for easy connection.
To ensure long service time of heaters, heaters casing is manufactured from AluZinc coated steel and heating elements from stainless steel AISI 304. AluZinc for heaters casing was selected for it's properties:
› Good corrosion resistance at high temperatures (up to 315°C).
› Excellent thermal reflectivity.
› Good abrasion resistance because of its surface hardness.
› Durability: under normal conditions the AZ 150 coating grade will protect the steel substrate from corrosion for a minimum period of 15 years.

Double overheat protection.
To ensure security in case of fire in all electric air heaters are installed 2 heat protection thermostats:
› First overheat protection automatically activates if temperature reaches 50°C, then protection disconnects heating elements, until it has cooled. When the temperature falls to the working temperature, heater automatically switches on.
› Second overheat protection automatically activates if temperature reaches 100°C, then protection disconnects heating elements, until it has cooled. In this case need to figure the cause of the overheating of the heater. Heater needs to be reset manually with the pushbutton on the heaters casing.

Duct connection.
For easy duct connection heaters casing is with rolled rubber seals.

Heaters with built-in control.
Electric duct heaters with built-in control has installed internal controller EKR-KN which works by algorithm impulse/pause that enables fine temperature control. Regulator controls load by triacs without moving parts, which causes no-noise commutation.

MARKING

OMH	-	G	-	GNV	-	GNI	-	GNIS	-	GNV-PTC	PS
1		2		3		4		5		6	7

OMH – circular duct heater
G – heater type.
GNV - you can set temperature of heater with potentiometer installed on heaters casing.
GNI - you can set temperature from distance with wired remote potentiometer ***TR5K.*** *(ART. 105986)*
GNIS – heater control from distance with 0 – 10V signal.

Executions: 1x230V, 1x400V, 3x400V.

According to list

***PTC** – heater with installed air flow sensor.*
***PS** – heater with installed pressure sensor.*
PTC/PS type can be marked also as NV PH if temperature setpoint of the heater -20°C to -5°C.

CIRCULAR DUCT HEATER TYPES

Model	Control	Control type
OMH	External controller EKR	External control
G	Built-in controller EKR KN NV	Control on heaters casing, default temperature setpoint 0°C ... +30°C
GNV.PTC	Built-in controller EKR KN NV PTC/PS EKR KN PH	Control on heaters casing, default temperature setpoint -10°C ... +50°C. Air flow sensor and pressure sensor are installed inside the heater. Difference between heaters is EKA NV PTC/PS and EKA NV PH, that EKA NV PH temperature setpoint is -20°C iki -5°C.
GNI	Built-in controller EKR KN NI	Remote control with wired potentiometer, default temperature setpoint 0°C ... +30°C
GNIS	Built-in controller EKR KN NIS	0-10V control

In heaters type NV PTC/PS are installed controllers with default temperature setpoint -10°C ... +50°C, on your needs we can install controllers with different temperature setpoints:

-40°C till -10°C	0°C till +30°C	-5°C till 0°C
-20°C till -5°C	-10°C till 0°C	-20°C till +30°C
-10°C till +40°C	-	-

The company reserves the right to make changes of technical data without prior notice

ACCESSORIES

Controller for electrical heater	Controller for electrical heater	Controller for electrical heater	Controller for electrical heater	Controller for electrical hea	Temperature sensor
				 ter	
EKR 6.1 P.7	EKR 15.1 P.8	EKR 15.1P P.8	EKR 30 P9	EKR 30P P.9	TJK-10K 106331

CONTROL

Model	Controlled load [kW]	Extra load control*	Full load	Relay output	Voltage output**
EKR15.1	15 kW	Up to 12 kW	27 kW	1x5A/230V	3x230/3x400
EKR15.1P	15 kW	Up to 225 kW	240 kW	4x5A/230V	3x230/3x400
EKR30	30 kW	Up to 42 kW	42 kW	1x5A/230V	3x230/3x400
EKR30P	30 kW	Up to 420 kW	450 kW	4x5A/230V	3x230/3x400

** Extra load control with contactor.*
*** Available voltage 3x230V, according to the current selected controlled power.*

Model	Controlled load [kW]	Maximum controlled current [A]	Voltage output
EKR 6.1	6,4 kW/400V	16 A	2x400V
	3.2 kW/230V		1x230V

CIRCULAR DUCT HEATERS POWER & DIMENSIONS

All circular duct heaters EKA regardless of the type can be produced in following dimensions and power:

Type	Diameter	Min. airflow [m³/h]	Voltage [V/50Hz]	Power [kW]
EKA (NV, NV PTC/PS, NV PH, NI, NIS)	100	40	1x230	0.3, 0.6, 0.9, 1.2
EKA (NV, NV PTC/PS, NV PH, NI, NIS)	125	70	1x230	0.3, 0.6, 0.9, 1.2, 1.8, 2.4
EKA (NV, NV PTC/PS, NV PH, NI, NIS)	160	110	1x230	0.3, 0.6, 0.9, 1.2, 1.8, 2.4
			2x400	3.0, 5.0, 6.0
			3x400	6.0
EKA (NV, NV PTC/PS, NV PH, NI, NIS)	200	170	1x230	0.9, 1.2, 1.8, 2.4, 3.0
			2x400	3.0, 5.0, 6.0
			3x400	6.0
EKA (NV, NV PTC/PS, NV PH, NI, NIS)	250	270	1x230	1.2, 2.0, 2.4, 3.0
			2x400	3.0, 5.0, 6.0
			3x400	6.0, 9.0, 12.0
EKA (NV, NV PTC/PS, NV PH, NI, NIS)	315 315	415 550	1x230	1.2, 2.0, 2.4, 3.0
			2x400	3.0, 5.0, 6.0
			3x400	6.0, 9.0, 12.0
EKA (NV, NV PTC/PS, NV PH, NI, NIS)	400	690	1x230	3.0, 5.0, 6.0
			2x400	3.0, 5.0, 6.0
			3x400	6.0, 9.0, 12.0, 15.0, 18.0
EKA (NV, NV PTC/PS, NV PH, NI, NIS)	500	1060	2x400	3.0, 5.0, 6.0
			3x400	6.0, 9.0, 12.0, 15.0, 18.0, 24.0

18.0 and 24.0 kW heaters are produced on customers request.

Production time can be longer as usually.

270 mm – dimension for heaters up to 12kW

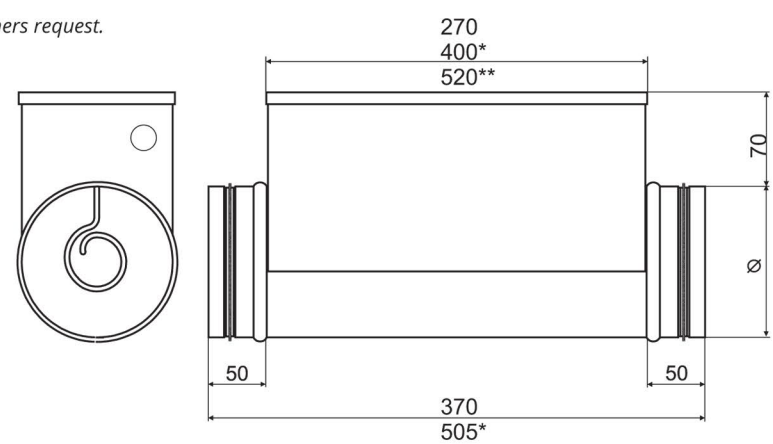
400 mm – dimension for 12 kW heaters

520 mm – dimension for 15 kW heaters

370 mm – dimension for heaters up to 12kW

505 mm – dimension for 12 kW heaters

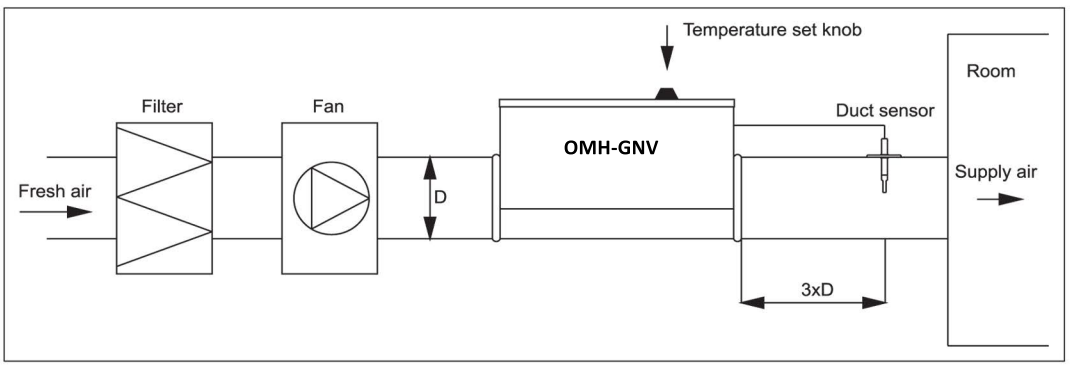
630 mm – dimension for 15 kW heaters



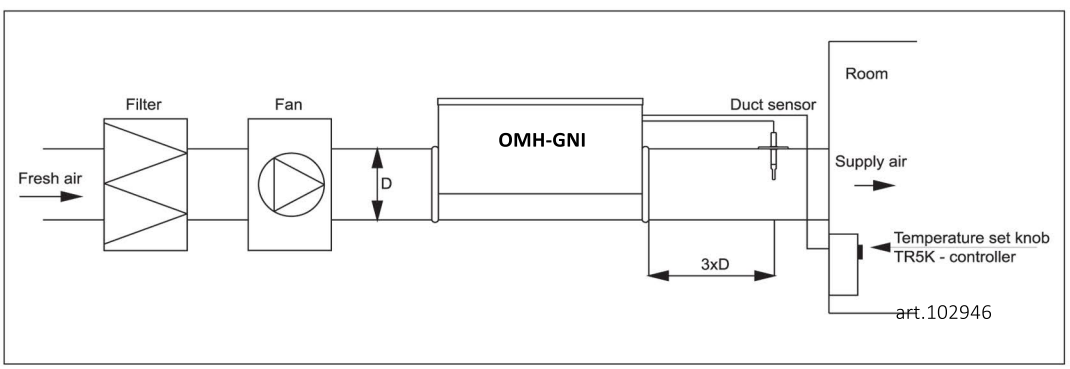
See also aditional list for more available executions.

The company reserves the right to make changes of technical data without prior notice

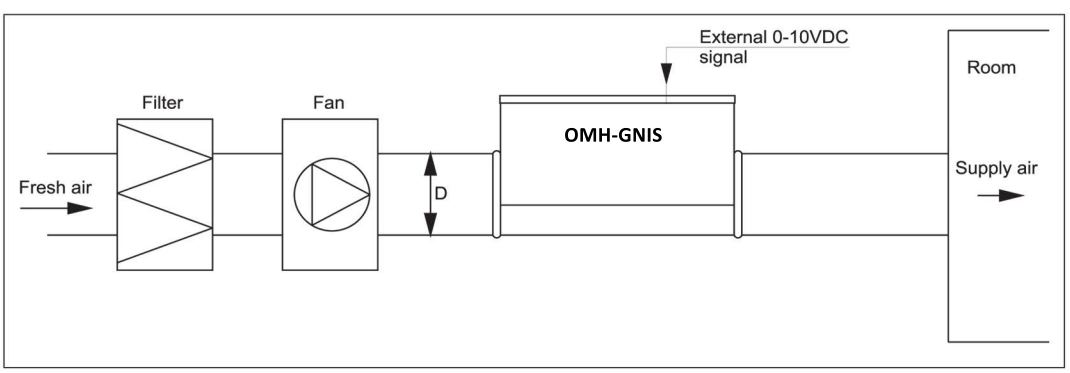
OMH-GNV connection diagram



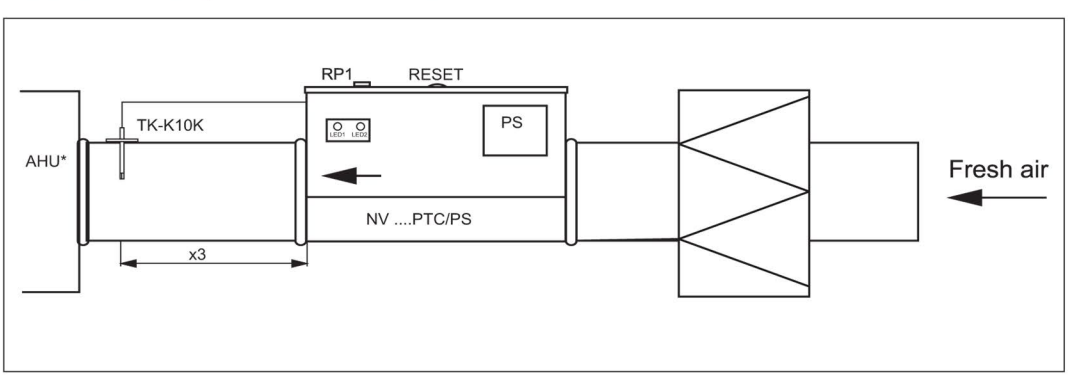
OMH-GNI connection diagram



OMH-GNIS connection diagram



Installation example OMH-GNV.PTC/PS



OMH-GNV.PH

Electric duct heater

Electric heaters are designed to heat clean air in ventilation systems. Casing is made from aluzinc coated steel which is high temperature proof. Heating elements tube is made from stainless steel AISI 304. Heaters are equipped with 2 protection thermostats, pressure switch, supply air sensor, air flow sensor, screw terminals for easy connection. Casing is with rubber seals for duct connection. Heaters can be installed vertically or horizontally. Maximum output air temperature 50°C.

Type	Type of preheater	Number of phases	[kW]*	Air flow based on the outside temperature, [m³/h]		
				-10°C	-15°C	-23°C
RIS 200VE/VW 3.0	EKA NV 125-0,3-1/PH	1	0,3	167	83	46
	EKA NV 125-0,6-1/PH	1	0,6	333	167	93
	EKA NV 125-0,9-1/PH	1	0,9	500	250	139
	EKA NV 125-1,2-1/PH	1	1,2	667	333	185
RIS 400VE/VW 3.0	EKA NIS 160-0,3-1/PH	1	0,3	167	83	46
	EKA NIS 160-0,6-1/PH	1	0,6	333	167	93
	EKA NIS 160-0,9-1/PH	1	0,9	500	250	139
	EKA NIS 160-1,2-1/PH	1	1,2	667	333	185
RIS 400PE/PW EKO 3.0	EKA NIS 200-0,9-1/PH	1	0,9	333	167	139
	EKA NV 200-1,5-1f/PH	1	1,5	-	410	225
	EKA NV 200-3,0-1f/PH	1	3,0	-	-	450
RIS 700HE/HW 3.0 RIS 700VE/VW 3.0 RIS 700PE/PW EKO 3.0	EKA NV 250-0,6-1/PH	1	0,6	333	167	93
	EKA NV 250-0,9-1/PH	1	0,9	500	250	139
	EKA NV 250-1,2-1/PH	1	1,2	667	333	185
	EKA NV 250-2,0-1/PH	1	2,0	-	556	309
	EKA NV 250-5,0-2/PH	1	5,0	-	-	772
RIS 1200HE/HW 3.0 RIS 1200VE/VW 3.0	EKA NV 315-1,0-1/PH	1	1,0	556	278	154
	EKA NV 315-1,2-1/PH	1	1,2	667	333	185
	EKA NV 315-2,0-1/PH	1	2,0	1111	556	309
	EKA NV 315-3,0-1/PH	1	3,0	-	833	463
	EKA NV 315-5,0-2/PH	1	5,0	-	1389	772
	EKA NV 315-6,0-3/PH	1	6,0	-	-	926
RIS 1900HE/HW 3.0 RIS 1900VE/VW 3.0	EKA NV 400-1,0-1/PH	1	1,0	556	278	154
	EKA NV 400-1,2-1/PH	1	1,2	667	333	185
	EKA NV 400-2,0-1/PH	1	2,0	1111	556	309
	EKA NV 400-5,0-2/PH	2	5,0	-	1389	772
	EKA NV 400-6,0-3/PH	3	6,0	-	1667	926
	EKA NV 400-9,0-3/PH	3	9,0	-	-	1389
	EKA NV 400-12,0-3/PH	3	12,0	-	-	1852
RIS 1200PE/PW EKO 3.0	EKS NV 500x250x370/3/PH	1	3,0	-	833	463
	EKS NV 500x250x370/5/PH	2	5,0	-	1389	772
	EKS NV 500x250x370/9/PH	3	9,0	-	-	1230

OMH-GNV.PH

Type	Type of preheater	Number of phases	[kW]*	Air flow based on the outside temperature, [m³/h]		
				-10°C	-15°C	-23°C
RIS 2500HE/HW 3.0	EKS NV 600x350x370/3/PH	1	3,0	1667	833	463
	EKS NV 600x350x370/6/PH	3	6,0	-	1667	926
	EKS NV 600x350x370/9/PH	3	9,0	-	2500	1389
	EKS NV 600x350x370/12/PH	3	12,0	-	-	1852
	EKS NV 600x350x370/15/PH	3	15,0	-	-	2315
RIS 1900PE/PW EKO 3.0	EKS NV 700x300x370/5/PH	2	5,0	-	1389	772
	EKS NV 700x300x370/9/PH	3	9,0	-	-	1389
	EKS NV 700x300x370/12/PH	3	12,0	-	-	1852
RIS 2500PE/PW EKO 3.0	EKS NV 700x400x370/5/PH	2	5,0	2750	1389	680
	EKS NV 700x400x370/9/PH	3	9,0	-	2500	1389
	EKS NV 700x400x370/18/PH	3	18,0	-	-	2450
RIS 3500HE/HW 3.0	EKS NV 800x500x370/6/PH	3	6,0	3333	1667	926
	EKS NV 800x500x370/9/PH	3	9,0	-	2500	1389
	EKS NV 800x500x370/12/PH	3	12,0	-	3333	1852
RIS 5500HE/HW 3.0	EKS NV 800x500x370/15/PH	3	15,0	-	4167	2315
	EKS NV 800x500x370/18/PH	3	18,0	-	5000	2778
	EKS NV 800x500x370/24/PH	3	24,0	-	-	3704
	EKS NV 800x500x370/30/PH	3	30,0	-	-	4630

* pre-heating power calculated up to -5°C