CAW
Fan heaters for ceiling mounting with hot water as the heating medium

Mech-Elec®

CAW

Fan heaters for hot water

CAW ceiling-mounted fans are used for heating entrance halls, warehouses, industrial premises, workshops, sports halls, garages and shops. Due to its low overall height, the CAW can be built into the ceiling, which saves using the wall area.

The CAW is available in three sizes and two models.
The fans are designed for 230 V, single-phase power supply, which makes installation very simply. The fans have a low sound level and are reliable in operation.

- Three sizes and two models
- Mounted on the ceiling - saves using wall surfaces
- Low overall height - can be built into the ceiling
- 230 V, single-phase for simple installation
- Two fan speeds as standard
- Ball bearing fan motor

Installation

Designed for mounting directly on the ceiling or suspending from hangers for vertical air flow.
The CAW can also be mounted on a wall for horizontal air flow.

Design

Type CAW-a

The CAW-a has a built-in automatic control system with an electronic thermostat that starts and stops the fan and the water flow. The thermostat adjusts the fan speed to suit the heat demand.

The built-in thermostat has three stages:

Stage 1 = The fan runs at low speed without hot water supply to the coil. This function puts to use the warm air accumulated under the ceiling, which ensures efficient energy utilization.

Stage 2 = The fan runs at low speed and the hot water valve opens.

Stage 3 = The fan runs at high speed and the hot water valve opens.

One CAW-a can carry out slave control of up to four CAW-s units.
One CAW-a can also carry out slave control of up to four wall-mounted type AW-s fan heaters.
A slave-controlled CAW-s fan heater is fitted with valve and valve motor.
Supplied as standard with built-in electronic thermostat and valve with valve motor.
The CAW-a must be supplemented with an external sensor/setpoint adjuster.

Type CAW-s

Must be supplemented with external control equipment.
Two fan speeds.
Up to four CAW-s fan heaters can be slave-controlled by one CAW-a. A slave-controlled CAW-s fan heater is supplemented with valve and valve motor.
Example of external accessories: Thermostat, motorized valve, speed selector switch, extension duct.

Design

Casing made of galvanized sheet steel and painted white.
Coils have copper tubes and aluminium fins.

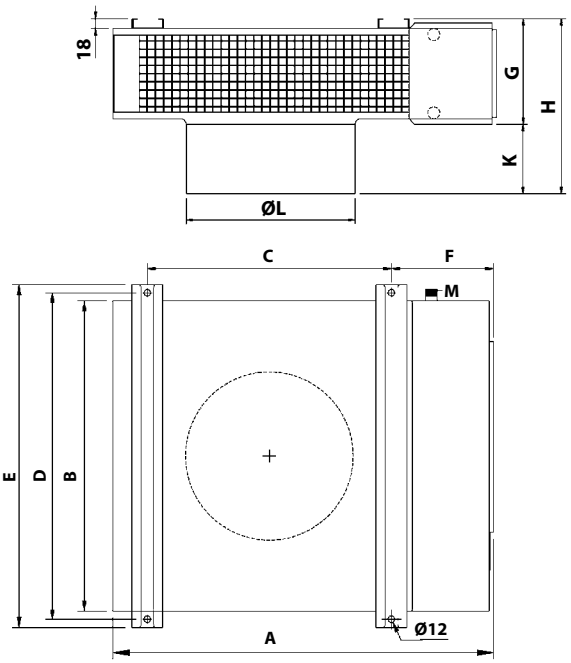
Approvals

The fan heaters are manufactured in conformance with:
LVD Directive: EN 60355-1, EN 60335-2-40 and EN 50366
EMC Directive: EN 61000-6-1 and EN61000-6-3
EMF Directive: EN 50366

Overview of range/technical data

Model		CAW 10	CAW 20	CAW 40
Power supply	V **AC**	230 V~	230 V~	230 V~
Current	A max.	0,4 A	0,6 A	1,0 A
Air flow rate, m^3/h	low speed	700	1300	2500
	high speed	1100	2000	3900
Sound level dBA 1)	low speed	37	44	48
	high speed	53	57	60
Vertical throw 2), m	low speed	2,2	2,7	4,5
	high speed	4	4,5	7,5
Vertical throw 2), m incl. CAWE	low speed	4	5	7
	high speed	7	8	12
Dimensions, mm	A	695	895	1065
	B	570	620	700
	C	450	650	850
	D	600	650	730
	E	630	680	760
	F	180	180	145
	G	195	195	290
	H	320	350	400
	K	130	155	110
Connecting water pipes	ØL	310	345	435
	M	R1/2	R1/2	R3/4
Weight	kg	21	28	42
Degree of protection		IP X4	IP X4	IP X4
Max. operating water temp., CAW-a		80°C	80°C	80°C
Max. operating water temp., CAW-s		80°C	80°C	80°C
Max. operating water press.		1,0 MPa	1,0 MPa	1,0 MPa
Ambient temperature		3-30°C	3-30°C	3-30°C

1) The sound level has been measured at a distance of 5 metres from the fan outlet
2) The information is based on:
From the ceiling down to a point at which the air velocity is 0.2 m/s, the room temperature is 18°C and the outlet air temperature is 40°C.



CAW

Accessories

	Product	Range	Degree of protection
Accessories for the CAW-a			
	Room sensor TG-R430 with setpoint adjustment	0-30°C	IP 30
	Room sensor TG-R530 Supplemented with TG-R430 for setpoint adjustment	0-30°C	IP 30
	Room sensor TG-R630 Supplemented with TG-R430 for setpoint adjustment	0-30°C	IP 65
Accessories for the CAW-s			
	Room thermostat TI-N Can control up to three CAW-s units	5-30°C Max. load 10A (3 A), 250 V AC	IP 30
	Operation selector switch AWD Can control up to five CAW-s units	0 = stopped 1 = low speed 2 = high speed	IP 65
	Thermostat SR121/1 Can control up to four CAW-s units	0-40°C Max. load 16A (4 A), 250 V AC	IP 54
	Motor + Valve CAWV	Max. 100°C, 10 bar CAW V 10 : 5,0 Kvs CAW V 20 : 5,0 Kvs CAW V 40 : 8,0 Kvs	IP 43
Extension duct CAWE for CAW-s and CAW-a			
	The duct is designed for use if the fan heater is installed at a greater ceiling height in order to increase the air flow. Length: 350mm		

CAW

Capacity of CAW 10

Water temp.		in/out 55°C/45°C				in/out 60°C/40°C				in/out 80°C/60°C			
Air flow	Inlet air temp.	Out-put	Outlet air temp.	Water flow	Water press. drop	Out-put	Outlet air temp.	Water flow	Water press. drop	Out-put	Outlet air temp.	Water flow	Water press. drop
m^3/h	°C	kW	°C	l/s	kPa	kW	°C	l/s	kPa	kW	°C	l/s	kPa
700	+10	6,3	35,8	0,15	4	5,3	31,8	0,06	1	9,5	48,9	0,13	2
1100	+10	8,3	31,6	0,20	6	7,3	29,1	0,09	1	12,5	42,5	0,15	3
700	+15	5,4	37,6	0,13	3	4,3	33,0	0,05	1	8,6	50,8	0,10	2
1100	+15	7,1	33,9	0,17	5	5,8	30,5	0,07	1	11,3	44,9	0,14	3
700	+20	4,6	39,3	0,11	2	3,4	34,3	0,04	0,5	7,7	52,6	0,09	1
1100	+20	6,0	36,1	0,14	3	4,4	31,9	0,05	1	10,1	47,3	0,12	2

Capacity of CAW 20

Water temp.		in/out 55°C/45°C				in/out 60°C/40°C				in/out 80°C/60°C			
Air flow	Inlet air temp.	Out-put	Outlet air temp.	Water flow	Water press. drop	Out-put	Outlet air temp.	Water flow	Water press. drop	Out-put	Outlet air temp.	Water flow	Water press. drop
m^3/h	°C	kW	°C	l/s	kPa	kW	°C	l/s	kPa	kW	°C	l/s	kPa
1300	+10	10,8	33,8	0,26	12	10,2	32,5	0,12	3	16,2	45,9	0,20	7
2000	+10	13,9	29,9	0,33	18	13,0	28,6	0,16	5	20,9	39,9	0,25	10
1300	+15	9,3	35,9	0,22	9	8,7	34,5	0,11	2	14,7	48,1	0,18	5
2000	+15	12,0	32,5	0,29	14	11,0	31,1	0,13	4	18,9	42,6	0,23	9
1300	+20	7,8	37,9	0,19	7	6,9	35,7	0,08	2	13,2	50,2	0,16	5
2000	+20	10,1	35,0	0,24	10	9,1	33,6	0,11	3	17,0	45,2	0,21	7

Capacity of CAW 40

Water temp.		in/out 55°C/45°C				in/out 60°C/40°C				in/out 80°C/60°C			
Air flow	Inlet air temp.	Out-put	Outlet air temp.	Water flow	Water press. drop	Out-put	Outlet air temp.	Water flow	Water press. drop	Out-put	Outlet air temp.	Water flow	Water press. drop
m^3/h	°C	kW	°C	l/s	kPa	kW	°C	l/s	kPa	kW	°C	l/s	kPa
2500	+10	21,3	34,5	0,51	11	20,2	33,2	0,24	3	32,1	46,9	0,39	6
3900	+10	27,7	30,4	0,67	17	26,0	29,1	0,31	4	41,7	40,7	0,51	10
2500	+15	18,4	36,5	0,44	8	17,3	35,2	0,21	2	29,2	49,1	0,36	5
3900	+15	23,9	32,9	0,58	13	22,2	31,6	0,27	3	37,8	43,3	0,46	8
2500	+20	15,5	38,5	0,38	6	13,6	36,2	0,16	1	26,2	51,1	0,32	4
3900	+20	20,2	35,4	0,49	10	18,4	34,0	0,22	2	34,0	45,9	0,41	7