

AW

Fan heaters for hot water

AW fans are used for permanent heating of warehouses, industrial premises, workshops, shops and the like. Due to its attractive design with simple, neat lines, the AW-series can also be installed in public premises.

The AW series is available in four sizes and two models. All fan heaters are designed for a 230V~ power supply, which ensures very simple installation. The fan heaters have a low sound level and offer reliable operation.

- Four sizes and two models
- Available with built-in control equipment for sensor control or for external 0...10V control signal
- Low sound level – suitable for most applications
- Three fan speeds as standard
- Simple 230V~ installation
- Air deflector directs the air vertically
- Inspection cover for cleaning the fan and coil

Design

Casing made of galvanized sheet steel, painted white. Coils have copper tubes and aluminium fins. Ball-bearing mounted fan with overheating protection has low sound level and reliable operation.

The AW is available in two models designated AW-a and AW-s.

Capacity

Pages 8 and 9 show examples of capacities for each size. You can also use the VEAB Select web-based calculation program to carry out your own calculations (www.veab.com) or contact our sales staff for assistance.

Installation

The AW can be mounted on a wall using AWV wall brackets or can be suspended from the ceiling on AWT hanger brackets.



Control

Built-in control equipment

-a

Fan heater with built-in control equipment for external sensor and setpoint adjustment. Can also be controlled by an external 0...10V control signal. See pages 4 and 5.

External control equipment

-s

Fan heater for external control equipment. Has three fan speeds. See pages 8 and 9.

Approvals

The fan heaters are manufactured in conformance with:
 LVD Directive: EN 60355-1 and EN 60335-2-30
 EMC Directive: EN 61000-6-2 and EN 61000-6-3
 EMF Directive: EN 62233



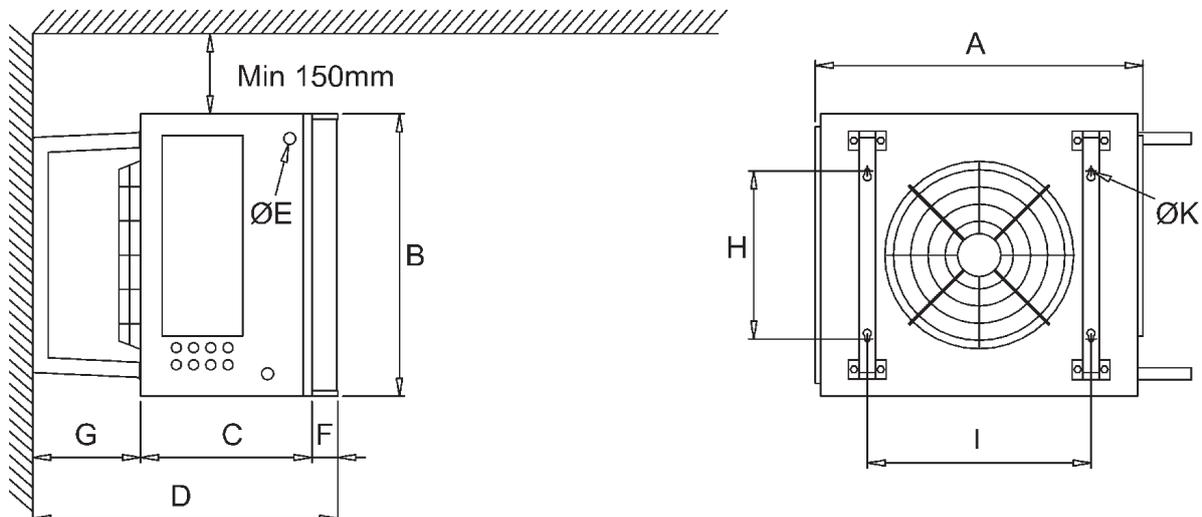
Product range overview

Type		AW12	AW22	AW42	AW62
Power supply/ Frequency		230V~ 50/60Hz	230V~ 50/60Hz	230V~ 50/60Hz	230V~ 50Hz
Current 50/60Hz	A	0.4 / 0,45	0.6 / 0,75	0.9 / 1,25	2.2
Air flow rate (low/intermediate/high speed)	m ³ /h	600 / 900 / 1200	1100 / 1500 / 2300	1900 / 2500 / 3900	3000 / 4500 / 6200
Sound pressure level ¹⁾ (low/intermediate/high speed)	dB(A)	41 / 51 / 56	41 / 52 / 56	44 / 55 / 62	48 / 57 / 68
Throw ²⁾ (high speed)	m	4,5	7,0	9,0	14,0
Throw with AWLA ²⁾ (high speed)	m	6,5	10,0	12,5	19,0
Connecting pipes	mm dia.	22	22	28	28
Max. operating water temp., AW-a	°C	100	100	100	100
Max. operating water temp., AW-s	°C	150	150	150	150
Max. operating pressure (water)	bar	10	10	10	10
Max. ambient temperature	°C	30	30	30	30
Can be ordered in version -a		X	X	X	X
Can be ordered in version -s		X	X	X	X
Weight	kg	17	23	32	46
Degree of protection		IP44	IP44	IP44	IP44

¹⁾ Is measured at 5 metres from the AW.

²⁾ The throw length data is valid when the inlet temperature is +40 °C and the room temperature is +18 °C. The throw length is defined as the distance from the fan heater to the point where the air speed has dropped to 0,2 m/s.

Dimensions	A mm	B mm	C mm	D mm	E Ø mm	F mm	G mm	H mm	I mm	ØK mm
AW 12	485	430	325	570	22	46	200	260	330	10
AW 22	560	530	350	600	22	46	200	330	410	10
AW 42	710	655	400	740	28	70	270	420	505	10
AW 62	855	780	445	785	28	70	270	550	640	10



AW-a

Fan heater for hot water with built-in control equipment for fan and water control

The AW-a with built-in control equipment offers simple installation due to fewer cable runs. This, in turn, lowers the installation cost and reduces the risk of wrong connections. The AW-a can be controlled by external sensors or an external 0...10V control signal.

Model –a

The AW-a is delivered with built-in automatic control for fan and water control, complete with valve and actuator. For KVS value of valve, see table to the right.

The AW-a has automatic control of fan speed in three steps to suit the heat demand. When there is no heat demand, the fan will stop and the valve will shut off the water flow, which reduces the heat losses, thus saving energy and money. This also ensures a low sound level and reduces fouling of the coil and fan.

Valve size	KVS
AW 12a	7.3
AW 22a	7.3
AW 42a	11.8
AW 62a	11.8

Control

The AW-a is supplemented with an external room sensor and setpoint adjuster. See the next page for example. The AW-a can also be controlled by an external 0...10V control signal.

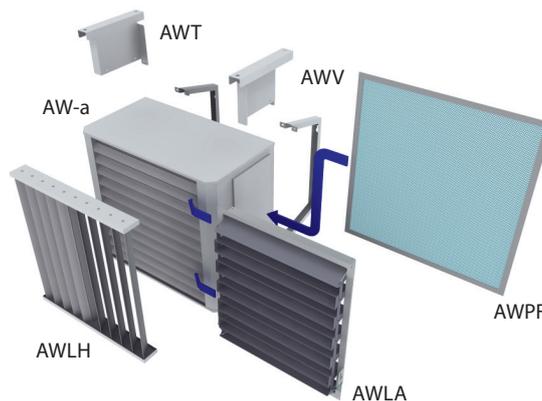
An AW-a with connected sensor can control an unlimited number of AW-a units and type CAW-a ceiling-mounted fan heaters by slave control. The slave-controlled units need no sensors since they receive their control signals from the AW-a with sensor. See next page for sensors.

Accessories

See next page for accessories suitable for the AW-a.

Installation

The AW-a with AWT hanger brackets can be suspended from the ceiling and with AWW brackets can be mounted on a wall. See next page for dimensions.



Project design/ordering

Descriptive text - AW-a

Fan heater for hot water. VEAB type AW-a, with casing of galvanized sheet steel, painted white. Water coils with copper tubes and aluminium fins. Built-in control equipment that controls the fan in three speeds to suit the heat demand and open/close the water flow. Setpoint adjustment is carried out externally on a sensor or by external 0...10V control signal. Accessories such as sensor, setpoint adjuster, filter, air deflector AWLH and brackets must be ordered separately.

Accessories

	Product	Range	Degree of protection
	Room sensor TG-R430 With setpoint adjustment.	Range 0-30°C	IP30
	Room sensor TG-R530. Supplement with the TG-R430 for setpoint adjustment.	Range 0-30°C	IP30
	Room sensor TG-R630. Supplement with the TG-R430 for setpoint adjustment.	Range 0-30°C	IP54

	Produkt	
	Filter AWPF Panel filter for installation in the AW between the fan and coil.	Max. temperature on hot water when mounted filter is 100°C.
	Air deflector AWLH Aluminium blades. Used for directing the air sideways. Can not be used together with AWLA.	
	Induction louvre AWLA Extends the throw with an average of 40%. Can not be used together with AWLH.	
	Wall brackets AWV	Overall length: AW 12 and 22 = 200 mm AW 42 and 62 = 270 mm
	Hanger brackets AWT	The distance between the ceiling and the AW is 150 mm.

AW-s

Fan heater for hot water for external control equipment

The AW-s for external control equipment is the alternative if you require a simple fan heater, without compromising on quality.

Model –s

The AW-s is supplied without automatic control. The AW-s has three fan speeds as standard. The speed can be controlled by selector switch AWC or can be preset during the electrical installation work.

Control

The AW-s is supplemented with room thermostat, valve with actuator, and also speed selector switch, if required. See next page.

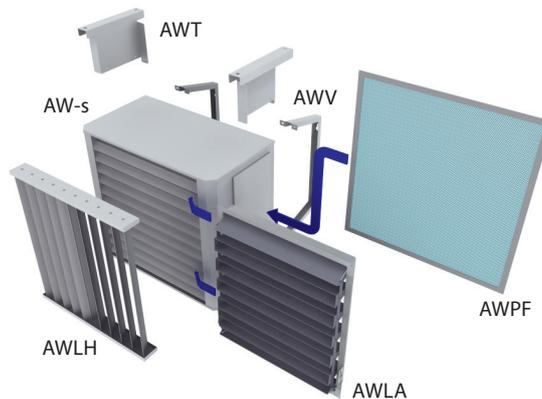
Valve	Kv
AWTV 12/22, IP44	7,3
AWTV 42/62, IP44	11,8

Accessories

See next page for accessories to suit the AW-s.

Installation

The AW-s can be suspended from the ceiling with hanger brackets AWT and with brackets AWV can be mounted on a wall. See next page for dimensions.



Project design/ordering

Descriptive text - AW-s

Fan heater for hot water. VEAB type AW-s, with casing of galvanized sheet steel, painted white. Water coils with copper tubes and aluminium fins. Fan motor for three fan speeds. Accessories such as thermostat, filter, air deflector AWLH and brackets must be ordered separately.

Accessories

	Product	Range	Degree of protection
	Valve with actuator AWTV 12-62, IP44 Used together with thermostat R31 or SR 121/1.	Max. 90°C 25 bar	IP44
	Speed selector switch AWC 12-62 Can control up to two AW-s. 1=low speed, 2=intermediate speed, 3=high speed		IP42
	Thermostat SR 121/1 Can control two AW-s.	Range 0-40°C	IP54
	Room thermostat R31 Can control one AW-s.	Range 7-30°C	IP20
	Valve ZTR20-6.0 three-way valve for AW 12s and AW 22s.		
	Valve ZTRB25-8 three-way valve for AW 42s and AW 62s.		
	Actuator RVAZ4-230 used for three-way valve. Connected to thermostat SR 121/1 or R31 equipped with alternating contact.		IP44

	Product	
	Filter AWPF Panel filter for installation in the AW between the fan and coil.	Max. temperature on hot water when mounted filter is 100°C.
	Air deflector AWLH Aluminium blades. Used for directing the air sideways. Can not be used together with AWLA.	
	Induction louvre AWLA Extends the throw with an average of 40%. Can not be used together with AWLH.	
	Wall brackets AWW	Overall length: AW 12 and 22 = 200 mm AW 42 and 62 = 270 mm
	Hanger brackets AWT	The distance between the ceiling and the AW is 150 mm.

Capacity of AW12

Water temp.		in/out 90°C/70°C				in/out 80°C/60°C				in/out 60°C/40°C			
Air flow rate	Air in	Air out	Output	Flow water	Pressure drop. water	Air out	Output	Flow water	Pressure drop. water	Air out	Output	Flow water	Pressure drop. water
m ³ /h	°C	°C	kW	l/s	kPa	°C	kW	l/s	kPa	°C	kW	l/s	kPa
1200	-10	41.2	23.0	0.28	21.9	35.0	20.2	0.25	17.3	22.4	14.6	0.18	9.6
900	-10	46.8	19.1	0.24	15.4	39.9	16.8	0.21	12.2	26.0	12.1	0.15	6.8
600	-10	54.7	14.5	0.18	9.2	46.9	12.8	0.16	7.3	31.2	9.3	0.11	4.1
1200	±0	46.1	20.0	0.25	16.7	39.8	17.2	0.21	12.8	26.9	11.7	0.14	6.3
900	±0	51.1	16.6	0.20	11.8	44.1	14.3	0.18	9.0	30.0	9.7	0.12	4.5
600	±0	58.1	12.6	0.16	7.0	50.3	10.9	0.13	5.4	34.3	7.4	0.09	2.7
1200	+15	53.0	15.6	0.19	10.5	46.5	13.0	0.16	7.5	33.2	7.5	0.09	2.7
900	+15	57.1	13.0	0.16	7.4	50.0	10.8	0.13	5.3	35.2	6.2	0.08	1.9
600	+15	62.9	9.8	0.12	4.4	54.9	8.2	0.10	3.1	38.1	4.8	0.06	1.2

Capacity of AW22

Water temp.		in/out 90°C/70°C				in/out 80°C/60°C				in/out 60°C/40°C			
Air flow rate	Air in	Air out	Output	Flow water	Pressure drop. water	Air out	Output	Flow water	Pressure drop. water	Air out	Output	Flow water	Pressure drop. water
m ³ /h	°C	°C	kW	l/s	kPa	°C	kW	l/s	kPa	°C	kW	l/s	kPa
2300	-10	36.8	40.4	0.50	26.7	31.1	35.4	0.43	21.0	19.4	25.4	0.31	11.4
1500	-10	45.0	30.9	0.38	16.0	38.2	27.1	0.33	12.6	24.7	19.5	0.24	6.9
1100	-10	51.0	25.1	0.31	10.8	43.6	22.1	0.27	8.6	28.6	15.9	0.19	4.7
2300	±0	42.2	35.0	0.43	20.3	36.3	30.2	0.37	15.5	24.4	20.3	0.25	7.5
1500	±0	49.4	26.8	0.33	12.2	42.6	23.1	0.28	9.3	28.7	15.6	0.19	4.5
1100	±0	54.8	21.8	0.27	8.2	47.3	18.8	0.23	6.3	32.0	12.7	0.15	3.1
2300	+15	49.7	27.4	0.34	12.7	43.7	22.6	0.28	9.0	31.3	12.9	0.16	3.2
1500	+15	55.7	20.9	0.26	7.6	48.7	17.3	0.21	5.4	34.3	9.9	0.12	1.9
1100	+15	60.1	17.0	0.21	5.2	52.5	14.1	0.17	3.7	36.4	8.1	0.10	1.3

Capacity of AW42

Water temp.		in/out 90°C/70°C				in/out 80°C/60°C				in/out 60°C/40°C			
Air flow rate	Air in	Air out	Output	Flow water	Pressure drop. water	Air out	Output	Flow water	Pressure drop. water	Air out	Output	Flow water	Pressure drop. water
m ³ /h	°C	°C	kW	l/s	kPa	°C	kW	l/s	kPa	°C	kW	l/s	kPa
3900	-10	37.0	68.8	0.85	34.9	31.4	60.5	0.74	27.6	19.8	43.6	0.53	15.4
2500	-10	45.6	52.1	0.64	20.6	38.9	45.8	0.56	16.3	25.4	33.1	0.40	9.2
1900	-10	50.9	43.4	0.54	14.6	43.6	38.2	0.47	11.6	28.9	27.7	0.34	6.6
3900	±0	42.4	59.7	0.74	26.7	36.6	51.6	0.63	20.4	24.9	35.0	0.43	10.2
2500	±0	50.0	45.2	0.56	15.7	43.2	39.0	0.48	12.1	29.5	26.6	0.32	6.1
1900	±0	54.8	37.6	0.46	11.1	47.4	32.5	0.40	8.6	32.4	22.2	0.27	4.4
3900	+15	50.0	46.8	0.58	16.8	44.1	38.8	0.48	12.0	31.9	22.5	0.27	4.5
2500	+15	56.3	35.3	0.44	9.9	49.3	29.4	0.36	7.1	35.0	17.2	0.21	2.7
1900	+15	60.2	29.4	0.36	7.0	52.7	24.5	0.30	5.1	37.1	14.3	0.17	1.9

Capacity of AW62

Water temp.		in/out 90°C/70°C				in/out 80°C/60°C				in/out 60°C/40°C			
Air flow rate	Air in	Air out	Output	Flow water	Pressure drop. water	Air out	Output	Flow water	Pressure drop. water	Air out	Output	Flow water	Pressure drop. water
m ³ /h	°C	°C	kW	l/s	kPa	°C	kW	l/s	kPa	°C	kW	l/s	kPa
6200	-10	36.1	107.2	1.32	51.7	30.5	94.2	1.16	40.7	19.3	68.0	0.83	22.5
4500	-10	42.1	87.9	1.09	35.4	35.9	77.4	0.95	28.0	23.2	56.0	0.68	15.6
3000	-10	50.1	67.5	0.83	21.4	42.9	59.5	0.73	17.0	28.4	43.2	0.52	9.6
6200	±0	41.6	93.1	1.15	39.5	35.9	80.4	0.99	30.1	24.4	54.7	0.66	14.9
4500	±0	47.0	76.3	0.94	27.0	40.6	66.0	0.81	20.7	27.7	45.0	0.55	10.4
3000	±0	54.1	58.6	0.72	16.3	46.8	50.7	0.62	12.6	32.0	34.7	0.42	6.4
6200	+15	49.3	72.9	0.90	24.8	43.5	60.5	0.74	17.6	31.6	35.2	0.43	6.6
4500	+15	53.8	59.8	0.74	17.0	47.3	49.7	0.61	12.1	33.9	29.1	0.35	4.6
3000	+15	59.6	45.8	0.57	10.3	52.2	38.2	0.47	7.4	36.9	22.5	0.27	2.8