

Series
AOW



Air unit with the water heat exchanger for arrangement of cost-saving and efficient air heating and cooling in various premises.

■ **Application**

Designed for air heating or cooling by water heat medium with subsequent uniform air distribution by the fan and louvre shutters. The units provide quick heating or cooling of large premises due to high efficient air heater and powerful fan and are suitable for local air heating or cooling of working areas in hangars or large industrial premises. Further application areas include workshops, garages, car showrooms, stock houses, trade facilities, super- and hypermarkets, shops, sport halls, conference halls, poultry and cattle farms, greenhouses and other similar premises. The unit design enables quick and easy mounting and reduces total investment costs for heating (cooling) system.

■ **Design**

AOW unit consists of the axial fan and aluminium-copper ribbed water heating coils located in steel casing with polymeric coating. The water coils are equipped with internally threaded pipes on the casing side for connection and supply of heat medium. The

units are rated for operation at maximum operating pressure 1.6 Mpa (16 bar) and maximum heat medium temperature 100°C.

■ **Motor**

AC motors with external rotor and built-in thermal overheating protection with automatic restart.

■ **Control and regulation**

Both smooth or step speed control with a thyristor or autotransformer controller. Motor speed decrease allows reducing flow and value of heating or cooling energy transfer.

The control block **UWT-1E** is used for controlling the operation modes of the air heating (cooling) unit. The casing is made of polymer coated steel and has IP 44 ingress protection rating. The automation unit has three operation modes, i.e. three modes for speed control.

The unit incorporates a switch with a light indicator, cable entry seals for cable connection, safety fuse for short circuit protection. The automation unit

is designed for joint operation either with TST-3 series digital thermostats with a sensor display (the thermostat TSTD-3 is equipped with a remote control panel) or with RTS-1-400 series thermostats with LCD display (RTSD-1-400 is equipped with a remote control panel). The digital thermostats are available upon separate order. Install the thermostat in the same room where the AOW unit is installed. It is used to measure the indoor temperature and control the unit operation. For correct functioning of the unit install the thermostat in places that are not subjected to temperature fluctuations, i.e. close to windows, doors, hot-water radiators. One thermostat can be used for control of several air heating (cooling) units located in the same room.

■ **Mounting**

The unit is suitable for vertical installation on walls or columns or horizontal installation on ceiling (beams). See mounting accessories.

Air heating (cooling) advantages:

- ▶ quick attaining of the set temperature in the premises,
- ▶ low system response time allows applying varying temperature conditions,
- ▶ high thermal capacity,
- ▶ Lower investment costs for air heating (cooling) system as compared to similar water heating (cooling) systems.

Designation key:

Series	Rated power [kW]
VENTS AOW	25; 30; 45

Accessories



Technical data:

	AOW 25	AOW 30	AOW 45
Unit power voltage [V / 50 Hz]	230	230	230
Fan power [W]	136	191	255
Fan current [A]	0,6	0,85	1,12
RPM	1350	1440	1360
Noise level at 3m [dB(A)]	53	55	58
Maximum heat medium temperature [°C]	100	100	100
Ingress protection rating	IP 44	IP 44	IP 44
Insulation class	F	B	F

Technical data for heating mode:

Model	Air flow [m³/h]	Inlet air temp. [°C]	Temperature difference 90/70 °C				Temperature difference 80/60 °C				Temperature difference 70/50 °C				Temperature difference 60/40 °C			
			Power [kW]	Outlet air temp. [°C]	Water flow [l/s]	Water pressure loss [kPa]	Power [kW]	Outlet air temp. [°C]	Water flow [l/s]	Water pressure loss [kPa]	Power [kW]	Outlet air temp. [°C]	Water flow [l/s]	Water pressure loss [kPa]	Power [kW]	Outlet air temp. [°C]	Water flow [l/s]	Water pressure loss [kPa]
AOW 25	2200	-15	34,5	26,0	1,5	7,5	30,4	21,2	1,3	6,0	26,0	16,0	1,1	4,6	22,0	11,0	1,0	3,4
		-10	32,0	29,0	1,4	6,6	28,3	24,3	1,2	5,3	24,0	19,2	1,1	4,0	20,0	14,0	0,9	2,8
		-5	30,0	32,0	1,3	5,8	26,2	27,4	1,2	4,6	22,0	22,0	1,0	3,4	18,0	17,0	0,8	2,3
		0	28,0	35,0	1,2	5,2	24,1	30,4	1,1	4,0	20,0	25,0	0,9	2,8	16,0	20,0	0,7	1,8
		5	26,2	38,5	1,2	4,5	22,1	33,3	1,0	3,3	18,0	28,0	0,8	2,3	14,0	22,0	0,6	1,4
		10	24,2	41,4	1,1	3,9	20,1	36,1	0,9	2,8	15,9	30,6	0,7	1,9	12,0	25,0	0,5	1,0
		15	22,1	44,2	1,0	3,3	18,1	38,8	0,9	2,3	13,8	33,0	0,6	1,4	9,0	27,0	0,4	0,7
AOW 30	3000	-15	48,4	27,2	2,1	7,4	42,0	22,0	1,9	6,0	36,6	17,0	1,6	4,7	31,0	11,7	1,3	3,5
		-10	45,4	30,3	2,0	6,6	39,0	25,2	1,7	5,3	33,7	20,0	1,5	4,0	27,6	14,6	1,2	2,9
		-5	42,4	33,4	1,9	5,9	36,7	28,2	1,6	4,6	30,0	22,9	1,4	3,4	24,0	17,4	1,1	2,4
		0	39,5	36,4	1,7	5,2	33,8	31,1	1,5	3,9	28,0	25,7	1,2	2,9	21,0	20,0	1,0	1,9
		5	36,7	39,4	1,6	4,5	30,9	34,0	1,4	3,4	25,0	28,5	1,1	2,4	19,0	22,7	0,8	1,5
		10	33,8	42,1	1,5	3,9	28,1	36,7	1,2	2,8	22,0	31,1	1,0	1,9	16,0	25,2	0,7	1,1
		15	31,0	44,9	1,4	3,3	25,3	40,0	1,1	2,3	19,4	33,7	0,9	1,5	13,0	27,5	0,6	0,7
AOW 45	3850	-15	63,0	28,4	2,8	11,9	55,6	23,3	2,4	9,7	48,1	18,1	2,1	7,6	40,4	12,8	1,8	5,7
		-10	59,2	31,5	2,6	10,6	51,8	26,4	2,3	8,5	44,3	21,1	1,9	6,6	36,7	15,7	1,6	4,8
		-5	55,4	34,6	2,4	9,4	48,0	29,3	2,1	7,4	40,6	23,9	1,8	5,6	32,9	18,5	1,4	3,9
		0	51,6	37,5	2,3	8,3	44,3	32,2	2,0	6,4	36,9	26,8	1,6	4,7	29,2	21,3	1,3	3,2
		5	47,9	40,4	2,1	7,3	40,6	35,0	1,8	5,5	33,2	29,5	1,5	3,9	25,6	23,9	1,1	2,5
		10	44,3	43,2	2,0	6,3	37,0	37,8	1,6	4,6	29,6	32,2	1,3	3,2	21,9	26,4	1,0	1,9
		15	40,6	45,9	1,8	5,4	33,4	40,4	1,5	3,8	26,0	34,8	1,1	2,5	18,1	28,8	0,8	1,3

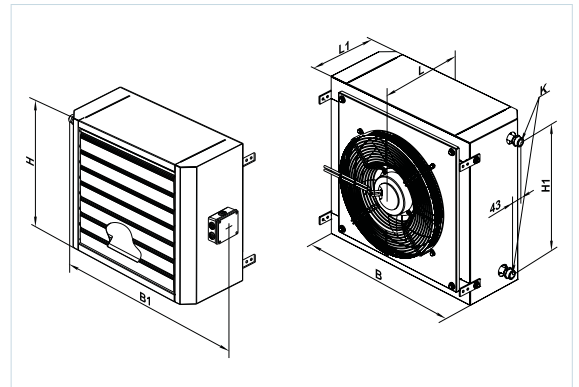
AIR HEATING (COOLING) UNITS

Technical data for cooling mode:

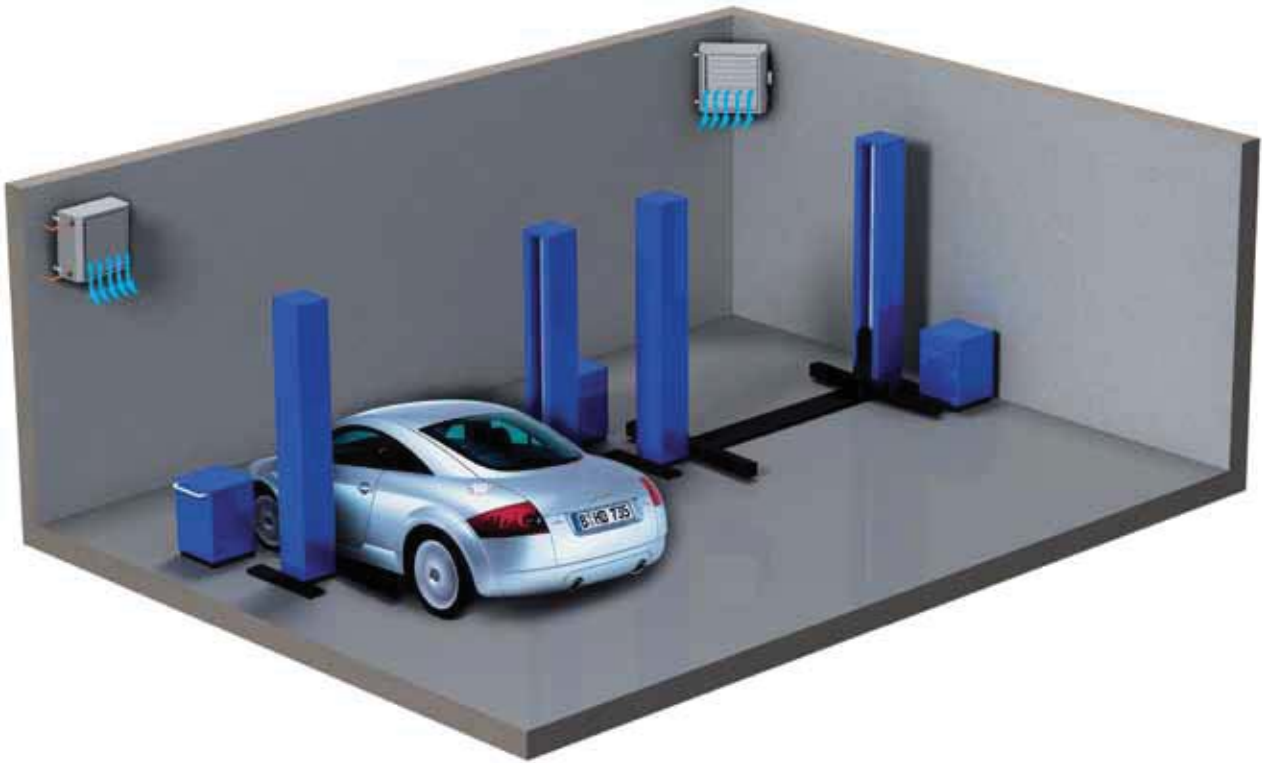
Model	Air flow [m³/h]	Inlet air temp. [°C]	Temperature difference 7/12 °C			
			Power [kW]	Outlet air temp. [°C]	Water flow [l/s]	Water pressure loss [kPa]
AOW 25	2200	35	9,1	26,0	1,6	7,5
		30	5,8	22,5	1,0	6,1
		25	3,2	21,0	0,6	2,1
		20	2,0	18,0	0,3	0,9
AOW 30	3000	35	11,4	27,0	2,0	11,2
		30	7,3	22,9	1,3	5,0
		25	3,9	21,1	0,7	1,6
		20	2,4	17,7	0,4	0,7
AOW 45	3850	35	18,0	24,9	3,1	31,8
		30	10,8	21,7	1,9	12,9
		25	7,3	19,0	1,3	6,3
		20	3,2	17,4	0,5	1,4

Overall dimensions without control unit:

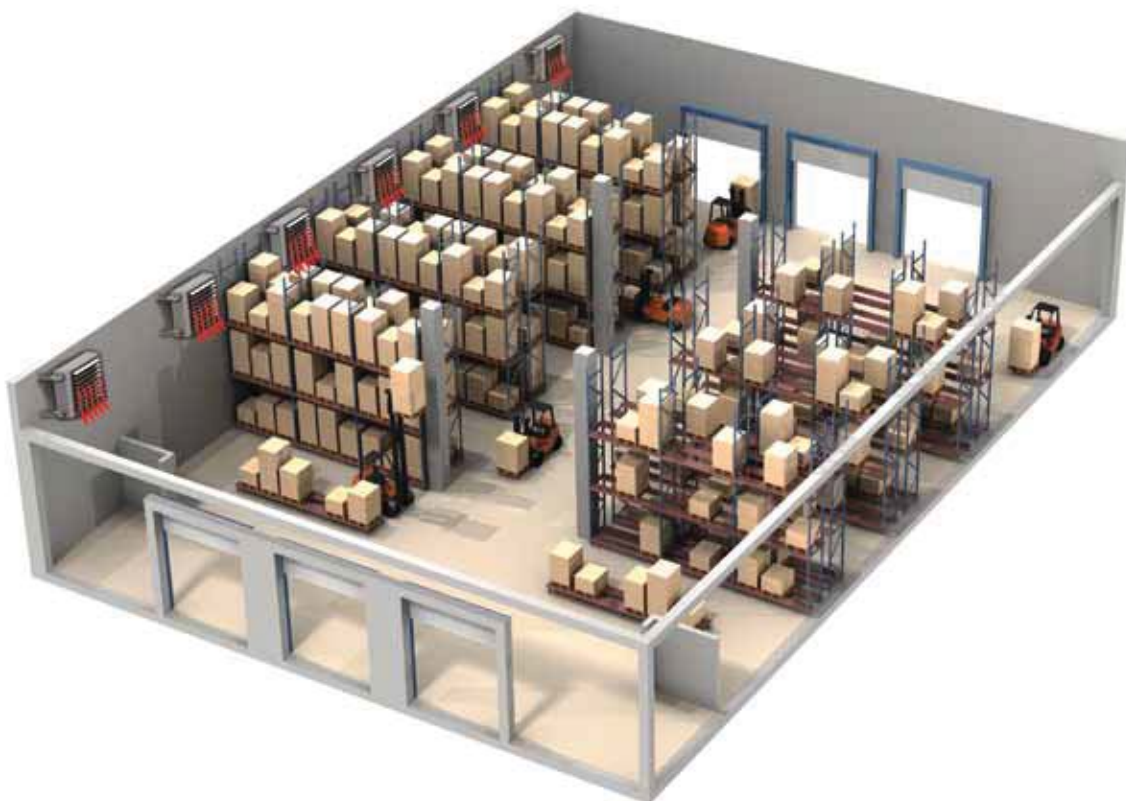
Type	Dimensions [mm]							Number of water coils	Weight [kg]
	B	B1	H	H1	L	L1	K		
AOW 25	680	785	605	468	360	286	G 3/4"	2	37,0
AOW 30	680	785	655	518	360	286	G 3/4"	2	40,0
AOW 45	780	885	710	570	380	300	G 3/4"	2	50,0



AOW unit greenhouse heating example.



AOW unit garage cooling example.



AOW unit stock house heating example.

AOW UNIT MOUNTING ACCESSORIES

We offer the following mounting accessories to make the unit installation easy and quick:

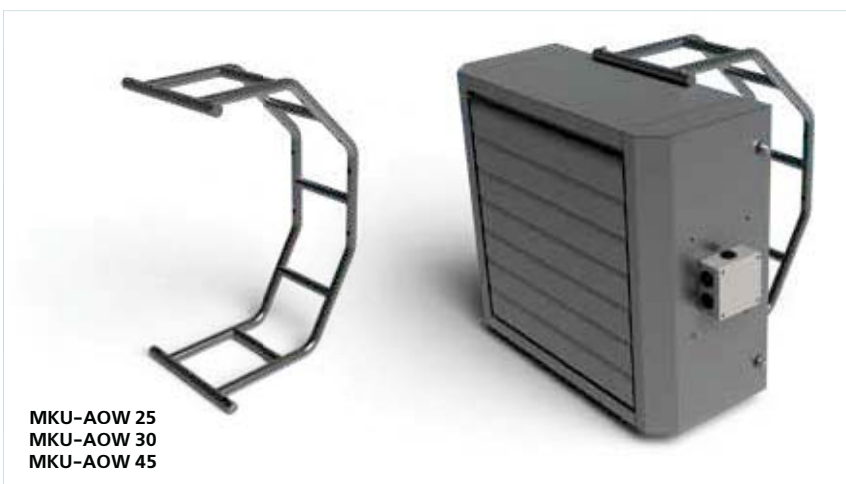
✓mounting angles ✓mounting brackets ✓multi-angle bracket



1. The angles are used for horizontal attachment of the unit to the ceiling with mounting studs or chains. This mounting option is applied only for the units operating in heating mode.



2. The mounting brackets enable vertical attachment of the unit to the wall or beam or horizontal fixing to the ceiling. This horizontal mounting is applied only for the units operating in heating mode.

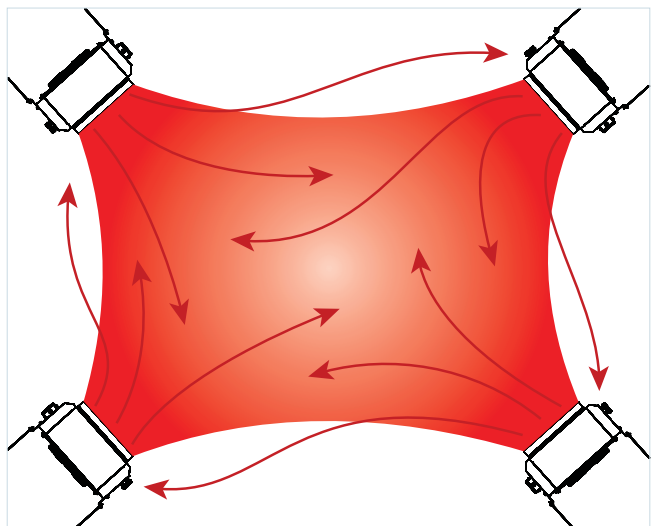
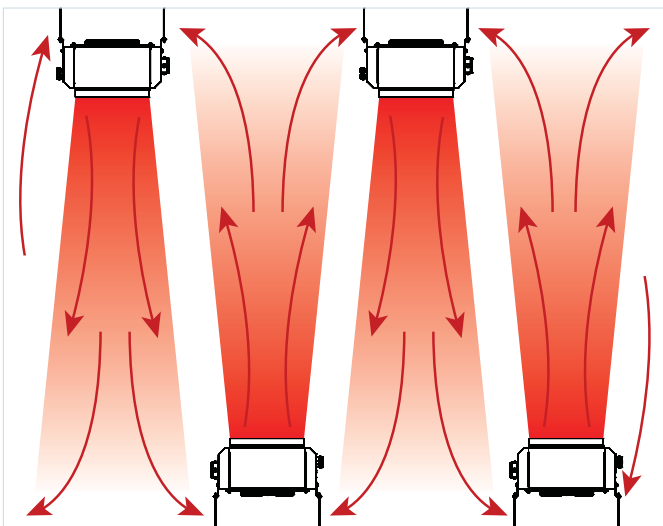
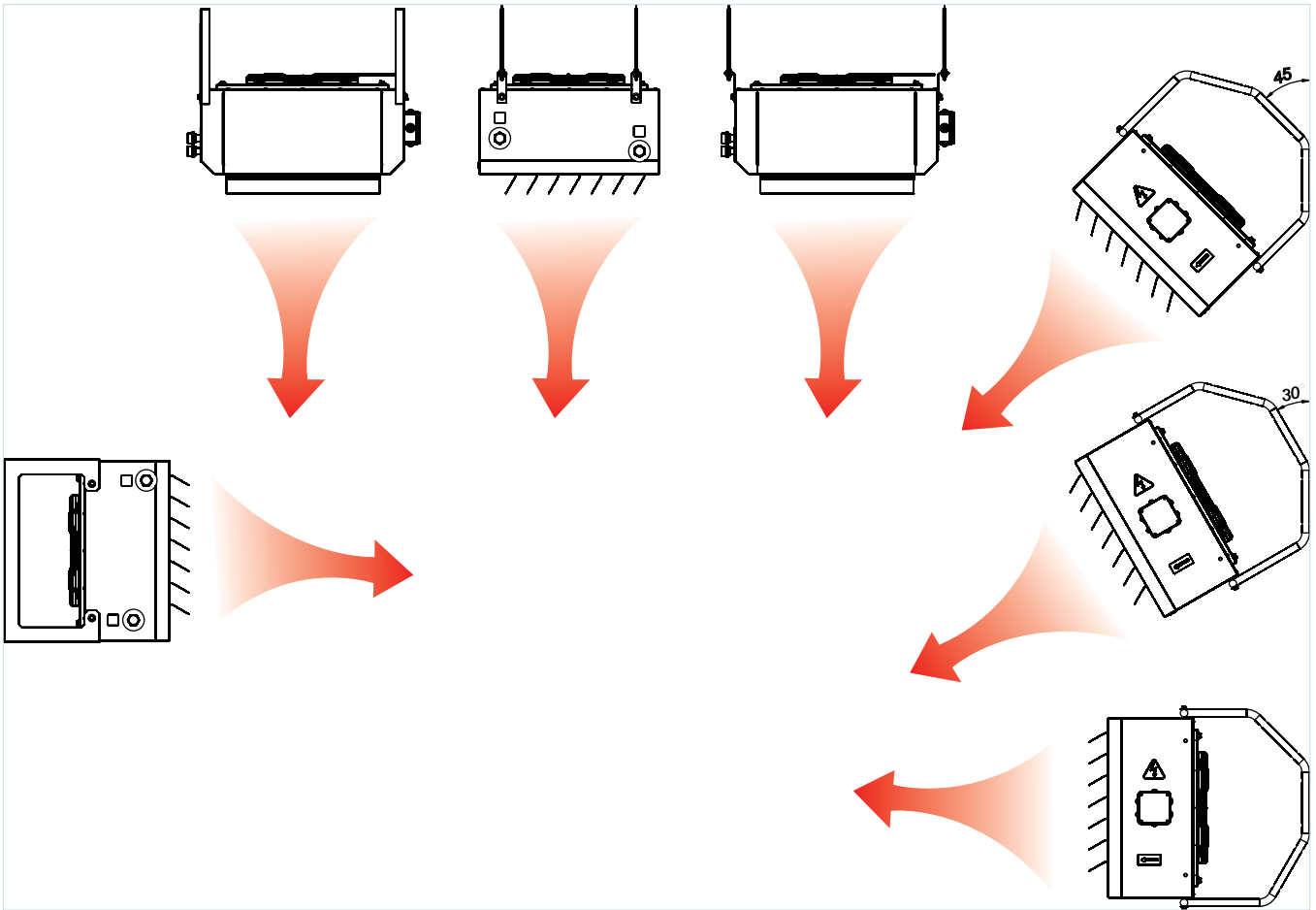


3. The multi-angle bracket enables attachment of the unit to horizontal or vertical structures tilted at 45° or 30°.

WARNING!

While mounting provide free air supply to the fan suction vent by keeping the minimum distance from the unit to the wall or ceiling 300 mm.

Warm air distribution.



AOW

AIR HEATING (COOLING) UNITS