

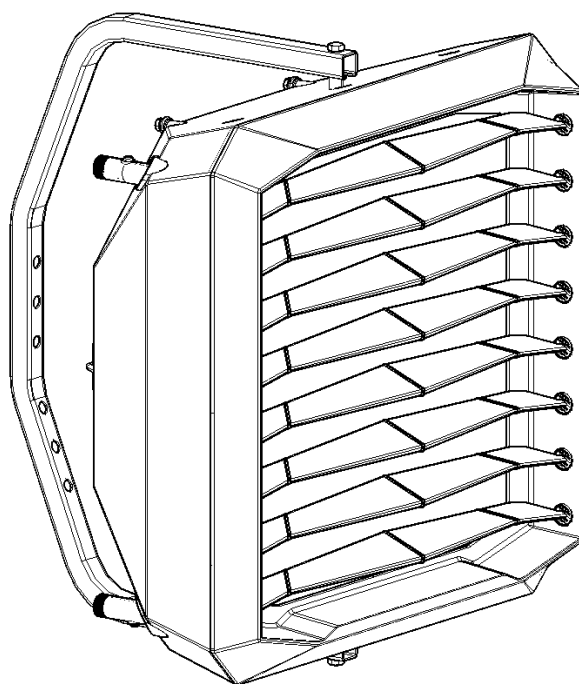
(EN)

**UNIT HEATER
AND DESTRATIFIER**

AEROCK

R SERIES

OPERATIONS AND MAINTENANCE MANUAL
AEROCK MINI R2, MINI R3, R1, R2, R3, R4, MINI RD, RD



V1.0 (2024.02.22)

INTRODUCTION	3
PURPOSE.....	3
GENERAL INFORMATION	3
NOTES.....	3
PRECAUTIONS	3
DEVICE CHARACTERISTICS	4
CONSTRUCTION AND PRINCIPLES OF OPERATION	4
HEAT EXCHANGER	4
AXIAL FAN WITH MOTOR.....	4
COVER	5
AIR BLADES	5
MOUNTING CONSOLE	5
MAIN DIMENSIONS.....	5
TECHNICAL SPECIFICATIONS OF EQUIPMENT	6
HEATING CAPACITIES.....	7
COOLING CAPACITIES.....	10
ADDITIONAL PARAMETERS	10
INSTALLATION.....	12
GENERAL INSTALLATION RECOMMENDATIONS	12
DETAILED INSTALLATION GUIDELINES	14
CONNECTION TO THE PLUMBING SYSTEM.....	16
CONNECTION TO THE ELECTRICAL SYSTEM.....	18
AUTOMATION AND ACCESSORIES	19
INITIAL START-UP	21
OPERATION.....	21
MAINTENANCE	21
DEALING WITH FAULTS	22
COMPLIANCE WITH DIRECTIVE 2009/125/EC.....	23
GUARANTEE	24
WARRANTY CONDITIONS.....	25
WARRANTY CARD	26

- Read the instructions carefully before installation.
- Failure to follow the instructions may result in improper operation of the unit and may void warranty rights.
- It is important to ensure that the installation work is carried out by suitably qualified personnel.

INTRODUCTION

PURPOSE

The AEROCK unit heater is designed for indoor use for space heating in industrial premises of all volumes, such as production halls, warehouses, sports halls, workshop spaces, garages, large shops, etc. The unit can be mounted at various angles, including horizontally and vertically, to building partitions and ceilings. The unit heaters provide a modular, dynamic heating system.

GENERAL INFORMATION

The AEROCK unit is delivered assembled in packaging to protect it from mechanical damage. Before unpacking the unit, check the condition of the packaging for potential damage to the unit. If the purchased product has been delivered damaged or with any other failure - assembly is not permitted. In such a situation, an appropriate protocol of the carrier must be drawn up, and the manufacturer's service center must be notified.

Due to the continuous development of the device, the manufacturer reserves the right to make changes to the documentation without prior notice.

NOTES

Before installing the unit, please read the enclosed manual and follow its recommendations. Following the instructions in this manual guarantees the correct and safe operation of the unit. Damage caused by improper installation, involvement of unauthorized personnel, failure to maintain the unit in a proper technical condition or operation not in conformity with the original purpose may result in the loss of warranty rights.

If there is any doubt about the provisions of the instructions and the safe use of the device, contact the manufacturer. During installation, operation and servicing, all possible protection and safety measures must be taken.

PRECAUTIONS

- The maximum feed water temperature depends on the unit model and ranges from 95° C to 130° C (see→ Table with main parameters).
- Please note that some parts of the unit may become hot during operation. Touching piping components can lead to burns.
- Under no circumstances should the unit be covered or any objects placed on it.
- If the system is found to be damaged, the power supply to the heater must be cut off immediately.
- If the unit is flooded with water, it must be disconnected from the power supply immediately.
- The device should not be exposed to high external temperatures.
- The unit has no fire or frost protection.
- It is prohibited to use the device in an environment where explosive elements are present.
- Health and safety regulations must be adhered to during the installation and operation of the unit.

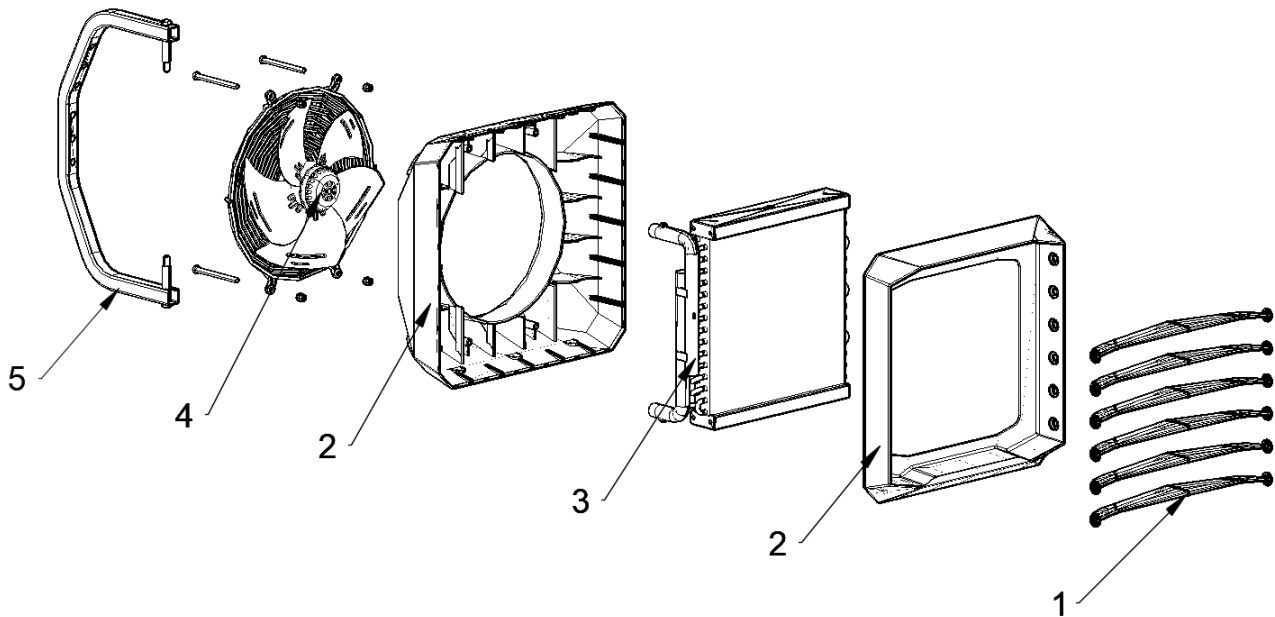
DEVICE CHARACTERISTICS

CONSTRUCTION AND PRINCIPLES OF OPERATION

The unit heater is equipped with a heat exchanger that is warmed by a heating medium, such as hot water, flowing through its center. An axial fan sweeps the airflow over the heated surface of the heat exchanger, taking heat away from it and blows the heated air out, distributing it around the room.

AEROCK RD and Mini RD are destratification units that assist in the distribution of heat in high spaces. They transport warm air, naturally rising towards the upper zones of the rooms, down into the occupied zones, increasing the thermal comfort of the building and reducing heat loss through the roof. Due to the principle of operation, these models are not equipped with heat exchangers.

Combining heaters with destratifiers will increase comfort and optimise the heating costs of the facility.



1 - air blades, 2 - cover, 3 - heat exchanger, 4 - axial fan with motor, 5 - mounting console

HEAT EXCHANGER

The exchanger is constructed with copper tubes and aluminium fins to increase the heat transfer surface area. The copper supply connections, with $\frac{3}{4}$ inch male threads, are located at the rear of the casing and are fitted with plugs for venting and draining the heating medium.

The maximum heating medium temperatures for the heat exchanger range from 95° C to 130° C depending on the model (see→ Technical specifications of the units), and the maximum operating pressure for all models is 1.6MPa.

The heat exchanger can also be fed with chilled water, allowing the unit to operate in cooling mode.

AXIAL FAN WITH MOTOR

AEROCK units are available in two motor options - AC and EC versions.

Both versions of the motors are supplied with 230V/50Hz AC power, have protection level IP54 and insulation class F. The maximum operating temperature for both motors is 60°C.

AC version motors are alternating current motors that can operate in 3 different gears (speeds). Motors EC versions are electronically commutated motors, which means that their speed can be continuously controlled by a 0-10V DC signal. EC versions of motors are also characterised by higher efficiency and quieter operation.

The fan, connected to the motor, is housed in a specially shaped nozzle that ensures even distribution of the airflow to the heat exchanger, ensuring efficient and quiet operation of the unit. The fan is protected at the rear by a protective mesh.

COVER

The casing of the device is made of top-quality plastic, characterised by exceptional mechanical strength and resistance to high temperatures. Admixture of anti-UV pigments contained in the material, prevents discoloration of the housing color even after years of intensive use.

The housing consists of two parts - the front cover, in RAL9016, and the rear cover, in RAL7024.

AIR BLADES

The specially shaped blades guarantee minimum airflow resistance. The fixing of the air blades to the swivel stem makes it possible to manually adjust the blades, to obtain the desired direction of air flow. To change the position of the air blades, grasp the edge of the blade with both hands and turn it in the desired direction with a calm motion. The air control blades should be turned on both pins at the same time. The available colour variant is RAL 7024 Graphite grey.

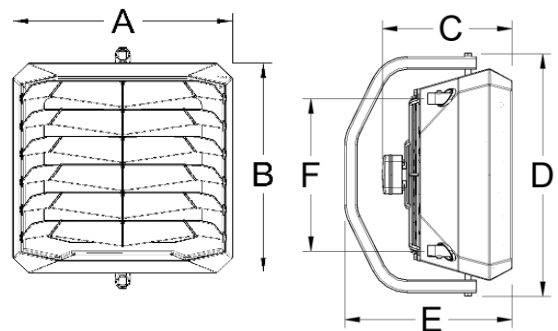
MOUNTING CONSOLE

The mounting console allows the unit to be fixed to room walls and ceilings. Its design allows the unit to be rotated around the connecting points by an angle of $-60^{\circ} \pm 0 \pm 60^{\circ}$, thus directing the airflow where it is needed.

MAIN DIMENSIONS

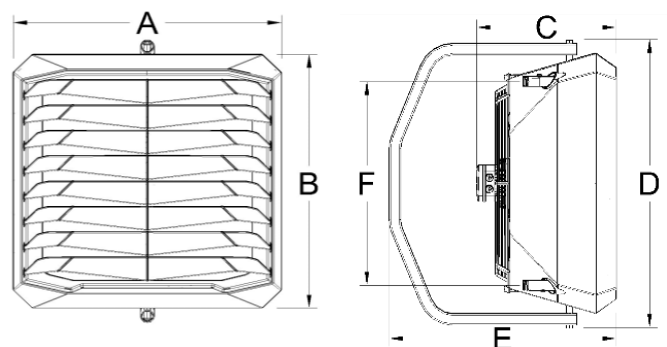
		MINI R2; MINI R3 [mm].	MINI RD [mm]
A		528	528
B		527	527
C*	AC	324	324
	EC	272	272
D		606	606
E		419	419
F		381	-

C* - motor variant



		R1; R2 [mm].	R3; R4 [mm].	RD [mm]
A		701	701	701
B		701	701	701
C*	AC	376	376	376
	EC	338	353	353
D		777	777	777
E		605	605	605
F		550	550	-

C* - motor variant



TECHNICAL SPECIFICATIONS OF EQUIPMENT

Parameter / Motor	MINI R2		MINI R3		MINI RD		R1		R2		R3		R4		RD	
	AC	EC	AC	EC	AC	EC	AC	EC	AC	EC	AC	EC	AC	EC	AC	EC
AEROCK article number	1-4-0101	1-4-0104	1-4-0102	1-4-0105	1-4-0103	1-4-0106	1-4-1007	1-4-0112	1-4-0108	1-4-0113	1-4-0109	1-4-0114	1-4-0110	1-4-0115	1-4-0111	1-4-0116
Number of heater rows [pcs].	2		3		---		1		2		3		4		---	
Maximum air flow rate [m ³ /h]	2150		2050		2350		5350		4900		5750		5000		6650	
Heating power range [kW]	2-21		2-28		---		2-30		3-51		6-73		8-94		---	
Maximum temperature of the heating medium [°C]	130		110		---		130		110		95		---		---	
Maximum operating pressure [MPa]	1,6															
Maximum horizontal air range [m]	14		12		16		23		22		25		22		28	
Maximum vertical air [m]	8		7		9		12		11		12		10		15	
Water volume [dm]	1,2		1,7		---		1,3		2,2		3,1		4,2		---	
Spigot diameter connection [inch]	3/4"															
Weight of the unit (without water) [kg].	11,7	9,8	12,5	10,5	9,9	7,9	19,9	18	20,9	19	24	21,8	25	22,8	17,8	15,6
Supply voltage [V/Hz]	1 ~ 230/50															
Motor power [kW]	0,12	0,09	0,12	0,09	0,12	0,09	0,28	0,22	0,28	0,22	0,42	0,33	0,42	0,33	0,42	0,33
Rated motor current at 1~230V/50Hz [A].	0,5	0,4	0,5	0,4	0,5	0,4	1,2	0,9	1,2	0,9	1,8	1,2	1,8	1,2	1,8	1,2
Motor protection class [IP]	54															
Colours [RAL]	Front of the cover: RAL9016 Rear of the cover and air blades: RAL7024															

HEATING CAPACITIES

MINI R2 AC / EC																	
Parameters Tz /Tp [°C]																	
Tp1 [°C]	90/70 [°C]					80/60 [°C]				70/50 [°C]				50/30 [°C]			
	Qp [m3/h]	Pg [kW]	Tp2 [°C]	Qw [m³/h]	Δp [kPa]	Pg [kW]	Tp2 [°C]	Qw [m³/h]	Δp [kPa]	Pg [kW]	Tp2 [°C]	Qw [m³/h]	Δp [kPa]	Pg [kW]	Tp2 [°C]	Qw [m³/h]	Δp [kPa]
0	2150	21,5	29,8	0,92	9,4	18,1	25,1	0,8	7,2	14,6	20,3	0,64	5,2	7,3	10,1	0,32	1,7
	1550	17,3	33,2	0,74	6,5	14,54	28	0,64	5	11,77	22,6	0,517	3,6	5,9	11,3	0,26	1,2
	1100	13,7	37	0,61	5,3	11,5	31,2	0,51	3,3	9,3	25,3	0,41	2,4	4,7	12,7	0,2	0,8
5	2150	20	32,8	0,86	8,4	16,59	28	0,73	6,3	13,1	23,2	0,58	4,3	5,7	12,9	0,25	1,1
	1550	16,1	36	0,72	7	13,4	30,7	0,59	4,3	10,6	25,3	0,47	3	4,6	13,9	0,2	0,8
	1100	12,7	39,5	0,57	4,7	10,6	33,7	0,47	2,9	8,4	27,7	0,37	2	3,7	15	0,17	0,5
10	2150	18,6	35,7	0,8	7,3	15,1	31	0,67	5,3	11,6	26,1	0,51	3,5	4,1	15,7	0,18	0,6
	1550	14,9	38,7	0,66	6,2	12,2	33,4	0,54	3,7	9,4	28	0,41	2,4	3,3	16,4	0,15	0,4
	1100	11,8	42	0,53	4,1	9,6	36,1	0,43	2,5	7,4	30,1	0,33	1,6	2,8	17,6	0,12	0,3
15	2150	17,1	38,7	0,73	7,8	13,6	33,9	0,6	4,5	10,1	29	0,44	2,7	2,8	18,9	0,12	0,3
	1550	13,8	41,4	0,61	5,3	11	36,1	0,49	3,1	8,1	30,6	0,36	1,9	2,6	20	0,11	0,3
	1100	10,9	44,5	0,48	3,7	8,7	38,6	0,38	2	6,4	32,5	0,28	1,3	2,4	21,5	0,1	0,3
20	2150	15,6	41,6	0,67	6,6	12,1	36,8	0,53	3,6	8,5	31,8	0,37	2	2,2	23,1	0,1	0,2
	1550	12,6	44,1	0,54	4,6	9,8	38,8	0,43	2,5	6,9	33,2	0,3	1,4	2	23,8	0,1	0,2
	1100	9,9	46,9	0,44	3,1	7,73	40,9	0,34	1,7	5,45	34,8	0,24	1	1,7	24,7	0,1	0,2

MINI R3 AC / EC																	
Parameters Tz /Tp [°C]																	
Tp1 [°C]	90/70 [°C]					80/60 [°C]				70/50 [°C]				50/30 [°C]			
	Qp [m3/h]	Pg [kW]	Tp2 [°C]	Qw [m³/h]	Δp [kPa]	Pg [kW]	Tp2 [°C]	Qw [m³/h]	Δp [kPa]	Pg [kW]	Tp2 [°C]	Qw [m³/h]	Δp [kPa]	Pg [kW]	Tp2 [°C]	Qw [m³/h]	Δp [kPa]
0	2050	28,8	41,8	1,28	10	24,1	35,1	1,07	7,7	19,6	28,6	0,86	5,6	9,9	14,3	0,43	1,8
	1450	22,5	46,2	1,00	6,6	18,8	38,6	0,83	5,0	15,4	31,7	0,68	3,7	7,8	15,9	0,34	1,2
	1050	17,7	50,3	0,79	4,4	14,8	41,9	0,65	3,3	12,2	34,5	0,54	2,5	6,2	17,5	0,27	0,8
5	2050	26,8	44,0	1,19	8,9	22,2	37,2	0,98	6,7	17,7	30,7	0,78	4,7	7,7	16,2	0,34	1,2
	1450	21,0	48,1	0,93	5,8	17,3	40,5	0,76	4,3	13,8	33,5	0,61	3,1	6,1	17,5	0,26	0,8
	1050	16,5	51,9	0,74	3,9	13,6	43,6	0,6	2,9	10,9	36,1	0,48	2,0	4,8	18,7	0,21	0,5
10	2050	24,9	46,2	1,11	7,8	20,2	39,4	0,89	5,7	15,6	32,7	0,69	3,8	5,5	18	0,24	0,7
	1450	19,4	50,0	0,86	5,1	15,7	42,4	0,7	3,7	12,3	35,2	0,54	2,5	4,4	19,1	0,19	0,5
	1050	15,3	53,6	0,68	3,4	12,4	45,2	0,55	2,5	9,7	37,6	0,43	1,7	4,0	21,3	0,17	0,4
15	2050	22,9	48,3	1,02	6,8	18,2	41,5	0,81	4,8	13,6	34,7	0,6	3,0	4,1	20,9	0,18	0,4
	1450	17,9	51,8	0,79	4,4	14,2	44,2	0,63	3,1	10,7	36,9	0,47	2,0	3,7	22,6	0,16	0,3
	1050	14,1	55,1	0,63	3,0	11,2	46,8	0,5	2,1	8,4	39	0,37	1,3	3,3	24,5	0,15	0,3
20	2050	20,9	50,4	0,93	5,8	16,2	43,6	0,72	3,9	11,5	36,7	0,51	2,2	3,2	24,6	0,15	0,3
	1450	16,4	53,6	0,73	3,8	12,6	46	0,56	2,5	9	38,6	0,4	1,5	2,8	25,7	0,15	0,3
	1050	12,9	56,7	0,58	2,5	10	48,3	0,44	1,7	7,2	40,3	0,32	1,0	2,4	26,7	0,15	0,3

Tz - water temperature at the inlet to the unit; Tp - water temperature at the return from the unit; Tp1 - air temperature at the inlet to the unit; Tp2 - air temperature at the outlet from the unit; Pg - heating power of the unit; Qw - water flow rate; Qp - air flow rate; Δp - pressure drop across the heat exchanger

R1 AC / EC																	
Parameters Tz /Tp [°C]																	
90/70 [°C]						80/60 [°C]				70/50 [°C]				50/30 [°C]			
Tp1 [°C]	Qp [m3/h]	Pg [kW]	Tp2 [°C]	Qw [m³/h]	Δp [kPa]	Pg [kW]	Tp2 [°C]	Qw [m³/h]	Δp [kPa]	Pg [kW]	Tp2 [°C]	Qw [m³/h]	Δp [kPa]	Pg [kW]	Tp2 [°C]	Qw [m³/h]	Δp [kPa]
0	5350	30,7	16,6	1,3	9,1	25,5	14,2	1,12	6,8	19,7	11,1	0,87	4,5	7,9	4,4	0,35	1
	3750	24,3	19,3	1	6	20,5	16,3	0,9	4,7	16	12,7	0,7	3,2	6,3	5	0,28	0,7
	2650	19,6	22	0,8	4,1	16,4	18,5	0,73	3,2	12,8	14,4	0,56	2,2	5,1	5,7	0,22	0,5
5	5350	28,5	20,4	1,3	7,9	23,2	17,9	1,03	5,8	17,5	14,8	0,77	3,7	5,4	8	0,24	0,5
	3750	22,6	22,9	1	5,3	18,6	19,8	0,82	4	14,1	16,2	0,62	2,5	4,4	8,5	0,19	0,4
	2650	18,1	25,4	0,8	3,7	14,9	21,8	0,66	2,7	11,3	17,7	0,5	1,7	4,1	9,6	0,18	0,3
10	5350	26,2	24,2	1,1	6,9	20,9	21,7	0,93	4,9	15,1	18,5	0,67	2,9	4	12,2	0,17	0,3
	3750	20,8	26,5	0,9	4,6	16,8	23,4	0,74	3,3	12,2	19,7	0,54	2	3,7	13	0,16	0,3
	2650	16,7	28,8	0,7	4,6	13,5	25,2	0,6	2,3	9,8	21	0,43	1,4	3,5	13,9	0,15	0,2
15	5350	23,9	22,4	1,1	5,9	18,6	25,3	0,82	3,9	12,8	22,2	0,56	2,1	3,2	16,8	0,15	0,2
	3750	19	30,1	0,8	4	14,9	26,9	0,66	2,7	10,3	23,2	0,45	1,5	2,9	17,3	0,15	0,2
	2650	15,3	32,2	0,7	3,9	12	28,5	0,53	1,9	8,3	24,3	0,37	1	2,7	18	0,15	0,2
20	5350	21,6	31,7	0,9	5	16,2	29	0,72	3,1	10,4	25,8	0,45	1,5	2,3	21,3	0,15	0,2
	3750	17,2	33,6	0,7	4,8	13	30,4	0,58	2,1	8,4	26,7	0,37	1,04	2,1	21,6	0,15	0,2
	2650	13,8	35,5	0,6	3,3	10,5	31,8	0,46	1,5	6,7	27,6	0,3	0,7	1,8	22,1	0,15	0,2

R2 AC / EC																	
Parameters Tz /Tp [°C]																	
90/70 [°C]						80/60 [°C]				70/50 [°C]				50/30 [°C]			
Tp1 [°C]	Qp [m3/h]	Pg [kW]	Tp2 [°C]	Qw [m³/h]	Δp [kPa]	Pg [kW]	Tp2 [°C]	Qw [m³/h]	Δp [kPa]	Pg [kW]	Tp2 [°C]	Qw [m³/h]	Δp [kPa]	Pg [kW]	Tp2 [°C]	Qw [m³/h]	Δp [kPa]
0	4900	51,3	31,2	2,28	21,4	43,3	26,3	1,92	16,6	35,1	21,4	1,55	12	18	10,9	0,78	4,1
	3550	41,4	34,8	1,84	14,8	34,9	29,4	1,55	11,5	28,4	23,9	1,25	8,3	14,6	12,2	0,64	2,9
	2450	32	39	1,42	9,5	27,1	33	1,2	7,4	22	26,8	0,97	5,4	11,3	13,8	0,49	1,8
5	4900	47,9	34,1	2,12	18,9	39,8	29,2	1,76	14,4	31,6	24,2	1,39	10	14,3	13,7	0,62	2,7
	3550	38,6	37,4	1,71	13,1	32,2	32	1,42	9,9	25,6	26,5	1,12	6,9	11,6	14,7	0,5	1,9
	2450	29,9	41,4	1,33	8,5	24,9	35,3	1,07	6,4	19,8	29,2	0,87	4,5	9	16	0,39	1,2
10	4900	44,4	37	1,98	16,7	36,3	32,1	1,61	12,2	28	27,1	1,23	8,1	10,4	16,3	0,46	1,6
	3550	35,8	40,1	1,6	11,6	29,3	34,6	1,3	8,5	22,7	29,1	1	5,6	8,5	17,1	0,37	1,1
	2450	27,8	43,8	1,23	7,4	22,8	37,7	1,01	5,5	17,6	31,4	0,78	3,7	6,6	18	0,29	0,7
15	4900	40,9	39,9	1,82	14,5	32,8	34,9	1,45	10,3	24,4	29,9	1,07	6,4	6,4	18,9	0,28	0,7
	3550	33	42,7	1,47	10	26,5	37,2	1,17	7,1	19,8	31,6	0,87	4,4	5,1	21,2	0,22	0,5
	2450	25,6	46,1	1,14	6,5	20,5	40	0,91	4,6	15,4	33,7	0,67	2,9	5,1	21,2	0,22	0,5
20	4900	37,4	42,7	1,66	12,4	29,2	37,7	1,29	8,4	20,7	32,6	0,91	4,8	4,7	22,9	0,21	0,4
	3550	30,2	45,3	1,34	8,6	23,6	39,8	1,04	5,8	16,8	34,1	0,74	3,4	4,3	23,6	0,2	0,4
	2450	23,4	48,5	1,04	5,5	18,3	42,3	0,81	3,8	13,1	35,9	0,57	2,2	3,7	24,5	0,2	0,4

Tz - water temperature at the inlet to the unit; Tp - water temperature at the return from the unit; Tp1 - air temperature at the inlet to the unit; Tp2 - air temperature at the outlet from the unit; Pg - heating power of the unit; Qw - water flow rate; Qp - air flow rate; Δp - pressure drop across the heat exchanger

R3 AC / EC																	
Parameters Tz /Tp [°C]																	
Tp1 [°C]	90/70 [°C]					80/60 [°C]				70/50 [°C]				50/30 [°C]			
	Qp [m ³ /h]	Pg [kW]	Tp2 [°C]	Qw [m ³ /h]	Δp [kPa]	Pg [kW]	Tp2 [°C]	Qw [m ³ /h]	Δp [kPa]	Pg [kW]	Tp2 [°C]	Qw [m ³ /h]	Δp [kPa]	Pg [kW]	Tp2 [°C]	Qw [m ³ /h]	Δp [kPa]
0	5750	73	37,9	3,24	40,9	62,3	32,3	2,76	32,4	51,5	26,7	2,27	24,2	28,8	14,9	1,26	9,62
	4150	58,4	42	2,6	27,9	49,9	35,9	2,21	22,1	41,3	29,7	1,82	16,5	23,2	16,7	1,01	6,6
	2950	45,9	46,4	2,04	18,3	39,2	39,7	1,73	14,6	32,8	32,8	1,43	10,9	18,3	18,5	0,8	4,38
5	5750	68,3	40,4	3,03	36,5	57,6	34,9	2,55	28,3	46,7	29,2	2,05	20,4	23,7	17,3	1,03	6,85
	4150	54,7	44,3	2,43	24,9	46,1	38,2	2,04	19,2	37,4	31,9	1,65	13,9	19,1	18,7	0,83	4,72
	2950	43	48,4	1,9	16,3	36,3	41,7	1,6	12,7	29,5	34,8	1,3	9,2	15,1	20,3	0,66	3,16
10	5750	63,6	43	2,83	32,3	52,8	37,4	2,33	24,3	41,8	31,7	1,84	16,8	18,5	19,6	0,81	4,48
	4150	50,9	46,6	2,27	22,1	42,3	40,4	1,87	16,6	33,5	34,1	1,48	11,5	14,9	20,7	0,65	3,07
	2950	40	50,4	1,71	14,4	33,3	43,6	1,47	11	26,4	36,7	1,16	7,6	11,8	21,9	0,52	2,06
15	5750	58,8	45,5	2,62	28,3	47,9	39,8	2,12	20,6	36,8	34,1	1,62	13,5	13,1	21,8	0,57	2,45
	4150	47,1	48,8	2,09	19,2	38,4	42,6	1,7	14	29,6	36,2	1,3	9,3	10,5	22,6	0,46	1,7
	2950	37	52,4	1,64	12,6	30,2	45,6	1,33	9,3	23,3	38,5	1,03	6,2	8,4	23,5	0,36	1,13
20	5750	53,9	48	2,4	24,3	43	42,3	1,9	17,1	31,8	36,5	1,37	10,5	7,3	23,8	0,32	0,89
	4150	43,2	51	1,92	16,6	34,5	44,8	1,53	11,7	25,5	38,3	1,13	7,2	6,3	24,5	0,28	0,71
	2950	34	54,3	1,51	10,9	27,1	47,4	1,2	7,7	20,2	40,4	0,88	4,8	5,8	25,8	0,25	0,6

R4 AC / EC																	
Parameters Tz /Tp [°C]																	
Tp1 [°C]	90/70 [°C]					80/60 [°C]				70/50 [°C]				50/30 [°C]			
	Qp [m ³ /h]	Pg [kW]	Tp2 [°C]	Qw [m ³ /h]	Δp [kPa]	Pg [kW]	Tp2 [°C]	Qw [m ³ /h]	Δp [kPa]	Pg [kW]	Tp2 [°C]	Qw [m ³ /h]	Δp [kPa]	Pg [kW]	Tp2 [°C]	Qw [m ³ /h]	Δp [kPa]
0	5000	94,4	56,3	4,2	46,2	80,4	47,9	3,56	36,4	66	39,4	2,9	26,7	35,5	21,2	1,55	10
	3900	78	59,6	3,47	33,2	66,5	50,9	2,94	26,1	54,7	41,8	2,41	19,4	29,5	22,6	1,29	7,2
	2700	58,2	64,3	2,59	20,1	49,7	54,9	2,2	15,8	41	45,3	1,8	11,8	22,3	24,6	0,97	4,5
5	5000	88,2	57,6	3,92	41,1	74,1	49,2	3,28	31,7	59,7	40,6	2,63	22,5	28,6	22,1	1,25	6,9
	3900	72,9	60,8	3,25	29,7	61,3	51,9	2,72	22,8	49,5	42,8	2,18	16,3	23,8	23,3	1,04	5
	2700	54,5	65,2	2,42	19,9	45,9	55,7	2,03	13,8	37,1	46	1,63	9,9	18	24,9	0,78	3,1
10	5000	82	58,9	3,65	36,3	67,8	50,5	2,92	27,1	53,2	41,7	2,34	18,5	21,5	22,8	0,94	4,2
	3900	67,8	61,9	3,01	26	56,2	52,9	2,48	19,5	44,2	43,8	1,94	13,4	17,9	23,7	0,78	3,1
	2700	60,7	66	2,25	15,8	42,1	56,5	1,86	11,9	33,2	46,6	1,46	8,2	13,6	25	0,59	1,9
15	5000	75,8	60,2	3,37	31,6	61,4	51,6	2,72	22,8	46,7	42,8	2,05	14,7	14	23,3	0,61	2
	3900	62,6	62,9	2,79	22,8	50,9	53,9	2,25	16,5	38,8	44,6	1,7	10,7	11,7	23,9	0,51	1,5
	2700	46,9	66,8	2,08	13,7	38,2	57,2	1,68	10	29,2	47,2	1,28	6,5	10	26,1	0,44	1,1
20	5000	69,4	61,4	3,08	27,1	55	52,8	2,43	18,9	40	43,9	1,76	11,3	9,4	25,6	0,41	1
	3900	57,4	63,9	2,55	19,6	45,6	54,9	2,01	13,6	33,3	45,4	1,47	8,2	8,8	26,7	0,38	0,9
	2700	43	67,5	1,91	11,9	34,2	57,8	1,51	8,3	25,1	47,7	1,1	5,1	7,5	28,3	0,37	0,9

Tz - water temperature at the inlet to the unit; Tp - water temperature at the return from the unit; Tp1 - air temperature at the inlet to the unit; Tp2 - air temperature at the outlet from the unit; Pg - heating power of the unit; Qw - water flow rate; Qp - air flow rate; Δp - pressure drop across the heat exchanger

COOLING CAPACITIES

		MINI R3					R3					R4				
		Parameters Tz /Tp [°C] 7/12 [°C]														
TP1 [°C]	Qp [m3/h]	Pc [kW]	TP2 [°C]	Qw [m³/h]	Δp [kPa]	Qp [m3/h]	Pc [kW]	TP2 [°C]	Qw [m³/h]	Δp [kPa]	Qp [m3/h]	Pc [kW]	TP2 [°C]	Qw [m³/h]	Δp [kPa]	
18	2050	1,8	15,4	0,31	1,3	5750	4,2	15,8	0,73	4,8	5000	4,7	15,2	0,81	4,1	
	1450	1,6	14,7	0,27	1,1	4150	3,4	15,6	0,58	3,2	3900	4,5	14,5	0,78	3,8	
	1050	1,4	14,1	0,24	0,9	2950	2,9	15,1	0,5	2,5	2700	4,1	13,5	0,71	3,2	
20	2050	2	17,2	0,34	1,6	5750	6,6	16,6	1,15	10,6	5000	6,9	15,9	1,18	7,9	
	1450	1,9	16,2	0,32	1,4	4150	5,3	16,2	0,91	7	3900	5,8	15,6	1	5,9	
	1050	1,8	15	0,3	1,3	2950	4,2	15,8	0,71	4,6	2700	4,8	14,7	0,83	4,2	
23	2050	3,3	18,3	0,56	3,8	5750	10,1	17,8	1,72	21,2	5000	11,5	16,1	1,99	19,2	
	1450	2,5	17,8	0,43	2,4	4150	8,1	17,2	1,39	14,7	3900	9,5	15,8	1,62	13,5	
	1050	2	17,3	0,35	1,7	2950	6,4	16,6	1,1	9,9	2700	7,1	15,2	1,22	8,3	
25	2050	4,2	18,9	0,72	5,9	5750	12,6	18,7	2,16	31,3	5000	14,4	16,6	2,5	28,6	
	1450	3,3	18,3	0,56	3,8	4150	10,2	18,1	1,76	22,1	3900	12,1	16,1	2,06	20,5	
	1050	2,6	17,7	0,44	2,5	2950	8	17,4	1,37	14,3	2700	9,1	15,5	1,55	12,5	
30	2050	7,7	21,3	1,32	16,7	5750	23,3	21,6	4	90,9	5000	27,5	18,4	4,76	87,1	
	1450	6,1	20,5	1,06	11,4	4150	19,2	20,7	3,3	65,2	3900	23,1	17,8	3,96	63,3	
	1050	4,9	19,7	0,85	7,9	2950	15,5	19,7	2,68	45,7	2700	17,7	16,9	3,01	39,4	

Tz - supply water temperature; Tp - return water temperature; Tp1 - inlet air temperature ; Tp2 - outlet air temperature; Pg - cooling power; Qp - air capacity

ADDITIONAL PARAMETERS

		MINI R2						MINI R3					
Fan speed		III (Max.)		II (Mid.)		I (Min.)		III (Max.)		II (Mid.)		I (Min.)	
Motor type		AC	EC	AC	EC	AC	EC	AC	EC	AC	EC	AC	EC
Air flow rate	m³/h	2150	2150	1550	1550	1100	1100	2050	2050	1450	1450	1050	1050
Noise level*	dB(A)	52,7	48,6	44,4	40,9	31,1	29,1	52,7	48,6	44,4	40,9	31,1	29,1
Maximum current **	A	0,5	0,4	0,3	0,3	0,3	0,1	0,5	0,4	0,3	0,3	0,3	0,1
Electric motor power***	W	120	90	70	50	55	20	120	90	70	50	55	20
Electricity consumption (active power)****	W	108	63	66	28	52	12	108	63	66	28	52	12
Horizontal range	m	14	14	8	8	5	5	12	12	7	7	4	4
Vertical range	m	8	3	5	5	3	3	7	7	4	4	3	3

		R1						R2					
Fan speed		III (Max.)		II (Mid.)		I (Min.)		III (Max.)		II (Mid.)		I (Min.)	
Engine type		AC	EC	AC	EC	AC	EC	AC	EC	AC	EC	AC	EC
Air flow rate	m³/h	5350	5350	3750	3750	2650	2650	4900	4900	3550	3550	2450	2450
Noise level*	dB(A)	60,9	60,8	57,9	57,5	52,3	45,6	60,9	60,8	57,9	57,5	52,3	45,6
Maximum current **	A	1,2	0,9	1,0	0,5	0,9	0,2	1,2	0,9	1,0	0,5	0,9	0,2
Electric motor power***	W	280	220	230	150	200	80	280	220	230	150	200	80
Electricity consumption (active power)****	W	242	185	192	127	183	51	242	185	192	127	183	51
Horizontal range	m	23	23	20	20	15	15	22	22	19	19	14	14
Vertical range	m	12	12	9	9	7	7	11	11	8	8	6	6

		R3						R4					
Fan speed		III (Max.)		II (Mid.)		I (Min.)		III (Max.)		II (Mid.)		I (Min.)	
Motor type		AC	EC	AC	EC	AC	EC	AC	EC	AC	EC	AC	EC
Air flow rate	m ³ /h	5750	5750	4150	4150	2950	2950	5000	5000	3900	3900	2700	2700
Noise level*	dB(A)	64,2	60,2	60,6	57,3	52,5	49,7	64,2	60,2	60,6	57,3	52,5	49,7
Maximum current **	A	1,8	1,2	1,5	0,6	1,2	0,4	1,8	1,2	1,5	0,6	1,2	0,4
Electric motor power***	W	420	330	340	150	280	85	420	330	340	150	280	85
Electricity consumption (active power)****	W	352	228	277	139	253	76	352	228	277	139	253	76
Horizontal range	m	25	25	22	22	16	16	20	20	18	18	11	11
Vertical range	m	12	12	9	9	7	7	10	10	8	8	6	6

		MINI RD						RD					
Fan speed		III (Max.)		II (Mid.)		I (Min.)		III (Max.)		II (Mid.)		I (Min.)	
Motor type		AC	EC	AC	EC	AC	EC	AC	EC	AC	EC	AC	EC
Air flow rate	m ³ /h	2350	2350	1850	1850	1250	1250	6650	6650	5500	5500	4000	4000
Noise level*	dB(A)	54,2	50	45,9	42,3	32,3	30,1	65,9	61,8	62,3	58,9	53,9	50,9
Maximum consumption**	A	0,5	0,4	0,3	0,3	0,3	0,1	1,8	1,2	1,5	0,6	1,2	0,4
Electric motor power***	W	120	90	70	50	55	20	420	330	340	150	280	85
Electricity consumption (active power)****	W	108	63	66	28	52	12	352	228	277	139	253	76
Horizontal range	m	16	16	10	10	7	7	28	28	24	24	19	19
Vertical range	m	10	10	7	7	5	5	15	15	11	11	9	9

* reference conditions: room volume 1500m³, measured at a distance of 5 m

** current consumption at 230VAC power supply

*** electric motor power for the above air flow rates

**** measurement under laboratory conditions

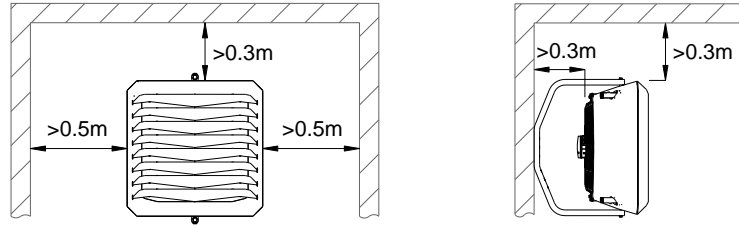
The noise level of the unit depends on the fan speed setting and room acoustics.

INSTALLATION

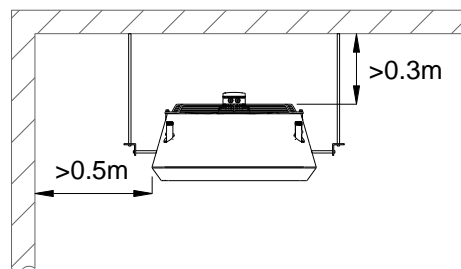
GENERAL INSTALLATION RECOMMENDATIONS

The unit must be installed maintaining the minimum distances from partitions and ceilings indicated on the drawings. Incorrect installation may cause the unit to malfunction, damaging of the fan or increase in the noise levels of the unit.

Minimum distances for vertical mounting:



Minimum distances for horizontal mounting:

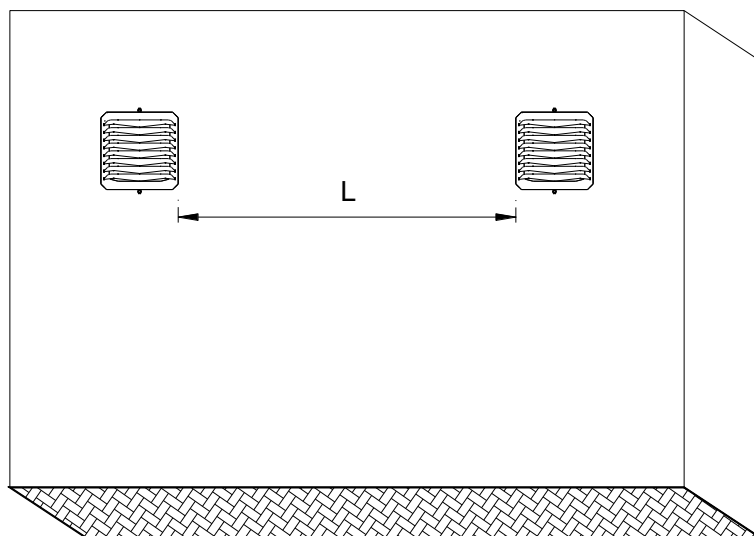


In the location where the heaters are installed, the best possible air distribution should be ensured, eliminating possible air flow disturbances.

If there is an increased demand for heat, it is recommended to install more units in the room. Please note the recommended spacing between the heaters.

The recommended distances (L) between units are between:

- 3 – 7 metres for Mini R2, Mini R3, Mini RD models
- 6 – 12 metres for models R1, R2, R3, R4, RD

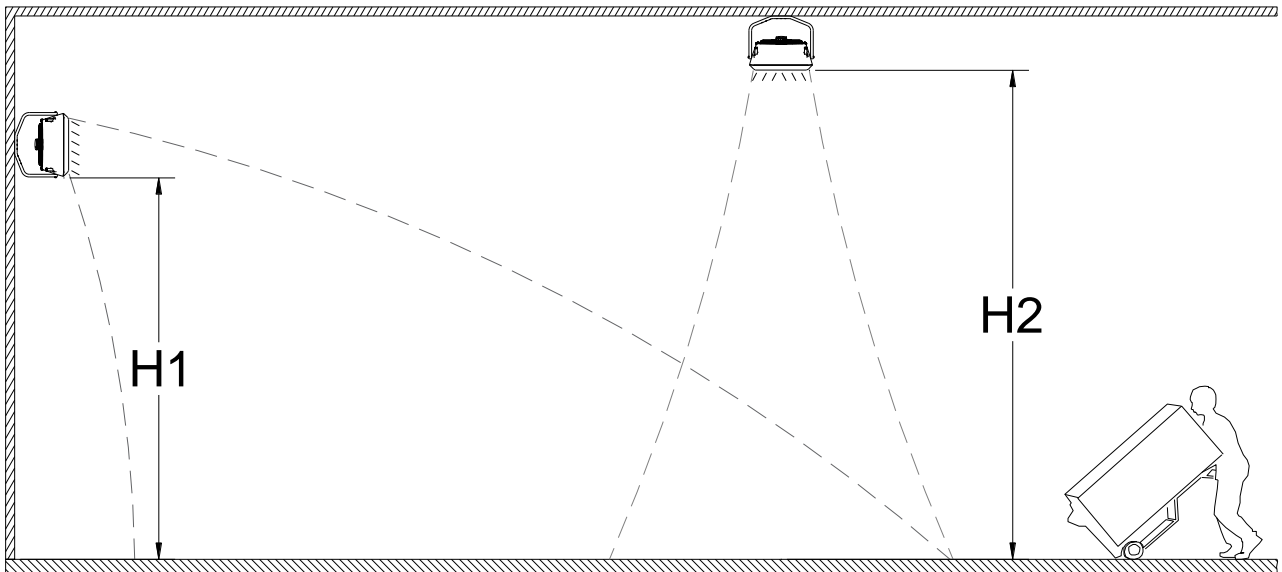


The recommended installation height of the unit for a vertical installation (H1) is:

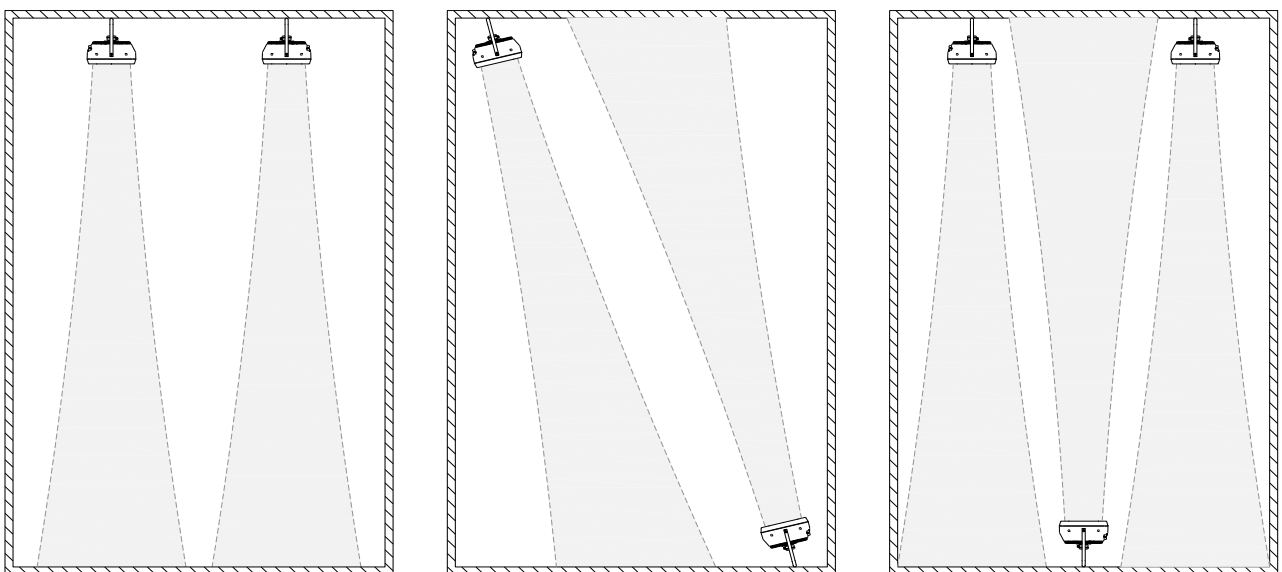
- 2.5 – 5 metres for the Mini R2 and Mini R3 models,
- 2.5 – 8 metres for R1, R2, R3, R4.

The recommended installation height of the unit for horizontal installation (H2) is:

- 3 – 6 metres for the Mini R2 and Mini R3, Mini RD
- 3 – 15 metres for R1, R2, R3, R4,
- 5 – 16 meters for RD.



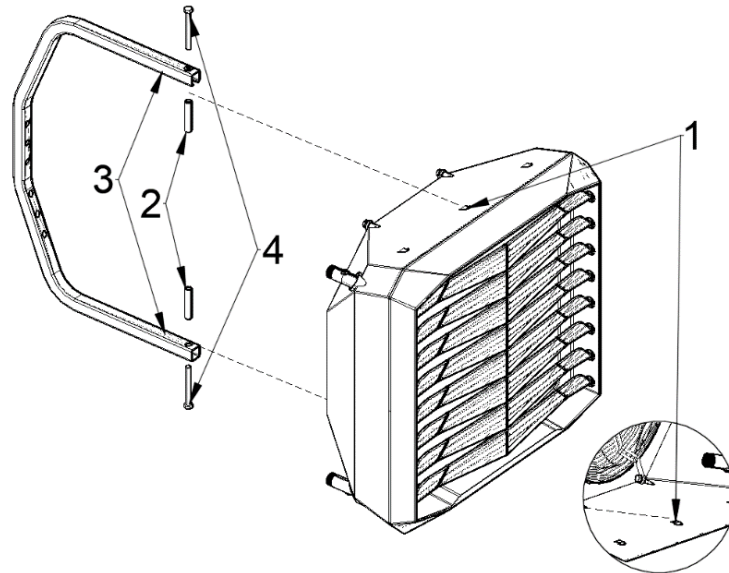
Example of air heater arrangement for wall mounting. Top view.



DETAILED INSTALLATION GUIDELINES

Console mounting (vertical and horizontal positions)

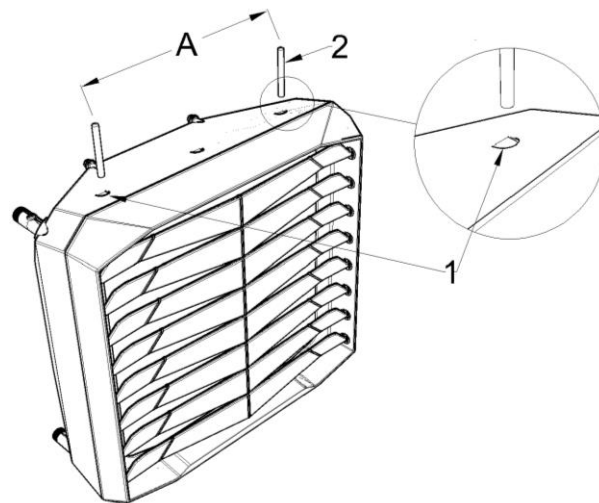
To attach the console to the unit, first drill two holes, one in the top and one in the bottom of the housing, at the points marked in the drawing (1). To drill the holes, it is recommended to use a crown drill with a diameter of $\varnothing 16\text{mm}$. When drilling the holes, special care should be taken not to drill through the heat exchanger. The bushings (2) are inserted into the holes and the console (3) is pushed on. The console allows the unit to be rotated around the connecting points by an angle of $-60^{\circ} \div 0 \div 60^{\circ}$. After fixing the expected position, the console should be screwed to the device using the supplied M10 screws with washers (4). To fix the console to the wall or ceiling, use four M10 screws of appropriate length.



Vertical installation without console

The unit can be mounted vertically under the ceiling on any support structure that will provide a stable and vibration-free fixing.

In order to mount the unit with mounting pins, two holes must first be drilled, on the top of the housing, at the points marked in the drawing (1). To drill the holes, it is recommended to use a crown drill with a diameter of $\varnothing 16\text{ mm}$. When drilling the holes, take special care not to drill through the heat exchanger. Then, M10 mounting pins (2) should be screwed into the threaded holes of the heat exchanger frame to a depth of approx. 15mm.

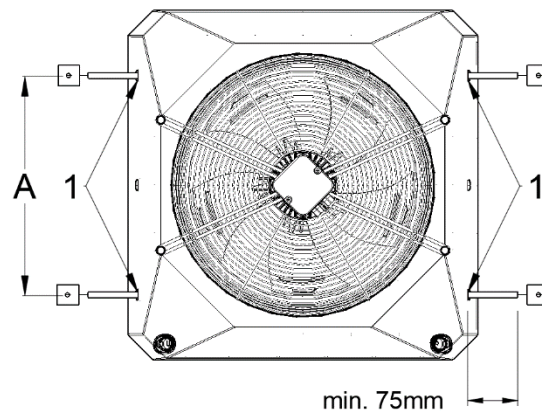


A = 320 mm for Mini R2, Mini R3, Mini RD | A = 440 mm for R1, R2, R3, R4, RD

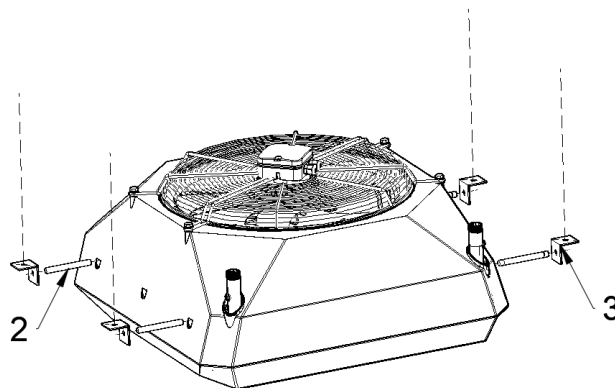
Mounting without console in horizontal position

The unit can be mounted horizontally under the ceiling on any support structure that will provide a secure and vibration-free fixing.

To mount the unit with the mounting pins, first drill four holes, two in the upper part and two at the bottom part of the housing, at the points indicated in the drawing (1). It is recommended to use a crown drill with a diameter of $\varnothing 16\text{mm}$ to drill the holes. When drilling the holes, special care must be taken not to drill through the heat exchanger. Then, the M10 mounting screws (2) should be screwed into the threaded holes of the heat exchanger frame to a depth of approx. 15mm. After screwing, the screws must protrude min. 75mm outside the casing. The screws protruding from the unit, can be connected to the mounting pins, e.g. using threaded angle brackets (3).



A = 320 mm for Mini R2, Mini R3, Mini RD | A = 440 mm for R1, R2, R3, R4, RD

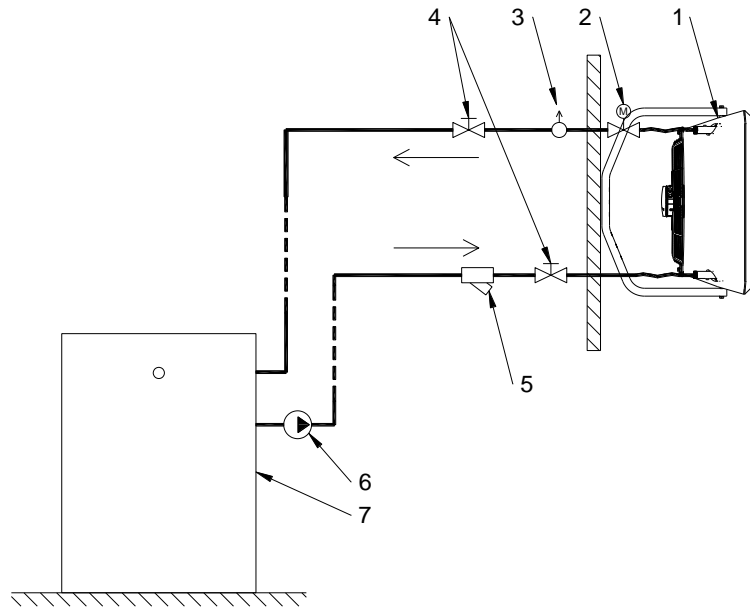


When determining the location of the device, the following should be taken into account:

- Ease of access for servicing,
- Access to water and electricity and
- Proper air distribution in the room.

CONNECTION TO THE PLUMBING SYSTEM

The heater should be connected according to the simplified hydraulic diagram below:

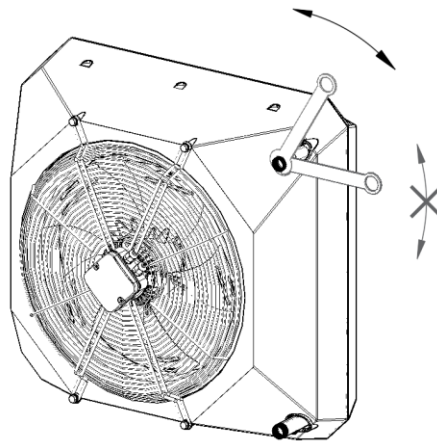


1) Heater; 2) Valve with actuator; 3) Vent valve; 4) Shut-off valve; 5) Filter; 6) Circulation pump; 7) Boiler

The hydraulic connections should be free from stress and strain. It is recommended to connect the hydraulic system with flexible connections - their use will enable the heater to be rotated on the mounting bracket in the horizontal plane.

The heat exchanger tubes and connections are made of copper. Copper components should not come into direct contact with components made of other metals in order to avoid so-called electrochemical corrosion.

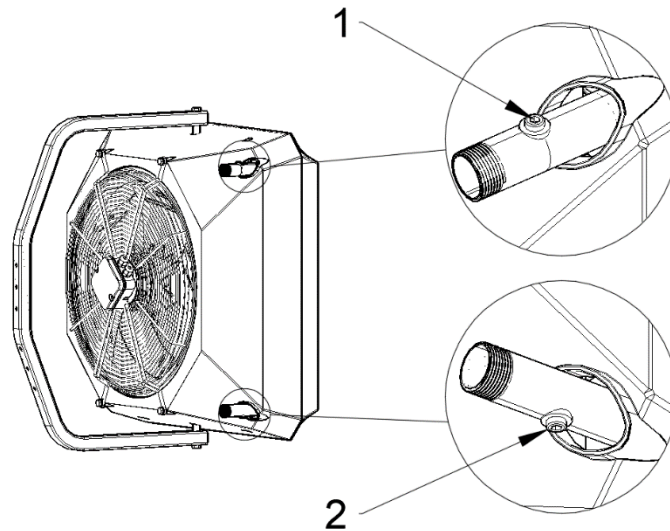
Be sure to immobilise the spigots when connecting the heater. Example drawing below:



The tightness of the hydraulic system must be checked against excessive pressure build-up. The permissible pressure for smooth operation of the system is 1.6 MPa. Before commissioning, it is recommended to clean the system by draining a few litres of clean water.

When starting the heater for the first time or after draining the heating medium in advance, the water system must be vented. It is recommended to install vent valves at the highest point of the system and shut-off valves after the heater on the supply and return.

The unit's supply spigots are fitted with plugs for venting and draining the heating medium.



Venting is done by loosening the screw of the vent plug (1), while draining the medium is done by unscrewing the drain plug (2). When draining the heating medium, care must be taken to prevent water from entering the unit.

The unit is designed for operation in rooms with a temperature of not less than 0° C. At temperatures below 0° C there is a risk of the heating water freezing and consequently damaging the heat exchanger. If there is a risk of the medium freezing, a glycol-water solution of not more than 50% concentration should be used. The parameters of the medium must meet the quality requirements listed in the table below:

Quality requirements of the medium in the heat exchanger	
Parameter	Value
Oil and grease	<1 mg/l
pH at 25 C°	8 to 9
Pollution	No deposits, particles
Residual hardness	$[Ca^{2+} + Mg^{2+}]/[HCO_3^-] > 0.5$
Oxygen	<0.1 mg/l

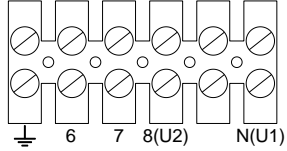
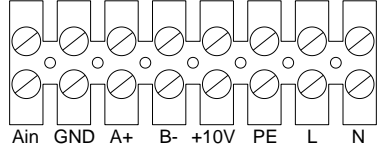
CONNECTION TO THE ELECTRICAL SYSTEM

The connection should be made by qualified personnel, based on the wiring diagrams supplied with the unit. The electrical installation should be fitted with suitable protection to disconnect the unit from the power supply and with residual current protection.

The following overcurrent protection is recommended:

- 1A for Mini R2, Mini R3, Mini RD;
- 2A for R1, R2;
- 4A for R3, R4, RD.

Before starting the unit for the first time, it is advisable to check the electrical connection of the unit and the automation.

Engine version for models: Mini R2, Mini R3, Mini RD R1, R2, R3, R4, RD	Minimum recommended cross-section of supply cables:	Appearance of the terminal block:
AC	5 x 1.5 mm ²	
EC	Power supply: 3 x 1.5 mm ² 0-10V DC control: 2 x 0.75 mm ² LiYCY	

The terminal block is suitable for a maximum wire diameter of 2.5 mm².

Units fitted with EC motors with protection level IP54 have an additional contact for 0-10 V DC control. When installing the unit in objects with high humidity, it is required to place the connection terminal in a protective box to ensure an adequate level of protection.

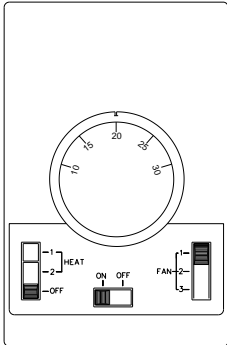
**Work on electrical installations should be carried
out by qualified persons.**



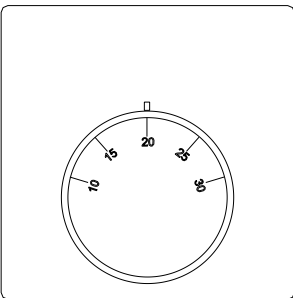
AUTOMATION AND ACCESSORIES

The drawings of automation components only show visualisations of example products.

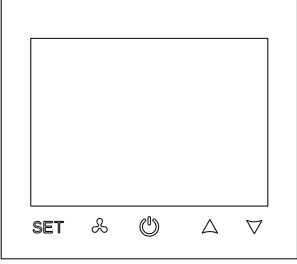
Wall-mounted controller for 3-speed AC fan

	<p>Technical data:</p> <p>Power supply: 1~230V/50Hz Permissible load current: 6(3)A for 230V AC Output signal: on-off Operating mode: manual Temperature setting range: 10 - 30 C° Temperature measurement: internal temperature sensor Degree of protection: IP30 Mounting: wall-mounted</p>
<p>Notes:</p> <p>Controller designed to work with devices equipped with AC motors. Allows selection of 3 fan speeds and on-off operation depending on thermostat settings. The power supply connection should be made with min. 5x1.5mm²</p>	

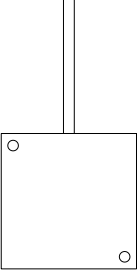
Wall-mounted on/off thermostat

	<p>Technical data:</p> <p>Power supply: 1~230V/50Hz Permissible load current: 3A for 230V AC Output signal: on-off Operating mode: manual Temperature setting range: 10 - 30 C° Temperature measurement: internal temperature sensor Degree of protection: IP30 Mounting: wall-mounted</p>
<p>Notes:</p> <p>Controller designed to work with devices equipped with AC motors. Allows control of on-off operation of the device. The power connection should be made with a wire min. 3x1.5mm².</p>	

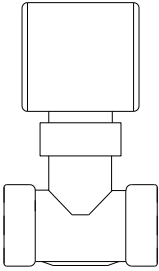
Wall-mounted controller for EC fan (0-10V)

	<p>Technical data:</p> <p>Power supply: 1~230V/50Hz Permissible load current: 1A for 230V AC and 0.02A for 0-10V DC Output signal: 0-10V DC Operating mode: manual / automatic Temperature setting range: 5 - 40 C° Temperature measurement: 10K NTC internal temperature sensor Degree of protection: IP20 Mounting: wall-mounted</p>
<p>Notes:</p> <p>The controller is designed for use with devices equipped with EC motors. Allows flexible control of the fan speed, The controller is also available in a WiFi version, allowing the system to be controlled via an app. It is possible to connect an external NTC temperature sensor. The power supply connection should be made with min. 3x1.5mm². The signal connection should be made with shielded cable min. 2x0.75mm² LiYCY.</p>	

NTC temperature sensor for EC controller

	<p>Technical data:</p> <p>Measuring element: NTC 10K Measuring range: -20 - +70 C° Ambient operating parameters: -20 - +70 C° Degree of protection: IP66 Maximum length of signal cable: 100m Mounting: surface-mounted</p>
<p>Notes:</p> <p>NTC temperature sensor works with EC fan controller. The sensor should be mounted in a place where the temperature measurement will not be disturbed by external factors, e.g. direct exposure to sunlight. The signal connection should be made with shielded cable min. 2x0.5mm².</p>	

Two-way valve with 3/4" actuator

	<p>Technical data:</p> <p>Female thread diameter: 3/4 inch Power supply: 1~230V/50Hz Max. operating pressure: 0.9 MPa Flow coefficient kvs: 4.5m³/h Ambient operating conditions: 0-60 C° Degree of protection: IP54 Opening/closing time: 3/3 min Operating mode: on-off</p>
<p>Notes:</p> <p>The valve works with a controller for 3-speed AC fan and with a controller for EC fan. The two-way valve should be mounted after the heater on the return of the hydraulic system. The supply connection should be made with min. 2x0.75mm².</p>	

INITIAL START-UP

Before starting the unit for the first time, ensure that:

- The supply voltage matches the voltage on the unit's rating plate.
- The fan motor and automation were connected according to the technical documentation.
- The hydraulic connections are free of stress and the heating medium pipes are correctly connected.
- The plumbing system is tight and has been vented.
- The heater blades were set in the desired direction of the airflow.

OPERATION

- Indoor unit for temperatures from 0° C to 30 C°.
- The unit is not equipped with anti-freeze protection. When operating at temperatures below 0° C, a glycol solution must be used as the heating medium. Otherwise, the heating medium may freeze and damage the exchanger.
- The relative humidity of the air in the room with the unit running does not exceed 70%.
- The device should not be exposed to direct UV radiation or other atmospheric agents.
- No objects are to be placed on the spigots or the heater body.
- If the device is not used for a long period of time, it should be disconnected from the power supply.
- In the event of abnormal operation of the heater, take the unit out of service and contact the manufacturer.
- Air blades should not be directed at walls, supports, cranes, racks, machinery, etc.

MAINTENANCE

- The unit should be inspected regularly before each heating season.
- It is essential to disconnect the unit from the power supply before carrying out any service work.
- It is recommended to periodically clean the heat exchanger surface of dust deposits. For this purpose, the heat exchanger should be blown with compressed air along the heat exchanger fins. Special care should be taken when cleaning the fins. Bent fins can be straightened with a suitable tool.
- The housing of the unit requires no maintenance.
- Failure to carry out periodic inspection and maintenance, irregular cleaning and self-modification of the unit may result in the loss of warranty rights.

DEALING WITH FAULTS

MINI R2, MINI R3, MINI RD, R1, R2, R3, R4, RD		
Problem	Possible cause	Proposal for a solution
The device does not switch on	No power supply.	Check power supply and fuses. Contact your installer.
	Incorrect wiring.	Disconnect the power supply and check that all cable connections have been made in accordance with the diagrams.
	The thermostat was placed too close to the heat source.	Place the thermostat further away from the heat source.
The fan works, but the unit does not heat	Interrupted heating water supply.	Check that the flow is not blocked by an actuator valve, shut-off valves and that the system pump is working.
	The boiler is not working or is not heating the heating water sufficiently.	Verify the boiler settings and correct them if necessary.
	The unit is not vented.	Vent the unit using the vent valve.
	Inadequate performance of the heat source.	Verify the load on the heating system.
Water leakage	Leaking installation.	Close the shut-off valves and notify the installer.
	Leaking heat exchanger.	
Unit fan is running too loudly	Incorrect attachment of the device.	Check that the unit has been installed with the minimum installation distances, is suitably levelled and tightened to the substructure. If it is not, call your installer.
	Incorrect electrical connections.	Disconnect the power supply and check that all cable connections have been made in accordance with the diagrams.
	Damage to the regulator (when noise occurs in lower gears)	
Actuator does not open the valve	Inadequate supply current parameters.	Check that the actuator responds to the electrical impulse.

COMPLIANCE WITH DIRECTIVE 2009/125/EC

	MINI R2 / MINI R3 / MINI RD	R1 / R2	R3 / R4 / RD	MINI R2 / MINI R3 / MINI RD	R1 / R2	R3 / R4 / RD
	AC motor			EC motor		
1	27,70%	30,60%	32,30%	30.7% (with VSD= 35.6%)	41.8% (with VSD = 47.4%)	35.3% (with VSD 39.6%)
2	B					
3	Total					
4	21					
5	VSD-YES (NO/WITHOUT)			VSD-YES (DRIVE INCLUDED)		
6	2023					
7	AEROCK Sp. z o.o. KRS: 0001050151 POLAND					
8	1-3-2003	1-3-2005	1-3-2007	1-3-2004	1-3-2006	1-3-2008
9	0.31kW, 2560m ³ /h, 130Pa	0.44kW, 3870mm ³ /h, 126Pa	0.59kW, 5450m ³ /h, 126Pa	0.09kW, 1580m ³ /h, 96Pa	0.22kW, 4240mm ³ /h, 115Pa	0.33kW, 5050m ³ /h, 116Pa
10	1430rpm	1375rpm	1378rpm	1430rpm	1375rpm	1378rpm
11	1,0					
12	<p>The dismantling of the unit should be carried out and/or supervised by suitably qualified personnel with the appropriate range of authorisations relating to work at height. With regard to disposal, contact a certified waste disposal organisation in your region or deliver to the manufacturer, who will recycle the components used. Clarify what is to take place in terms of the quality of the dismantling of the unit and the protection of the components. Dismantle the unit using general procedures commonly used in mechanical engineering and the art of installation.</p> <p>WARNING</p> <p>The fan unit consists of heavy components. These parts may fall during disassembly which may cause personal injury, serious injury in extreme cases leading to death or property damage.</p> <p>Make yourself familiar with the safety precautions:</p> <ol style="list-style-type: none"> 1. disconnect the supply voltage including all associated circuits. 2. Prevent accidental reconnection. 3. ensure that the equipment is de-energised. 4. protect or insulate components that are energised and in the vicinity. <p>To restore power to the system, apply measures in reverse order.</p> <p>COMPONENTS</p> <p>The equipment consists predominantly of various proportions of steel, copper, aluminium and plastics (impeller made of powder coated metal blades or plastic structure: SAN - styrene, acrylonitrile, construction material with 30% glass fibre) and rubber (neoprene) bearing seats/hubs. Components should be sorted for recycling according to material: iron and steel, aluminium, copper, non-ferrous metals e.g. windings (winding insulation will be burned off when copper is recycled), insulating materials, electrical cables, electronic waste (capacitor etc.), plastic components (fan impeller, winding covers etc.). Rubber parts (neoprene). The same applies to fabrics and cleaning substances that have been used when dismantling components. The separation of components should be carried out according to local regulations or by a specialised recycling company or by returning them to the manufacturer.</p>					
13	A long period of trouble-free operation depends on maintaining the product/device/fan within the operating parameters specified by the selection programme and using it in accordance with its intended use as specified in the available technical and operating documentation for the unit (QR code, website). In order to operate and work the unit correctly, it is also necessary to read the information contained in the technical documentation in the sections: installation, commissioning, operation and maintenance.					
14	Measuring chamber, sensor system, damper or fan to simulate pressure build-up.					

Explanation:

1. Overall efficiency (η), rounded to one decimal place.
2. Measurement category used to determine energy efficiency (a-d).
3. Efficiency category (static or total).
4. Efficiency factor at the point of optimum energy efficiency.
5. Is the use of a speed control system included in the calculation of the fan efficiency and, if so, is the speed control system permanently connected to the fan or is it necessary to attach it to the fan.
6. Year of production.
7. Manufacturer's name or trademark, trade register number and place of manufacture.
8. Product model number;.
9. Rated motor power consumption (kW), flow rate and pressure at the point of optimum energy efficiency.
10. Revolutions per minute at the point of optimum energy efficiency. en6.4.2011 Official Journal of the European Union I 90/15
11. "Characteristic factor.
12. Information relevant to facilitate disassembly, recycling or end-of-life disposal.
13. Information relevant for minimising environmental impact and ensuring optimum service life relating to installation, operation and maintenance of the fan.
14. Description of additional components used for the determination of the energy efficiency of the fan, such as air ducts, which are not included in the description within the measuring category and which are not delivered with the fan

GUARANTEE

§ 1 Warranty conditions for AEROCK R-series units

1. Within the scope of the guarantee, the customer has the right to exchange the device or its component for a new product, free from defects, only if the manufacturer determines during the guarantee period that it is not possible to rectify the defect.
2. The proof of purchase together with the duly completed warranty card provides the user with a basis for requesting a free of charge warranty repair.
3. This warranty covers material defects in the unit that make it unsuitable for its intended use. The warranty does not cover installation and operation work.
4. The warranty period is 24 months from the date of delivery to the Purchaser, which is shown on the sales invoice.
5. In order to carry out a warranty repair, the user is obliged to deliver the advertised device to the manufacturer.
6. The warranty will not be honoured if a fault is found to have arisen as a result of installation, commissioning or operation of the unit not complying with the technical and operating documentation.
7. The equipment may only be commissioned and serviced by personnel trained in the operation and use of the equipment and holding the appropriate authorisations. It is imperative that all commissioning, service and repair work is recorded in this Warranty Card.
8. The warranty is conditional on the installation and commissioning of the unit in accordance with the technical and operational documentation, carried out no later than 12 months from the date of purchase.
9. The condition for maintaining the warranty for the full warranty period is to carry out the service activities indicated in the OMM for the equipment under "Maintenance". Maintenance services related to the maintenance of the equipment shall be performed at the request and expense of the User.
10. The provision of warranty service shall not interrupt or suspend the warranty period. The guarantee for replaced or repaired components of the unit shall end with the expiry of the warranty period for the unit.
11. At the discretion of AEROCK Sp. z o.o., for the duration of the warranty consideration, the Manufacturer may supply a replacement device. An invoice will be issued for the supplied replacement device, which will be corrected if the complaint is accepted.
12. If it is determined that the defect is due to the device being used contrary to the manufacturer's instructions or the advertised device proves to be fully operational - the guarantee will not be recognised and the applicant will have to pay for a replacement device in accordance with the invoice issued.

§ 2 Limitations of the guarantee

1. Warranty services do not include: assembly and installation of equipment, maintenance work, troubleshooting due to lack of knowledge of how to operate the equipment.
2. The guarantee does not cover mechanical damage and damage to electrical parts resulting from improper use, transport, voltage spikes or other causes not attributable to product defects. Therefore, the warranty only covers the replacement of parts/components containing a design defect.
3. The guarantee shall not apply in the event of the following defects:

- damage to or destruction of the product resulting from improper operation, from not following the recommendations for normal use, or from not following the technical documentation supplied with the unit.
- defects caused by physical or electrical influences, overheating or moisture or environmental conditions, wetness, corrosion, oxidation, damage or fluctuation in electrical voltage, lightning, fire or other force majeure causing damage or destruction to the product.
- defects caused by the installation of equipment not in conformity with accordance with the technical documentation.
- mechanical damage or destruction of products and defects caused by them.
- defects caused by improper transport or packaging of the product sent to the point of sale. The customer is obliged to check the goods on receipt. If defects are found, the customer is obliged to inform the manufacturer of the goods and to draw up a damage report with the carrier.
- defects caused by normal wear and tear of materials resulting from normal use.
- defects caused by natural disasters such as fire, explosions and incidents that may damage the mechanical, electrical and safety equipment of the product.
- defects caused by inadequate installation unsuitable for the low external ambient temperature of the operating conditions.

§ 3 Manufacturer's exclusions of liability

AEROCK Sp. z o.o. is not responsible for:

1. Ongoing maintenance, service checks resulting from OMM and programming of equipment.
2. Damage caused by equipment downtime while waiting for warranty service.
3. Any damage to the Customer's property other than equipment.

§ 4 Complaint procedure

1. Complaints covered by these Warranty Terms and Conditions shall be made by the user directly to the Manufacturer.
2. The services under this guarantee will be provided within 14 working days from the date of notification. In exceptional cases, this period may be extended.
3. The user, within the scope of the service activities, undertakes to:
 - a. Presentation of the original Warranty Card and the VAT invoice documenting the purchase of the equipment.
 - b. Ensure that work can commence immediately upon the arrival of the service provider performing the service (if there is a need for service).
 - c. Ensure the safety of the work during the performance of the service.
4. In order to report a fault covered by this guarantee, it is necessary to send the following documents to the Manufacturer's address:
 - a. A properly completed claim form.
 - b. A copy of the completed Warranty Card.
 - c. A copy of the first commissioning, warranty inspection protocol.
 - d. A copy of the purchase invoice.

WARRANTY CONDITIONS

Duration of the guarantee

The warranty is given for a period of 24 months from the date of delivery to the Purchaser. The warranty is conditional on the installation and commissioning of the unit in accordance with the operations and maintenance manual (hereinafter OMM), carried out no later than 12 months from the date of purchase.

How do I start a complaint procedure?

The complaint procedure starts with the customer making a complaint by filling in a complaint form and sending the complaint to serwis@aerock.pl with all required documents according to § 4 point. 4, as described in the OMM.

If you have any questions, please contact the AEROCK Sp. z o.o. service department.

The next steps in the complaints procedure

1. The Service Department verifies the request, notifies the customer of its acceptance and assigns it a number. The service technician of the AEROCK Sp. z o.o. makes a proposal on how to proceed in the case and may ask for the goods to be sent back to the AEROCK Sp. z o.o.
2. The customer sends back the goods under complaint at the expense of AEROCK Sp. z o.o via the designated courier company. The serviceman of AEROCK Sp. z o.o is obliged to inform the customer of the name of the carrier.
3. The customer is obliged to send the goods back in their original packaging or, if they do not have it, in a substitute packaging that protects the goods from damage in transit. Please attach the required documents to the parcel, their absence or improper filling without a precise description of the defect, return address and telephone number of the contact person will make it difficult to consider the complaint. Parcels containing complaint protocols without filled-in fields facilitating the identification of the sender may be rejected in the service process. When sending a parcel to a courier company, please fill in the consignment note legibly and accurately and keep a copy.
4. Repair, including replacement of parts, will be carried out free of charge if a representative of the Authorised Service of AEROCK Sp. z o.o. ascertains that the damage or malfunction of the unit is due to the fault of the unit/manufacture.
5. In the event of an unfounded complaint, the customer will be charged the transport and handling costs associated with the diagnosis of the goods complained of.
6. If the complaint is not accepted, the advertised Device will be returned to the Customer.

Information on repairs

e-mail: serwis@aerock.pl

www.aerock.pl

WARRANTY CARD

AEROCK MINI R2, MINI R3, R1, R2, R3, R4 and MINI RD, RD



AEROCK Sp. z o.o.
134B Śremska Street
63-100 Zbrudzewo

Name of unit*

Model / serial number*

Place of installation	
Company/Institution (full name)*	
Street*	Building no. / Premises no.*
Postcode*	City*
Date of installation	Name, address and stamp of the company installing the unit*
Additional information	

*Mandatory information