

# INSTALLATION AND OPERATION MANUAL

## INDUSTRIAL WARM AIR HEATERS

### of AEH type



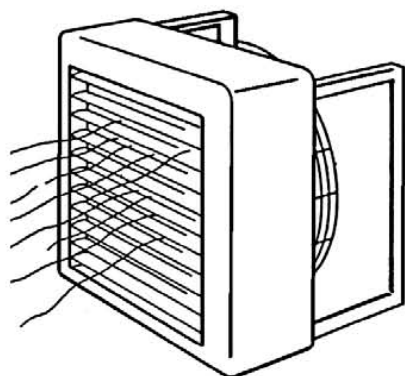
Thank you for choosing a product of **ECO CALORIA Sp. z o.o.!!!**

We are glad to have you as our customers, we believe that you will be satisfied with the use of our heaters. Following the manual and caring out of installation and maintenance by qualified staff ensures proper and safe operation of the device. Not following the manufacturer's recommendations will void the device's warranty

## **Before installation carefully read the instructions**

This manual is an integral part of the product and must be supplied along with it to you. To ensure proper handling equipment should be thoroughly familiar with this manual and keep it for future reference.

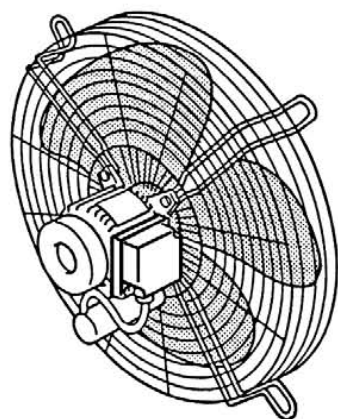
The unit can be installed and operated in conditions for which it was designed. Any other use not in accordance with these instructions may lead to serious consequences of accidents. Care should be taken to eliminate the possibility of misuse of the device. Restrict access to the device by unauthorized persons and trained support staff. The manufacturer is not responsible for damage resulting from incorrect installation, improper operation or are not getting acquainted with the guidelines of the manufacturer's instructions.



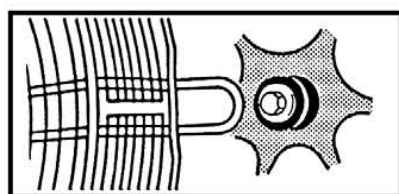
Water heater **ECOair** of **UH** type has been designed and manufactured for heating of large buildings such as factories, workshops, showrooms, warehouses, pavilions, sports facilities, and religious, etc.

UH Ecoair heater type can be supplied with hot water or steam from the boiler heating or local.

Thanks you performed the heat exchanger steel tubes with a diameter of 22 mm and aluminum plates (fins) with adapted shape and spacing, it has much more advantages and is thus more competitive in relation to the heater made of copper pipes of smaller diameter.



The material of which are made of steel tube is thicker (1.0 mm instead of 0.3-0.4 mm), which means that the heat exchanger is faster and has a long life.



The larger diameter tube reduces the pressure loss, which means that you can install a smaller pump power, the ability to provide rapid heating. System is characterized by high dynamics of the engine.

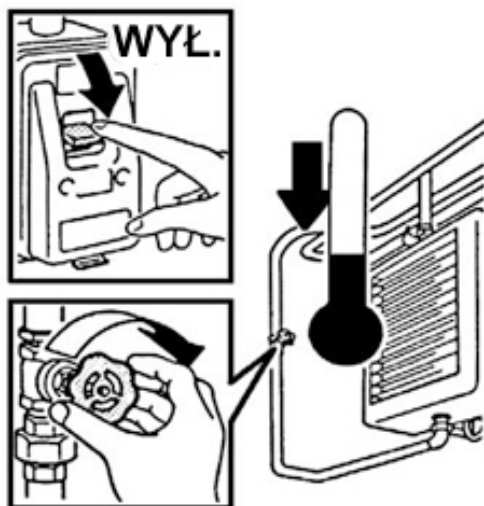
Reduced heat exchanger tubes in the heater reaches the same performance which results in less resistance to air flow and the optimum temperature of the air coming out with a very strong air outlet.

The larger the distance between the ribs, as well as their thickness facilitate the work associated with cleaning and support what is important to maintain adequate heating efficiency.

Special housing for long life and increased thermal efficiency.

The heat exchanger in the heater UH Ecoair type can be supplied with hot water and water at a very high temperature of the working pressure of 16 bar and a pair of working pressure of max. 10 bar.

The electric fan is made up of three blades permitting a substantial reduction of the noise level does not produce sparks, is statically and dynamically balanced, directly connected to an electric motor built hermetically. The fan is located in a protective casing made of strong steel wire. The fan is mounted on anti-vibration pads.



## Safety rules

Before installation, make sure that:

- heater is not connected to the mains,
- supply valve is closed.

Before any modifications to the device while it is running, you must wait until the heat exchanger to cool.

### The fan must be a complete stop!

Make sure that the ground is properly connected.

To transport the machine, use the appropriate handles to keep his balance.

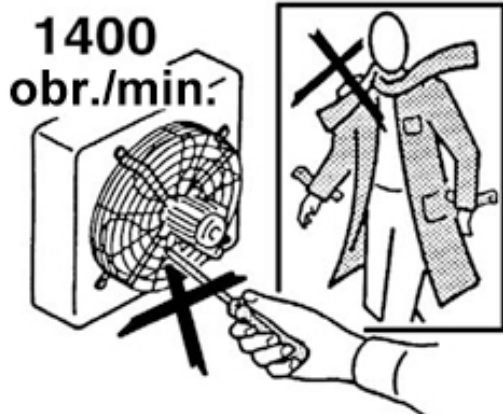
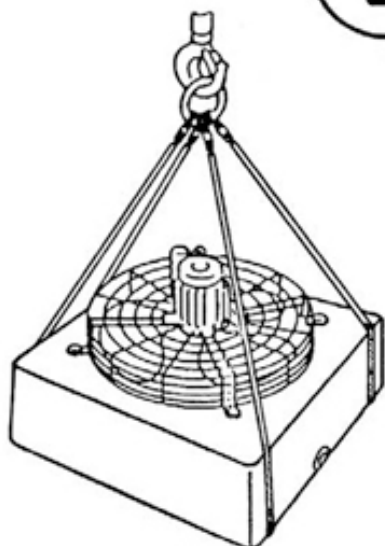
When lifting, make sure that the heater is well protected from falling, and the center of gravity is the point in the center.

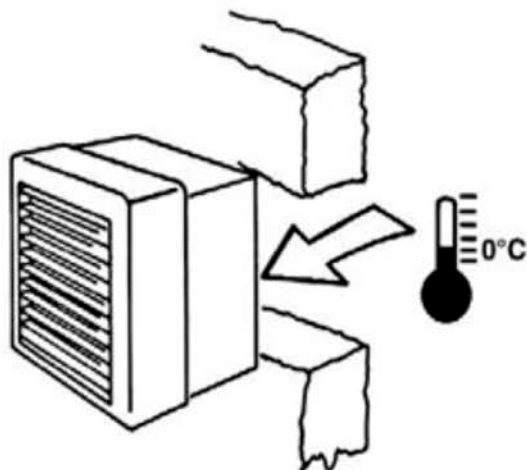
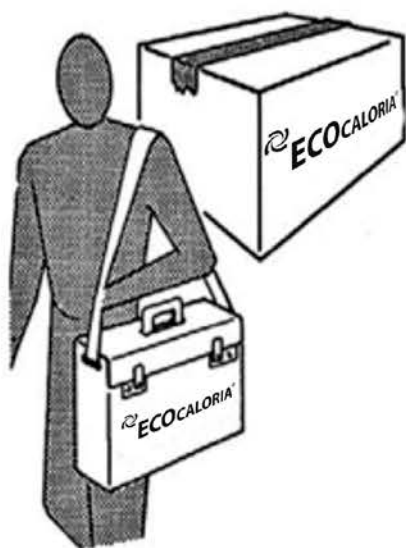
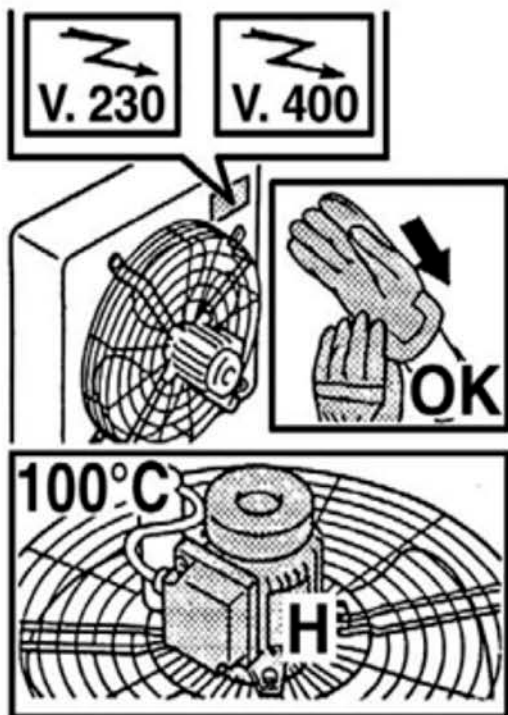
The place is easily accessible and close to the device or devices must be installed a safety switch that turns off when the need for electrical power.

Fan speed can reach 1400 rev / min. Do not zoom in any objects or hands into the fan.

Do not go to the fan in the airy clothes.

When installing the heater in places where the device may be vulnerable to damage, such as, for example, sports arenas, mount grill.





Do not remove the warning signs.

If they are illegible, ask about their exchange.

When removing the unit to work when wearing gloves.

**When installing a ceiling heater powered heating medium at a temperature above 100 ° C, it must be equipped with motor protection class H!**

If any part needs to be replaced or replaced - Always use original spare parts.

Only properly trained and qualified and authorized staff can undertake installation, operation and maintenance.

Do not leave the heater in contact with flammable gas.

The heat exchanger must be protected from freezing. The device is intended for indoor use at temperatures above 0 ° C. At low temperatures (below 0 ° C), there is a danger of frost heat transfer medium.

The manufacturer is not liable for any damage to the heat exchanger resulting from freezing in the heat exchanger of the heating medium.

### The parameters of the heating medium:

#### Water:

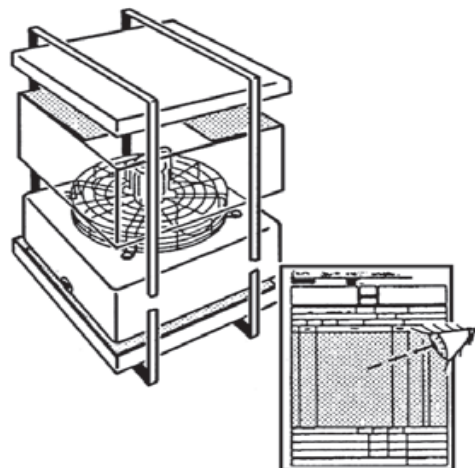
The maximum water temperature - 170°C

The maximum pressure – 16 bar

#### Steam:

The maximum pressure - 10 bar

## Transport and identification



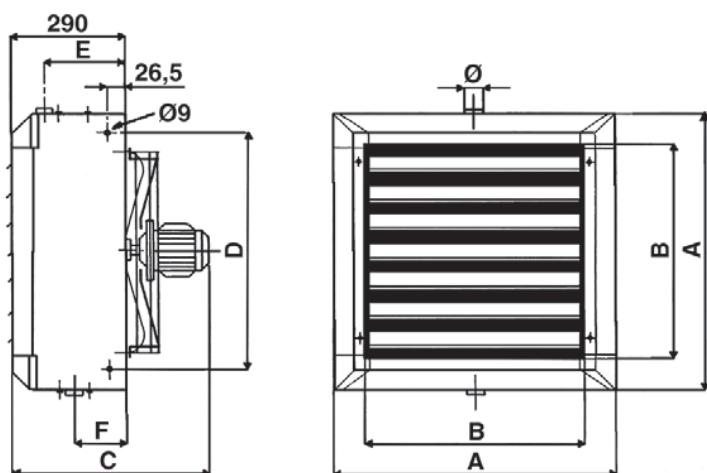
The device is packaged and put them together.

After unloading, make sure that the device is not damaged and that the corresponding order.

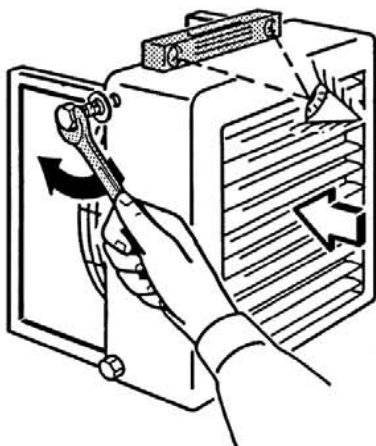
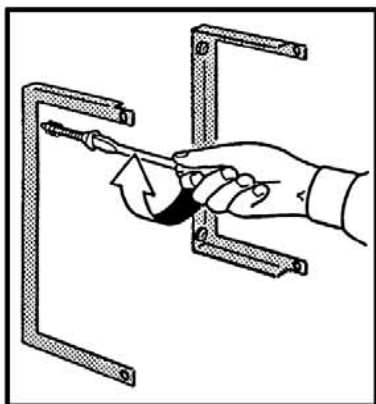
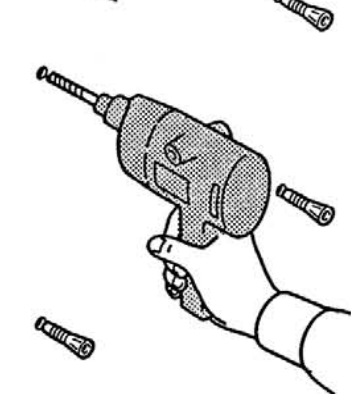
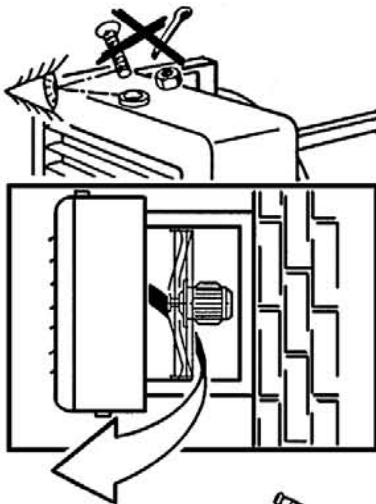
If the device is damaged or does not match the serial number of the contract, you should contact the Seller with the serial number.

The rating plate is located on the rear of the unit.

## Main dimensions / construction



Type	Dimensions (mm)							Weight (kg)			Capacity (l)			Noise level		
	A	B	C	D	E	F	Ø	1R	2R	3R	1R	2R	3R	4P	6P	8P
1	472	336	465	375	220	130	1 1/4"	19	22	24	1,3	2,6	3,9	56	48	42
2	526	390	465	429	220	130	1 1/4"	22	25	27	1,6	3,2	4,8	59	51	45
3	580	444	465	483	220	130	1 1/4"	26	30	33	1,9	3,8	5,7	61	52	46
4	634	498	488	537	220	130	1 1/4"	30	34	38	2,3	4,6	6,9	64	54	49
5	688	552	488	591	220	130	1 1/4"	33	40	44	3,0	6,0	9,0	66	56	50
6	742	606	513	645	220	130	1 1/4"	38	46	51	3,5	7,0	10,5	69	60	52
7	793	657	560	696	210	140	1 1/2"	46	55	61	4,3	8,2	12,3	-	65	60
8	900	764	575	803	210	140	1 1/2"	55	66	73	5,8	11,1	16,6	-	67	61
9	1010	874	595	913	210	140	1 1/2"	65	79	88	7,6	14,5	21,8	-	68	62
10	1117	980	640	1020	210	140	2"	79	95	106	9,6	18,2	27,3	-	71	65



## Instalation

Do not leave anything in the middle of the unit, as they may cause damage, damage to the equipment as well as pumps or boiler.

Keep a minimum distance of 150 mm from the back of the heater for access to the motor or fan.

After installing heater, make sure that the level of water in the system is suitable to prevent the formation of "air pockets" or stagnation condensation.

The unit can be suspended with the following handles:

A. Cantilever designed specifically to allow the suspension device for the vertical and horizontal partitions. Consoles are optionally provided with components necessary for the assembly.

B. Ceiling Mounting Feet. In the corners of the heater were installed four channel sections through which the device can be suspended from the ceiling by means of pins, chains or cables.

C. Other suitable brackets for mounting devices of this type.

### Ad. A. Fixing a wall panel:

A1. Determine the height of the suspension, get the right kind of plugs.

A2. Install the console.

A3. Lift the machine and attach them to the console.

It is advisable to frame assembly was bolted to the unit using the 4 threaded holes.



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