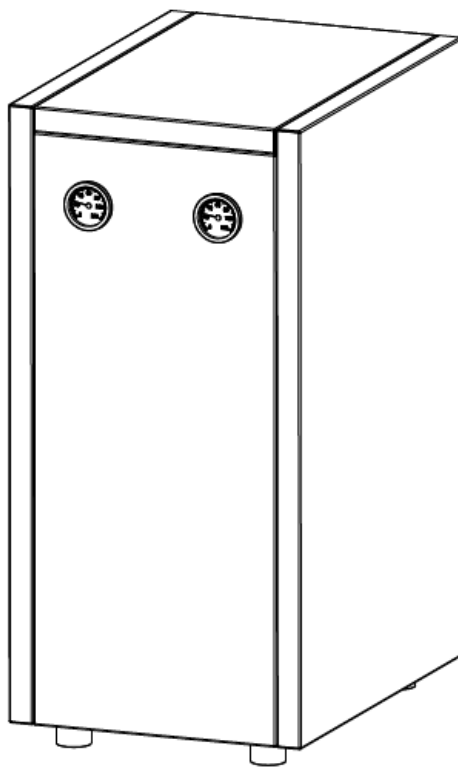


Installation and operating manual

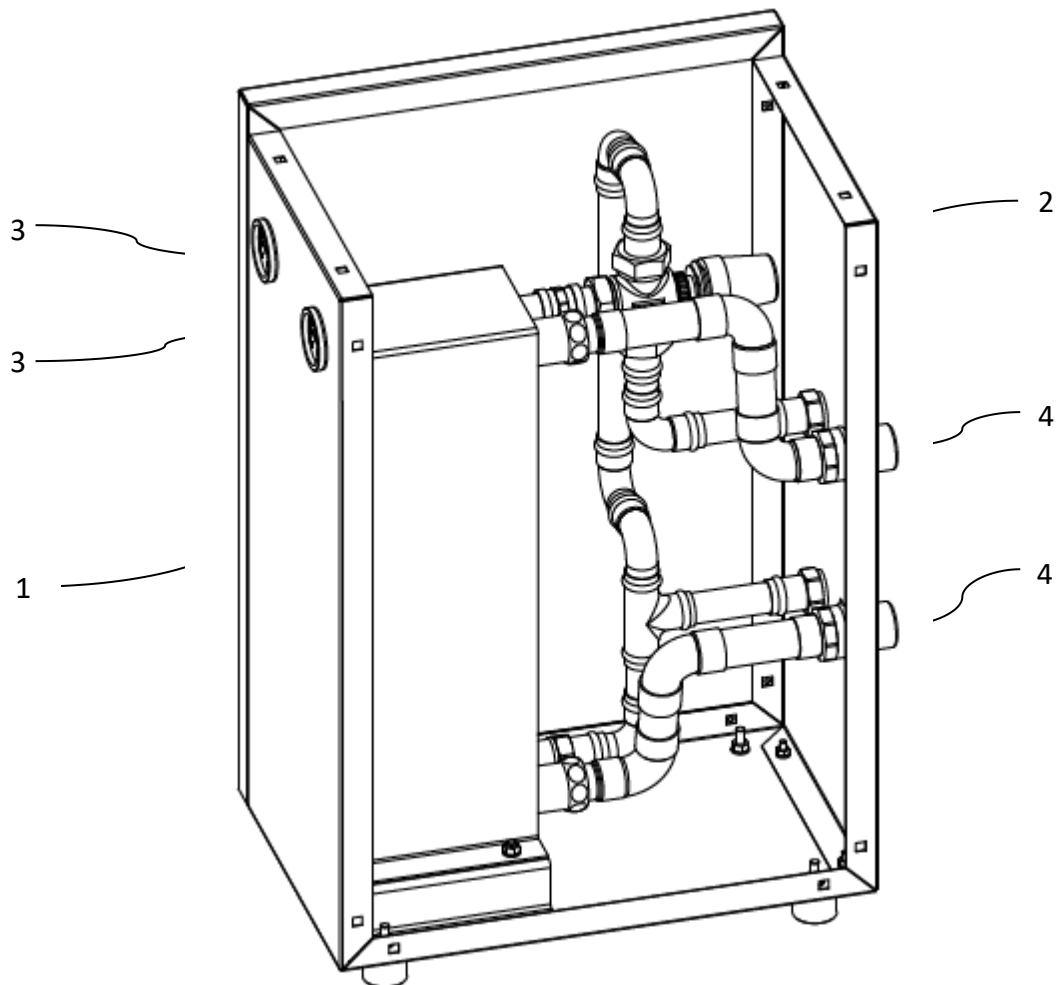
AirWatt External Heat Recovery



Please read the following instructions carefully before installing indicator into service. Trouble free and safe operating of the unit can only be guaranteed if recommendations and conditions stated in this manual are respected.

CE

Components



Part

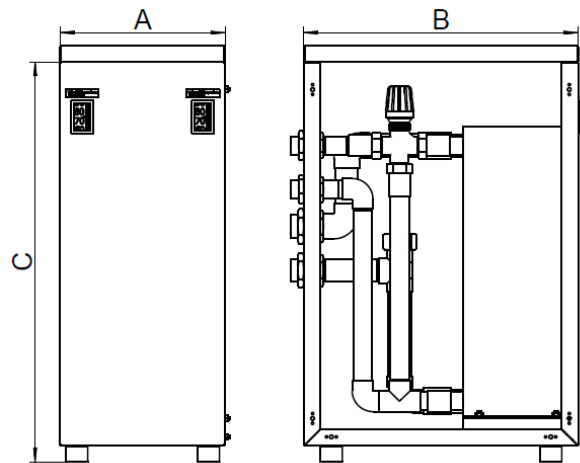
- 1 Plate chiller
- 2 Thermostat head
- 3 Temperature sensor (input/output)
- 4 Connection oil/water

Technical data

SIZES	CONNECTIONS		COMPRESSOR POWER	MAXIMUM HEAT CAPACITY	DIMENSIONS			WEIGHT
	OLJE	VODA	[kW]	[kW]	A [mm]	B [mm]	C[mm]	[kg]
AirWatt 22	G 1 1/4"	G 1"	15 - 22	12 - 17,5	360	500	760	33
AirWatt 37	G 1 1/4"	G 1"	26 - 37	20,8 – 29,6	360	500	760	35
AirWatt 75	G 1 1/4"	G 1"	45-75	36 - 60	360	500	760	42
AirWatt 160	G 2"	G 2"	115-160	80-144	550	800	800	68

Materials

Housing	Steel sheet metal
External protection	Powder paint coated (Epoxy-polyester base)
Heat exchanger	Stainless steel
Pipes	Copper
Connection	Brass, copper
Support	NBR



Technical specification

Operating pressure (oil)	1 – 16 bar
Maximum water pressure	10 bar
Operating temperature	5°C – 120°C
Maximum output water temperature	70°C
Oil drop (oil)	~ 100mbar
Ambient temperature	5°C – 45°C
Water temperature indicator	Analog mechanical

PRESSURE EQUIPMENT DIRECTIVE PED 97/23/CE (Fluid group 2)

AirWatt 22	Not required
AirWatt 37	Not required
AirWatt 75	Not required
AirWatt 160	Not required

Introduction

External heat recovery system AirWatt is intended for professional use. This user manual provides all necessary information for dimensioning, installation, safe operation and maintenance. It should be read thoroughly and carefully. Obey all safety instructions. Manual should be conserved through entire lifetime of device. Regular and correct maintenance and regular safety checks are required for long and trouble free operation.

Installation and use may be subject of local laws and directives which must be obeyed. For any further information or in case of doubt contact manufacturer. Manufacturer will not be held responsible for any defects, which are consequence of misinterpreting user manual instructions, unprofessional installation or disobeying local laws and directives.

General safety instructions



Warning!

Operating this device may be dangerous, if following instructions are not obeyed. In addition to this manual instructions from compressor manufacturer must also be observed.

AirWatt unit was designed and manufactured in accordance with all health and safety requirements of EU.

- All personnel involved at installation, operating and maintenance of this device must read and fully understand this included instructions.
- Installation and assembly of the unit can only be performed by authorized personnel of company Omega Air d.o.o. Ljubljana.
- Device may only be used in accordance to this manual.
- Personnel must always wear personal protective equipment.
- Do not use this device, if there are present any signs of damage or defect.
- Always turn off compressor, lock the power supply and depressurize the system, before performing any kind of work on device or installation.
- Device must have installed limiting elements, which prevent operating outside specified parameters.
- It is forbidden to approach device under operation.

Installation and maintenance work on the device may only be carried by authorized and trained professional.

- It is forbidden to alter the device or its construction in any way.
- Before maintenance depressurise the system.
- Use only original spare parts.
- Use the device only for the purpose for which it was originally designed.

Field of use

External heat recovery unit AirWatt is intended for recapturing waste heat, which is generated at air compression. Up to 70% of energy, consumed by compressor may be in form of heat. Recovered heat may be used for heating domestic hot water or for central heating. Recovered heat may represents significant savings and reduced load on environment.

Principle of operation

AirWatt has two separate piping systems, through which flows water or oil. Device is connected to oil circuit in compressor. Inside built in plate heat exchanger oil cools and water gains heat.

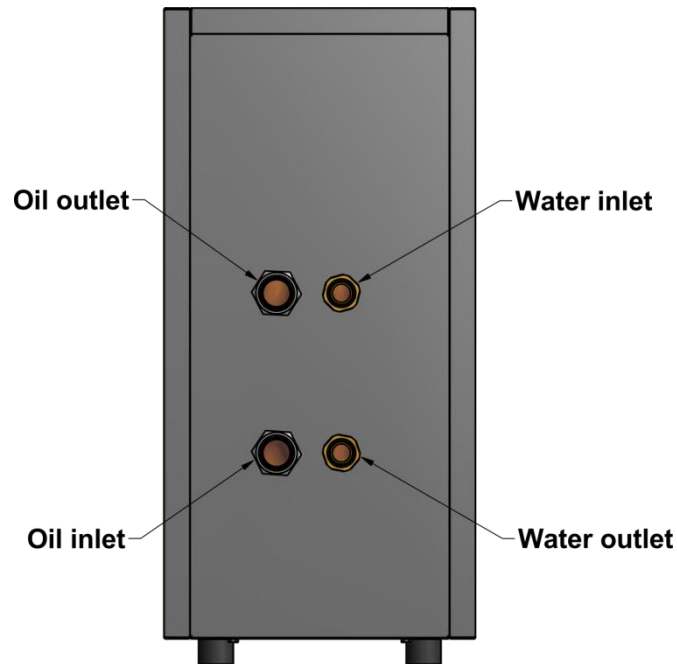
Unit is regulated and protected with thermostatic valve, which maintains oil temperature above set value. Correct oil temperature is crucial for safe and long operation of screw compressor. Water does not start to flow, until oil temperature reaches set value. Switch on temperature of thermostatic valve can be set between 60°C and 90°C. Device also has two thermometers installed on housing to monitor inlet and outlet water temperature.

Heat recovery

There are four connections on the back side of device. Two are connected to compressor oil circuit, the other two are for water circuit. When compressor is in operation, compressor oil constantly flows through AirWatt heat exchanger oil piping and plate heat exchanger. Water does not start to flow through thermostatic valve, until oil temperature reaches the set value on the valve. When oil temperature reaches desired value, thermostatic valve opens water flow through plate heat exchanger. Heat is extracted from oil and it's temperature drops. Water gains heat. The lower the water flow, the higher it's temperature at outlet gets.

Connection

Place AirWatt on flat surface. Connect oil circuit and water installation on the device as demonstrated on the picture below.



Oil circuit installation requires special interference with compressor construction. Only authorized personnel are allowed to install the unit.

Connection of oil circuit:

- Must be performed by Omega Air or by authorized and trained professional.
- Compressor oil circuit is required.
- Establish pipe connection between compressor and AirWatt unit.
- Replenish oil in compressor separator to prescribed level. AirWatt and connecting circuit between compressor has some volume and holds certain capacity of oil. Connection of AirWatt will therefore lower oil level in compressor separator.

Connection of water circuit:

- Must be performed by plumber or heating systems installer.
- Connect water pipes to inlet and outlet connections.
- Install suitable water pump with option of flow regulation.

Maintenance

- Once a month check the device for possible defects.
- All maintenance work must be performed by qualified and trained professional.
- Before any work on installation, turn of the compressor, lock the power supply and depressurize the system. Turn off the water pipe.
- Use only original spare parts.
- From time to time clean the piping installation to prevent the clogging by debris.
- Cleaning intervals depends on water purity: 6 months for very dirty water; 1 year for moderately polluted water; 3 years for relatively clean water.
- For cleaning oil sediment and grease it is recommended to use paraffin, for cleaning limestone it is recommended to use acetic or citric acid.

Warranty exclusion

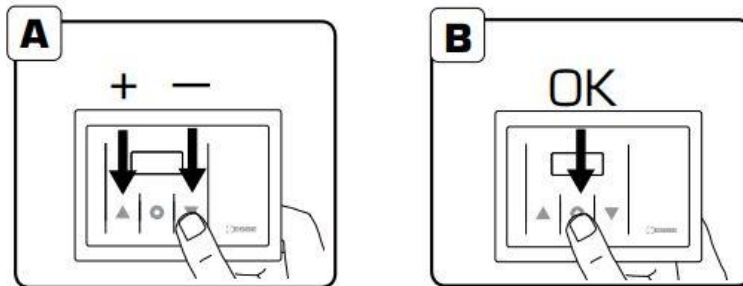
The guarantee shall be void if:

- The operating instructions were not followed with respect to initial commissioning and maintenance.
- The unit was not operated properly and appropriately.
- The unit was operated when it was clearly defective.
- Non-original spare parts or replacement parts were used.
- The unit was not operated within the permissible technical parameters.
- Unauthorised constructional changes were made to the unit or if parts of the unit that may not be opened were dismantled.

Settings

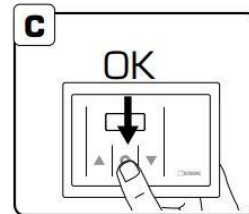
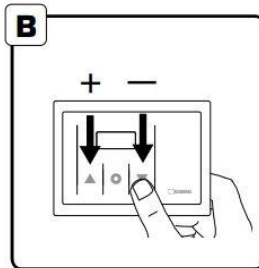
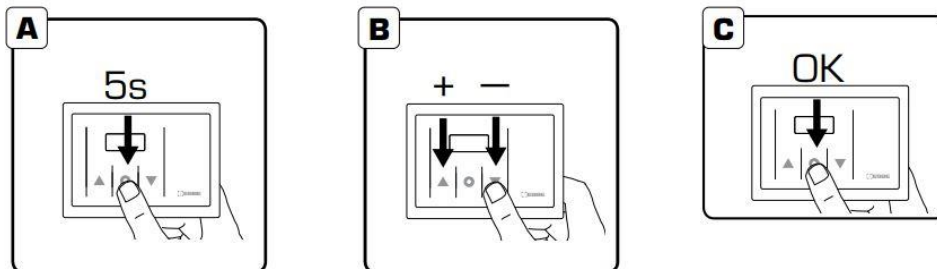
Change of target temperature

1. In order to change the target flow temperature, press the left or right button (A)
2. Press the middle button shortly to confirm new target temperature (B).



Advanced Settings:

1. Press middle button for 5 seconds to reach advanced settings (A).
2. To move between menus press left or right button (B).
3. Press middle button (OK) to enter desired menu (C).



Symbol	Explanation GB	Förklaring SE	Erklärung DE	Objaśnienia PL	Объяснение RU
▲ ●	Maximum FlowTemperature	Max begränsning	Maximale Vorlauftemperatur	Maks. temp. zasilania	Максимальная температура подачи
● ▼	Minimum FlowTemperature	Min begränsning	Minimale Vorlauftemperatur	Min. temp. zasilania	Минимальная температура подачи
~120	Running time	Gångtid	Laufzeit	Czas obrotu	Время работы

Maximum Flow Temperature

1. To change the maximum flow temperature press middle button the joystick for 5 seconds to reach advanced settings.
2. Choose menu "Max" by pressing the middle button OK.
3. Decide the maximum flow temperature by pressing the left or right button OK.
4. Press down the middle button for 5 seconds to return to main menu.

Minimum Flow Temperature

1. To change the minimum flow temperature press the middle button for 5 seconds to reach advanced settings.
2. Choose menu "Min" by pressing left or right button OK.
3. Decide the minimum flow temperature by pressing the left or right button OK.
4. Press the middle button for 5 seconds to return to main menu.