

AirWATT

Heat recovery units



heat capacity

12 - 100 kW

for compressor capacity

15 - 132 kW

APPLICATIONS

- heat recovery in oil lubricated rotary screw compressors

Compressors in their process of air compression consume energy, which is converted into pressure energy of compressed air. The consequence of the air compression is the generation of heat, which can cause overheating of the system, and thus damage of system components.

Classical systems of the screw compressor have a regulated air cooling of the lubricating oil, which means that the excess heat is discharged into the ambient by the fan. In this way the heat is completely lost.

This heat can be useful and at no additional cost exploited for heating of domestic hot water or water for central heating system. AirWATT - external heat recovery system is a perfect system for this application.

The unit has two separate piping systems - water and oil circuit with counterflow media. The heat through the heat exchanger passes from the hot oil of the compressor to the cold water system and the heating is thereby heated.

The unit is controlled by means of a thermostatic valve, which prevents oil freezing and thus possible damage to the compressor.

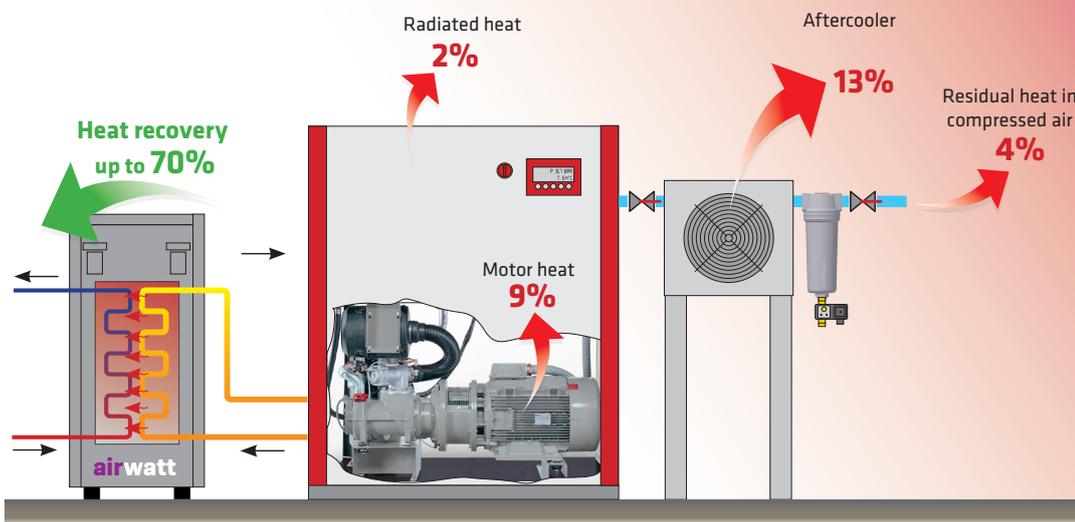


Up to 70 %

of screw compressor energy consumption is converted into heat during air compression process!

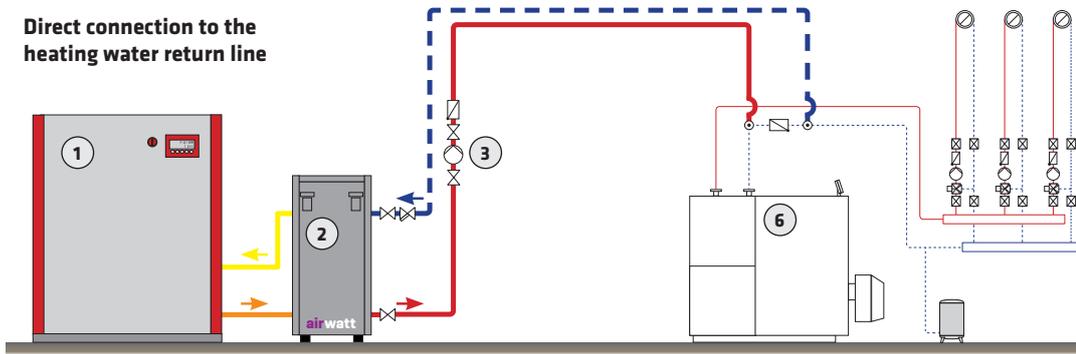
AirWATT FEATURES

- exploitation of up to 70% energy of the compressor,
- improved energy efficiency of the system,
- upgrade of the compressor regardless of the manufacturer,
- compact design,
- use in oil lubricated compressors of 15-100 kW power (also option for larger power),
- easy installation without additional control on the compressor.

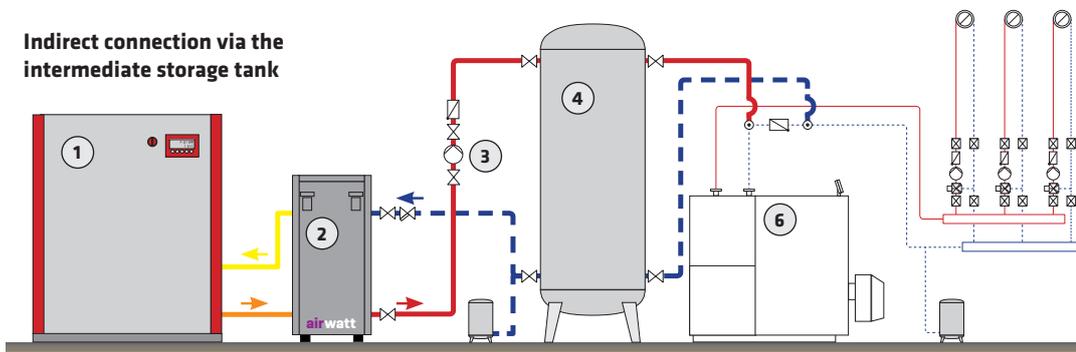


Examples of AirWATT connection to heating systems

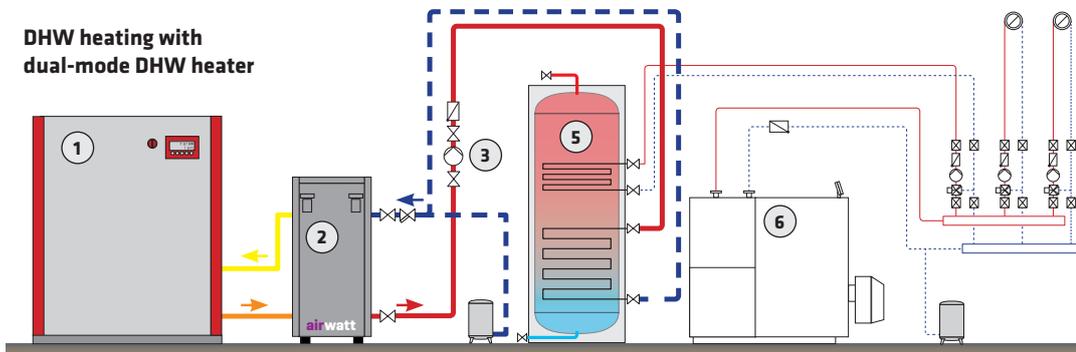
Direct connection to the heating water return line



Indirect connection via the intermediate storage tank

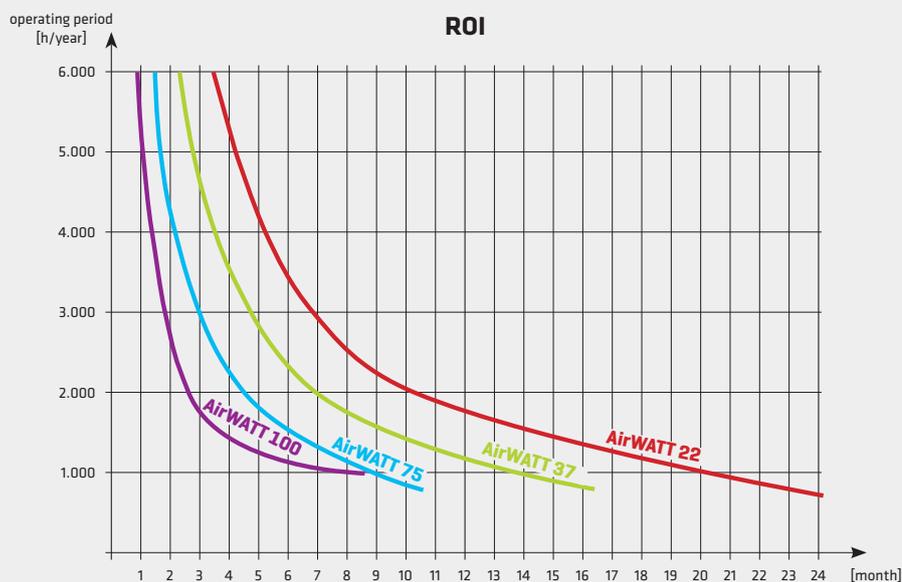


DHW heating with dual-mode DHW heater



LEGEND

1. screw compressor
2. AirWATT
3. circulation pump
4. heat storage tank
5. DHW heater
6. existing heating system



The AirWATT operating economics is determined under the following conditions:

AirWATT 22

- nominal compressor motor power: 22 kW
- useful thermal output: 17,6 kW

AirWATT 37

- nominal compressor motor power: 37 kW
- useful thermal output: 29,6 kW

AirWATT 75

- nominal compressor motor power: 75 kW
- useful thermal output: 60 kW

Note:

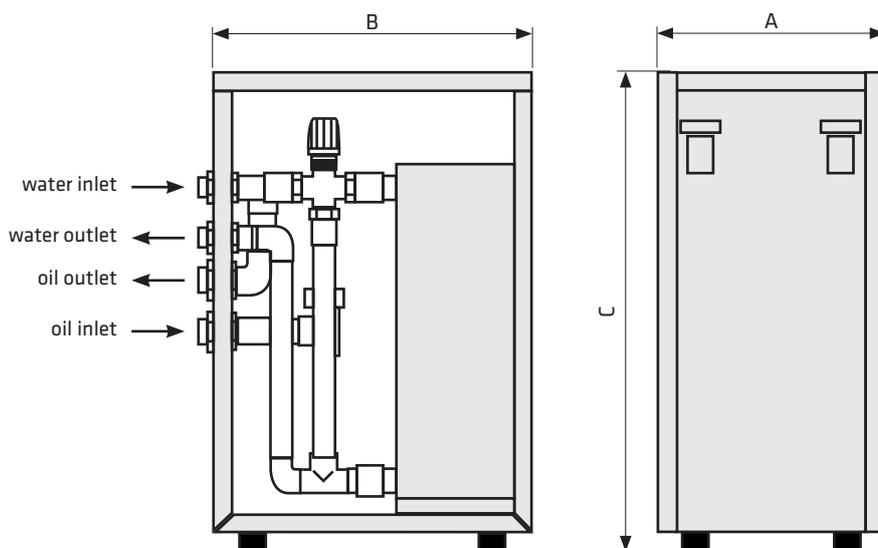
The values in the diagram are obtained on the basis of the average thermal energy price. For more accurate calculation of the operation economics, please contact the sales department Omega Air d.o.o..

TECHNICAL DATA

Type	Motor power	Heat capacity	Oil connection	Water connection	Dimensions [mm]			Mass
	kW	kW	G	G	A	B	C	kg
AirWATT 22	15-22	12-17,6	1 1/4"	1"	360	500	760	33
AirWATT 37	26-37	20,8-29,6	1 1/4"	1"	360	500	760	35
AirWATT 75	45-75	36-60	1 1/4"	1"	360	500	760	42
AirWATT 100	90-132	72-100	2"	2"	450	600	860	58

TECHNICAL SPECIFICATIONS	
Operating pressure (oil)	1 - 16 bar
Maximum water pressure	10 bar
Operating temperature	5°C - 120°C
Max. outlet water temperature*	70°C
Pressure drop (oil)	~ 100mbar
Ambient temperature	5°C - 45°C
Water temperature indicator	Analog mechanical

Type	Classification according to Pressure Equipment Directive PED 97/23 / CE (fluid group 2)
AirWATT 22	not necessary
AirWATT 37	not necessary
AirWATT 75	not necessary
AirWATT 100	not necessary



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