

Rank.[®] HP2

Product description

In the case there are useful heat demands with temperatures above 100°C, the Rank[®] HP2 machine allows the generation of thermal powers up to 240 kWt.

It is a high temperature heat pump equipment, which uses low temperature heat sources (above 60°C) and has high efficiency values, with a COP of 4.



What is it for

The Rank[®] HP equipment allows, through the use of a low temperature heat source, the production of useful heat at a higher temperature. For this they consume electrical energy, but efficiently.



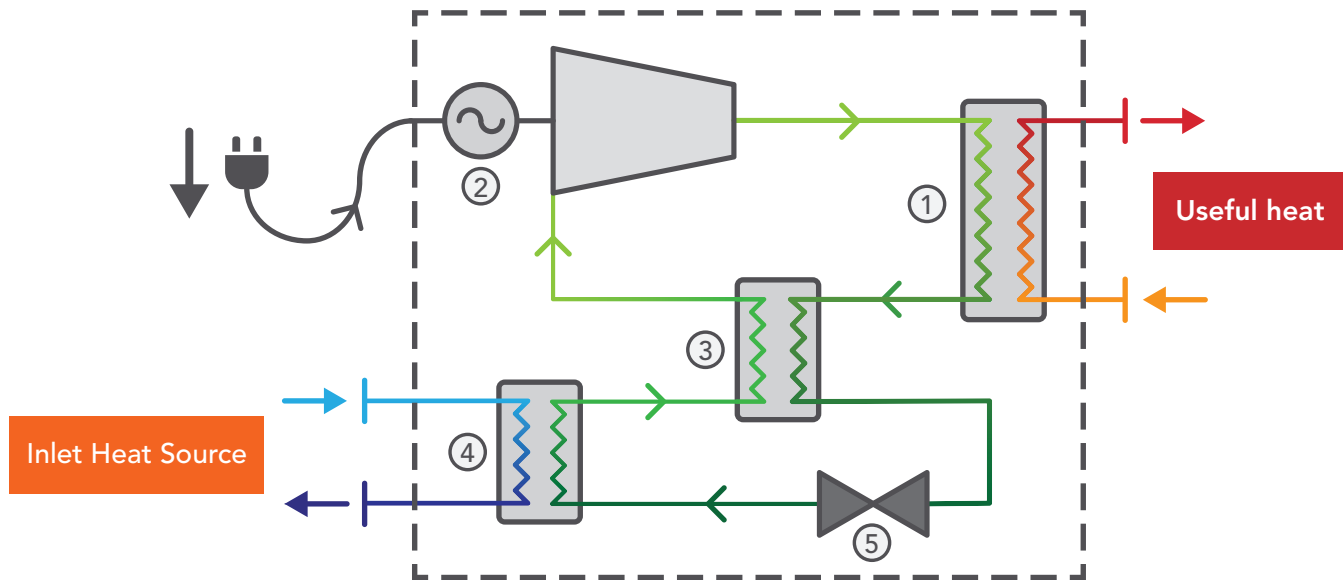
A Rank[®] machine for every need

Whatever your need is, there is a Rank[®] machine that can be adapted to it, through a variety of products that cover a wide range of power.



Rank® HP2

How does it work



- | | |
|-------------------|----------------------------------------------------------------------------------------|
| ① Condenser | The condensation of the working fluid releases heat at high temperature (useful heat). |
| ② Compressor | The working fluid circulates through the system thanks to the compressor. |
| ③ Regenerator | To increase the efficiency of the system, a regenerator is used. |
| ④ Evaporator | The evaporator takes the low temperature heat from the source. |
| ⑤ Expansion valve | The expansion valve regulates the pressure levels on the system. |

Energy and economic savings

The Rank® HP equipment has associated important energy and economic savings. This is because of the high values of COP they present.

A value of COP of 4 indicates that to generate 4 kWt of useful heat at high temperature, only 1 kW of electrical consumption is required. Obviously, it is a heat production much more efficient than an electrical resistance.

In addition, by using a quarter of the necessary energy, energy and economic savings are produced with respect to the use of fossil fuels. This is due to the use of a low temperature heat source and the high temperature heat pump cycle used.

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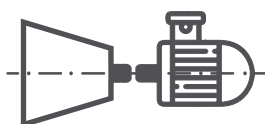
Rank® Technology

The Rank® equipment is composed of high quality, robust and efficient components, which offer the following advantages and benefits to our customers.



Rank® low rpm compressor

Operation at low revolutions reduces the noise level, lengthens the service life and improves the reliability.



Rank® direct drive

Direct drive avoids the use of gears or pulleys, minimising the maintenance and increasing electrical efficiency.



Zero leaks

Our hermetic components eliminate the leakage of the working fluid, reducing maintenance costs and downtime and being more environmentally friendly.



Magnetic transmission

Magnetic transmission to ensure the tightness and to reduce the possibility of leakage.



Flexible operation

Modular machines that can operate under a wide range of temperature and flow inlet and outlet conditions.



Digitalisation through the Rank® control system

Our machines operate without the need for the human interface through an automatic, efficient managing system.



Internet Of Things

Real time data transmission via internet that allows, predictive maintenance by server data analysis, online supervision (PC, mobile phone, tablet, etc.) and remote configuration of working parameters.



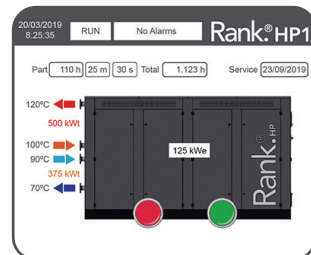
Security

It complies with all safety regulations and minimises the risk of accidents.



Rank® service

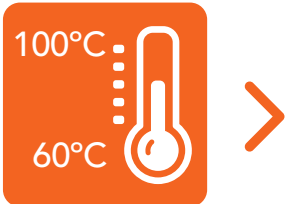

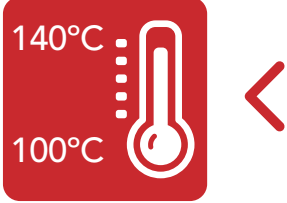
Real-time remote monitoring and predictive control of the machines, and automatically generated reports.



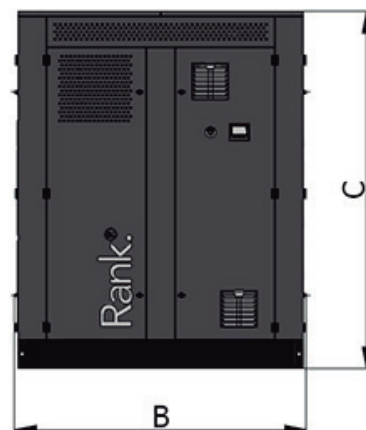
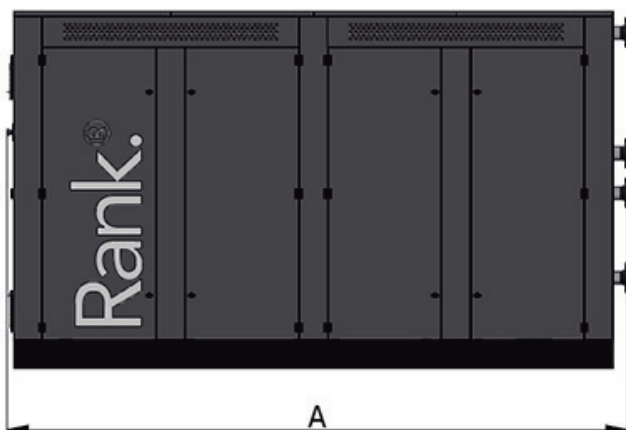
Safety Regulations and Standards

- Low voltage Directive
- Machinery Directive
- Electromagnetic Compatibility Directive
- Pressurized Equipment Directive
- ASME B31.1 – Power Piping Code, Mechanical
- ASME B31.3 – Process Piping Code
- ASME Boiler and Pressure Vessel Code Section VIII
- UL 508A- Control Panel Wiring
- EN/ISO 3744:2010

Technical Data

 <p>Inlet Heat source</p>	Heat transfer fluid	Water	-
	Inlet temperature	60-100	°C
	Outlet temperature	40-80	°C
	Volumetric flow rate	12	m ³ /h
	Thermal power	90-180	kWt
	Connections diameter	DN100 PN16	-
	Pressure drop	125	kPa
Heat transfer fluid inner volume		50	L
 <p>Electricity</p>	Power	30-60	kWe
	Voltage	3 x 400	V
	Frequency	50	Hz
	Intensity	122	A
 <p>Useful heat</p>	Heat transfer fluid	Water	-
	Inlet temperature	80-120	°C
	Outlet temperature	100-140	°C
	Volumetric flow rate	12	m ³ /h
	Thermal power	120-240	kWt
	Connections diameter	DN100 PN16	-
	Pressure drop	125	kPa
Heat transfer fluid inner volume		50	L
Data Connection		RJ45	-

Dimensions



A = 4.850 mm
 B = 2.050 mm
 C = 2.500 mm
 Weight 6.500 Kg