

Data sheet ecop RHP K7

ROTATION HEAT PUMP

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The ecop ROTATION HEAT PUMP K7, based on a Joule Cycle, is an energy-efficient heating and cooling device for industrial applications. The integrated regulation enables a wide variety of application cases. Since the compression of the refrigerant is achieved by the centrifugal force, the regulation is realized by a change in rotational speed. For an energy-efficient and flexible operation the machine is driven by frequency converter controlled electric motors.

The benefits at a glance:

- Maximum flow temperature in heating operation 150°C
- Minimum flow temperature for cooling -20°C
- variable temperature spread of up to 70°C (sink out – source out)
- entire variety of applications is achieved without a change in design
- Heat output of up to 700kW
- environmentally friendly working medium
- heating and cooling within one machine
- operated via control panel or remote access
- possible outdoor installation in a optional container
- encapsulated housing, safety proofed and intrinsically safe, conform to all relevant standards
- hermetic tight, non-flammable, non-toxic working medium



ROTATION HEAT PUMP



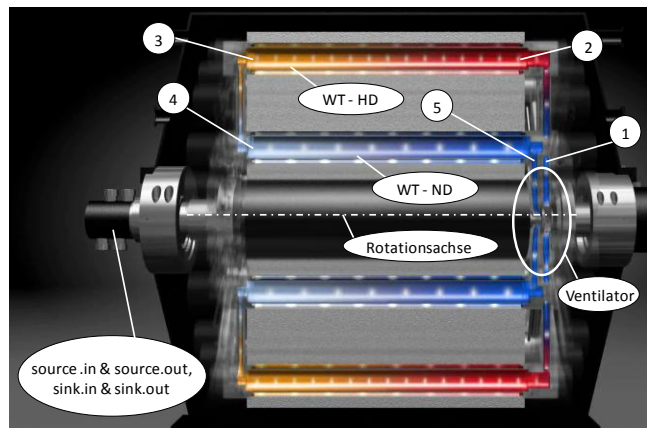
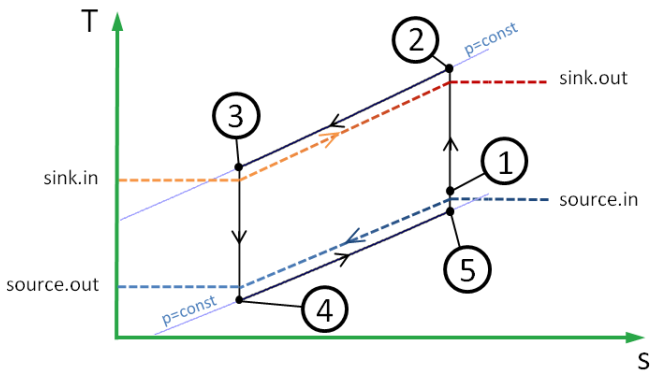
ecop Technologies GmbH, Headquarter: Hafenstraße 47-51, 4020 Linz, Austria

Operating Site: Perfektastraße 73, Top A1, 1230 Wien, Austria

+43-1-865 10 62, office@ecop.at, www.ecop.at

FN: 366892y, Firmenbuchgericht: Landesgericht Linz, UID: ATU66635689

Technical data ¹	
Weight:	15t
Dimensions ^{1 2} (W x H x L):	2400 x 2500 x 7000mm
Connection heat source:	DN80 (3")
Connection heat sink:	DN80 (3")
Maximum flow temperature on heat sink:	150°C ⁶
Maximum flow temperature on heat source:	110°C ⁶
Maximum temperature spread between sink out and source in:	40 °C
Minimum flow temperature:	-20°C
Designed heat transfer medium:	H ₂ O
Heat output:	400-700 kW
Refrigerant	ECOP Fluid 1 (inert)
Nominal heating water flow rate ³ / pressure drop ⁴ :	21m ³ /h / 0,5bar
Fuse protection:	500A gL/gG
Main supply:	400V-3-N ~50Hz
Nominal power consumption:	70 - 280kW



Example cases⁴

Example case	#1	#2	#3	#4	#5	#6	#7
Sink in [°C]	95	115	60	65	120	90	70
Sink out [°C]	120	140	90	85	140	105	95
Source in [°C]	80	100	70	60	110	80	65
Source out [°C]	60	80	45	45	95	70	45
COP ⁸	5.15	5.14	7.95	6.51	5.33	4.99	6.17

¹ please note that additional space is required for pipe connections, operation and maintenance
² including control terminal
³ depends on implementation
⁴ All example cases could be achieved without a change in design
⁶ specified maximum Temperatures are possible with optional module
⁷ optional sound protection can be installed if necessary
⁸ depending on specific implementation

