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HRC 2 control

/// Data Sheet

The compact refrigerated and heating circulator HRC 2 control is renowned for its high energy efficiency, a working temperature range from -30°C to 100°C and a powerful and infinitely variable pressure and suction pump. The on-demand and speed-controlled compressor reduces noise and operating costs.
The HRC 2 control in combination with an external temperature sensor is perfectly suitable to precisely temper external closed or open applications.
The high-quality Isolation of the 4 l bath allows fast heating and reduces heat input when cooling. Using the external temperature control circuit is possible for up to 2,5 l thermofluid without a refill.
The integrated hopper and drain valve ensure a safe and clean handling of the thermofluid. The easy-to-open front flap

allows an easy cleaning of the cooling unit’s air filter.There is a drain valve on the front side of the bath. A hose can be connected to empty the bath, so the user does not get in direct contact with the thermofluid.

- Speed-controlled refrigeration system unit with 400 W cooling capacity
- Speed-controlled PEEK pump (0,5 bar; 22 l/min)
- 1500 W heating capacity (1200 W @115V)
- digital level indicator
- Safety classification III (FL) according to DIN 12876
- Adjustable temperature safety circuit

With the Wireless Controller (Wico) the HRC 2 control can be operated safely and conveniently everywhere. Processes can be automated and simplified through 10 freely programmable temperature ramps with each 10 steps.

Additional features of the control device:
- Operating Mode D (Confirmation Mode)
- Signal if Set Point is reached
- Timer/Counter
- outgassing function for Labreactors

Interfaces:
- Connection socket for external PT 100 temperature sensor (Accessory: PT100.30; Lemo connector)
- Connection of magnetic valves possible (Mulit IO)
- Alarm contact (Multi IO)
- Connector for Standby contact input (Multi IO)
- RS 232
- USB

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Technical Data

Appliance type	Circulation thermostat
Class designation acc. DIN 12876	III
Identification according to DIN 12876	FL
Cooling agent	R134a
Cooling agent quantity [g]	230
Cooling agent pressure max. [bar]	20
Heat output [W]	1500
Cooling capacity (@20°C) [W]	400
Cooling capacity (@10°C) [W]	370
Cooling capacity (@0°C) [W]	320
Cooling capacity (@-10°C) [W]	240
Cooling capacity (@-20°C) [W]	130
Working temperature [°C]	-30 - 100
Operating temperature min. [°C]	-30
Temperature display	yes
Temperature stability DIN 12876 (@+70°C) [K]	±0.05
Temperature stability DIN 12876 (@-10°C) [K]	±0.05
Temperature control	PID
Working temperature sensor	PT 100
Safety temperature sensor	PT1000
Working temperature display	LED
Safety temperature display	LED
Temperature stability DIN 12876 [K]	±0.05
Connection for ext. temperature sensor	PT 100
Display resolution [K]	0.01
Display for operation with ext. sensor	yes
Set temperature resolution [K]	0.1
Warning function optical	yes
Warning function acoustic	yes
Warning function excess temperature	yes
Warning function insufficient temperature	yes
Adjustable safety circuit [°C]	0 - 110
Sub-level protection	yes
Over-level protection	yes
Filling volume [l]	1.4 - 4.0
Pump type	Pressure- / suction pump
Pump capacity adjustable	yes
Pump pressure max. (0 liters discharge flow) [bar]	0.5
Pressure pump (suction side) (0 liter flow) [bar]	0.25
Flow rate max. (0 bar back pressure) [l/min]	21
Pump connection	M16x1
Calibration option	yes
Technical data complies with the standard	DIN 12876
Permissible ON time [%]	100
Multi-Interface	yes
Alarm output (potential-free contact) max. [V AC/DC]	30
Alarm output (potential-free contact) max. [A]	1
Solenoid valve output [VDC]	24

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Solenoid valve output max. [A]	0.8
Standby input [VDC]	5
Noise level [dB(A)]	52
Dimensions (W x H x D) [mm]	220 x 475 x 525
Weight [kg]	33.3
Permissible ambient temperature [°C]	5 - 32
Permissible relative humidity [%]	80
Protection class according to DIN EN 60529	IP 21
RS 232 interface	yes
USB interface	Micro-USB
Analog output	yes
Voltage [V]	230
Frequency [Hz]	50/60
Power input [W]	1800