



designed for scientists



RC 5 control

/// Data Sheet

Powerful recirculating chiller, designed for external cooling applications up to -30°C .

The energy-efficient chiller is operated with an eco-friendly refrigerant and reaches a high power density. This results in a comparatively small working space in the lab. The speed-controlled PEEK pump allows an indirect, continuous adjustment of the maximum pressure and flow rate. Due to the PT100 temperature sensor, which is part of the delivery and its excellent temperature stability of about $\pm 0,1 \text{ K}$, the RC 5 can handle even sophisticated applications.

Laboratory staff operates the RC 5 control safely and conveniently from everywhere in the lab by using the Wireless Controller (WiCo). Processes can be automated and simplified through 10 freely programmable temperature ramps with 10 steps each.



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Its isolated, high-quality 7l bath has an integrated hopper and drain valve, ensuring safe and clean handling of the thermofluid. A hose can be connected to empty the bath in order to avoid direct contact with the thermofluid. The easy-to-open front flap allows an easy cleaning of the cooling unit's air filter.

Key Features

- Speed-controlled refrigeration system with 1400 W cooling capacity (@20°C)
- Natural thermofluid R290
- Designed for cooling applications up to -30°C - RT
- Extended operating temperature range up to 80°C
- Excellent temperature stability of about $\pm 0,1\text{K}$ (@-10°C)
- Speed-controlled pump made of PEEK: (0,6 bar; 31l/min)
- Digital level indicator

Additional benefits of the control device:

- Operating mode D (confirmation mode)
- Signal if set point is reached
- Timer/Counter
- Degassing function

Interfaces:

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

Scope of delivery

- RC 5 control
- PT 100.30 Temperature sensor
- Hose olive NW 8 (2 pcs.)
- Hose olive NW 12 (2 pcs.)
- WH10 WiCo Holder
- OS 1.0 power supply (for WiCo)
- USB Cable - USB A to Micro-B, 2 m
- USB 2.0 cable Micro A – Micro B



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Technical Data

Appliance type	Recirculating chiller
Cooling agent	R290
Cooling agent quantity [g]	90
Cooling agent pressure max. [bar]	21
Cooling capacity (@20°C) [W]	1400
Cooling capacity (@10°C) [W]	1200
Cooling capacity (@0°C) [W]	950
Cooling capacity (@-10°C) [W]	650
Cooling capacity (@-20°C) [W]	450
Cooling capacity (@-30°C) [W]	200
Working temperature [°C]	-30 - room temp.
Operating temperature min. [°C]	-30
Operating temperature max. (with external heating) [°C]	80
Temperature display	yes
Temperature control	PID
Working temperature sensor	PT 100
Working temperature display	TFT
Temperature stability DIN 12876 [K]	±0.1
Connection for ext. temperature sensor	PT 100
Display resolution [K]	0.01
Display for operation with ext. sensor	yes
Warning function optical	yes
Warning function acoustic	yes
Warning function excess temperature	yes
Sub-level protection	yes
Filling volume [l]	5.0 - 7.0
Pump type	Pressure- / suction pump
Pump capacity adjustable	yes
Pump pressure max. (0 liters discharge flow) [bar]	0.61
Pressure pump (suction side) (0 liter flow) [bar]	0.45
Flow rate max. (0 bar back pressure) [l/min]	31
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
Solenoid valve output max. [A]	0.8
Standby input [VDC]	5
Noise level [dB(A)]	61
Dimensions (W x H x D) [mm]	310 x 546 x 490
Weight [kg]	37.5
Permissible ambient temperature [°C]	5 - 32
Permissible relative humidity [%]	80
Protection class according to DIN EN 60529	IP 21
RS 232 interface	yes



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USB interface	Micro-USB
Voltage [V]	230
Frequency [Hz]	50/60
Power input [W]	1100