

PRODUCT DATA SHEET

Published: 2025-12-02

LAUDA Universa U 4230 M

Cooling thermostat, 200-240 V; 50/60 Hz

Part Number: L004164

Features

- Bath circulation thermostat with advanced electronics ensures precise control accuracy
- Future-proof thanks to modularity: LAUDA Universa with interchangeable control head and heating/cooling base allows flexible adaptation to current and future requirements.
- Clear overview, intuitive operation: The 5-inch colour TFT display simultaneously shows temperature values with a progression graph, offers clear menu navigation in six languages and clear operating status icons - easily controlled via cursor and soft keys.
- Focus on safety: The dedicated Tmax button provides convenient access to the essential overtemperature protection setting during commissioning.
- Flexible pump performance: The Varioflex pump with eight selectable performance levels, adjustable flow rate distribution for internal/external circulation for optimal volume flow and pressure
- Easily accessible front switch on the control head allows the pump output to be adjusted during operation.
- Highly efficient refrigeration technology: Combination of speed-controlled inverter compressor and capacity control by means of electronic expansion valves and speed-controlled fans - for improved energy efficiency and reduced operating costs, - increased service life by avoiding frequent switch-on and switch-off cycles, - dynamic approach to the set temperature and - quieter operation.
- Environmentally friendly refrigerants: Use of natural refrigerants for sustainable and environmentally conscious cooling.
- Adaptive bath edge ventilation (patent application): - Prevents icing and condensation - Stops water entering the bath - Blocks vapors to protect electronics. To increase operational safety and extend service life.
- Extensive functionality with programmer, safe mode, calibration options, controller self-adaptation and weekly planner for precise and flexible process control.
- Intelligent remote control and monitoring: Integrated web server allows flexible remote control in the company network via the LAUDA Command app or browser-based, secured by PKI and 2-factor authentication. The connection to LAUDA.LIVE enables global, cloud-based data analysis and remote maintenance.
- Maximum networking: Comprehensive connectivity for almost any application thanks to standard Ethernet, USB and interface for an external Pt100 as well as eleven optional interface modules.



Reserve technical changes

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Geschäftsführer:
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Dr. Marc Stricker
Beirat: Dr. Gerhard Wobser

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- Comprehensive safety functions: - Effective over- and under-level protection - Adjustable overtemperature protection with acoustic alarm - Automatic system diagnostics at start-up with alarm and error message display - Smart temperature control media management with automatic limit value adjustment. For reliable operation and improved safety of your valuable samples.



Working temperature min.
-30 °C



Working temperature max.
200 °C

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Technical Features

Working temperature range	-30 ... 200 °C
Operating temperature range	-30 ... 200 °C
Ambient temperature range	5 ... 40 °C
Temperature stability	0.01 ± K
Heating capacity range	2.8 ... 3.7 kW
Current max.	16 A
Size of bath (W x D x H)	300 x 350 x 320 mm
Bath opening (WxT)	300 x 350 mm
Bath volume min. / max.	19.0 / 47.0 L
Pump Pressure max.	1,1 bar
Pump flow rate max. (pressure)	32 L/min
In / Outlet connection thread (outside)	M16 x 1
In / Outlet Ø olives	13 mm
Overall dimensions (WxDxH)	450 x 690 x 927 mm
Weight	69 kg
Refrigerant stage 1	R-290 (GWP 3); 0.080 kg; 0.0 t CO2-eq
Power supply	200-240 V, 50/60 Hz
Power plug	Power cord with plug (NEMA 6-20P)

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Power cord with plug (NEMA 6-20P)

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Temperature	Pump stage	Heat transfer liquid	Cooling Capacity 50 Hz	Cooling Capacity 60 Hz
200 °C	8	Thermal oil	0.8 kW	0.8 kW
100 °C	8	Thermal oil	0.8 kW	0.8 kW
20 °C	8	Ethanol	0.8 kW	0.8 kW
10 °C	8	Ethanol	0.74 kW	0.74 kW
0 °C	8	Ethanol	0.7 kW	0.7 kW
-10 °C	8	Ethanol	0.59 kW	0.59 kW
-20 °C	4	Ethanol	0.43 kW	0.43 kW
-30 °C	4	Ethanol	0.18 kW	0.18 kW

Standard accessories

- 1 Bath cover
- Pump connection set with M16x1 stainless steel connections
- 2 screw caps, 2 closing plugs
- 2 nipples 13 mm for pump connectors

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COOLING PERFORMANCE Heat transfer liquid: Ethanol, bath closed

Bath temperature °C



- 1 U 845 M
- 2 U 2040 M
- 3 U 4230 M
- 4 U 855 M
- 5 U 1645 M
- 6 U 890 M

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PUMP CHARACTERISTIC Heat transfer liquid: Water

Pressure bar



- 1 Stage 1
- 2 Stage 2
- 3 Stage 3
- 4 Stage 4
- 5 Stage 5
- 6 Stage 6
- 7 Stage 7
- 8 Stage 8

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