PRODUCT DATA SHEET

Published: 2026-07-20

LAUDA Universa U 1645 M
Cooling thermostat 200-240 V; 50/60 Hz
Part Number: L003816

Reserve technical changes

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.
- Versatile pressure-suction pump: The LAUDA Varioflex pump, a powerful pressure-suction pump, offers eight selectable performance levels, adjustable flow rate distribution for internal/external circulation for optimal volume flow and pressure
- Ball bearing pump for extreme requirements: Guarantees safe operation with highly viscous and dense heat transfer fluids as well as with impurities in the temperature control bath.
- 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.
- Wireless communication: Integrated WLAN enables effortless connection with PC, tablet and smartphone.

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- 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.
- 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.

Options included

- Integrated Wi-Fi communication: The device may only be imported and used in certified countries and regions: United States of America, Canada, EU including the UK and Switzerland, and India.

Working temperature min.
-45 °C

Working temperature max.
200 °C

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Technical Features	
Working temperature range	-45 ... 200 °C
Operating temperature range	-45 ... 200 °C
Ambient temperature range	5 ... 40 °C
Temperature stability	0.01 ± K
Heating capacity range	2.6 ... 3.1 kW
Power consumption max.	3.1 kW
Current max.	13 A
Size of bath (W x D x H)	200 x 300 x 200 mm
Bath opening (WxT)	200 x 300 mm
Bath volume min. / max.	10.5 / 16.5 L
Pump Pressure max.	0,7 bar
Pump suction max.	0,4 bar
Pump flow rate max. (pressure)	25 L/min
Pump Flow rate max. (suction)	23 L/min
In / Outlet connection thread (outside)	M16 x 1
In / Outlet ∅ olives	13 mm
Overall dimensions (WxDxH)	310 x 610 x 757 mm
Weight	49 kg
Refrigerant stage 1	R-1270 (GWP 2); 0.075 kg; 0.0 t CO2-eq
Power supply	200-240 V, 50/60 Hz
Power plug	Power cord with angled plug (BS1363)

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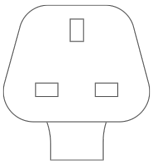

Power cord with angled plug (BS1363)

Temperature	Pump stage	Heat transfer liquid	Cooling Capacity 50 Hz	Cooling Capacity 60 Hz
200 °C	8	Thermal oil	1.6 kW	1.6 kW
100 °C	8	Thermal oil	1.6 kW	1.6 kW
20 °C	8	Ethanol	1.6 kW	1.6 kW
10 °C	8	Ethanol	1.45 kW	1.45 kW
0 °C	8	Ethanol	1.2 kW	1.2 kW
-10 °C	8	Ethanol	0.86 kW	0.86 kW
-20 °C	4	Ethanol	0.58 kW	0.58 kW
-30 °C	4	Ethanol	0.35 kW	0.35 kW
-40 °C	4	Ethanol	0.15 kW	0.15 kW
-45 °C	4	Ethanol	0.07 kW	0.07 kW

Reserve technical changes

Standard accessories

- 1 Bath cover
- Pump connection set with M16x1 stainless steel connections
- 2 hose olives 13.5 mm, 2 union nuts

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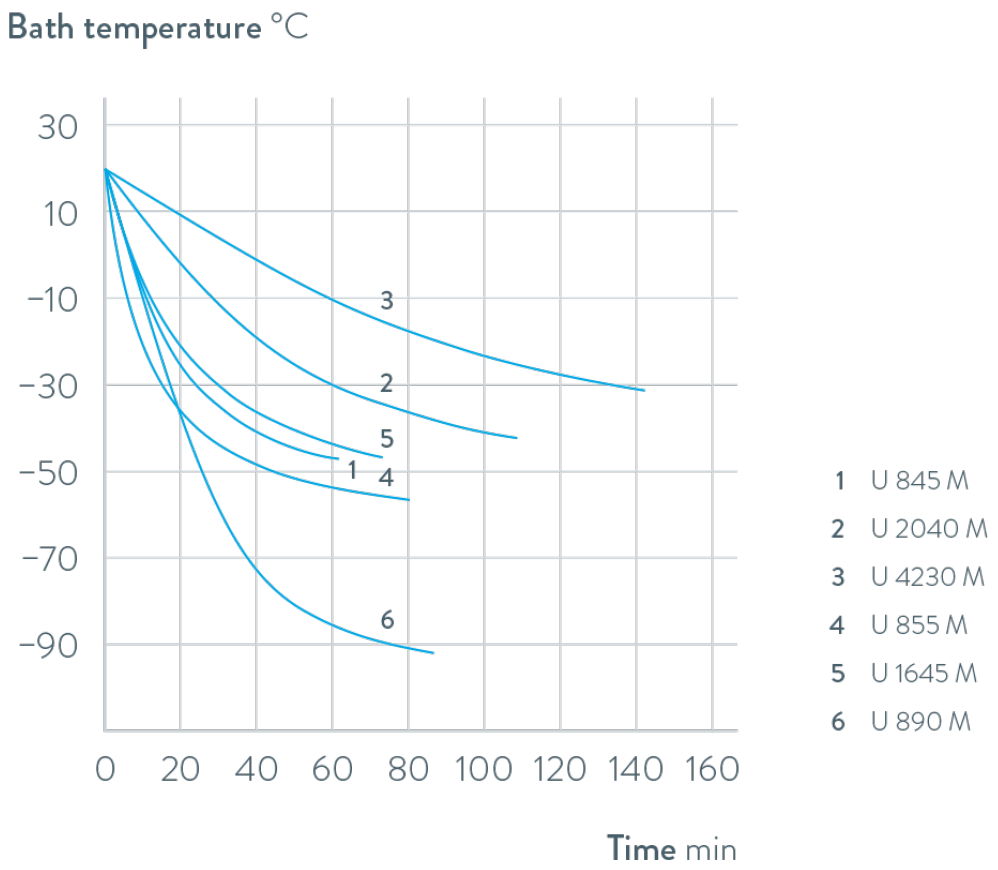
COOLING PERFORMANCE Heat transfer liquid: Ethanol, bath closed



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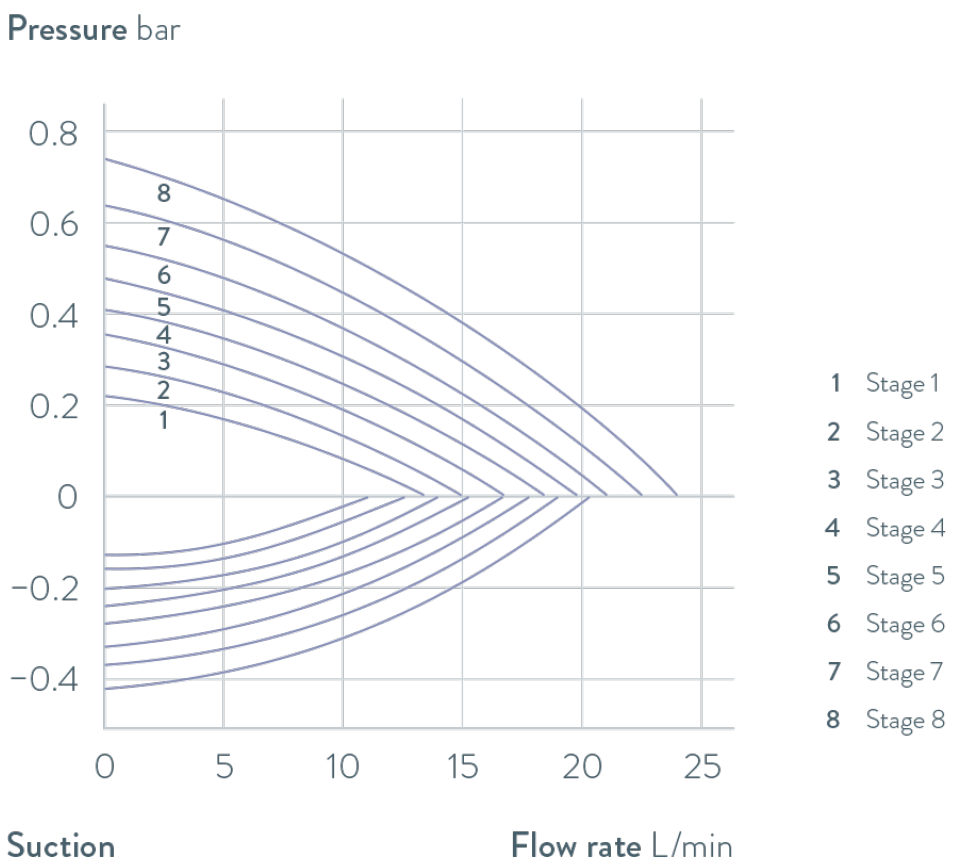
PUMP CHARACTERISTIC Heat transfer liquid: Water



Reserve technical changes

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Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct.
If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

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Please contact us if this literature doesn't answer all your questions.