PRODUCT DATA SHEET

Standing: 2025-06-03

LAUDA Universa U 1645 M
Cooling thermostat 200-240 V; 50/60 Hz
Part Number: L003765

DOMINIQUE DUTSCHER SAS



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.

Reserve technical changes

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WEEE-Reg-Nr.: DE 66 42 40 57

Kommanditgesellschaft: Sitz Lauda-Königshofen
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Persönlich haftende Gesellschafterin:
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Registergericht Mannheim • HRB 560226

Geschäftsführer:
Dr. Gunther Wobser (Vors.), Dr. Mario Englert,
Dr. Marc Stricker
Beirat: Dr. Gerhard Wobser

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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.



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	2.8 ... 3.7 kW
Current max.	16 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 3); 0.075 kg; 0.0 t CO2-eq
Power supply	200-240 V, 50/60 Hz
Power plug	Power cord with angled plug (CEE7/7)

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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

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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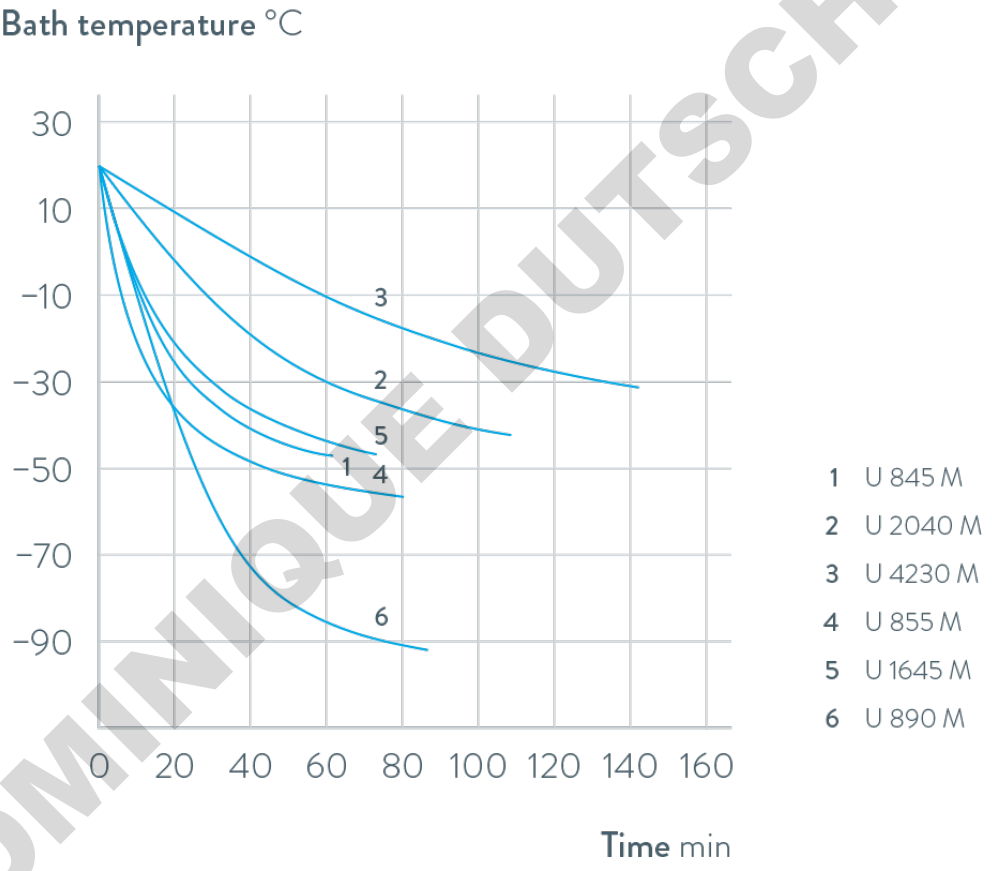
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COOLING PERFORMANCE Heat transfer liquid: Ethanol, bath closed



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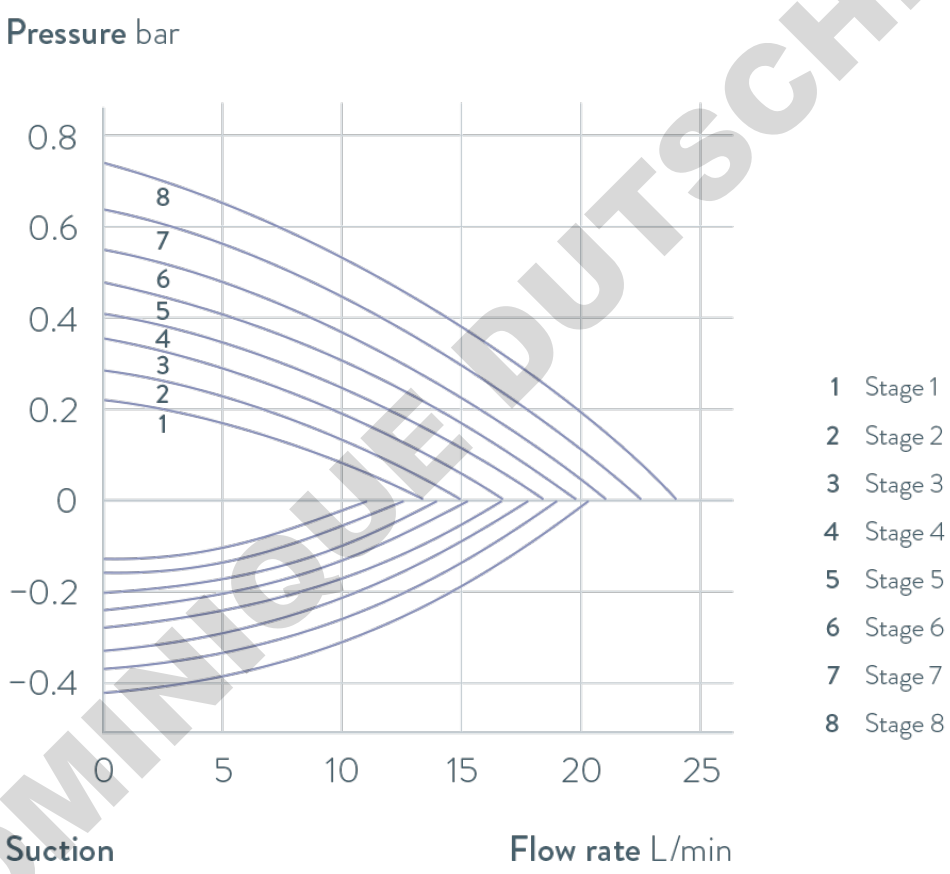
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PUMP CHARACTERISTIC Heat transfer liquid: Water



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