°LAUDA

NEW

THE NEW BATH THERMOSTATS

LAUDA Universa

°FAHRENHEIT. °CELSIUS. °LAUDA.

THE ALL-NEW DIMENSION

MODULAR, AI-READY, SUSTAIN

OF TEMPERATURE CONTROL

ABLE, HIGH-PERFORMANCE

One product line. Maximum performance

Three innovative product variants for perfect temperature control

With LAUDA Universa, we offer you a new generation of bath thermostats for reliable, precise and powerful temperature control. Three performance classes – ECO, PRO and MAX – allow you to select the perfect solution for a wide range of requirements in laboratories, research and industry. Whether entry-level solution, versatile all-rounder or high-end system for demanding processes: All variants impress with their high temperature stability, powerful heating and cooling capacities and modern digital functions – for high efficiency and process reliability.

LAUDA UNIVERSA ECO

The smart choice for convenient basic temperature control. Reliable. Compact. Economical.

Display:	2.9" VA LC display
Temperature range:	−30 … 100 °C
Heating output:	2 kW
Cooling output:	300 W
Pump type:	Pressure pump
Bath volume:	8 … 16 L
Bath depths:	160 mm, 200 mm
Safety class:	I/NFL

LAUDA UNIVERSA PRO

The all-rounder for versatile laboratory applications. Flexible. Powerful. Dynamic.

Display:	3.5" TFT color display
Temperature range:	−45 … 200 °C
Heating output:	2.5 kW
Cooling output:	200 … 800 W
Pump type:	Pressure pump
Bath volume:	4 … 40 L
Bath depths:	160 mm, 200 mm
Safety class:	III/FL

LAUDA UNIVERSA MAX

The powerful solution for the highest demands. Maximum performance. Precise control. For extreme temperature ranges.

Display:	5" TFT color display
Temperature range:	−90 ... 300 °C
Heating output:	3.6 kW
Cooling output:	800 W ... 1.6 kW
Pump type:	Pressure/suction pump
Bath volume:	8 ... 42 L
Bath depths:	200 mm, 320 mm
Safety class:	III/FL

Technology that makes the difference

High precision, dynamics and temperature stability

Whether heating or cooling, LAUDA Universa stands for powerful, precise and efficient temperature control in all processes. Sophisticated technology, intelligent control and innovations (patent-pending) ensure top performance in everyday laboratory work – flexible, sustainable and future-proof.

1

Rapid heating & cooling
High heating and cooling capacity, high-quality insulation and minimal heat loss enable short heating and cooling times. For maximum dynamics and efficiency in every process.

2

Constant precision – even with temperature jumps
LAUDA Universa guarantees exact temperature constancy down to ±0.01 K – for internal and external temperature control. Ideally suited for processes with tight tolerances and the highest quality requirements in static and dynamic applications.

3

Reliability thanks to intelligent safety functions
LAUDA Universa offers comprehensive protection in daily operation: with adjustable overtemperature protection, automatic system diagnostics, acoustic alarm functions and intelligent warning messages. For a high level of safety even in sensitive applications.

4

Powerful pump with control stages
The speed-controlled pressure or pressure-suction pump ensures even temperature distribution – adapted to your application, whether internal or external temperature control. For demanding media such as oils at high temperatures, the pressure-suction pump is also available in a ball bearing version. For even greater operational reliability in continuous operation.

5

Extra quiet, clean and durable
The standard speed-control enables trouble-free, low-noise operation and extends the service life of the compressors - for more quietness and planning reliability in the laboratory.

6

Modular, intelligent, future-proof
Control heads and base parts can be replaced or upgraded as required. This means that LAUDA Universa grows with your requirements – without you having to buy a complete new one. The built-in electronics are also designed to be future-proof: Its intelligent structure forms the basis for functional updates, digital services, remote maintenance and AI-supported functions.

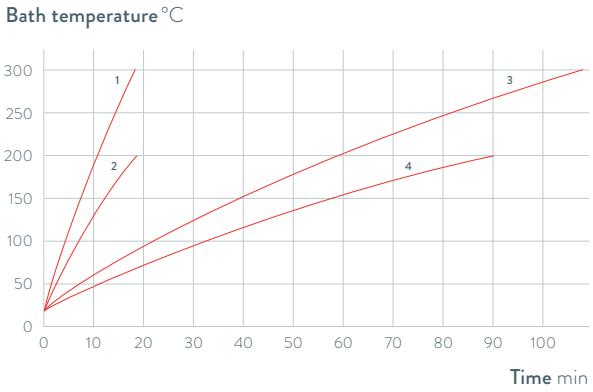
BATH EDGE VENTILATION

Bath edge ventilation for clean operation
An innovative, software-controlled ventilation system prevents condensation and vapors from entering the control head. The air is extracted in a targeted manner - for a dry, clean and safe working area. Icing is also reduced, which significantly increases reliability (patent pending).

SPEED-CONTROLLED COMPRESSORS

Efficient refrigeration technology – minimal energy consumption, quiet operation
The refrigeration system automatically adjusts the cooling capacity to the requirements of the respective process. Speed-controlled compressors minimize energy consumption – for dynamic temperature control with high precision, quiet operation and a reduced CO_2 footprint (patent pending).

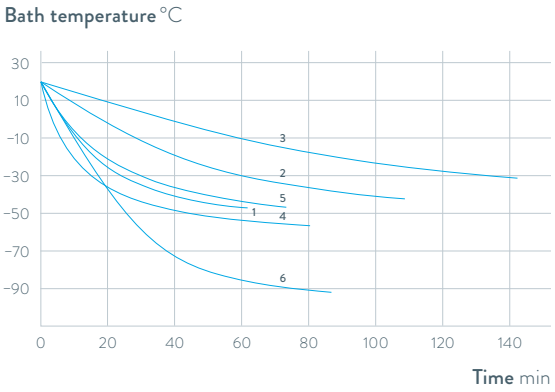
HEATING PERFORMANCE Heat transfer liquid: Silicone oil



1 U 8 M | **2** U 8 P | **3** U 40 M | **4** U 40 P

Fast heating with heating thermostats
With up to 3.6 kW heating power, LAUDA Universa sets standards, while the high-quality insulation minimizes heat loss, shortens process times and increases efficiency in everyday laboratory work.

COOLING PERFORMANCE Heat transfer liquid: Ethanol



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

Precision without delay with cooling thermostats
Refrigerated thermostats with high cooling capacities, fast response and precise control - for dynamic cooling and demanding heating cycles with maximum stability.

THE ALL-NEW DIMENSION

MODULAR, AI-READY, SUSTAIN

OF CUSTOMIZATION

ABLE, HIGH-PERFORMANCE

Maximum choice. Perfect temperature control

The modular system – as individual as your application

With LAUDA Universa, you can specify your temperature control system as required: Choose from three powerful control heads and a variety of heating or cooling baths – for maximum flexibility in every application.

LAUDA UNIVERSA ECO

The entry into the modular world
The ECO control head impresses with easy handling, solid performance and an economical solution for standard applications in the temperature range from −30 to 100 °C. Optimally combinable with numerous heating or cooling baths – for reliable results in everyday temperature control tasks.

LAUDA UNIVERSA PRO

The modular solution for versatile processes
More pumping power, higher heating and cooling capacity, programmable and additional functions make the PRO control head the powerful choice for more demanding applications. Application temperatures from −45 to 200 °C can be flexibly realized with a wide variety of baths.

3x MECHANICAL

LAUDA UNIVERSA MAX

The powerful solution for the highest demands
LAUDA Universa MAX offers advanced control functions, pressure-suction pump and high temperature stability for extreme temperature ranges from −90 to 300 °C. Can be combined with the most powerful chillers – for maximum control and dynamics.

9x

HEAT BATHS TO CHOOSE FROM

Versatile bath options for every application

From compact 4 L stainless steel baths to spacious 40 L versions – including deep versions up to 320 mm and transparent polycarbonate baths for an optimum view of your temperature-controlled products.

INTERFACE

Maximum variety

Six powerful chillers with cooling capacities from 200 W to 1.6 kW, combinable with various bath vessels – tailor-made solutions for all your temperature control requirements.

14x

COLD BATHS TO CHOOSE FROM

Step-by-step to the right product:

www.lauda.de/en/products/constant-temperature-equipment/product-finder

LAUDA product finder

LAUDA Universa – fully customizable

The right temperature control system for every requirement

LAUDA Universa offers a large selection of heating and cooling baths that can be flexibly combined with all three control head variants in countless combinations. Stainless steel and transparent baths, many cooling and heating power levels and a comprehensive range of accessories guarantee an individual solution for every application – just one combination away.

IMMERSION THERMOSTATS

Universa ECO

307 mm

Universa PRO

327 mm

Device type	ECO	PRO
Temperature range °C	25 ... 100	20 ... 200
Temperature stability K	±0.05	±0.01
Heater power kW	2	2.5
Bath volume L	–	–

HEATING THERMOSTATS

Universa ECO

450 mm

Universa PRO

436 - 478 mm

Device type	U 8 E	U 12 E	U 16 E	U 4 P	U 8 P	U 16 P	U 40 P
Temperature range °C	20 ... 100	20 ... 100	20 ... 100	20 ... 200	20 ... 200	20 ... 200	20 ... 200
Temperature stability K	±0.05	±0.05	±0.05	±0.01	±0.01	±0.01	±0.01
Heater power kW	2	2	2	2.5	2.5	2.5	2.5
Bath volume L	5.8 ... 8.5	8.5 ... 13	11.5 ... 17	3 ... 5	5.8 ... 8.5	11.5 ... 17	27.5 ... 41

Universa MAX

497 - 617 mm

Device type	U 8 M	U 12 M	U 20 M	U 40 M
Temperature range °C	20 ... 300	20 ... 300	20 ... 300	20 ... 300
Temperature stability K	±0.01	±0.01	±0.01	±0.01
Heater power kW	3.6	3.6	3.6	3.6
Bath volume L	5.8 ... 8.5	8.5 ... 13	9.5 ... 22	29 ... 42

COOLING THERMOSTATS

Universa ECO

Device type	U 830 E	U 1225 E	U 1625 E
Temperature range °C	−30 ... 100	−25 ... 100	−25 ... 100
Temperature stability K	±0.05	±0.05	±0.05
Heater power kW	2	2	2
Cooling power W	300	300	300
Bath volume L	5 ... 8	8.5 ... 13	10.5 ... 16.5

Universa PRO

Device type	U 420 P	U 630 P	U 635 P	U 1245 P	U 1635 P
Temperature range °C	−20 ... 200	−30 ... 200	−35 ... 200	−45 ... 200	−35 ... 200
Temperature stability K	±0.02	±0.02	±0.02	±0.02	±0.02
Heater power kW	2.5	2.5	2.5	2.5	2.5
Cooling power W	200	300	500	800	500
Bath volume L	1.8 ... 4	3.2 ... 5,7	3.2 ... 5.7	8.5 ... 13	11 ... 16.5

Universa MAX

Device type	U 845 M	U 855 M	U 890 M	U 2040 M	U 1645 M	U 4230 M
Temperature range °C	−45 ... 200	−55 ... 200	−90 ... 200	−40 ... 200	−45 ... 200	−30 ... 200
Temperature stability K	±0.01	±0.01	±0.01	±0.01	±0.01	±0.01
Heater power kW	3.6	3.6	3.6	3.6	3.6	3.6
Cooling power W	800	1600	800	800	1600	800
Bath volume L	5 ... 8	5 ... 8	5 ... 8	9 ... 21	10.5 ... 16.5	19 ... 47

THE ALL-NEW DIMENSION

MODULAR, AI-READY, SUSTAIN

OF CONNECTIVITY

ABLE, HIGH-PERFORMANCE

Fully connected, intuitive control, efficient maintenance

Digital control and smart process reliability

Intuitive control – anytime, from anywhere
With the LAUDA Command app, you can control your devices flexibly and precisely – wirelessly and device-independently via smartphone, tablet or PC.

Wi-Fi on board – without additional infrastructure
LAUDA Universa devices have integrated Wi-Fi as standard. Ideal for mobile or decentralized use.

Ready for AI-supported monitoring & maintenance
With LAUDA.LIVE, your devices can be monitored in real time and checked via remote maintenance. The integrated connectivity and our research work on artificial intelligence shall detect faults at an early stage in the future and, in the best case, prevent them from occurring in the first place – for maximum availability.

Secure and encrypted
Data is encrypted and transmitted securely in the network. A comprehensive rights and access system protects sensitive processes and prevents unauthorized access.

Everything at a glance – with just a few fingertips
The LAUDA Command app offers an intuitive user interface with full functionality:

- Set target values
- Start & stop processes
- Manage device settings
- Manage programs
- Display temperature curves
- Analyze & export data

Available for all platforms
Whether smartphone, tablet or PC: the LAUDA Command app is available for iOS, Android and Windows.

APP DOWNLOAD

GET IT ON Google Play
Download on the App Store
Get it from Microsoft
WINDOWS APP Download center

Maximum connectivity for modern system integration

Standard interfaces – flexibly expandable via module

Plug and Play interface extension

Whether control system, LIMS or digital laboratory platform – LAUDA Universa offers a wide range of communication interfaces as standard for smooth data exchange. The modular interface card system expands connectivity as required: from the classic RS-232 connection to Profinet and EtherCAT through to the integration of external sensors. This means that LAUDA Universa is ready for any system integration – today and tomorrow.

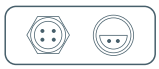
Standard interfaces

Model variant	Ethernet	Wi-Fi	USB*	Pt100/LiBus	Number of module slots
Universa ECO	●	●	●	-	-
Universa PRO	●	●	●	-	1x large, 1x small
Universa MAX	●	●	●	●	2x large

* For data import/export and updates only

Interface modules as a flexible expansion solution

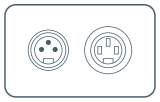
LRZ 912
Analog module



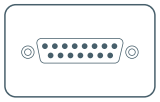
LRZ 918
Pt100/LiBus module, small cover

LRZ 925
External Pt100/LiBus module, large cover

LRZ 926
RS-232/485

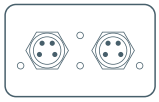


LRZ 927
Contact module with single input and single output (NAMUR)

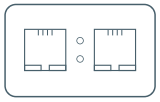


LRZ 928
Contact module D-Sub

LRZ 929
Profibus

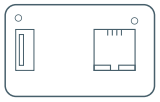


LRZ 931
EtherCAT

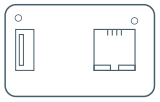


LRZ 932
Profinet

LRZ 933
CAN



LRZ 934
OPC UA



LZR 935
ModBus TCP/IP

With LAUDA.LIVE Services Cloud-enabled and AI-ready

Remote maintenance-capable and ready for AI-supported process optimization

Smartly connected into the future
LAUDA Universa is designed to be digital from the ground up. The system comes with integrated connectivity to the LAUDA.LIVE Cloud out of the box and can be activated with just a few clicks – without any additional hardware. This enables modern remote maintenance, live monitoring and data-based process analysis in real time.

LAUDA.LIVE – digital services with added value
Statuses, processes and temperature curves are monitored live via a secure cloud connection. Errors can be identified and rectified quickly, often without on-site intervention. This can significantly reduce downtimes, associated costs and maintenance work.

AI-ready – ready for intelligent optimization
LAUDA Universa is ready for future developments in the field of artificial intelligence. Thanks to its modular architecture and digital interfaces, AI-supported functions can be integrated in the future – for predictive maintenance, automatic process optimization or intelligent energy control, for example.

Future-proof thanks to adaptive systems
In the future, AI-based analyses will be able to detect deviations at an early stage, prevent faults and adjust temperature control processes independently. This not only increases efficiency, but also operational safety – a decisive factor in sensitive laboratory environments.

Your advantages:
- Minimization of downtime and malfunctions
- Fast troubleshooting via remote maintenance
- Reduction of service calls and travel costs
- Full transparency through live data analysis
- Future-proof through AI integration

THE ALL-NEW DIMENSION

MODULAR, AI-READY, SUSTAIN

OF SUSTAINABILITY

ABLE, HIGH-PERFORMANCE

Sustainably thought. Efficiently implemented

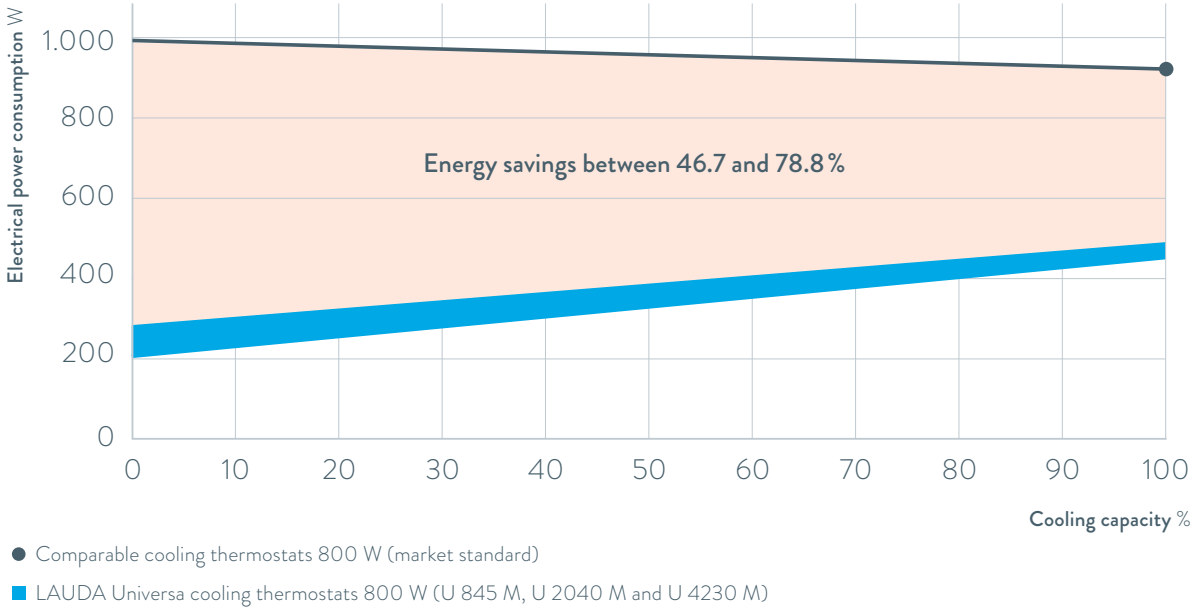
For future-oriented, resource-saving temperature control technology

Efficiency that pays off twice
LAUDA Universa relies on speed-controlled compressors, intelligent refrigeration control and natural refrigerants – for maximum performance with maximum energy savings. The system is particularly efficient and application-optimized, especially at partial load. The innovative technology not only ensures low power consumption, but also measurably reduces the carbon footprint.

Natural refrigerants – safe & environmentally friendly
All LAUDA Universa refrigerated thermostats use natural refrigerants with an extremely low **Global Warming Potential (GWP)**. The filling quantity remains below **100 grams**, even with the most powerful devices. This eliminates the need for complex safety measures or special transportation regulations.

Quiet in operation, strong in occupational safety
The lower housing of the bath features high-quality insulation and a three-part bath edge – for optimum energy efficiency and safe working conditions. Speed-controlled fans in the chillers also ensure quiet, resource-saving operation. This promotes focused work in the laboratory and supports occupational safety in noise-sensitive environments.

Durable. Modular. Future-proof.
The modular system enables simple repairs, targeted upgrades and the long-term replacement of individual components – all in the interests of a sustainable product life cycle. Regular updates ensure that LAUDA Universa is always at the cutting edge of technology.



Up to 78.8 % energy savings

Thanks to state-of-the-art components, such as a speed-controlled compressor and fan as well as electronic expansion valves, LAUDA Universa significantly reduces energy consumption compared to the market standard. This results in energy savings of between **46.7 and 78.8 %**, depending on the operating mode.

VERSATILE IN USE. EQUIPPED FOR ALL APPLICATIONS

High-precision temperature control for industry, research and development


LAUDA
24,20
LAUDA

Internal temperature control

Constant temperature, maximum homogeneity

LAUDA Universa bath thermostats enable precise sample temperature control through uniform circulation and stable temperature conditions throughout the bath. They are used in a wide range of industries – from pharmaceuticals and chemicals to electronics, biotech and food technology. High temperature stability and homogeneity, which must be maintained over several days or even weeks, are common requirements for temperature control units.

QUALITY CONTROL AND CALIBRATION

Inline tests require temperature-stable conditions.
LAUDA Universa offers:

- Large bath volume for several samples
- Uniform liquid circulation around your samples
- Precise temperature stability

Accessories such as lid inserts, baskets or racks support standard-compliant quality testing in the bath.

LAUDA Universa offers for the calibration of sensors, thermometers and components:

- Uniform spatial temperature distribution
- Stable temperatures over the entire calibration period
- Optional cylindrical inserts and controlled overflow weirs enable even higher temperature homogeneities

The result: reproducible calibration values in research, production and quality assurance.

External temperature control
Dynamic, precise, versatile

For reactors, systems and appliances: LAUDA Universa bath thermostats offer maximum flexibility and performance for external applications. Fast-response temperature control, high flow rates and smart control ensure precise processes.

TEMPERATURE CONTROL OF REACTORS AND SYSTEMS

LAUDA Universa bath thermostats create ideal conditions for the precise temperature control of reactors:

- Pressure-suction pump for high flow rate
- High heating and cooling capacity for reaching the target temperature quickly

A particular advantage of the LAUDA Universa MAX devices is the standard Pt100/LiBus interface.
It enables:

1. Direct temperature monitoring in the reactor
2. Precise control of the external temperature

This means that even the most sophisticated reactor temperature control systems can be implemented safely and efficiently.

LAUDA Universa bath thermostats are suitable for controlling the temperature of a wide range of systems - from analysis devices to complex systems and machines. They can be flexibly integrated or operated independently. Digital tools such as

- **LAUDA Command app** for remote control & monitoring
- **LAUDA.LIVE** for data analysis & process optimization enable wireless control, monitoring and data analysis – for reliable, safe and efficient continuous operation.

LAUDA Universa

Limitless versatile temperature control

High-performing, sustainable, digital and modular – this is how LAUDA is repositioning temperature control technology for the laboratory. The innovative LAUDA Universa range offers a comprehensive modular system of bath thermostats in three performance classes: ECO, PRO and MAX. From the economically optimized standard device to the powerful high-end thermostat, each device can be flexibly configured – perfectly matched to your application.

MODULAR DESIGN

The ideal choice from the modular system: desired range of functions of the control head, heating and cooling capacity and bath size. This creates the right device for every application – individual, flexible and future-proof.

MECHANICAL INTERFACE

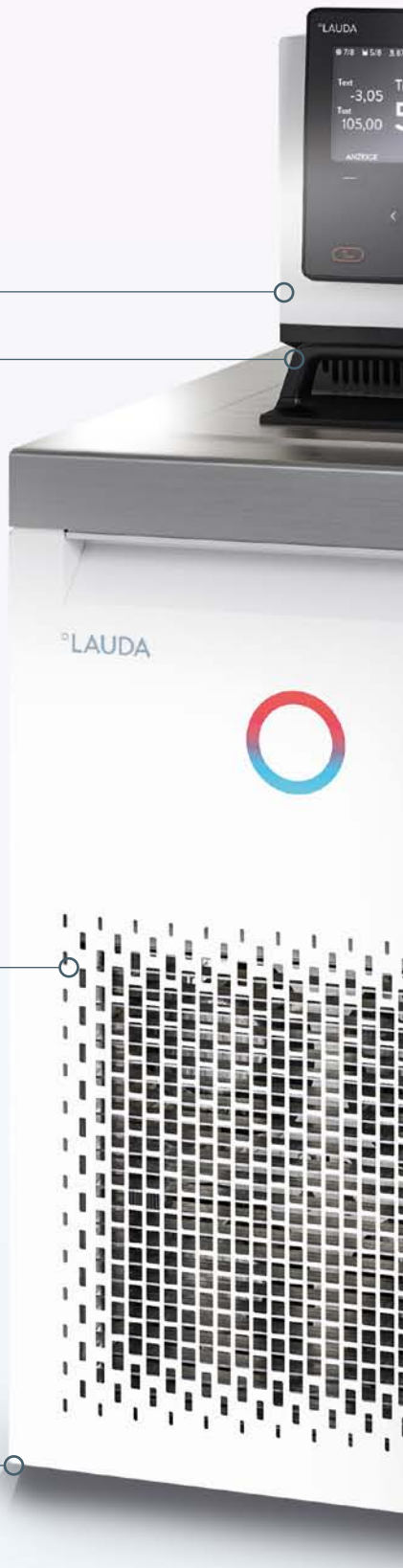
The standardized mechanical interface guarantees simple installation, secure sealing and reliable operation – even after many years of use.

HIGH-QUALITY CONSTRUCTION

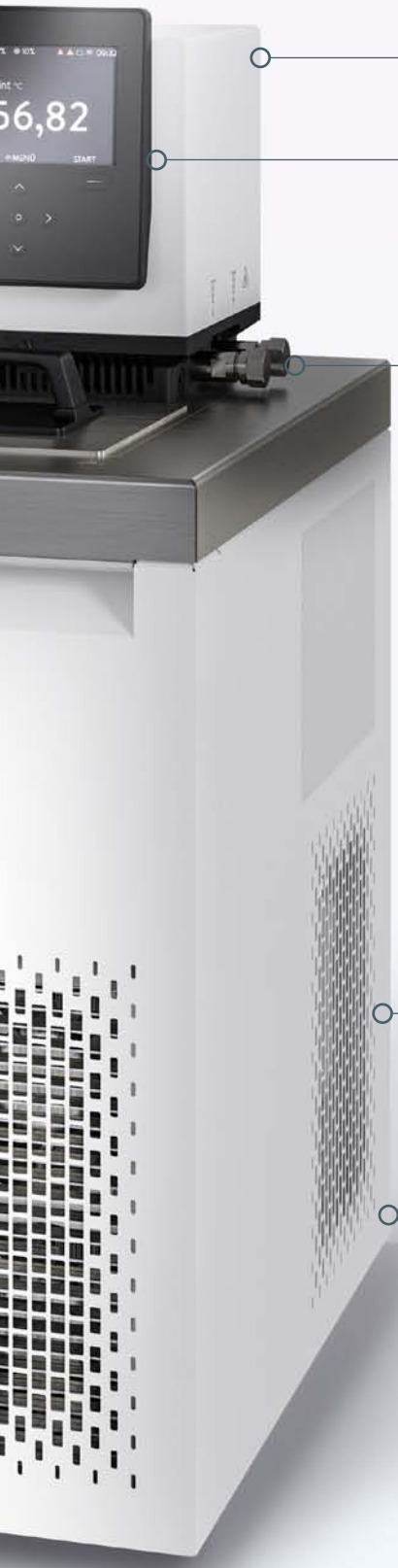
Welded bath vessels, robust materials and precise workmanship ensure durability, stability and uncompromising quality.

STABLE AND MOBILE

LAUDA Universa devices stand securely on rubber feet – and can still be moved comfortably thanks to the integrated castors on the refrigerated base.



LAUDA Universa U 855 M



ACCESSORIES

Suitable accessories such as quick-release couplings, solenoid valves, stands and racks allow the system to be expanded flexibly and optimally for both internal and external applications.

INTUITIVE OPERATION

Control via a well-arranged display with a clearly structured menu. All functions can be accessed quickly and directly – ideal for laboratory use.

PUMP NOZZLE

The pump connections are made of stainless steel with a standardized M16×1 connection – for high compatibility and safe operation.

CONNECTIVITY AS STANDARD

Wi-Fi, USB, Ethernet and Pt100/LiBus are standard features. Other interfaces and protocols can be flexibly retrofitted.

SUSTAINABLY DESIGNED

With speed-controlled compressors, intelligent refrigeration control and natural refrigerants, all LAUDA Universa devices are energy-efficient and environmentally friendly.

ACCESSORIES AND HEAT TRANSFER LIQUIDS

Optimally matched to LAUDA Universa

Heat transfer liquids for safe processes

Optimally matched and suitable for continuous operation

Reliable temperature control up to wide temperature ranges – continuous operation for a long service life of the thermostat

Choosing the right heat transfer liquids is crucial. Thanks to decades of experience, LAUDA offers a wide range of heat transfer liquids for wide temperature ranges and reliable heat transfer. The menu-controlled fluid management of LAUDA Universa bath thermostats ensures safe and optimum use at all times.

Heat transfer fluid / Chemical substance class	Temperature range for open/half-open systems	Recommendation for the following device			Part Number 5 L / 10 L / 20 L
	−50 °C 0 °C 100 °C	Universa ECO	Universa PRO	Universa MAX	
Aqua 90 Water	5 °C – 90 °C	●	●	●	LZB 120 / 220 / 320
Therm 160 Polyethylene glycol	60 °C – 160 °C	-	●	●	LZB 106 / 206 / 306
Therm 180 Silicone oil	0 °C – 180 °C	-	●	●	LZB 114 / 214 / 314
Therm 250 Silicone oil	50 °C – 250 °C	-	●	●	LZB 122 / 222 / 322
Ultra 301 Mineral oil	40 °C – 230 °C	-	●	●	LZB 153 / 253 / 353
Kryo 10 Water/antifreeze*	−10 °C – 90 °C	●	●	●	LZB 132 / 232 / 332
Kryo 20 Silicone oil	−20 °C – 170 °C	-	●	●	LZB 116 / 216 / 316
Kryo 30 Water/antifreeze	−30 °C – 90 °C	●	●	●	LZB 109 / 209 / 309 / LZB 809 (200 L barrel)
Kryo 51 Silicone oil	−50 °C – 120 °C	-	●	●	LZB 121 / 221 / 321
Kryo 60 Silicone oil	−60 °C – 60 °C	-	-	●	LZB 102 / 202 / 302 LZB 802 (200 L barrel)
Kryo 95 Silicone oil	−95 °C – 60 °C	-	-	●	LZB 130 / 230 / 330

Note: When working above T = 250 °C, special safety precautions must be observed: Work under fume hood or extraction, wear gloves and goggles. The ambient temperature must not exceed Ta = 35 °C

● = approved for the device line
● = Restricted release for the device line. Please check specification.
- = NOT approved for device line
* food compatible

Further information can be found in the LAUDA temperature control fluids brochure or at www.lauda.de/en/products/heat-transfer-liquids

Accessories for maximum compatibility
Expandable and a perfect fit

Optimized for your requirements
The reliable operation of temperature control units requires suitable accessories. With adapters, hose connections, distributors and interface modules, LAUDA Universa can be specifically expanded – for maximum flexibility in use. The comprehensive range of LAUDA accessories ideally complements your laboratory equipment and comes from a single source: well thought-out, proven, compatible.

Accessories:
- Extensive range of racks for centrifuge tubes and test tubes
- Standard rails for lid holders and standard rail clamps for attaching support stands – creates space on the laboratory bench and enables individual set-ups
- Bath cover with lockable opening for temperature sensor
- Cylinder-shaped insert for calibrating temperature sensors
- Quick coupling for connecting external consumers
- Compatible slotted rails and cover holders for modular customer applications from Better Basics

Accessories for maximum compatibility

Expandable and a perfect fit

Part Number	Designation	Description	Suitable for
Bath covers			
A001748	Bath cover Universa	for bath opening 130 × 100 mm	U 4, U 420
A001751	Bath cover Universa	for bath opening 130 × 150 mm	U 630, U 635
A001661	Bath cover Universa	for bath opening 150 × 150 mm	U 8, U 830, U 845, U 855, U 890
A001662	Bath cover Universa	for bath opening 200 × 200 mm	U 12, U 1225, U 1245, U 20, U 2040
A001663	Bath cover Universa	for bath opening 200 × 300 mm	U 16, U 1625, U 1635, U 1645
A001749	Bath cover Universa, two parts	for bath opening 300 × 600 mm	U 40
A001750	Bath cover Universa	for bath opening 300 × 350 mm	U 4230
A001658	Bath cover with feed-throughs	for bath opening 150 × 150 mm	U 8, U 830, U 845, U 855, U 890
A001659	Bath cover with feed-throughs	for bath opening 200 × 200 mm	U 12, U 1225, U 1245, U 20, U 2040
A001744	Bath cover with ring inserts: 4 openings	for bath opening 150 × 150 mm	U 8, U 830, U 845, U 855, U 890
A001745	Bath cover with ring inserts: 5 openings	for bath opening 200 × 200 mm	U 12, U 1225, U 1245, U 20, U 2040
A001769	Bath cover for transparent baths	for bath opening 130 × 270 mm	U 6 T
A001770	Bath cover for transparent baths	for bath opening 270 × 130 mm	U 15 T
A001771	Bath cover for transparent baths	for bath opening 300 × 350 mm	U 20 T
A001761	Screw-on cover	for bath opening 130 × 100 mm	U 4, U 420
Mounting parts, brackets			
A001666	Standard rail	Length: 394 mm	U 8, U 420
A001667	Standard rail	Length: 444 mm	U 12, U 20, U 630
A001668	Standard rail	Length: 474 mm	U 635, U 830
A001669	Standard rail	Length: 484 mm	U 845, U 855, U 1225, U 1245
A001670	Standard rail	Length: 534 mm	U 16, U 2040
A001671	Standard rail	Length: 604 mm	U 1625, U 1635, U 1645, U 890, U 4230
A001672	Standard rail	Length: 844 mm	U 40
A001720	Standard rail claw for pipes	Mounting hole: M10	A001666 … A001672
A001721	Cover holder	Suitable for standard rails	A001666 … A001672, A001780
A001773	Aluminum slotted rail*	Length: 394 mm	U 8, U 420
A001774	Aluminum slotted rail*	Length: 444 mm	U 12, U 20, U 630
A001775	Aluminum slotted rail*	Length: 474 mm	U 635, U 830
A001776	Aluminum slotted rail*	Length: 484 mm	U 845, U 855, U 1225, U 1245
A001777	Aluminum slotted rail*	Length: 534 mm	U 16, U 2040
A001778	Aluminum slotted rail*	Length: 604 mm	U 1625, U 1635, U 1645, U 890, U 4230
A001779	Aluminum slotted rail*	Length: 844 mm	U 40
A001780	Adapter for cover holder*	Suitable for aluminum slotted rail	A001773 … A001779
A001742	Conversion kit to swivel castors with 4 brakes	Suitable for Universa U 890	U 890
A001746	Trolley with castors, adjustable		all
Bath vessels			
A001734	LAUDA Universa U 6 T	6 L, transparent bath in polycarbonate	
A001722	Cylindrical insert	Suitable for U 20 M & U 2040 M	U 20, U 2040
Boxes, Baskets			
LCZ 0694	Basket	W × D × H: 180 × 190 × 195 mm	U 12, U 1225, U 1245, U 20, U 2040
LCZ 0658	Basket	W × D × H: 140 × 140 × 195 mm	U 8, U 830, U 845, U 855, U 890
Racks			
A001652	Test tube rack in z-shape	with 36 openings, diameter 17 mm	U 8, U 830, U 845, U 855, U 890
A001653	Test tube rack in z-shape	with 49 openings, diameter 13 mm	U 8, U 830, U 845, U 855, U 890
A001654	Test tube rack in z-shape	with 64 openings, diameter 17 mm	U 12, U 1225, U 1245, U 20, U 2040
A001655	Test tube rack in z-shape	with 100 openings, diameter 13 mm	U 12, U 1225, U 1245, U 20, U 2040
A001787	Stainless steel test tube rack	for 14 test tubes, diameter 29 mm	U 8, U 830, U 845, U 855, U 890, U 630, U 635
A001788	Stainless steel test tube rack	for 30 test tubes, diameter 17 mm	U 8, U 830, U 845, U 855, U 890, U 630, U 635
UE 028	Stainless steel test tube rack	for 42 Eppendorf tubes	U 4, U 420

* Compatible with Better Basics

Part Number	Designation	Description	Suitable for	
UE 035	Stainless steel test tube rack RN 18/4	for 11 glasses, D=14-18 mm, 110 mm ID	U 4, U 420	
A001764	Rotorack	Diameter 198 mm	U 20, U 2040	
Heat exchanger				
A001740	Cooling coil set Universa PRO	with M16 × 1 stainless steel connections	Universa PRO	
A001741	Cooling coil set Universa ECO	with M16 × 1 stainless steel connections	Universa ECO	
LCZ 0787	Insulated plate heat exchanger M16 × 1 O	Temperature range: –100 to 150 °C, up to 12 bar	Universa PRO, Universa MAX	
Adapters, fittings				
A001737	Pump connection set Universa PRO	with M16 × 1 stainless steel connections	Universa PRO	
A001738	Pump connection set Universa ECO	with 11 mm stainless steel connectors	Universa ECO	
LCZ 0660	Level controller, mechanical	for bath opening 150 × 150 mm	Universa MAX	available Q4/25
LCZ 0679	Connection set for ext. in- and outlet	M16 × 1 outside thread	Universa MAX	available Q4/25
A001656	Quick coupling	Suitable for M16 x 1 connection thread	all	
HKA 221	Adapter	Adapter M16 × 1 I - NPT 1/2" O	all	
HKA 107	Adapter	Adapter M16 × 1 I - NPT 1/4" O	all	
HKA 063	Angle adapter	M16 × 1 outside thread/screw cap	all	
HKA 058	Adapter M16 × 1 I - 3/8" O		all	
HKA 060	Adapter M16 × 1 I - G1/2" O	Cooling coil connection	all	
HKA 068	Adapter M16 × 1 - M14 × 1,5		all	
HKA 144	Adapter M16 × 1 I - G1/4" I		all	
HKA 149	Adapter M16 × 1 O - spherical liner RD=22		all	
HKA 150	Adapter M16 × 1 I - G1/2" O	ID=4,5 mm	all	
HKA 190	Extension 70 mm M16 × 1 O - M16 × 1 I		all	
HKM 032	Screw cap M16 × 1			
Connectors				
HKA 073	Angular connector 13,5 mm to M16 × 1 I		all	
HKO 025	Connector 11 mm for M16 × 1		all	
HKO 026	Connector 13,5 mm for M16 × 1		all	
HKO 061	Connector 8 mm for M16 × 1		all	
A001781	Connector set for M16 × 1	External diameter connector 13.5 mm	all	
Magnetic valves				
A001657	Coolant valve with LiBus	with M16 × 1 stainless steel connector	Universa PRO, Universa MAX	
A001753	Shut-off unit/return valve	with LiBus	Universa PRO, Universa MAX	
Interface modules				
LRZ 912	Analog module PMA with LiBus		Universa PRO, Universa MAX	
LRZ 918	External Pt100-/LiBus module	small cover	Universa PRO	
LRZ 925	External Pt100-/LiBus module	large cover	Universa PRO, Universa MAX	
LRZ 926	RS-232/485 module Advanced, LiBus	D-SUB 9-pol.	Universa PRO, Universa MAX	
LRZ 927	Contact module NAMUR Advanced, LiBus	1 x input, 1 x output	Universa PRO, Universa MAX	available Q3/25
LRZ 928	Contact module D-SUB Advanced, LiBus	D-SUB 15-pol., 3 x input, 3 x output	Universa PRO, Universa MAX	
LRZ 929	Profibus module Advanced, LiBus	D-SUB 9-pol.	Universa PRO, Universa MAX	
LRZ 931	EtherCAT module Advanced, LiBus	2 x M8	Universa PRO, Universa MAX	available Q4/25
LRZ 932	Profinet module Advanced, LiBus	RJ45	Universa PRO, Universa MAX	available Q3/25
LRZ 933	CAN module Advanced, LiBus	D-SUB 9-pol.	Universa PRO, Universa MAX	available Q4/25
LRZ 934	OPC UA module Advanced, LiBus	RJ45	Universa PRO, Universa MAX	
LRZ 935	Modbus TCP module Advanced, LiBus	RJ45	Universa PRO, Universa MAX	
LCZ 9727	Module box with LiBus MB		Universa PRO, Universa MAX	
Digital products				
D000089	LAUDA Command Professional app		all	

LAUDA Universa

Functional overview of control units

Whether LAUDA Universa ECO, PRO or MAX – each LAUDA Universa device variant has its own strengths. The tabular overview shows key features in direct comparison and makes it easier to select the right device variant for your application.

Operating element	Universa ECO	Universa PRO	Universa MAX
Display	VA LC	TFT	TFT
Display size	2,9"; 77 × 38 mm	3,5"; 77 × 64 mm	5"; 121 × 76 mm
Mode of operation	3-button	Cursor softkey	Cursor softkey
User languages	1 (english)	6	6
Data logging, export to USB stick	✓	✓	✓
Safe mode	-	-	✓ (available Q1/26)
1-point calibration	✓	✓	✓
2-point calibration	-	-	✓
Self-adaptation controller	-	-	✓ (available Q3/25)
Programmer, programs/segments	-	5 / 150	5 / 150
Programmer, tolerance range function	-	✓	✓
Ramp function	-	✓	✓
Date / Time	✓	✓	✓
Weekly timer	-	✓	✓
Countdown function	✓	-	-
Graphic temperature profile display	-	✓	✓
Splitting switch for pump flow pressure	-	✓	✓
Level indicator (digital)	-	-	✓
Standby timer	-	✓	✓
Low-level alarm	✓	✓	✓
Low-level warning	-	-	✓
Drain tap	✓	✓	✓
Liquid menu	-	✓	✓

LAUDA Universa
Pump curves

LAUDA Universa PRO and MAX work with a multi-stage, speed-controlled circulation pump that ensures optimum heat transfer for both internal and external temperature control. The pump stage can be conveniently selected via the menu in order to precisely adjust the outlet pressure and flow rate to each application.

Pump curves LAUDA Universa MAX

LAUDA Universa MAX is equipped with an eight-stage, speed-controlled pressure-suction pump. This enables the reliable supply to external consumers as well as stable internal circulation. Devices with a bath depth of 320 mm have particularly powerful pressure pumps for uniform temperature distribution in the bath (ΔT = ±0.01 K).

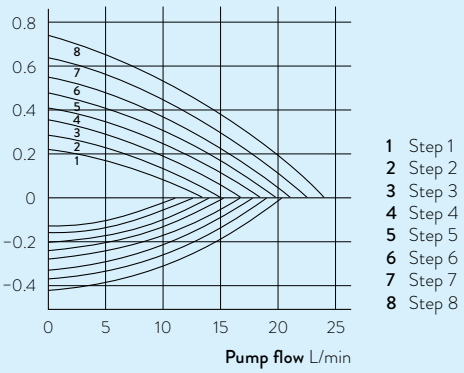
Ball bearing version for special requirements

All LAUDA Universa MAX devices with a pressure-suction pump are also available with an optional ball bearing pump – ideal for:

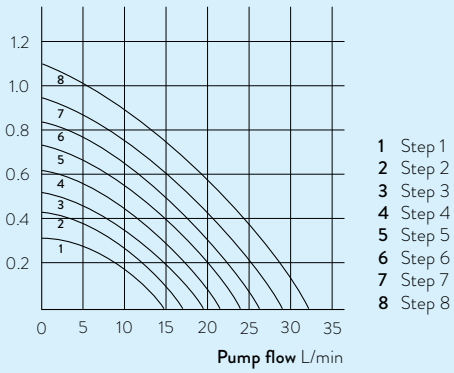
a) Foreign bodies in the bath (e.g. due to material residues)
b) Residues from high-temperature applications with silicone or mineral oils

This design increases operational safety and prevents blockages during continuous operation.

PUMP CHARACTERISTIC Pressure-suction pump, Heat transfer liquid: Water
Universa MAX

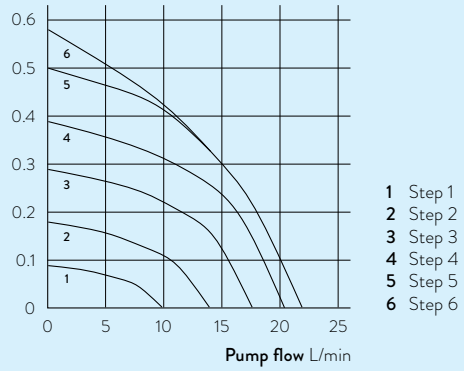


PUMP CHARACTERISTIC Pressure pump, Heat transfer liquid: Water
Universa MAX



	Pressure-suction pump	Pressure-suction pump with ball bearing	Pressure pump
Heating thermostats	U 8, U 12 M, U 40 M	U 8, U 12 M, U 40 M	U 20 M
Cooling thermostats	U 845 M, U 855 M, U 890 M	U 845 M, U 855 M, U 890 M	U 2040 M, U 4230 M

PUMP CHARACTERISTIC Pressure pump, Heat transfer liquid: Water
Universa PRO



Pump characteristics LAUDA Universa PRO

LAUDA Universa PRO works with a multi-stage, speed-controlled circulation pump that ensures optimum heat transfer for internal and external temperature control.

LAUDA Universa Heating thermostats

Technical data according to DIN 12876 standard

Device type	Working temperature range °C	Working temperature range with water cooling °C	Temperature stability ±K	Safety fittings	Heater power max. kW	Pump pressure max. (pressure) bar	Pump pressure max. (suction) bar	Pump flow max. (pressure) L/min	Pump flow max. (suction) L/min
LAUDA Immersion thermostats									ECO available Q4/25
ECO	25 ... 100	-	0.05	I/NFL	2	0.2	-	15	-
PRO	30 ... 200	20 ... 200	0.01	III/FL	2.5	0.55	-	22	-
LAUDA Universa ECO Heating thermostats									available Q4/25
U 8 E	25 ... 100	-	0.05	I/NFL	2	0.2	-	15	-
U 12 E	25 ... 100	-	0.05	I/NFL	2	0.2	-	15	-
U 16 E	25 ... 100	-	0.05	I/NFL	2	0.2	-	15	-
LAUDA Universa PRO Heating thermostats									
U 4 P	30 ... 200	20 ... 200	0.01	III/FL	2.5	0.55	-	22	-
U 8 P	40 ... 200	20 ... 200	0.01	III/FL	2.5	0.55	-	22	-
U 16 P	40 ... 200	20 ... 200	0.01	III/FL	2.5	0.55	-	22	-
U 40 P	40 ... 200	20 ... 200	0.01	III/FL	2.5	0.55	-	22	-
LAUDA Universa MAX Heating thermostats									
U 8 M	70 ... 300	20 ... 300	0.01	III/FL	3.6	0.7	0.4	25	23
U 12 M	70 ... 300	20 ... 300	0.01	III/FL	3.6	0.7	0.4	25	23
U 20 M	65 ... 300	20 ... 300	0.01	III/FL	3.6	1.1	-	32	-
U 40 M	65 ... 300	20 ... 300	0.01	III/FL	3.6	0.7	0.4	25	23
LAUDA Universa MAX Heating thermostats, pump with ball bearing									
U 8 M	70 ... 300	20 ... 300	0.01	III/FL	3.6	0.7	0.4	25	23
U 12 M	70 ... 300	20 ... 300	0.01	III/FL	3.6	0.7	0.4	25	23
U 40 M	65 ... 300	20 ... 300	0.01	III/FL	3.6	0.7	0.4	25	23

The Universa PRO Immersion thermostat is equipped with a protective plate with integrated screw terminal as standard.
Pump nozzles are available as accessories for the Universa PRO Immersion thermostats and the Universa PRO Heating thermostats.
All Universa MAX devices are fitted with a cooling coil, pump nozzle and a cover as standard.
Universa ECO and PRO Heating thermostats: A cover is available as an accessory, the PRO Heating thermostats are equipped with a cooling coil as standard.

Pump connection thread mm	**Bath volume max.** L	**Bath opening (W × D)** mm	**Bath depth** mm	**Usable depth** mm	**Height top of bath** mm	**Dimensions (W × D × H)** mm	**Weight** kg	**Power supply** V; Hz	**Radio capability**	**Part Number**	**Device type**
-	-	-	-	-	-	125 × 176 × 307	-	-	-	L003967	ECO
M16 × 1	-	-	-	-	-	164 × 186 × 327	-	200-240 V; 50/60 Hz	Wi-Fi	L003890	PRO
-	8.5	150 × 150	200	-	-	230 × 400 × 450	-	-	-	L003968	U 8 E
-	13	200 × 200	200	-	-	280 × 450 × 450	-	-	-	L003969	U 12 E
-	17	200 × 300	200	-	-	280 × 550 × 450	-	-	-	L003970	U 16 E
M16 × 1	5	130 × 100	160	140	240	190 × 330 × 436	10.5	200-240 V; 50/60 Hz	Wi-Fi	L003891	U 4 P
M16 × 1	8.5	150 × 150	200	180	280	230 × 400 × 476	14.5	200-240 V; 50/60 Hz	Wi-Fi	L003892	U 8 P
M16 × 1	17	200 × 300	200	180	280	280 × 550 × 476	19.0	200-240 V; 50/60 Hz	Wi-Fi	L003893	U 16 P
M16 × 1	41	300 × 600	200	180	282	380 × 850 × 478	28.0	200-240 V; 50/60 Hz	Wi-Fi	L003894	U 40 P
M16 × 1	8.5	150 × 150	200	180	280	230 × 400 × 497	15.0	200-240 V; 50/60 Hz	Wi-Fi	L003749	U 8 M
M16 × 1	13	200 × 200	200	180	280	280 × 450 × 497	18.0	200-240 V; 50/60 Hz	Wi-Fi	L003750	U 12 M
M16 × 1	22	200 × 200	320	300	400	280 × 450 × 617	22.5	200-240 V; 50/60 Hz	Wi-Fi	L003751	U 20 M
M16 × 1	42	300 × 600	200	180	282	380 × 850 × 499	29.0	200-240 V; 50/60 Hz	Wi-Fi	L003752	U 40 M
M16 × 1	8.5	150 × 150	200	180	280	230 × 400 × 497	14.5	200-240 V; 50/60 Hz	Wi-Fi	L003759	U 8 M
M16 × 1	13	200 × 200	200	180	280	280 × 450 × 497	18.0	200-240 V; 50/60 Hz	Wi-Fi	L003760	U 12 M
M16 × 1	42	300 × 600	200	180	282	380 × 850 × 499	29.0	200-240 V; 50/60 Hz	Wi-Fi	L003761	U 40 M

LAUDA Universa Cooling thermostats

Technical data according to DIN 12876 standard

Device type	Working temperature range °C	Temperature stability ±K	Safety fittings	Heater power max. kW	Cooling output kW										Pump pressure max. (pressure) bar	Pump pressure max. (suction) bar	Pump flow max. (pressure) L/min	Pump flow max. (suction) L/min
					20 °C	0 °C	−20 °C	−30 °C	−40 °C	−45 °C	−50 °C	−60 °C	−80 °C	−90 °C				
LAUDA Universa ECO Cooling thermostats																	available Q4/25	
U 830 E	−30 ... 100	0.05	I/NFL	2	0.3										0.2	-	15	-
U 1225 E	−25 ... 100	0.05	I/NFL	2	0.3										0.2	-	15	-
U 1625 E	−25 ... 100	0.05	I/NFL	2	0.3										0.2	-	15	-
LAUDA Universa PRO Cooling thermostats																		
U 420 P	−20 ... 200	0.02	III/FL	2.5	0.2	0.18	0.07	-	-	-	-	-	-	-	0.55	-	22	-
U 630 P	−30 ... 200	0.02	III/FL	2.5	0.3	0.25	0.12	0.02	-	-	-	-	-	-	0.55	-	22	-
U 635 P	−35 ... 200	0.02	III/FL	2.5	0.5	0.47	0.17	0.06	-	-	-	-	-	-	0.55	-	22	-
U 1245 P	−45 ... 200	0.02	III/FL	2.5	0.8	0.73	0.45	0.26	0.12	0.05	-	-	-	-	0.55	-	22	-
U 1635 P	−35 ... 200	0.02	III/FL	2.5	0.5	0.43	0.15	0.05	-	-	-	-	-	-	0.55	-	22	-
LAUDA Universa MAX Cooling thermostats																		
U 845 M	−45 ... 200	0.01	III/FL	3.6	0.8	0.7	0.44	0.26	0.12	0.05	-	-	-	-	0.7	0.4	25	23
U 855 M	−55 ... 200	0.01	III/FL	3.6	1.6	1.25	0.62	0.38	0.18	-	0.05	-	-	-	0.7	0.4	25	23
U 890 M	−90 ... 200	0.01	III/FL	3.6	0.8	0.74	0.72	0.68	0.64	-	0.6	0.46	0.12	0.02	0.7	0.4	25	23
U 2040 M	−40 ... 200	0.01	III/FL	3.6	0.8	0.71	0.45	0.26	0.1	-	-	-	-	-	1.1	-	32	-
U 1645 M	−45 ... 200	0.01	III/FL	3.6	1.6	1.2	0.58	0.35	0.15	0.07	-	-	-	-	0.7	0.4	25	23
U 4230 M	−30 ... 200	0.01	III/FL	3.6	0.8	0.7	0.43	0.18	-	-	0.12[1]	-	-	-	1.1	-	32	-
LAUDA Universa MAX Cooling thermostats, pump with ball bearing																		
U 845 M	−45 ... 200	0.01	III/FL	3.6	0.8	0.7	0.44	0.26	0.12	0.05	-	-	-	-	0.7	0.4	25	23
U 855 M	−55 ... 200	0.01	III/FL	3.6	1.6	1.25	0.62	0.38	0.18	-	0.05	-	-	-	0.7	0.4	25	23
U 890 M	−90 ... 200	0.01	III/FL	3.6	0.8	0.74	0.72	0.68	0.64	-	0.6	0.46	0.12	0.02	0.7	0.4	25	23
U 1645 M	−45 ... 200	0.01	III/FL	3.6	1.6	1.2	0.58	0.35	0.15	0.07	-	-	-	-	0.7	0.4	25	23

All Universa Cooling thermostats are fitted with a cover as standard.

Pump connection thread mm	**Bath volume max.** L	**Bath opening (W × D)** mm	**Bath depth** mm	**Usable depth** mm	**Height top of bath** mm	**Dimensions (W × D × H)** mm	**Noise level full load** dB (A)	**Noise level partial load** dB (A)	**Weight** kg	**Power supply** V; Hz	**Radio capability**	**Part Number**	**Device type**
-	8	150 × 150	200	-	-	260 × 480 × 632	-	-	-	-	-	L003971	U 830 E
-	13	200 × 200	200	-	-	310 × 510 × 630	-	-	-	-	-	L003972	U 1225 E
-	16.5	200 × 300	200	-	-	310 × 610 × 630	-	-	-	-	-	L003973	U 1625 E
M16 × 1	4	130 × 100	160	140	420	210 × 410 × 616	50	48	25	200-240 V; 50/60 Hz	Wi-Fi	L003898	U 420 P
M16 × 1	5.7	130 × 150	160	140	420	215 × 460 × 616	50	48	26	200-240 V; 50/60 Hz	Wi-Fi	L003899	U 630 P
M16 × 1	5.7	130 × 150	160	140	450	290 × 480 × 646	52	49	33	200-240 V; 50/60 Hz	Wi-Fi	L003900	U 635 P
M16 × 1	13	200 × 200	200	180	540	310 × 510 × 736	56	40	43	200-240 V; 50/60 Hz	Wi-Fi	L003901	U 1245 P
M16 × 1	16.5	200 × 300	200	180	540	310 × 610 × 736	52	49	38	200-240 V; 50/60 Hz	Wi-Fi	L003902	U 1635 P
M16 × 1	8	150 × 150	200	180	540	310 × 490 × 757	58	44	44	200-240 V; 50/60 Hz	Wi-Fi	L003753	U 845 M
M16 × 1	8	150 × 150	200	180	540	310 × 490 × 757	60	44	44	200-240 V; 50/60 Hz	Wi-Fi	L003754	U 855 M
M16 × 1	8	150 × 150	200	180	570	525 × 615 × 787	56	47	76	200-240 V; 50/60 Hz	Wi-Fi	L003755	U 890 M
M16 × 1	21	200 × 200	320	300	710	350 × 540 × 927	55	51	55	200-240 V; 50/60 Hz	Wi-Fi	L003756	U 2040 M
M16 × 1	16.5	200 × 300	200	180	540	310 × 610 × 757	60	44	48	200-240 V; 50/60 Hz	Wi-Fi	L003757	U 1645 M
M16 × 1	47	300 × 350	320	300	710	450 × 690 × 927	55	51	66	200-240 V; 50/60 Hz	Wi-Fi	L003758	U 4230 M
M16 × 1	8	150 × 150	200	180	540	310 × 490 × 757	58	44	44	200-240 V; 50/60 Hz	Wi-Fi	L003762	U 845 M
M16 × 1	8	150 × 150	200	180	540	310 × 490 × 757	60	44	44	200-240 V; 50/60 Hz	Wi-Fi	L003763	U 855 M
M16 × 1	8	150 × 150	200	180	570	525 × 615 × 787	56	47	76	200-240 V; 50/60 Hz	Wi-Fi	L003764	U 890 M
M16 × 1	16.5	200 × 300	200	180	540	310 × 610 × 757	60	44	48	200-240 V; 50/60 Hz	Wi-Fi	L003765	U 1645 M

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Once registration is complete, you will receive an official warranty confirmation, accessible online at any time.

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Laudaplatz 1 • 97922 Lauda-Königshofen • Germany
www.lauda.de

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