

LAUDA



Exclusive pre-print
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OVERALL BROCHURE CONSTANT TEMPERATURE EQUIPMENT 2026/2027

°FAHRENHEIT. °CELSIUS. °LAUDA.

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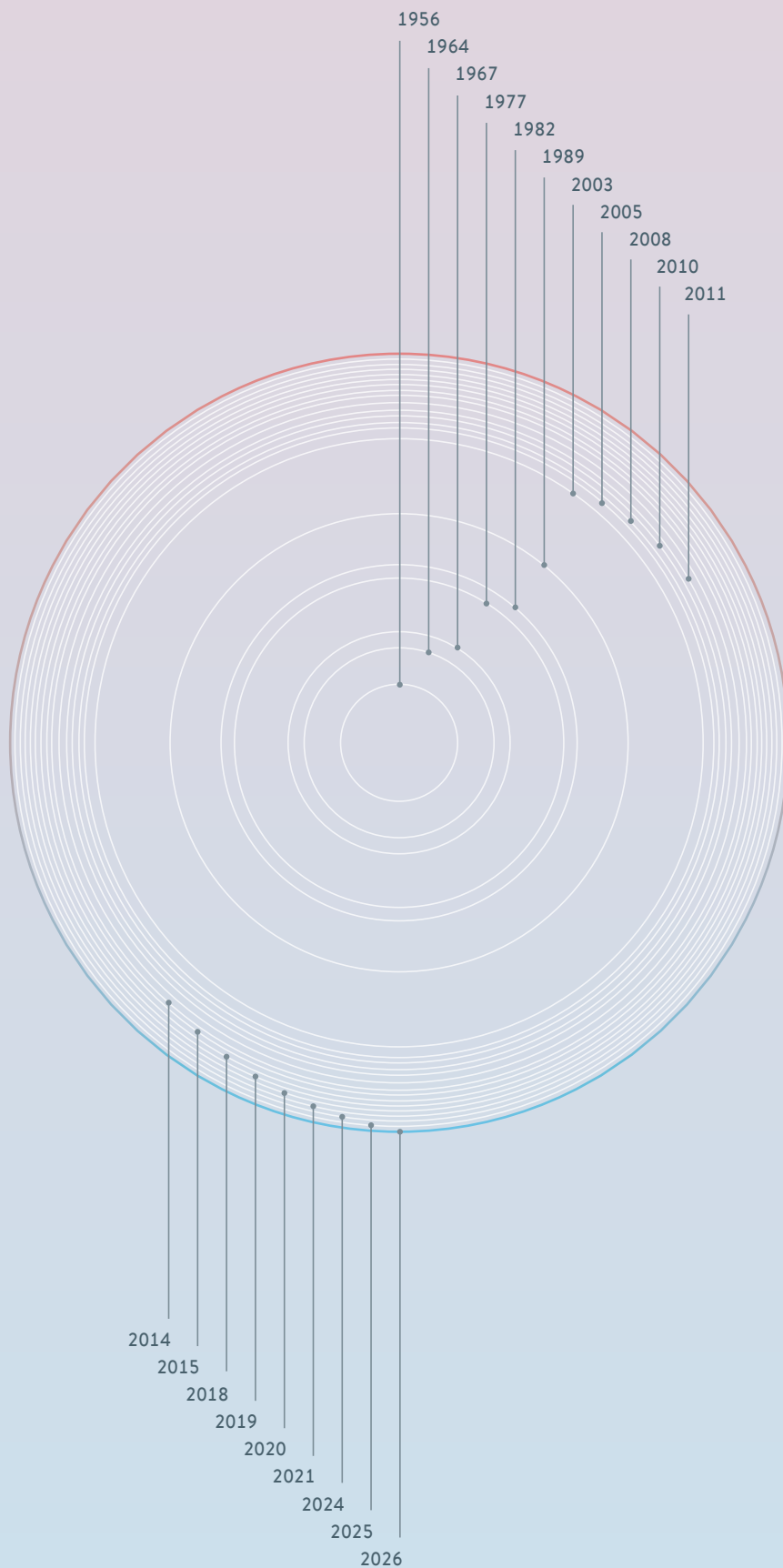
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LAUDA

A world market leader with tradition



1956	The first year	Dr. Rudolf Wobser founds Messgeräte-Werk Lauda Dr. R. Wobser KG in the small town of Lauda in Baden.
1964	The first industrial systems	Since 1964, LAUDA has also been building industrial heating and cooling systems for technology centers and production.
1967	The first measuring instruments	Market launch of pioneering LAUDA innovations: such as the first tensiometer and first film weighing scales.
1977	Dr. Gerhard Wobser and Karlheinz Wobser take over the management	After their father's death, the two brothers take up the role of Managing Director and share responsibilities accordingly.
1982	The first thermostat with a microprocessor	LAUDA introduces the world's first thermostats featuring microprocessor technology.
1989	The first year under today's company name	Renaming of company from Messgeräte-Werk Lauda Dr. R. Wobser KG to LAUDA DR. R. WOBSER GMBH & CO. KG.
2003	Dr. Gunther Wobser appointed Managing Director	Karlheinz Wobser retires. Dr. Gunther Wobser, at LAUDA since 1997, becomes the new Managing Director.
2005	Subsidiary LAUDA France	First subsidiary LAUDA France is founded.
2008	Global expansion phase with new subsidiaries	LAUDA America Latina C.A., LAUDA China Co. Ltd. and LAUDA-Brinkmann, LP, USA, are founded.
2010	Dr. Gerhard Wobser resigns	His son, Dr. Gunther Wobser, takes over his duties.
2011	Acquisition of LAUDA Ultracool	LAUDA expands its product range with industrial circulation chillers by acquiring LAUDA Ultracool S.L.U. in Barcelona.
2014	Acquisition of LAUDA-Noah	LAUDA buys US company Noah Precision and expands the product range with thermo-electric thermostats.
2015	Independent company for measuring devices	The new subsidiary LAUDA Scientific takes over development, sales and service activities for LAUDA measuring.
2018	New branding for LAUDA	LAUDA is introducing a confident new corporate design with a redesigned logo and new slogan.
2019	Aquisition of GFL	LAUDA acquires the traditional company GFL, thereby expanding its expertise in lab technology.
2020	New benchmarks in device design	LAUDA transitions all its product lines to a consistent and ultra-modern new design.
2021	Medical technology in focus	LAUDA is expanding its expertise in the medical market with the newly founded LAUDA Medical GmbH & Co. KG.
2024	The first mobile ultra low temperature chest freezer in the world	The new LAUDA Mobifreeze M 270, a mobile ultra low temperature chest freezer with active temperature control, ensures that the cold chain is reliably maintained.
2025	New LAUDA Universa device line and expansion in India	Market launch of LAUDA Universa and founding of the subsidiary Degree LAUDA Precision Pvt. Ltd. in Pune, India.
2026	70 years of LAUDA	LAUDA celebrates its 70th anniversary on March 1, 2026.

LAUDA

Applications according to sectors

RESEARCH AND DEVELOPMENT LABORATORIES



In research and development, temperature control is particularly important in the areas of sample preparation and quality assurance. As part of the sample preparation, a pre-tempering takes place in many cases. Many processes in quality assurance require the observance of a defined temperature or the targeted change of the temperature in a defined time.

Typical applications

- Sample preparation
- Quality assurance
- Research laboratory

AUTOMOTIVE



Temperature control in the automotive sector is mainly found in test benches and material tests. All components of the automobile are exposed to particularly high temperature fluctuations. Great importance is attached to component testing on special test benches. The simulation of environmental conditions such as high or low temperatures is an important part of material testing.

Typical applications

- Test bench applications
- Material testing

BIOTECHNOLOGY



In biotechnology, temperature control is essential to the quality of research and production results. Constant temperatures in the operation of bioreactors contribute significantly to the success of the products. As part of sample preparation, there are a variety of work steps that require reliable temperature control.

Typical applications

- Bioreactors
- Sample preparation

CHEMISTRY



In the chemical industry, there are many processes where temperature control plays an important role, including reactor temperature control and process engineering. At tempering processes in reactors, applications such as chemical reactions, syntheses, production of drug substances, polymerizations or crystallizations take place.

Typical applications

- Reactor temperature control
- Process engineering

PHARMACEUTICAL INDUSTRY



In the pharmaceutical industry, the temperature control processes range from research to production scale. To obtain high-quality reaction products, temperature control systems must reliably control the process sequence in an external reactor.

Typical applications

- Reactor temperature control
- Process engineering

PRINTING INDUSTRY

In digital printing machines, circulation chillers are used to cool the inking units and to remove the heat generated by the processes in the machine.

Typical applications

- Cooling of digital printing machines
- Cooling of UV curing systems

SEMICONDUCTORS



In the production of semiconductors and testing of electronic components, numerous processes must be exactly tempered, such as the organometallic chemical vapor phase deposition (MOCVD) in semiconductor coating as a precursor of LED production. Temperature-dependent investigations in the semiconductor industry also include stress tests for function and load testing, environmental simulations, and in-circuit tests of electronic assemblies.

Typical applications

- Process cooling
- Component testing

AEROSPACE



Temperature simulations and temperature-dependent material tests are an important component in the aerospace industry. Cyclic temperature stress tests ensure that a trouble-free usage of the components used is always ensured, even under extremely fluctuating external conditions in space.

Typical applications

- Material testing
- Temperature simulation

MEDICAL TECHNOLOGY



In medical technology, temperature control is found primarily in the laboratory for sample preparation and in medical devices such as imaging machines, medical lasers or devices used in pharmaceutical and medical laboratories.

Typical applications

- Medical laboratory
- Medical device

HYDROGEN

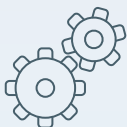


Hydrogen has a key role to play in managing the energy transition. Hydrogen is extremely important as environmentally friendly energy system, both for energy storage and for future mobility. In this respect, correct temperature control is an essential element in many applications, e.g. the cooling and temperature control of sustainable e-fuel processes for CO₂-neutral fuels.

Typical applications

- Refueling hydrogen vehicles
- Process cooling of electrolyzer applications
- Cooling with heat discharge in the compression process

MECHANICAL AND PLANT ENGINEERING



In mechanical engineering, even small deviations from the set temperature can compromise quality, reduce the service life of the machine and increase the risk of breakdown. Reproducible production processes on laser cutting machines or high-precision machine tools can only be ensured by constant temperature control.

Typical applications

- Laser cutting machines
- Precision machine tools

FOOD



The manufacture of conventional products and the testing of cellular agriculture require precise temperature control. Only the precise temperature control of extruders, mixers, bioreactors and fermenters can guarantee exceptional results. What's more, it is essential to ensure the reliable cooling of sorting machines and other systems involved in the process.

Typical applications

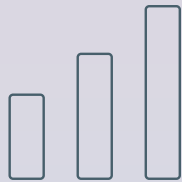
- Food processing machines
- Fermenters
- Sorting machines

LAUDA Group

The essential facts

We are LAUDA – the world leader in precise temperatures. Our Constant temperature equipment and systems are at the heart of important applications, contributing to a better future. As a full-service provider we guarantee the optimum temperature in research, production and quality control. We are the trusted partner for electromobility, hydrogen, chemical, pharmaceutical/ biotech, semiconductor and medical industries. For 70 years we have been inspiring our customers with our competent consulting and innovative solutions, anew every day – globally.

100,000,000



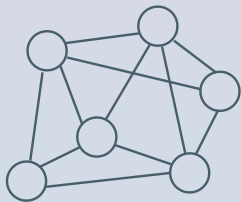
Revenue in euro

> 570



Employees

> 140



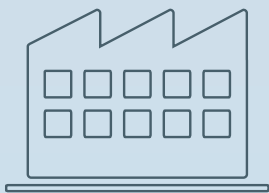
Number of representatives

> 150



Supported countries

6



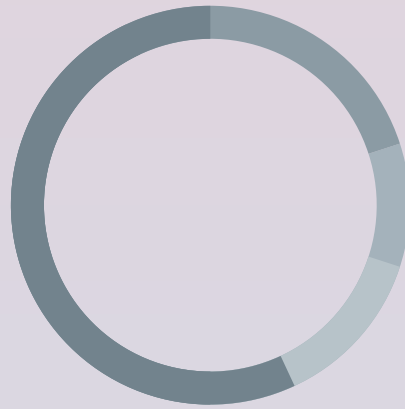
Production sites

10



Distribution companies

56 %
Portfolio



20 %
Customer-specific devices

10 %
Service

13 %
Plant engineering

Business units (Portion of overall turnover 2025)

PORTFOLIO

From water baths to high-performance process thermostats: LAUDA thermostats are characterized by their excellent handling, highly ergonomic design and intuitive operation and provide a working temperature range from -90 to 320°C .

PLANT ENGINEERING

Heating and cooling to the accuracy of a tenth degree in a temperature range from -150 to 550°C : with tailor-made systems for industrial applications according to modular engineering principles.

CUSTOMER-SPECIFIC DEVICES

Customer-specific advice with corresponding instrument selection and development of individual temperature control solutions for an optimum cost-benefit ratio with decades of successful partnerships.

SERVICE

High product quality and comprehensive professional services form an inseparable unit at LAUDA. Regular care, service and maintenance by highly qualified LAUDA service specialists ensures the high performance of your LAUDA devices.



LAUDA WINS: WITH PRODUCTS, SAFETY AND SERVICE – AND PEACE OF MIND.



Large selection

Whether it's for routine tasks, professional and economical temperature control, high cooling outputs and high cooling rates or lightning-fast temperature changes – LAUDA has the right solution for almost every requirement.



Exemplary safety concepts

All products meet the most stringent safety requirements and provide peace of mind in every application, thanks to the intelligent technologies and sophisticated safety concepts.



Easy handling

All LAUDA devices are characterized by excellent handling, a highly ergonomic design and intuitive operation. They also offer maximum user convenience and future-oriented software.



First-class advice – internationally

The LAUDA team provides friendly, fair, and expert advice. LAUDA application experts help customers worldwide to configure application-optimized systems.



Proverbial quality

For 70 years, LAUDA has been developing, designing and producing high-quality constant temperature equipment to the highest standards in quality and safety – confirming time and again the durability and longevity that LAUDA has become known for.



Reliable service

Robust LAUDA devices are known for their durability. If you still need additional support, we will not let you down: with quick access to comprehensive services – for greater flexibility and cost-efficiency.


LAUDA

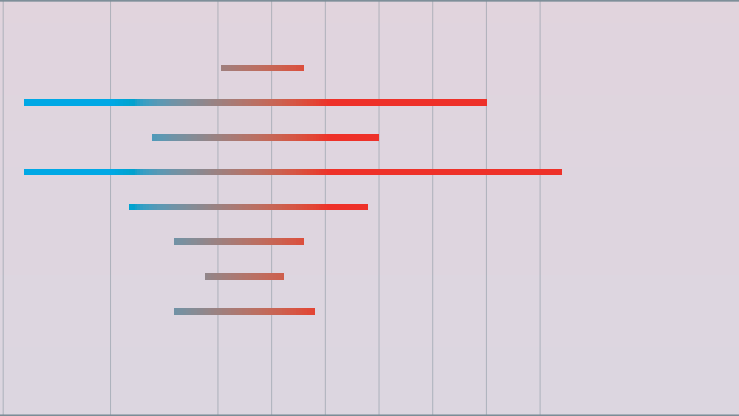
Overview



-100°C -50°C 0°C 100°C 200°C 300°C



CIRCULATION AND PROCESS THERMOSTATS

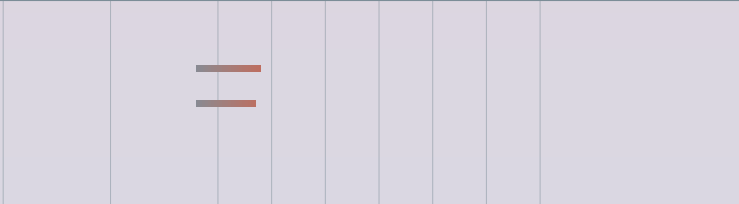
- LOOP P.16
-  PRO P.18
- Integral T P.20
-  Integral XT P.22
-  Integral P P.24
-  Variocool P.28
- Ultratemp P.30
- Semistat P.32



Circulation and process thermostats





CIRCULATION CHILLERS

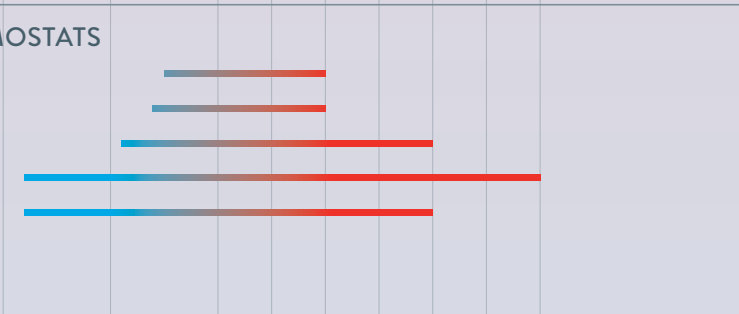
-  Microcool P.54 **NEW** 0.35 — 2kW
-  Ultracool P.56 2.1 — 265kW



Circulation chillers

IMMERSION AND BATH CIRCULATION THERMOSTATS

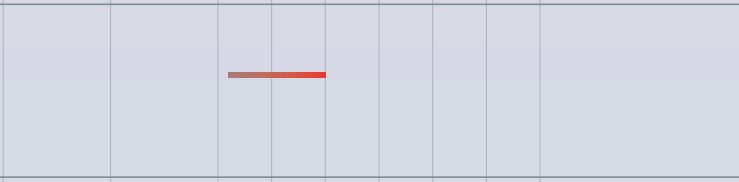
-  Alpha P.70
-  Universa ECO P.74 **NEW**
-  Universa PRO P.76 **NEW**
-  Universa MAX P.78 **NEW**
- Proline Kryomats P.80



Immersion and bath thermostats



WATER BATHS

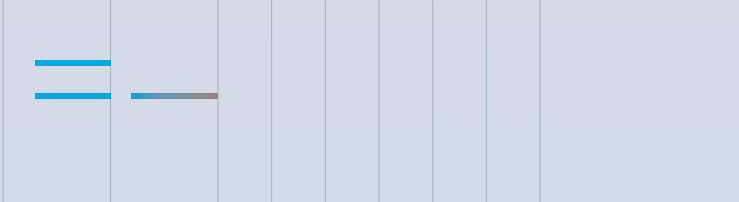
- Hydro P.108



Water baths

DEEP-FREEZERS

-  Mobifreeze P.114
-  Versafreeze P.116



Deep-freezers

STILLS

- Puridest P.122

Stills

DIGITAL PRODUCTS

- LAUDA.LIVE P.128
- Command app P.130

Digital products

ACCESSORIES, HEAT TRANSFER LIQUIDS, SERVICE P.134

Accessories, Service

-  Devices with natural refrigerant

LAUDA CIRCULATION AND PROCESS THERMOSTATS

°LAUDA

Specific application examples

- Refractometer
- Polarimeter
- Single-use bioreactors
- Extruder for food production
- Micro reactors
- Responsive control in chemical/pharmaceutical surroundings
- Climate chambers
- Space simulation
- Electric mobility; battery testing
- Test rigs
- Stress test
- Crystallization regulation
- Freeze-drying
- Micro structures
- Coating plants



LAUDA LOOP

The compact, lightweight circulation thermostat for external applications from 4 to 80 °C

4°C ————— 80°C

Extremely versatile, flexibly usable thermo-electric circulation thermostat

The LAUDA LOOP circulation thermostat is sure to impress with its constant temperature range between 4 and 80 °C. Its compact construction and low weight, as well as wide voltage input range of 100 to 240 volts, make it possible to put it to use flexibly and spontaneously anywhere in the world – the ›Plug & Play‹ setup with quick-fit couplings makes it especially easy to use. The intuitive three-button softkey operation and simple menu navigation in five available languages via the well-lit, high-contrast OLED display make using the device a breeze.



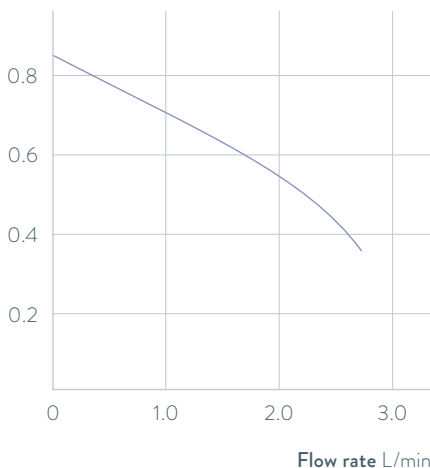
Simple three-button controls with OLED display



Standard-issue RS-232 interface for system integration into processes

PUMP CHARACTERISTIC Heat transfer liquid: Water

Pressure bar



Important functions

- Pump connections with quick-fit couplings for easy consumer changes
- Can be operated with non-flammable liquids (water, water/glycol)
- Cooling technology free of coolant ensures silent, low-vibration operation

Included accessories

Hose nozzles for pump connections

Further accessories

Tubing

All technical data and power supply variants can be found in the ›Technical data‹ section.

More at www.lauda.de/de/1748



LAUDA LOOP

The L 100 and L 250 air-cooled device types achieve a cooling capacity of 120 and 250 watt. The devices are primarily for use at constant temperatures with low power requirements. Both device types are especially energy-efficient and silent in partial-load operation.



LAUDA PRO

Compact circulation thermostats for professional temperature control from -90 to 250 °C

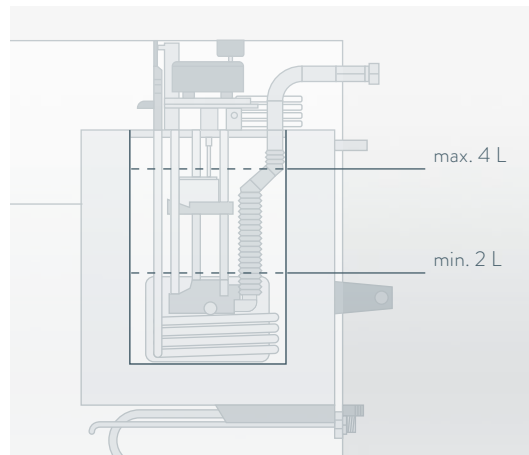


Flexible operation, outstanding performance characteristics

LAUDA PRO is the cutting-edge product line with an outstanding overall concept: The circulation thermostats with small, active volumes of liquid enable rapid temperature changes in external applications. The innovative Base or Command Touch operating units can be detached and used as a remote control. The cooling thermostats come equipped with hybrid cooling as standard, which allows for additional cooling of the refrigerating machine with water.



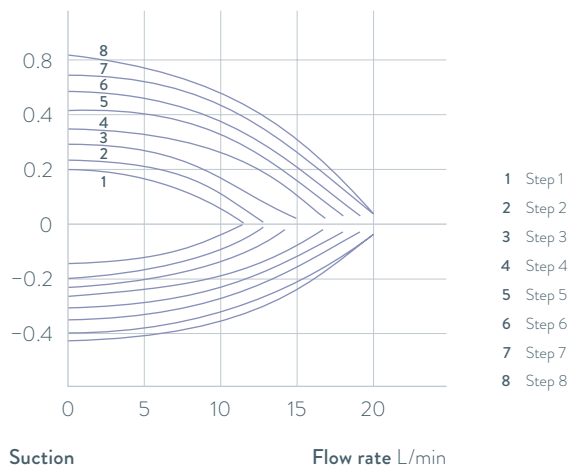
Many basic functions with the economic Base variant



The small filling volume and powerful vario flex pump offer fast temperature changes with low operating costs and material consumption

PUMP CHARACTERISTICS Heat transfer liquid: Water

Pressure bar



Suction

Flow rate L/min

Important functions

- Tower design for small footprint
- LAUDA Vario Flex Pump with 8 available output levels, pump connections at rear
- SmartCool system for digital, energy-saving cooling control including automatic compressor control

Included accessories

Tubing nipples for pumps and cooling water connection

Further accessories

Tubing, interface modules

All technical data and power supply variants can be found in the ›Technical data‹ section.

More at www.lauda.de/de/1750



LAUDA PRO

The PRO heating circulation thermostats are designed for external applications up to 250 °C. The compact construction permits space-saving installation of the thermostats. An integrated cooling coil, fitted as standard, provides cooling. The PRO cooling circulation thermostats are ideal for external applications where rapid temperature changes are required. The cooling output of 0.6 and 0.8 kW or 1.5 kW, combined with a very low filling volume permit these rapid temperature changes.



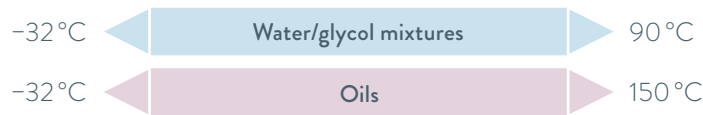
LAUDA Integral T

Process thermostats for professional external temperature control in the temperature range of -32 to $150\text{ }^{\circ}\text{C}$



LAUDA Integral T process thermostats are optimally suited to the effective monitoring of external temperature control processes in temperatures ranging from -32 to $150\text{ }^{\circ}\text{C}$. Integral T process thermostats enable fast temperature changes thanks to tailored heating outputs and cooling capacities with small internal volumes.

The open hydraulic system means that the device vents quickly without any impairment of function, and is thus ideal for temperature controlling processes with frequent changes of consumer or user.

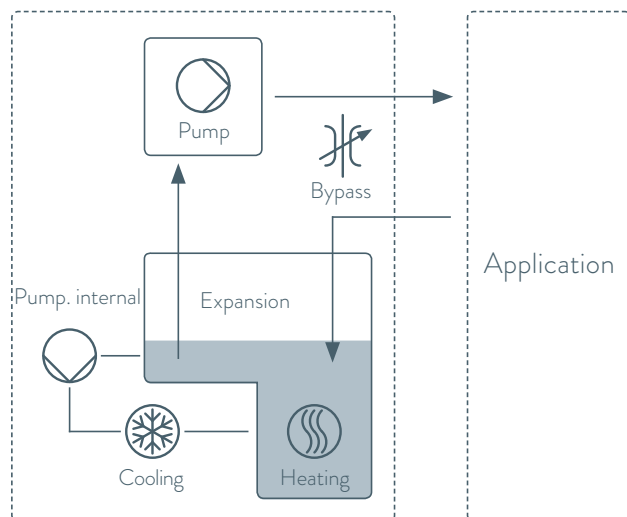


Three different housing sizes, depending on the output power



Ethernet, USB, malfunction contact and Pt100 as standard, two module slots for additional interfaces

INTEGRAL T HYDRAULIC DIAGRAM



Important functions

- Compact, open bath system with large expansion volume
- Programmer with 150 temperature/time segments
- Self-adaption of the controller for optimized temperature control
- Adjustable bypass for pressure limitation
- Filling from above, drainage from the side
- Electronic level monitoring
- Operation in internal LAN possible on web server via PC or tablet/smartphone
- Remote monitoring and maintenance via LAUDA.LIVE

Included accessories

Nipples for pump connections

Further accessories

Tubing, 4-port manifold

All technical data and power supply variants can be found in the [Technical data](#) section.

More at www.lauda.de/de/1752

LAUDA.LIVE
ready



LAUDA Integral T

The bypass in the Integral T reduces the linear pump characteristics when it opens. Pressure-sensitive applications can therefore be protected by reducing the discharge pressure. The digital pressure indication in the Integral T display facilitates manual adjustment of the discharge pressure by means of a bypass. The robust and powerful immersion pressure pump ensures reliable, leak-free and safe operation. The independent internal circulation of the heat transfer liquid ensures maximum heating and cooling capacity.



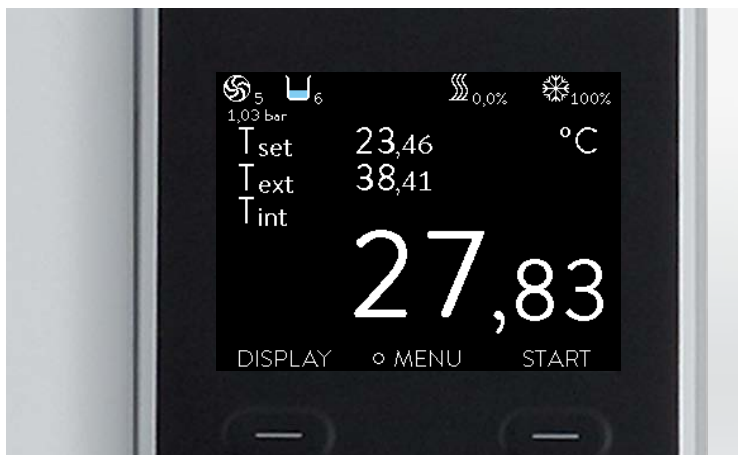
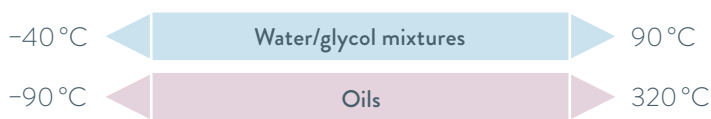
LAUDA Integral XT

High-performance process thermostats from 1.5 to 35 kW for temperature control from -90 to 320 °C



LAUDA Integral XT process thermostats operate according to the flow principle with a cold oil overlay which enables the utilization of temperature control media over a significantly larger temperature range—optimal for dynamic temperature control tasks.

The electronically controlled, magnetically coupled pump can set the flow rate optimally both for the requirements of pressure-sensitive consumers and for applications with high hydraulic resistance.

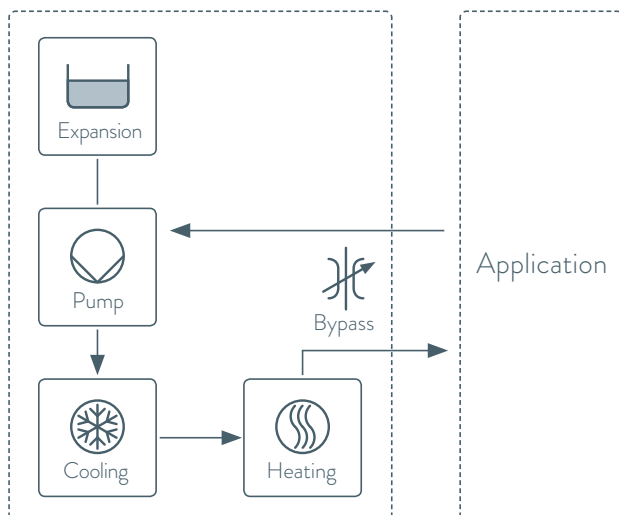


TFT display with different screens or temperature profiles



Bypass included as standard. For increased internal flow rates in applications requiring pressure limitations

INTEGRAL XT HYDRAULIC DIAGRAM



Important functions

- High-performance LAUDA Vario Pump (pressure pump) with 8 selectable output levels or flow pressure control
- Programmer with 150 temperature/time segments, can be divided into five programs
- Two additional interface modules available for retrofit
- Operation in internal LAN possible on web server via PC or tablet/smartphone
- Remote monitoring and maintenance via LAUDA.LIVE

Standard equipment

Ethernet and USB interfaces, Pt100 and malfunction contact

Additional accessories

Hoses, adapters, through-flow control systems, filling and emptying systems

All technical data and power supply variants can be found in the ›Technical data‹ section.

More at www.lauda.de/de/1754

LAUDA.LIVE
ready



LAUDA Integral XT

The Integral XT uses an eight-stage, robust and magnetically coupled Vario pump with selectable characteristics to ensure a reliable supply to the consumer, even with high flow resistance. The menu-driven selection of the pump level enables optimum thermal connection of the application with the required pressure and volume flow rate.



Circulation and process thermostats

Circulation chillers

Immersion and bath thermostats

Water baths

Deep-freezers

Stills

Digital products

Accessories, Service

LAUDA Integral P

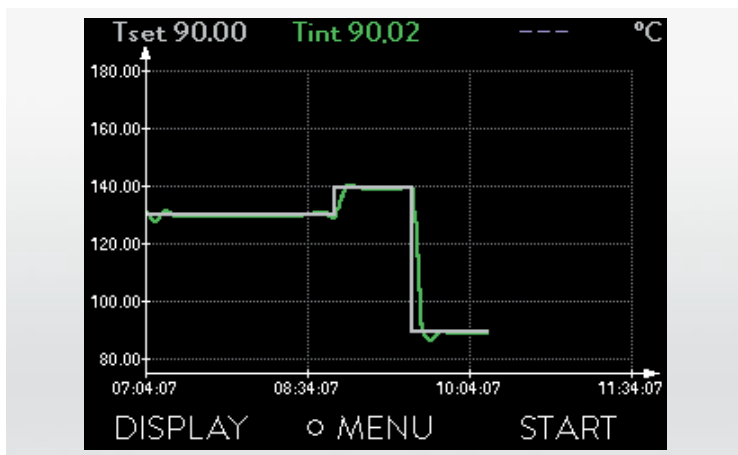
High-performance process thermostats from 20 to 35 kW for temperature control from -40 to 140 °C



The **LAUDA Integral P** process thermostats function according to the flow principle, with a pressure overlay of up to 4 bar. This allows non-flammable water/glycol mixtures to be used in a temperature range of -40 to 140 °C.

Thanks to the electronically controlled, magnetically coupled pump, optimized flow rates can be set for different applications.

-40 °C  140 °C

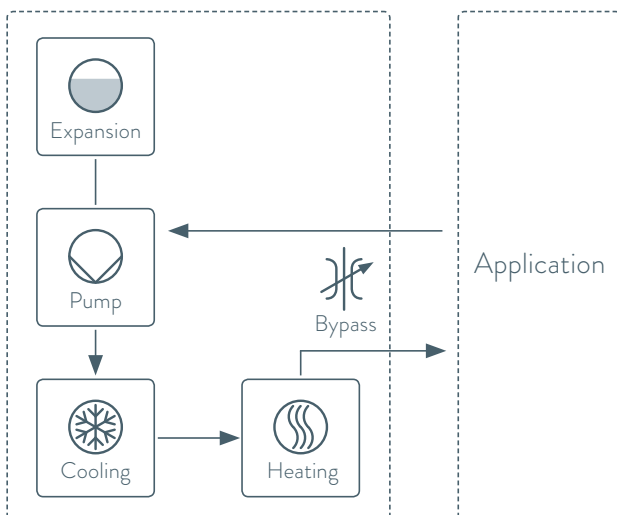


TFT display with different screens or temperature profiles



Bypass included as standard. For increased internal flow rates in applications requiring pressure limitations

INTEGRAL P HYDRAULIC DIAGRAM



Important functions

- High-performance LAUDA Vario pump (pressure pump) with 8 selectable output levels or flow pressure control
- Programmer with 150 temperature/time segments, can be divided into five programs
- Two additional interface modules available for retrofit
- The LAUDA Command app enables wireless device operation on external devices such as PCs, tablets, and smartphones within the network
- Venturi element for vacuum filling
- Remote monitoring and maintenance via LAUDA.LIVE

Standard equipment

Ethernet and USB interfaces, Pt100 and malfunction contact

Additional accessories

Hoses, adapters, through-flow control systems

All technical data and power supply variants can be found in the [Technical data](#) section.

More at www.lauda.de/de/1755



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LAUDA Integral P

The LAUDA Integral P process thermostats can generate a static pressure of up to 4 bar with compressed air. This makes it possible to use non-flammable water-glycol mixtures, which have a high vapor pressure in open-atmosphere temperature control systems, from -40 to 140 °C. This can significantly reduce operating costs compared to the use of combustible heat transfer media. Filling can be carried out either via a vacuum generated by compressed air or via a drum pump provided by the customer.



Circulation and process thermostats

Circulation chillers

Immersion and bath thermostats

Water baths

Deep-freezers

Stills

Digital products

Accessories, Service

LAUDA Integral XT and P variants

Additional products for functional expansion



FC 80 MID

FC 80 C

LAUDA FLOW CONTROL

FC 80 C

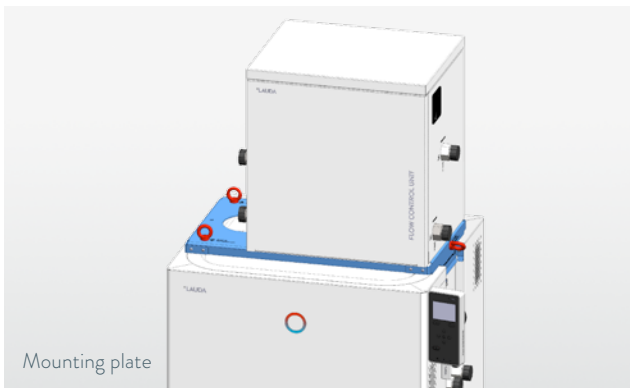
NEW

- Flow control system with Coriolis measuring method
- Ideal for dielectric cooling media with immersion cooling
- Suitable for all temperature control media
- Available as a floor-standing or surface-mounted solution

FC 80 MID

- Flow control system with magnetic inductive measurement principle
- Ideal for water/glycol and conductive temperature control media
- Available as a floor-standing or surface-mounted solution

More at www.lauda.de/de/1825



Mounting plate

Mounting plate

- For flow control on Integral (shown in blue)
- Depending on the housing size of the Integral

More at www.lauda.de/de/1827



FD 50

LAUDA FILLING AND DRAINING UNIT

FD 50

- For non-flammable liquids
- Buffer volume up to 50 L
- Safe temperature before emptying
- Leak test via compressed air
- Rapid venting

More at www.lauda.de/de/1826

FD 50 F

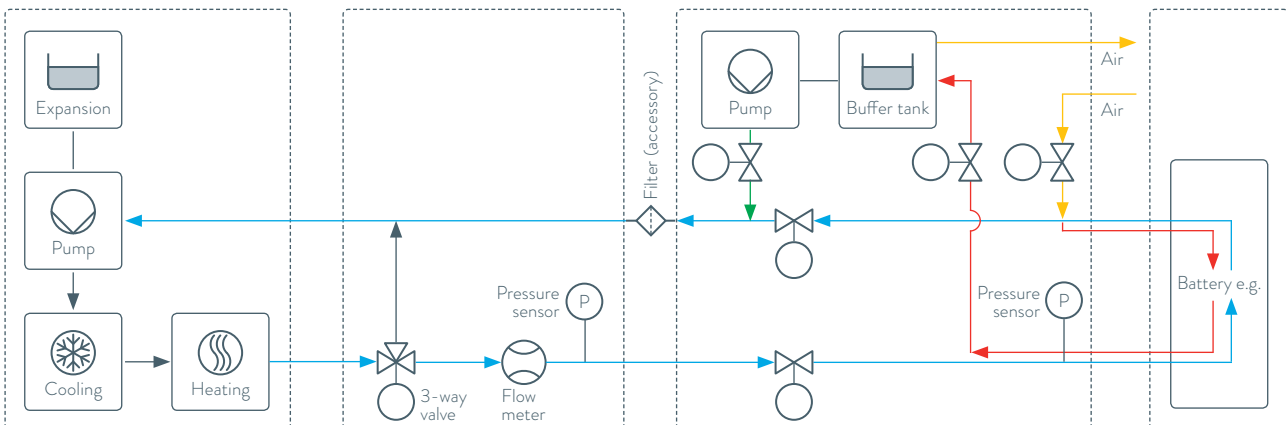
- For flammable liquids

LAUDA Integral XT
Process thermostat

LAUDA FC 80 MID/FC 80 C
Flow control unit

LAUDA FD 50/FD 50 F
Filling and draining unit

Climate chamber





Functional enhancements for LAUDA Integral XT and P variants

The LAUDA filling and flow control system based on FD 50 and FC 80 MID is the perfect combination for standardized test and inspection procedures for water/glycol mixtures as temperature control media.

The LAUDA filling and emptying system FD 50 F can also handle flammable media and, together with the FC 80 C, is optimized for dielectric temperature control media.



LAUDA Variocool

Process thermostats from -25 to $80\text{ }^{\circ}\text{C}$
with cooling capacities up to 10 kW and powerful pumps

$-20\text{ }^{\circ}\text{C}$  $80\text{ }^{\circ}\text{C}$

Powerful and flexible in use

A comprehensive performance spectrum enables the LAUDA Variocool to deal with sophisticated process temperature control in the moderate temperature range. Equipment incorporating various pumps and individual expansion with interface modules, including the option of external temperature control, allow optimized adaptation to changing requirements in the process environment.



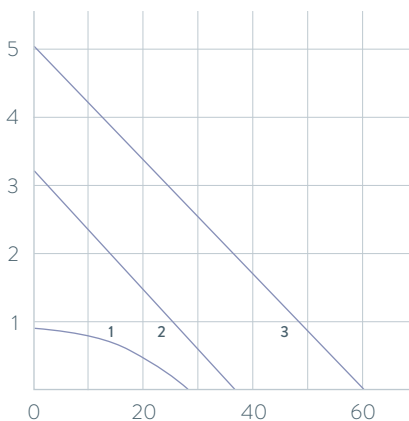
Malfunction contact included as standard. A Pt100 module for external temperature control and interfaces for analog and digital communication can also be added.



Analog pressure indication for operational control, can be adjusted via the bypass on the back of the device

PUMP CHARACTERISTIC Heat transfer liquid: Water

Pressure bar



Flow rate L/min

- 1 0.9 bar, 28 L/min
- 2 3.2 bar, 37 L/min
- 3 5.0 bar, 60 L/min

Important functions

- Adjustable bypass for pressure limitation
- Filling opening at the top, drain tap at the rear
- Integrated programmer with 150 segments, can be divided into 5 programs
- Electronic level indicator and low-level alarm
- SmartCool system for digital, energy-saving cooling control, including automatic compressor control

Included accessories

Nipples, screw caps

Further accessories

Hoses, interface modules

All technical data and power supply variants can be found in the [Technical data](#) section.

More at www.lauda.de/de/1756



LAUDA Variocool

All models are available in air and water-cooled versions (W) and fitted with moveable as well as fixable castors. High-performance process thermostats in a tower design starting from the VC 5000 model are available with sound insulation.



LAUDA Ultratemp

Process thermostats with heating and cooling capacities of up to 50 kW for reactor volumes of up to 5,000 liters

-5°C  60°C

Powerful temperature control at low operating costs: LAUDA Ultratemp

The new Ultratemp process thermostats round off the LAUDA portfolio in the upper performance range of biotech and industrial applications.

The devices are specially designed for these applications. As a result, they provide e.g. the requisite high heating and cooling capacities for long process times with constant temperatures of 37°C and can subsequently cool down the reactor content very quickly.

The new Ultratemp line means that LAUDA can offer solutions for reactors and mixers with a volume of up to 5,000 liters.



LAUDA temperature solutions for applications with reactor volumes of up to 5,000 liters – perfect for biotech and industrial applications



Easy operation, even with gloves on



The high-quality stainless steel housing is protected against splash water and allows easy cleaning of the surfaces

Important functions

- Intuitive operation directly on the device via LCD or via an integrated web server on the PC
- High temperature stability of ± 0.5 K
- Simple handling and low operating costs, thanks to non-combustible heat transfer fluid of water or water-glycol
- Ready for digital applications from LAUDA.LIVE
- Extensive connectivity
- Worldwide use, thanks to dual-frequency power supply 400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz

Standard equipment

Splash-protected stainless steel housing, LCD with menu navigation in clear text, protection class IP54

Further accessories

Pressure-reducing valve, water solenoid valve kit, installation kit

All technical data and power supply variants can be found in the ›Technical data‹ section.

More at www.lauda.de/de/1800

LAUDA.LIVE
ready



LAUDA Ultratemp

The Ultratemp portfolio includes three models of constant temperature equipment with high heating and cooling capacities from 25 to 50 kW, especially for bioreactor applications with reactor volumes from 2,000 to 5,000 liters within a moderate temperature range.



LAUDA Semistat

Thermo-electric process thermostats
for the semiconductor industry from -20 to 90°C

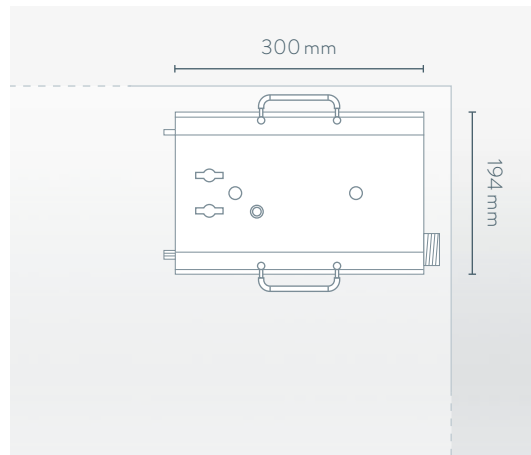


Fast and precise temperature control for demanding processes

The thermoelectric Semistat temperature control system offers reproducible temperature control for plasma etching applications. This system dynamically controls the temperature of the electrostatic wafer chuck (ESC) and can be used in all types of etching processes. The LAUDA Semistat thermoelectric temperature control systems are based on established principles of heat transfer used for Peltier elements. These elements allow quick and precise temperature control required for complex processes involved in the manufacture of components progressively getting smaller and smaller in size.



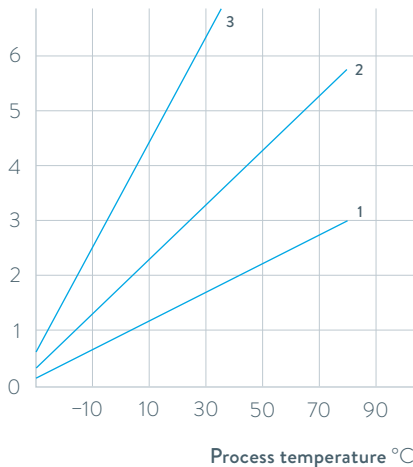
The Power Supply Controller (PSC) meets industry-specific SEMI S2 and F47 standards



Small footprint

COOLING POWER dependent on process temperature and flow rate of cooling water

Effective cooling power kW



3 S 4400
2 S 2400
1 S 1200

Important functions

- Compressor and refrigerant-free system with low energy consumption
- Smallest footprint in the industry, ideally suited for underfloor installation
- Extremely low volume of heat transfer fluid

Available accessories

Communications modules with remote control function (RS-485 protocol)

All technical data and power supply variants can be found in the ›Technical data‹ section.

More at www.lauda.de/de/1760



LAUDA Semistat

Semistat temperature control systems can reduce energy consumption by up to 90% compared to compressor-based systems.

Minimal space requirements with the option of underfloor installation at the point of use minimizes cleanroom use.

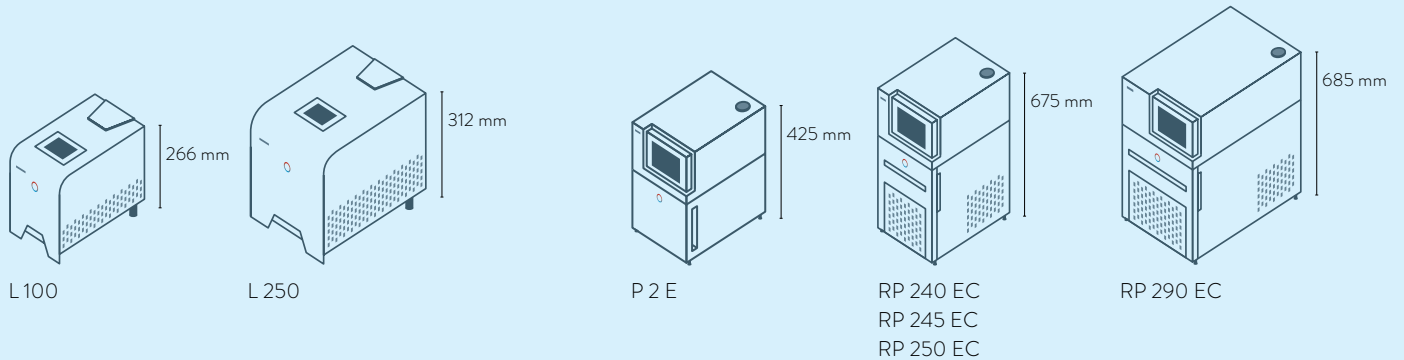


LAUDA Circulation and process thermostats

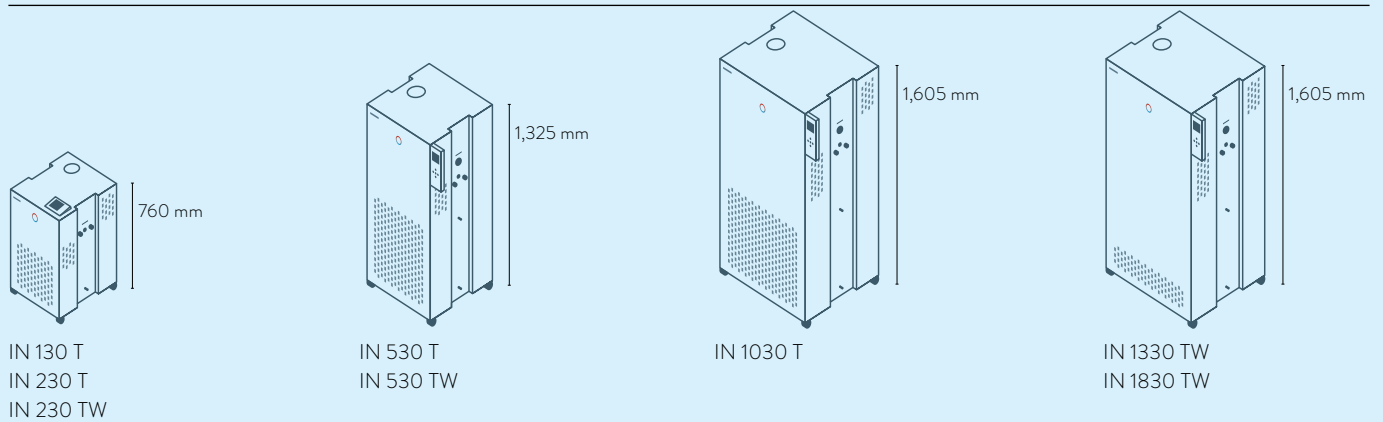
Device type overview

LAUDA LOOP / Page 16

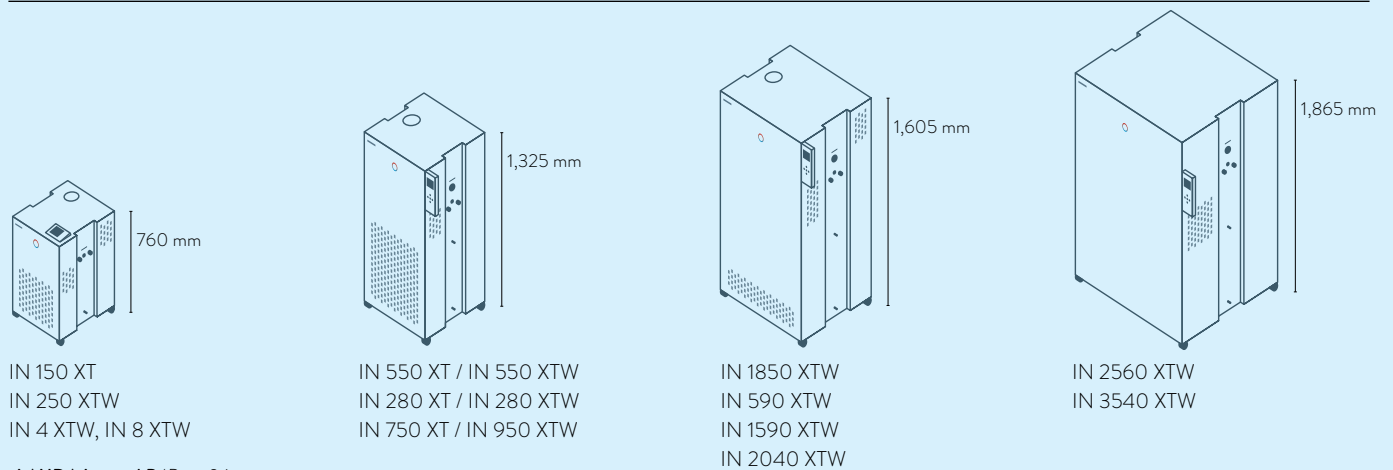
LAUDA PRO / Page 18



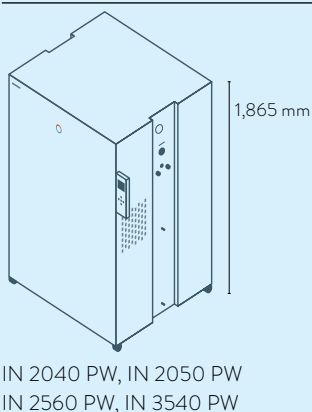
LAUDA Integral T / Page 20

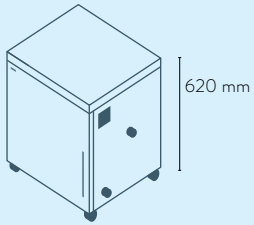


LAUDA Integral XT / Page 22

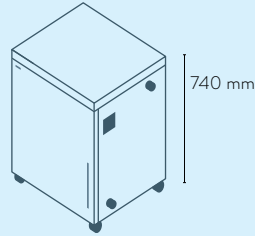


LAUDA Integral P / Page 24

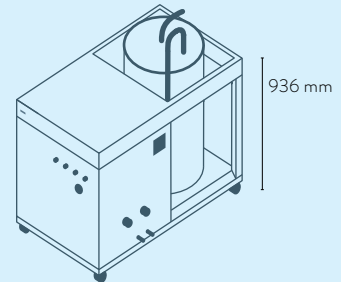




FC 80 MID

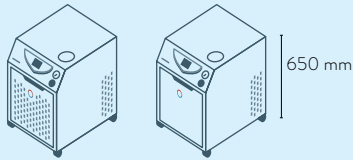


FC 80 C



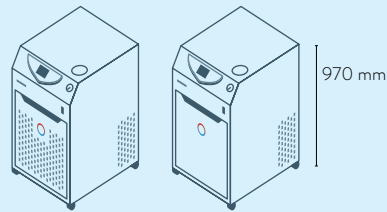
FD 50 / FD 50 F

LAUDA Variocool / Page 28



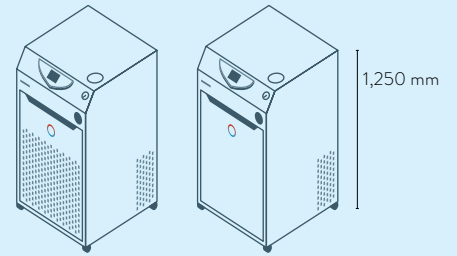
VC 1200
VC 2000

VC 1200 W
VC 2000 W



VC 5000

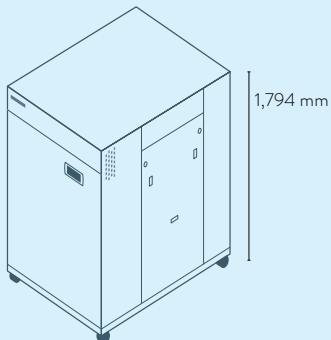
VC 5000 W



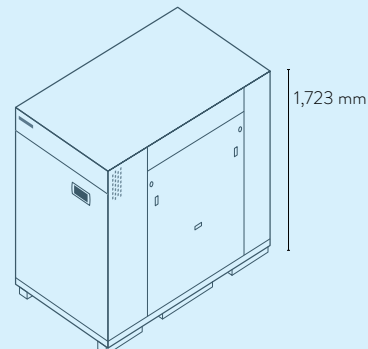
VC 10000

VC 10000 W

LAUDA Ultratemp / Page 30

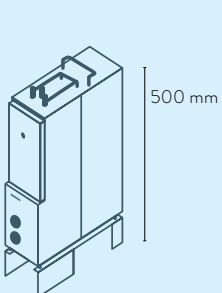


UT 2505 W
UT 3505 W

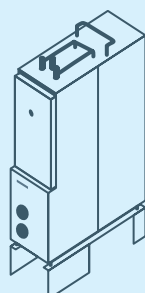


UT 5005 W

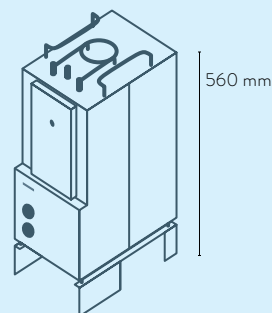
LAUDA Semistat / Page 32



S 1200



S 2400



S 4400

LAUDA Circulation and process thermostats

Interfaces

	Pt 100 (1)	Pt 100 (2)	USB	Ethernet	RS-232/485	Analog	Namur contact	D-Sub contact	PROFIBUS	EtherCAT M8	EtherCAT RJ45	Malfunction contact	Number of module slots, large	Number of module slots, small	RS-232/485 module Advanced	Contact module NAMUR Advanced	Contact module D-Sub Advanced	Profibus module Advanced	Ethernet module Advanced	Profinet module Advanced	CAN module Advanced	OPC UA module Advanced	Modbus TCP module Advanced	EtherCAT module Advanced ***	EtherNet/IP module Advanced ***
LAUDA LOOP / Page 16	-	-	-	-	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LAUDA PRO / Page 18	S	-	S	S	Z	Z	Z	Z	Z	Z	Z	-	1	-	Z	Z	Z	Z	-	Z	Z	-	-	-	-
LAUDA Integral T / Page 20	S	Z	S	S	Z	Z	Z	Z	Z	Z	Z	S	2	-	Z	Z	Z	Z	S	Z	Z	Z	Z	Z	Z
LAUDA Integral XT / Page 22	S	Z	S	S	Z	Z	Z	Z	Z	Z	Z	S	2	-	Z	Z	Z	Z	S	Z	Z	Z	Z	Z	Z
LAUDA Integral P / Page 24	S	Z	S	S	Z	Z	Z	Z	Z	Z	Z	S	2	-	Z	Z	Z	Z	S	Z	Z	Z	Z	Z	Z
LAUDA Variocool / Page 28	Z	-	S	Z	Z	Z	Z	Z	Z	Z	Z	S	1	1	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z
LAUDA Ultratemp / Page 30	S	-	-	S*	-	S**	-	-	-	-	-	S	-	-	-	-	-	-	-	-	-	-	-	-	-

S = Series standard

Z = Available as an accessory

S* = Ethernet with Modbus TCP/IP protocol S* = 4 - 20 mA signal

S** = Direct connection to the device. Integration of interface modules not possible.

*** from 2027

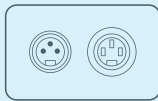
LAUDA interfaces



LRZ 912
Analog module



LRZ 913
RS-232/485 interface



LRZ 914
Contact module, 1 input, 1 output (NAMUR)



LRZ 915
Contact module, 3 inputs, 3 outputs



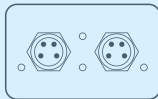
LRZ 917
Profibus module



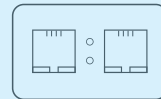
LRZ 918
Pt100/LiBus-Modul, small cover



LRZ 921
Ethernet module



LRZ 922
EtherCAT module with M8 connection



LRZ 923
EtherCAT module with RJ45 connection



LRZ 925
External Pt100/LiBus-module, large cover

LAUDA interfaces Advanced*



LRZ 926
RS-232/485 module Advanced, D-Sub 9-pin



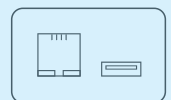
LRZ 927
Contact module NAMUR Advanced, 1 input, 1 output



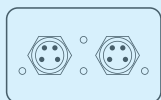
LRZ 928
Contact module D-Sub Advanced, 3 inputs, 3 outputs



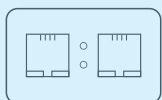
LRZ 929
Profibus module Advanced, D-Sub 9-pin



LRZ 930
Ethernet module Advanced, RJ45



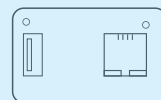
LRZ 931
EtherCAT module Advanced, with M8 connection



LRZ 932
Profinet module Advanced, RJ45



LRZ 933
CAN module Advanced, D-Sub 9-pin



LRZ 934: OPC UA module Advanced
LRZ 935: Modbus TCP module Advanced
LRZ 936: EtherNet/IP module Advanced

* Interfaces of the Advanced generation replace modules in the process thermostats of the same name as per the above selection table

LAUDA Circulation and process thermostats

Function overview

Operating element	LOOP	PROE	PRO EC	Integral T	Integral XT	Integral P	Variocool	Ultratemp
Display	OLED	OLED	TFT	TFT	TFT	TFT	TFT	LCD
Mode of operation	3-button softkey	Cursor softkey	Multi-touch	Cursor softkey	Cursor softkey	Cursor softkey	Cursor softkey	6 buttons
Removable control	-	✓	✓	Z	Z	Z	Z	-
User management	-	-	✓	Operator / Viewer	Operator / Viewer	Operator / Viewer	-	-
Data logging, export to USB stick	-	-	✓	✓	✓	✓	-	✓
1-point calibration	✓	✓	✓	✓	✓	✓	✓	-
2-point calibration	✓	✓	✓	✓	✓	✓	-	-
Self-adaptation controller	-	-	✓	✓	✓	✓	-	-
Safety mode	-	✓	✓	✓	✓	✓	-	-
Programmer, programs/segments	-	1 / 20	100 / 5,000	5 / 146	5 / 146	5 / 146	5 / 146	-
Programmer, tolerance range function	-	✓	✓	✓	✓	✓	✓	-
Ramp function	-	-	✓	✓	✓	✓	-	-
Timer function	-	-	✓	✓	✓	✓	-	-
Countdown function	-	-	✓	-	-	-	-	-
Graphic temperature profile display	-	-	✓	✓	✓	✓	✓	-
Pump pressure display (digital)	-	-	-	✓	✓	✓	-	✓
Adjustable bypass	-	-	-	✓	✓	✓	✓	✓
Level indicator (digital)	-	✓	✓	✓	✓	✓	✓	-
Standby timer	✓	✓	✓	✓	✓	✓	✓	✓
Flow control instrument	-	-	-	-	-	-	Z	-
Flow pressure control	-	-	-	-	✓	✓	-	-
Flow measurement + control	-	-	-	-	Z	Z	-	-
Overflow	-	✓	✓	✓	✓	✓	-	-
Low-level alarm	✓	✓	✓	✓	✓	✓	✓	✓
Drain tap	-	✓	✓	✓	✓	✓	✓	✓

Z = Available as an accessory

LAUDA Circulation and process thermostats

Technical data according to DIN 12876 standard

Device type	Working temperature range °C	Temperature stability ±K	Cooling of the refrigerating machine	Heater power max. kW	Cooling output kW													
					200 °C	100 °C	20 °C	10 °C	0 °C	-10 °C	-20 °C	-30 °C	-40 °C	-50 °C	-60 °C	-70 °C	-80 °C	-90 °C

LAUDA LOOP / Page 16

L 100	4 ... 80	0.10	Air	0.2	-	-	0.12	0.06	-	-	-	-	-	-	-	-	-	-
L 250	4 ... 80	0.10	Air	0.4	-	-	0.25	0.13	-	-	-	-	-	-	-	-	-	-

LAUDA PRO with natural refrigerant / Page 18

P 2 E	80 ... 250	0.05	Water	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P 2 EC	80 ... 250	0.05	Water	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RP 240 E	-40 ... 200	0.05	Hybrid	2.5	-	-	0.60 ³	0.60 ³	0.60 ³	0.41 ³	0.24 ²	0.12 ²	0.02 ¹	-	-	-	-	-
RP 240 EC	-40 ... 200	0.05	Hybrid	2.5	-	-	0.60 ³	0.60 ³	0.60 ³	0.41 ³	0.24 ²	0.12 ²	0.02 ¹	-	-	-	-	-
RP 245 E	-45 ... 200	0.05	Hybrid	2.5	-	-	0.80 ³	0.80 ³	0.80 ³	0.53 ³	0.34 ²	0.15 ²	0.04 ²	-	-	-	-	-
RP 245 EC	-45 ... 200	0.05	Hybrid	2.5	-	-	0.80 ³	0.80 ³	0.80 ³	0.53 ³	0.34 ²	0.15 ²	0.04 ²	-	-	-	-	-
RP 250 E	-50 ... 200	0.05	Hybrid	2.5	-	-	1.50 ³	1.44 ³	1.20 ³	0.84 ³	0.54 ²	0.29 ²	0.11 ²	0.02 ¹	-	-	-	-
RP 250 EC	-50 ... 200	0.05	Hybrid	2.5	-	-	1.50 ³	1.44 ³	1.20 ³	0.84 ³	0.54 ²	0.29 ²	0.11 ²	0.02 ¹	-	-	-	-
RP 290 E	-90 ... 200	0.05	Hybrid	2.5	-	-	0.80 ³	0.77 ³	0.74 ³	0.72 ³	0.70 ²	0.68 ²	0.64 ²	0.56 ²	0.39 ²	0.21 ²	0.09 ²	0.01 ¹
RP 290 EC	-90 ... 200	0.05	Hybrid	2.5	-	-	0.80 ³	0.77 ³	0.74 ³	0.72 ³	0.70 ²	0.68 ²	0.64 ²	0.56 ²	0.39 ²	0.21 ²	0.09 ²	0.01 ¹

LAUDA Integral T / Page 20

IN 130 T	-32 ... 120	0.05	Air	2.7	-	1.40	1.40	1.35	1.20	0.80	0.40	0.10	-	-	-	-	-	-
IN 230 T	-32 ... 120	0.05	Air	2.7	-	2.20	2.20	1.90	1.50	1.00	0.60	0.15	-	-	-	-	-	-
IN 230 TW	-32 ... 120	0.05	Water	2.7	-	2.30	2.30	2.30	1.90	1.30	0.75	0.35	-	-	-	-	-	-
IN 530 T	-32 ... 120	0.05	Air	8.0	-	5.00	5.00	4.50	3.80	2.60	1.50	0.60	-	-	-	-	-	-
IN 530 TW	-32 ... 120	0.05	Water	8.0	-	6.00	6.00	5.50	4.50	3.00	1.60	0.70	-	-	-	-	-	-
IN 1030 T	-32 ... 150	0.10	Air	8.0	-	11.00	11.00	9.50	7.10	4.90	3.00	1.60	-	-	-	-	-	-
IN 1330 TW	-32 ... 150	0.10	Water	16.0	-	13.00	13.00	10.00	7.60	5.40	3.40	1.70	-	-	-	-	-	-
IN 1830 TW	-32 ... 150	0.10	Water	16.0	-	19.00	19.00	15.00	11.50	7.50	5.00	2.70	-	-	-	-	-	-

¹Pump output step 2 ²Pump output step 4 ³Pump output step 8

Pump pressure max. bar	Pump flow max. pressure L/min	Pump connection thread	Bath volume min. L	Bath volume max. L	Dimensions (W x D x H) mm	Protection Rating	Noise level dB (A)	Weight kg	Loading max. kW	Power supply V; Hz	Part Number	Device type
0.8	2.6	Quick C. ¼"	0.26	0.28	175×301×266	IP 21	57	7	0.2	100-240 V; 50/60 Hz	L000027	L 100
0.8	2.6	Quick C. ¼"	0.30	0.32	261×368×312	IP 21	57	12	0.4	100-240 V; 50/60 Hz	L000580	L 250
0.68	22	M16×1	2.4	4.4	250×365×425	IP 21	47	17	2.7	200-230 V; 50/60 Hz	L000019	P 2 E
0.68	22	M16×1	2.4	4.4	250×365×425	IP 21	47	17	2.7	200-230 V; 50/60 Hz	L000020	P 2 EC
0.68	22	M16×1	2.4	4.4	300×430×675	IP 21	54	42	3.7	230 V; 50 Hz	L000021	RP 240 E
0.68	22	M16×1	2.4	4.4	300×430×675	IP 21	54	42	3.7	230 V; 50 Hz	L000023	RP 240 EC
0.68	22	M16×1	2.4	4.4	300×430×675	IP 21	54	39	3.7	230 V; 50 Hz	L000022	RP 245 E
0.68	22	M16×1	2.4	4.4	300×430×675	IP 21	54	43	3.7	230 V; 50 Hz	L000024	RP 245 EC
0.68	22	M16×1	2.4	4.4	300×430×675	IP 21	57	47	3.7	230 V; 50 Hz	L002494	RP 250 E
0.68	22	M16×1	2.4	4.4	300×430×675	IP 21	57	48	3.7	230 V; 50 Hz	L002495	RP 250 EC
0.68	22	M16×1	2.4	4.4	390×600×685	IP 21	56	77	3.7	230 V; 50 Hz	L002502	RP 290 E
0.68	22	M16×1	2.4	4.4	390×600×685	IP 21	56	79	3.7	230 V; 50 Hz	L002503	RP 290 EC
3.5	40	G ¾	3.6	8.7	430×550×760	IP 21	61	79	3.7	230 V; 50 Hz	L002663**	IN 130 T
3.5	40	G ¾	3.6	8.7	430×550×760	IP 21	63	84	3.7	230 V; 50 Hz	L002664**	IN 230 T
3.5	40	G ¾	3.6	8.7	430×550×760	IP 21	60	85	3.7	230 V; 50 Hz	L002665**	IN 230 TW
3.5	40	G ¾	7.2	20.5	560×550×1,325	IP 21	66	149	11.0	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	L002666**	IN 530 T
3.5	40	G ¾	7.2	20.5	560×550×1,325	IP 21	62	150	11.0	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	L002667**	IN 530 TW
5.5	60	M38×1.5	9.7	25.5	760×650×1,605	IP 21	70	223	11.0	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	L002668**	IN 1030 T
5.5	60	M38×1.5	9.7	25.5	760×650×1,605	IP 21	62	225	18.0	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	L002669**	IN 1330 TW
5.5	60	M38×1.5	9.7	25.5	760×650×1,605	IP 21	67	244	18.0	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	L002670**	IN 1830 TW

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LAUDA Circulation and process thermostats

Technical data according to DIN 12876 standard

Device type	Working temperature range °C	Temperature stability ±K	Cooling of the refrigerating machine	Heater power max. kW	Cooling output kW												
					200 °C	100 °C	20 °C	10 °C	0 °C	-10 °C	-20 °C	-30 °C	-40 °C	-50 °C	-60 °C	-70 °C	-80 °C

LAUDA Integral XT / Page 22

IN 150 XT	-45 ... 220	0.05	Air	3.5	1.50 ³	1.50 ³	1.50 ³	1.50 ³	1.30 ³	1.00 ³	0.70 ²	0.30 ²	0.06 ²	-	-	-	-	-
IN 250 XTW	-45 ... 220	0.05	Water	3.5	2.20 ³	2.20 ³	2.10 ³	2.00 ³	1.80 ³	1.40 ³	1.00 ²	0.55 ²	0.20 ²	-	-	-	-	-
IN 550 XT	-50 ... 220	0.05	Air	8.0	5.00 ³	5.00 ³	5.00 ³	4.80 ³	4.60 ³	3.30 ³	2.30 ²	1.20 ²	0.50 ²	0.10 ¹	-	-	-	-
IN 550 XTW	-50 ... 220	0.05	Water	8.0	5.80 ³	5.80 ³	5.80 ³	5.80 ³	5.40 ³	4.00 ³	2.60 ²	1.45 ²	0.55 ²	0.12 ¹	-	-	-	-
IN 750 XT	-45 ... 220	0.05	Air	8.0	7.00 ³	7.00 ³	7.00 ³	7.00 ³	5.40 ³	3.60 ³	2.60 ²	1.60 ²	0.80 ²	-	-	-	-	-
IN 950 XTW	-50 ... 220	0.05	Water	8.0	9.50 ³	9.50 ³	9.50 ³	8.50 ³	6.20 ³	4.30 ³	3.00 ²	1.70 ²	0.90 ²	0.35 ¹	-	-	-	-
IN 1850 XTW	-50 ... 220	0.05	Water	16.0	20.00 ³	20.00 ³	20.00 ³	15.00 ³	11.50 ³	8.50 ³	6.10 ²	3.60 ²	1.90 ²	1.10 ¹	-	-	-	-
IN 2560 XTW	-60 ... 220	0.10	Water	24.0	25.00 ³	25.00 ³	25.00 ³	24.50 ³	22.50 ³	22.00 ³	18.50 ²	12.50 ²	8.70 ²	5.00 ¹	3.00 ²	-	-	-
IN 280 XT	-80 ... 220	0.05	Air	4.0	1.60 ³	1.60 ³	1.60 ³	1.55 ³	1.50 ³	1.50 ³	1.70 ²	1.70 ²	1.65 ²	1.40 ²	0.85 ²	0.35 ²	0.15 ²	-
IN 280 XTW	-80 ... 220	0.05	Water	4.0	1.70 ³	1.70 ³	1.70 ³	1.65 ³	1.60 ³	1.60 ³	1.80 ²	1.80 ²	1.80 ²	1.50 ²	0.90 ²	0.45 ²	0.18 ²	-
IN 590 XTW	-90 ... 220	0.05	Water	8.0	4.50 ³	4.50 ³	4.50 ³	4.45 ³	4.40 ³	4.40 ³	4.60 ²	4.60 ²	4.50 ²	4.20 ²	2.70 ²	1.40 ²	0.60 ²	0.20 ¹
IN 1590 XTW	-90 ... 220	0.05	Water	12.0	18.50 ³	18.50 ³	18.50 ³	15.00 ³	11.50 ³	8.70 ³	8.50 ²	8.50 ²	7.50 ²	6.00 ²	4.00 ²	2.20 ²	0.90 ²	0.35 ¹

LAUDA Integral XT with natural refrigerant / Page 22

IN 550 XT	-50 ... 220	0.05	Air	8.0	5.00 ³	5.00 ³	5.00 ³	4.80 ³	4.60 ³	3.30 ³	2.40 ²	1.50 ²	0.70 ²	0.30 ¹	-	-	-	-
IN 550 XTW	-50 ... 220	0.05	Water	8.0	5.80 ³	5.80 ³	5.80 ³	5.80 ³	5.40 ³	4.00 ³	2.80 ²	1.70 ²	0.75 ²	0.35 ¹	-	-	-	-
IN 750 XT	-50 ... 220	0.05	Air	8.0	7.00 ³	7.00 ³	7.00 ³	6.30 ³	4.80 ³	3.60 ³	2.60 ²	1.70 ²	0.85 ²	0.40 ¹	-	-	-	-
IN 950 XTW	-50 ... 220	0.05	Water	8.0	9.00 ³	9.00 ³	9.00 ³	7.80 ³	5.80 ³	4.20 ³	3.00 ²	1.90 ²	0.95 ²	0.50 ¹	-	-	-	-
IN 1850 XTW	-50 ... 220	0.05	Water	16.0	20.00 ³	20.00 ³	20.00 ³	17.80 ³	13.20 ³	9.40 ³	6.80 ²	4.20 ²	2.20 ²	1.35 ¹	-	-	-	-

LAUDA Integral XT with CO₂ refrigerant / Page 22

IN 2040 XTW	-45 ... 200	0.05	Water	16.0	20.80 ³	20.80 ³	20.80 ³	20.50 ³	17.80 ³	14.00 ³	10.50 ²	6.60 ²	3.50 ²	-	-	-	-	-
IN 3540 XTW	-45 ... 200	0.10	Water	24.0	35.00 ³	35.00 ³	35.00 ³	34.00 ³	31.00 ³	25.00 ³	19.00 ²	12.50 ²	9.00 ²	-	-	-	-	-

* Cooling water supply must be provided for operation

¹Pump output step 2 ²Pump output step 4 ³Pump output step 8

Pump pressure max. bar	Pump flow max. pressure L/min	Pump connection thread	Bath volume min. L	Bath volume max. L	Dimensions (W x D x H) mm	Protection Rating	Noise level dB (A)	Weight kg	Loading max. kW	Power supply V; Hz	Part Number	Device type
3.1	65	M30×1.5	2.5	8.7	430×550×760	IP 21	60	106	3.7	230 V; 50 Hz	L002673**	IN 150 XT
3.1	65	M30×1.5	2.5	8.7	430×550×760	IP 21	57	106	3.7	230 V; 50 Hz	L002674**	IN 250 XTW
3.1	65	M30×1.5	4.8	17.2	560×550×1,325	IP 21	66	177	10.5	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	L002675**	IN 550 XT
3.1	65	M30×1.5	4.8	17.2	560×550×1,325	IP 21	66	177	10.5	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	L002676**	IN 550 XTW
3.1	65	M30×1.5	4.8	17.2	560×550×1,325	IP 21	68	176	11.0	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	L002677**	IN 750 XT
3.1	65	M30×1.5	4.8	17.2	560×550×1,325	IP 21	69	176	11.0	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	L002678**	IN 950 XTW
6.0	120	M38×1.5	8.0	28.6	760×650×1,605	IP 21	62	288	18.0	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	L002680**	IN 1850 XTW
6.0	100	M38×1.5	12.6	34.4	1,100×895×1,865	IP 21	74	613	37.0	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	L002681**	IN 2560 XTW
3.1	65	M30×1.5	4.8	17.2	560×550×1,325	IP 21	63	198	9.0	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	L002684**	IN 280 XT
3.1	65	M30×1.5	4.8	17.2	560×550×1,325	IP 21	62	195	9.0	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	L002685**	IN 280 XTW
3.1	65	M30×1.5	8.0	28.6	760×650×1,605	IP 21	64	279	11.0	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	L002687**	IN 590 XTW
3.1	65	M38×1.5	10.0	30.6	760×650×1,605	IP 21	65	356	19.0	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	L002689**	IN 1590 XTW
3.1	65	M30×1.5	4.8	17.2	560×550×1,325	IP 21	65	176	10.5	400 V; 3/PE; 50 Hz	L004069	IN 550 XT
3.1	65	M30×1.5	4.8	17.2	560×550×1,325	IP 21	60	181	10.5	400 V; 3/PE; 50 Hz	L004070	IN 550 XTW
3.1	65	M30×1.5	4.8	17.2	560×550×1,325	IP 21	65	176	11.0	400 V; 3/PE; 50 Hz	L004063	IN 750 XT
3.1	65	M30×1.5	4.8	17.2	560×550×1,325	IP 21	60	181	11.0	400 V; 3/PE; 50 Hz	L003681	IN 950 XTW
6.0	120	M30×1.5	8.0	28.6	760×650×1,605	IP 21	60	310	18.0	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	L004064	IN 1850 XTW
6.0	120	M38×1.5	10.5	30.0	760×650×1,605	IP 21	61	454	18.0	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	L004065	IN 2040 XTW
6.0	100	M38×1.5	15.6	37.4	1,100×895×1,865	IP 21	75	600	-	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	L004071	IN 3540 XTW

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LAUDA Circulation and process thermostats

Technical data according to DIN 12876 standard

Device type	Working temperature range °C	Temperature stability ±K	Cooling of the refrigerating machine	Heater power max. kW	Cooling output kW													
					200 °C	100 °C	20 °C	10 °C	0 °C	-10 °C	-20 °C	-30 °C	-40 °C	-50 °C	-60 °C	-70 °C	-80 °C	-90 °C
LAUDA Integral XT High-temperature thermostats / Page 22																		
IN 4 XTW*	25 ... 320	0.10	Water	3.5	17.00 ³	10.00 ²	-	-	-	-	-	-	-	-	-	-	-	-
IN 8 XTW*	25 ... 320	0.10	Water	8.0	17.00 ³	10.00 ²	-	-	-	-	-	-	-	-	-	-	-	-
LAUDA Integral P / Page 24																		
IN 2050 PW	-40 ... 140	0.05	Water	16.0	-	20.00 ³	20.00 ³	15.00 ³	10.80 ³	7.80 ³	4.80 ²	3.00 ²	1.60 ²	-	-	-	-	-
IN 2560 PW	-40 ... 140	0.10	Water	24.0	-	25.00 ³	25.00 ³	25.00 ³	24.50 ³	24.00 ³	17.70 ³	11.00 ³	7.50 ³	-	-	-	-	-
LAUDA Integral P with CO₂ refrigerant / Page 24																		
IN 2040 PW	-40 ... 140	0.05	Water	16.0	-	20.80 ³	20.80 ³	20.00 ³	17.00 ³	13.00 ³	9.20 ²	5.30 ²	3.00 ²	-	-	-	-	-
IN 3540 PW	-40 ... 140	0.10	Water	24.0	-	35.00 ³	35.00 ³	34.00 ³	33.00 ³	26.00 ³	18.50 ²	9.00 ²	5.40 ²	-	-	-	-	-
LAUDA Variocool with natural refrigerant / Page 28																		
VC 1200	-25 ... 80	0.05	Air	2.3	-	-	1.30	1.20	1.05	0.80	0.50	-	-	-	-	-	-	-
VC 1200	-25 ... 80	0.05	Air	2.6	-	-	1.22	1.12	0.97	0.72	0.42	-	-	-	-	-	-	-
VC 1200 W	-25 ... 80	0.05	Water	2.3	-	-	1.40	1.30	1.10	0.85	0.53	-	-	-	-	-	-	-
VC 1200 W	-25 ... 80	0.05	Water	2.6	-	-	1.32	1.22	1.02	0.77	0.45	-	-	-	-	-	-	-
VC 2000	-25 ... 80	0.05	Air	2.3	-	-	2.00	1.60	1.25	0.90	0.57	-	-	-	-	-	-	-
VC 2000	-25 ... 80	0.05	Air	2.6	-	-	1.92	1.52	1.17	0.82	0.49	-	-	-	-	-	-	-
VC 2000 W	-25 ... 80	0.05	Water	2.3	-	-	2.10	1.85	1.30	0.95	0.62	-	-	-	-	-	-	-
VC 2000 W	-25 ... 80	0.05	Water	2.6	-	-	2.02	1.77	1.22	0.87	0.54	-	-	-	-	-	-	-

* Cooling water supply must be provided for operation

¹Pump output step 2 ²Pump output step 4 ³Pump output step 8

Pump pressure max. bar	Pump flow max. pressure L/min	Pump connection thread	Bath volume min. L	Bath volume max. L	Dimensions (W x D x H) mm	Protection Rating	Noise level dB (A)	Weight kg	Loading max. kW	Power supply V; Hz	Part Number	Device type
3.1	60	M30×1.5	3.3	9.5	430×550×760	IP 21	52	52	3.7	230 V; 50 Hz	L002682	IN 4 XTW
3.1	60	M30×1.5	3.6	9.8	430×550×760	IP 21	52	86	9.0	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	L002683	IN 8 XTW
6.0	120	M38×1.5	11.1	36.3	1,100×895×1,865	IP 21	58	382	18.0	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	L003214**	IN 2050 PW
6.0	100	M38×1.5	12.1	48.1	1,100×895×1,865	IP 21	74	625	37.0	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	L003308**	IN 2560 PW
6.0	120	M38×1.5	11.5	41.0	1,100×895×1,865	IP 21	61	508	18.0	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	L004350	IN 2040 PW
6.0	100	M38×1.5	15.6	37.4	1,100×895×1,865	IP 21	75	612	-	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	L004351	IN 3540 PW
0.9	28	G ¾	8.0	15	450×550×650	IP 32	51	51	2.7	230 V; 50 Hz	L004353	VC 1200
3.2	37	G ¾	8.0	15	450×550×790	IP 32	51	58	3.1	230 V; 50 Hz	L004354	VC 1200
0.9	28	G ¾	8.0	15	450×550×650	IP 32	50	50	2.7	230 V; 50 Hz	L004356	VC 1200 W
3.2	37	G ¾	8.0	15	450×550×790	IP 32	50	57	3.0	230 V; 50 Hz	L004357	VC 1200 W
0.9	28	G ¾	8.0	15	450×550×650	IP 32	52	51	2.8	230 V; 50 Hz	L004072	VC 2000
3.2	37	G ¾	8.0	15	450×550×790	IP 32	52	58	3.1	230 V; 50 Hz	L004073	VC 2000
0.9	28	G ¾	8.0	15	450×550×650	IP 32	50	50	2.7	230 V; 50 Hz	L004074	VC 2000 W
3.2	37	G ¾	8.0	15	450×550×790	IP 32	50	57	3.1	230 V; 50 Hz	L004075	VC 2000 W

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LAUDA Circulation and process thermostats

Technical data according to DIN 12876 standard

Device type	Working temperature range °C	Temperature stability ±K	Cooling of the refrigerating machine	Heater power max. kW	Cooling output kW													
					200 °C	100 °C	20 °C	10 °C	0 °C	-10 °C	-20 °C	-30 °C	-40 °C	-50 °C	-60 °C	-70 °C	-80 °C	-90 °C

LAUDA Variocool / Page 28

VC 3000	-20 ... 80	0.05	Air	1.5	-	-	3.00	2.40	1.68	0.95	0.45	-	-	-	-	-	-
VC 3000	-20 ... 80	0.05	Air	1.5	-	-	2.80	2.20	1.48	0.75	0.25	-	-	-	-	-	-
VC 3000 W	-20 ... 80	0.05	Water	1.5	-	-	3.00	2.40	1.68	0.95	0.45	-	-	-	-	-	-
VC 3000 W	-20 ... 80	0.05	Water	1.5	-	-	2.80	2.20	1.48	0.75	0.25	-	-	-	-	-	-
VC 5000	-20 ... 80	0.05	Air	4.5	-	-	5.00	3.90	2.75	1.70	0.90	-	-	-	-	-	-
VC 5000	-20 ... 80	0.05	Air	4.5	-	-	4.65	3.55	2.40	1.35	0.55	-	-	-	-	-	-
VC 5000 W	-20 ... 80	0.05	Water	4.5	-	-	5.00	3.90	2.75	1.70	0.90	-	-	-	-	-	-
VC 5000 W	-20 ... 80	0.05	Water	4.5	-	-	4.65	3.55	2.40	1.35	0.55	-	-	-	-	-	-
VC 7000	-25 ... 80	0.10	Air	4.5	-	-	7.00	5.30	3.70	2.40	1.30	-	-	-	-	-	-
VC 7000	-25 ... 80	0.10	Air	4.5	-	-	6.65	4.95	3.35	2.05	0.95	-	-	-	-	-	-
VC 7000 W	-25 ... 80	0.10	Water	4.5	-	-	7.00	5.30	3.70	2.40	1.30	-	-	-	-	-	-
VC 7000 W	-25 ... 80	0.10	Water	4.5	-	-	6.65	4.95	3.35	2.05	0.95	-	-	-	-	-	-
VC 10000	-25 ... 80	0.10	Air	7.5	-	-	10.00	7.60	5.30	3.50	2.00	-	-	-	-	-	-
VC 10000	-25 ... 80	0.10	Air	7.5	-	-	9.65	7.25	4.95	3.15	1.65	-	-	-	-	-	-
VC 10000 W	-25 ... 80	0.10	Water	7.5	-	-	10.00	7.60	5.30	3.50	2.00	-	-	-	-	-	-
VC 10000 W	-25 ... 80	0.10	Water	7.5	-	-	9.65	7.25	4.95	3.15	1.65	-	-	-	-	-	-

LAUDA Ultratemp / Page 30

UT 2505 W	-5 ... 60	0.50	Water	35.0	-	-	25.80	19.10	13.80	-	-	-	-	-	-	-	-
UT 3505 W	-5 ... 60	0.50	Water	35.0	-	-	35.30	26.20	18.70	-	-	-	-	-	-	-	-
UT 5005 W	-5 ... 60	0.50	Water	50.0	-	-	46.70	34.30	24.40	-	-	-	-	-	-	-	-

LAUDA Semistat / Page 32

S 1200	-20 ... 90	0.10	Water	3.0	-	-	1.20	0.90	0.60	0.35	0.08	-	-	-	-	-	-
S 2400	-20 ... 90	0.10	Water	6.0	-	-	2.45	1.93	1.40	0.88	0.35	-	-	-	-	-	-
S 4400	-20 ... 90	0.10	Water	12.0	-	-	4.40	3.50	2.60	1.65	0.70	-	-	-	-	-	-

Pump pressure max. bar	Pump flow max. pressure L/min	Pump connection thread	Bath volume min. L	Bath volume max. L	Dimensions (W x D x H) mm	Protection Rating	Noise level dB (A)	Weight kg	Loading max. kW	Power supply V; Hz	Part Number	Device type
3.2	37	G ¾	20	33	550×650×970	IP 32	57	89	2.6	230 V; 50 Hz	L000715*	VC 3000
4.8	37	G ¾	20	33	550×650×970	IP 32	61	89	2.6	230 V; 50 Hz	L000929*	VC 3000
3.2	37	G ¾	20	33	550×650×970	IP 32	55	88	2.6	230 V; 50 Hz	L000735*	VC 3000 W
4.8	37	G ¾	20	33	550×650×970	IP 32	59	88	2.6	230 V; 50 Hz	L000962*	VC 3000 W
3.2	37	G ¾	20	33	550×650×970	IP 32	65	97	7.8	400 V; 3/N/PE; 50 Hz	L000728*	VC 5000
5.0	60	G ¾	20	33	550×650×970	IP 32	69	97	7.8	400 V; 3/N/PE; 50 Hz	L000949*	VC 5000
3.2	37	G ¾	20	33	550×650×970	IP 32	64	97	7.8	400 V; 3/N/PE; 50 Hz	L000746*	VC 5000 W
5.0	60	G ¾	20	33	550×650×970	IP 32	68	97	7.8	400 V; 3/N/PE; 50 Hz	L001995*	VC 5000 W
3.2	37	G 1¼	48	64	650×670×1,250	IP 32	66	124	8.8	400 V; 3/N/PE; 50 Hz	L000729*	VC 7000
5.0	60	G 1¼	48	64	650×670×1,250	IP 32	69	124	8.8	400 V; 3/N/PE; 50 Hz	L000951*	VC 7000
3.2	37	G 1¼	48	64	650×670×1,250	IP 32	60	122	8.8	400 V; 3/N/PE; 50 Hz	L000747*	VC 7000 W
5.0	60	G 1¼	48	64	650×670×1,250	IP 32	64	133	8.8	400 V; 3/N/PE; 50 Hz	L000983*	VC 7000 W
3.2	37	G 1¼	48	64	650×670×1,250	IP 32	67	137	11.1	400 V; 3/N/PE; 50 Hz	L000730*	VC 10000
5.0	60	G 1¼	48	64	650×670×1,250	IP 32	70	137	11.1	400 V; 3/N/PE; 50 Hz	L000953*	VC 10000
3.2	37	G 1¼	48	64	650×670×1,250	IP 32	61	131	11.1	400 V; 3/N/PE; 50 Hz	L000748*	VC 10000 W
5.0	60	G 1¼	48	64	650×670×1,250	IP 32	65	131	11.1	400 V; 3/N/PE; 50 Hz	L000985*	VC 10000 W
3.2	250	Rp 1½	-	100.0	1,138×1,486×1,792	IP 54	47**	520	40.7***	400 V; 3/PE; 50 Hz	L004022*	UT 2505 W
3.2	250	Rp 1½	-	100.0	1,138×1,486×1,792	IP 54	49**	585	42.1***	400 V; 3/PE; 50 Hz	L004024*	UT 3505 W
4.8	250	Rp 1½	-	100.0	1,138×1,728×1,722	IP 54	50**	700	59.6***	400 V; 3/PE; 50 Hz	L004026*	UT 5005 W
2.8	22	½"	1.00	1.30	116×232×470	-	-	15	-	Connection to PSC	L003276	S 1200
2.8	22	½"	1.25	1.60	116×300×560	-	-	27	-	Connection to PSC	L003277	S 2400
2.8	27	½"	2.50	2.80	194×300×560	-	-	38	-	Connection to PSC	L003278	S 4400

* Utilises traditional refrigerants (HFCs) in accordance with European legislation to control F-gases (EU) 573/2024.

Detailed information can be found on the respective product detail page of the order number at www.lauda.de

** at a distance of 5 m under free-field conditions

*** at 20 °C cooling water temperature, 20 °C outflow temperature and maximum heating output

LAUDA Circulation and process thermostats

Power supply variants

Device type	Power supply V; Hz	Heater power max. kW	Pump pressure max. 60 Hz bar	Pump flow max. pressure 60 Hz L/min	Loading max. kW	Plug code*	Part Number	Device type	Power supply V; Hz	Heater power max. kW	Pump pressure max. 60 Hz bar	Pump flow max. pressure 60 Hz L/min	Loading max. kW	Plug code*	Part Number
LAUDA PRO / Page 18															
P 2 E	100-120 V; 50/60 Hz	1.8	0.68	22	1.9	4	L000549	RP 245 EC	100 V; 50/60 Hz	1.3	0.68	22	1.5	14	L000537
P 2 E	200-230 V; 50/60 Hz	2.5	0.68	22	2.7	3	L000045	RP 245 EC	120 V; 60 Hz	1.8	0.68	22	1.9	4	L000457
P 2 EC	100-120 V; 50/60 Hz	1.8	0.68	22	1.9	4	L000553	RP 245 EC	200 V; 50/60 Hz	1.9	0.68	22	3.2	3	L000497
P 2 EC	200-230 V; 50/60 Hz	2.5	0.68	22	2.7	3	L000049	RP 245 EC	208-220 V; 60 Hz	2.3	0.68	22	3.5	3	L000321
RP 240 E	100 V; 50/60 Hz	1.3	0.68	22	1.5	14	L000532	RP 245 EC	208-220 V; 60 Hz	2.3	0.68	22	3.5	2	L000579
RP 240 E	120 V; 60 Hz	1.8	0.68	22	1.9	4	L000452	RP 250 E	200 V; 50/60 Hz	1.9	0.68	22	3.2	3	L002498
RP 240 E	208-220 V; 60 Hz	2.3	0.68	22	3.5	3	L000312	RP 250 E	208-220 V; 60 Hz	2.3	0.68	22	3.5	3	L002657
RP 240 E	208-220 V; 60 Hz	2.3	0.68	22	3.5	2	L000570	RP 250 E	208-220 V; 60 Hz	2.3	0.68	22	3.5	2	L002500
RP 240 EC	100 V; 50/60 Hz	1.3	0.68	22	1.5	14	L000536	RP 250 EC	200 V; 50/60 Hz	1.9	0.68	22	3.2	3	L002499
RP 240 EC	120 V; 60 Hz	1.8	0.68	22	1.9	4	L000456	RP 250 EC	208-220 V; 60 Hz	2.3	0.68	22	3.5	2	L002501
RP 240 EC	200 V; 50/60 Hz	1.9	0.68	22	3.2	3	L000496	RP 250 EC	208-220 V; 60 Hz	2.3	0.68	22	3.5	3	L002658
RP 240 EC	208-220 V; 60 Hz	2.3	0.68	22	3.5	3	L000320	RP 290 E	200 V; 50/60 Hz	1.9	0.68	22	3.2	3	L002506
RP 245 E	100 V; 50/60 Hz	1.3	0.68	22	1.5	14	L000533	RP 290 E	208-220 V; 60 Hz	2.3	0.68	22	3.5	3	L002659
RP 245 E	120 V; 60 Hz	1.8	0.68	22	1.9	4	L000453	RP 290 E	208-220 V; 60 Hz	2.3	0.68	22	3.5	2	L002508
RP 245 E	200 V; 50/60 Hz	1.9	0.68	22	3.2	3	L000489	RP 290 EC	200 V; 50/60 Hz	1.9	0.68	22	3.2	3	L002507
RP 245 E	208-220 V; 60 Hz	2.3	0.68	22	3.5	2	L000571	RP 290 EC	208-220 V; 60 Hz	2.3	0.68	22	3.5	2	L002509
RP 245 E	208-220 V; 60 Hz	2.3	0.68	22	3.5	3	L000313	RP 290 EC	208-220 V; 60 Hz	2.3	0.68	22	3.5	3	L002660
LAUDA Integral T / Page 20															
IN 130 T	200 V; 50/60 Hz	2.2	4.5	45	3.2	3	L002787	IN 530 T	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	8.0	4.6	65	11.0	34	L002883
IN 130 T	208-220 V; 60 Hz	2.7	4.5	45	3.5	3	L002788	IN 530 TW	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	8.0	4.6	65	11.0	34	L002884
IN 130 T	208-220 V; 60 Hz	2.7	4.5	45	3.5	2	L003301	IN 1030 T	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	8.0	7	70	11.0	34	L002885
IN 230 T	200 V; 50/60 Hz	2.2	4.5	45	3.2	3	L002789	IN 1330 TW	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	16.0	7	70	18.0	33	L002886
IN 230 T	208-220 V; 60 Hz	2.7	4.5	45	3.5	2	L003302	IN 1830 TW	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	16.0	7	70	18.0	33	L003274
IN 230 T	208-220 V; 60 Hz	2.7	4.5	45	3.5	3	L002791								
IN 230 TW	200 V; 50/60 Hz	2.2	4.5	45	3.2	3	L002790								
IN 230 TW	208-220 V; 60 Hz	2.7	4.5	45	3.5	2	L003303								
IN 230 TW	208-220 V; 60 Hz	2.7	4.5	45	3.5	3	L002792								

*All data for the plug codes can be found on page 142

**Technical data NRTL according to UL and CSA

Device type	Power supply V; Hz	Heater power max. kW	Pump pressure max. 60 Hz bar	Pump flow max. pressure 60 Hz L/min	Loading max. kW	Plug code*	Part Number	Device type	Power supply V; Hz	Heater power max. kW	Pump pressure max. 60 Hz bar	Pump flow max. pressure 60 Hz L/min	Loading max. kW	Plug code*	Part Number
LAUDA Integral XT / Page 22															
IN 150 XT	200 V; 50/60 Hz	3.0	3.1	65	3.2	3	L002793	IN 750 XT	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	8.0	3.1	65	11.0	34	L002889
IN 150 XT	208-220 V; 60 Hz	3.3	3.1	65	3.5	3	L002794	IN 950 XTW	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	8.0	3.1	65	11.0	34	L002890
IN 150 XT	208-220 V; 60 Hz	3.3	3.1	65	3.5	2	L003304	IN 1850 XTW	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	16.0	6.0	120	18.0	33	L002895
IN 250 XTW	200 V; 50/60 Hz	3.1	3.1	65	3.2	3	L002795	IN 280 XT	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	4.0	3.1	65	9.0	34	L002892
IN 250 XTW	208-220 V; 60 Hz	3.4	3.1	65	3.5	2	L003305	IN 280 XTW	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	4.0	3.1	65	9.0	34	L002893
IN 250 XTW	208-220 V; 60 Hz	3.4	3.1	65	3.5	3	L002796	IN 590 XTW	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	8.0	3.1	65	11.0	34	L002897
IN 550 XT	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	8.0	3.1	65	10.5	34	L002887	IN 1590 XTW	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	12.0	3.1	65	19.0	33	L002898
IN 550 XTW	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	8.0	3.1	65	10.5	34	L002888								
LAUDA Integral XT with CO₂ refrigerant / Page 22															
IN 2040 XTW	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	16.0	6.0	120	18.0	33	L004491								
LAUDA Integral XT High-temperature thermostats / Page 22															
IN 4 XTW	200 V; 50/60 Hz	2.9	3.1	60	3.2	3	L002799	IN 8 XTW	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	8.0	3.1	60	9.0	34	L002891
IN 4 XTW	208-220 V; 60 Hz	3.3	3.1	60	3.5	3	L002800								
LAUDA Integral P / Page 24															
IN 2050 PW	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	16.0	6	120	18.0	33	L003319								
LAUDA Integral P with CO₂ refrigerant / Page 24															
IN 2040 PW	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	16.0	6	120	18.0	33	L004585								

** Technical data NRTL according to UL and CSA

LAUDA Circulation and process thermostats

Power supply variants

Device type	Power supply V; Hz	Heater power max. kW	Pump pressure max. 60 Hz ^{bar}	Pump flow max. pressure 60 Hz L /min	Loading max. kW	Plug code*	Part Number	Device type	Power supply V; Hz	Heater power max. kW	Pump pressure max. 60 Hz ^{bar}	Pump flow max. pressure 60 Hz L /min	Loading max. kW	Plug code*	Part Number
LAUDA Variocool with natural refrigerant / Page 28															
VC 1200	200 V; 50/60 Hz	2.0	3.2	37	2.5	3	L004469	VC 2000	200 V; 50/60 Hz	2.0	3.2	37	2.6	3	L004471
VC 1200	208-220 V; 60 Hz	2.4	3.2	37	2.9	3	L004359	VC 2000	208-220 V; 60 Hz	2.4	3.2	37	2.9	3	L004362
VC 1200 W	200 V; 50/60 Hz	2.0	3.2	37	2.4	3	L004470	VC 2000 W	200 V; 50/60 Hz	2.0	3.2	37	2.5	3	L004472
VC 1200 W	208-220 V; 60 Hz	2.4	3.2	37	2.8	3	L004360	VC 2000 W	208-220 V; 60 Hz	2.4	3.2	37	2.9	3	L004361
LAUDA Variocool / Page 28															
VC 3000	200 V; 50/60 Hz	1.0	3.2	37	2.6	3	L000772	VC 7000	200 V; 3/PE; 50/60 Hz	3.4	3.2	37	5.4	33	L000774
VC 3000	208-220 V; 60 Hz	1.3	3.2	37	2.8	3	L000755	VC 7000	208-220 V; 3/PE; 60 Hz	4.1	3.2	37	5.7	33	L000757
VC 3000	200 V; 50/60 Hz	1.1	4.8	37	2.6	3	L001024	VC 7000	200 V; 3/PE; 50/60 Hz	3.4	4.3	60	5.4	33	L001028
VC 3000	208-220 V; 60 Hz	1.3	4.8	37	2.8	3	L000994	VC 7000	208-220 V; 3/PE; 60 Hz	4.1	5.0	60	5.7	33	L000998
VC 3000 W	200 V; 50/60 Hz	1.0	3.2	37	2.6	3	L000780	VC 7000 W	200 V; 3/PE; 50/60 Hz	3.4	3.2	37	5.4	33	L000782
VC 3000 W	208-220 V; 60 Hz	1.3	3.2	37	2.8	3	L000763	VC 7000 W	208-220 V; 3/PE; 60 Hz	4.1	3.2	37	5.7	33	L000765
VC 3000 W	200 V; 50/60 Hz	1.1	4.8	37	2.6	3	L001039	VC 7000 W	200 V; 3/PE; 50/60 Hz	3.4	4.3	60	5.4	33	L001043
VC 3000 W	208-220 V; 60 Hz	1.3	4.8	37	2.8	3	L001009	VC 7000 W	208-220 V; 3/PE; 60 Hz	4.1	5.0	60	5.7	33	L001013
VC 5000	200 V; 3/PE; 50/60 Hz	3.4	3.2	37	4.3	40	L000773	VC 10000	200 V; 3/PE; 50/60 Hz	5.7	3.2	37	7.6	33	L000775
VC 5000	208-220 V; 3/PE; 60 Hz	4.1	3.2	37	4.5	40	L000756	VC 10000	208-220 V; 3/PE; 60 Hz	6.9	3.2	37	7.7	33	L000758
VC 5000	200 V; 3/PE; 50/60 Hz	3.4	4.3	60	4.3	40	L001026	VC 10000	200 V; 3/PE; 50/60 Hz	5.7	4.3	60	7.6	33	L001030
VC 5000	208-220 V; 3/PE; 60 Hz	4.1	5.0	60	4.5	40	L000996	VC 10000	208-220 V; 3/PE; 60 Hz	6.9	5.0	60	7.7	33	L001000
VC 5000 W	200 V; 3/PE; 50/60 Hz	3.4	3.2	37	4.3	40	L000781	VC 10000 W	200 V; 3/PE; 50/60 Hz	5.7	3.2	37	7.6	33	L000783
VC 5000 W	200 V; 3/PE; 50/60 Hz	3.4	4.3	60	4.3	40	L001041	VC 10000 W	208-220 V; 3/PE; 60 Hz	6.9	3.2	37	7.7	33	L000766
VC 5000 W	208-220 V; 3/PE; 60 Hz	4.1	5.0	60	4.5	40	L001011	VC 10000 W	200 V; 3/PE; 50/60 Hz	5.7	4.3	60	7.6	33	L001045
								VC 10000 W	208-220 V; 3/PE; 60 Hz	6.9	5.0	60	7.7	33	L001015
LAUDA Ultratemp / Page 30															
UT 2505 W	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	35.0	4.6	300	-	1	L004023	UT 5005 W	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	50.0	7.0	300	-	1	L004027
UT 3505 W	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	35.0	4.6	300	-	1	L004025								

*All data for the plug codes can be found on page 142

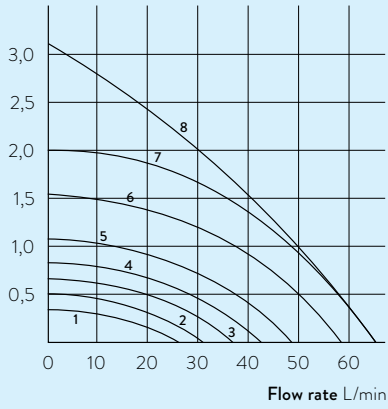
LAUDA Circulation and process thermostats

More characteristics

LAUDA Integral IN 150 XT, 250 XTW, 280 XT, 280 XTW, 590 XT, 590 XTW, 550 XT, 550 XTW, 750 XT, 950 XTW, 1350 XTW, 1590 XTW / Page 22

PUMP CHARACTERISTICS Heat transfer liquid: Water

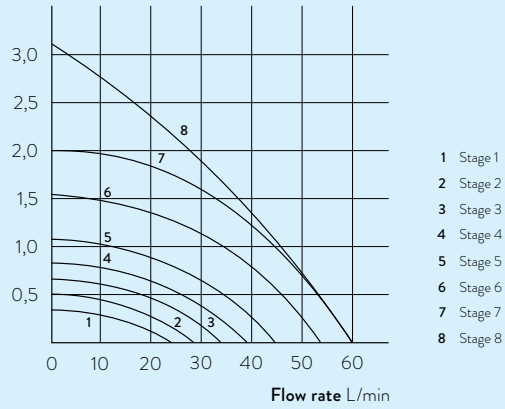
Pressure bar



LAUDA Integral IN 4 XTW, IN 8 XTW / Page 22

PUMP CHARACTERISTICS Heat transfer liquid: Water

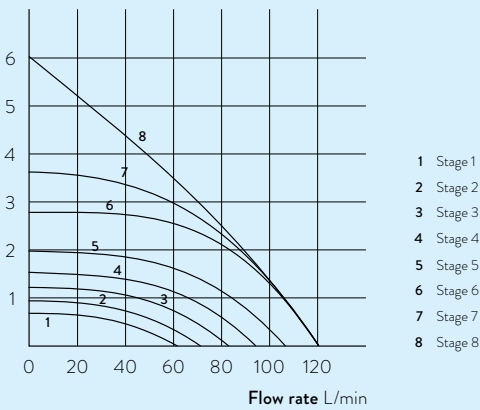
Pressure bar



LAUDA Integral IN 1850 XTW, IN 2050 PW, IN 2040 XTW / PW / Page 22, 24

PUMP CHARACTERISTICS Heat transfer liquid: Water

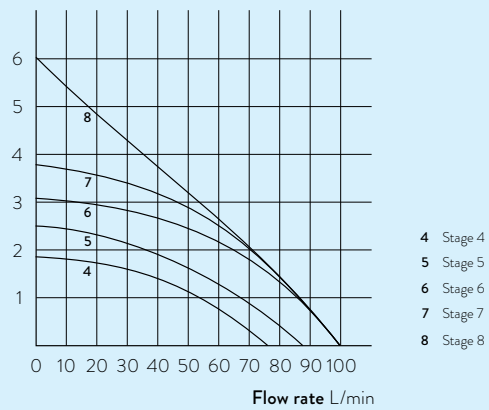
Pressure bar



LAUDA Integral IN 2560 XTW / PW, IN 3540 XTW / PW / Page 22, 24

PUMP CHARACTERISTICS Heat transfer liquid: Water

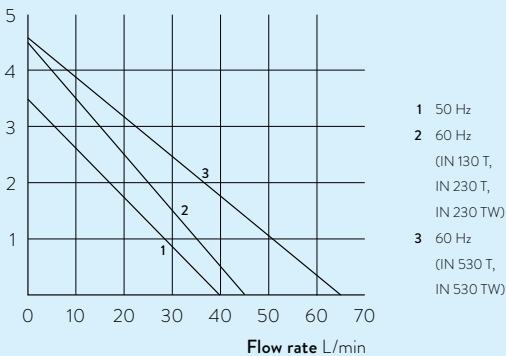
Pressure bar



LAUDA Integral IN 130 T, IN 230 T, IN 230 TW, IN 530 T, IN 530 TW / Page 20

PUMP CHARACTERISTICS Heat transfer liquid: Water

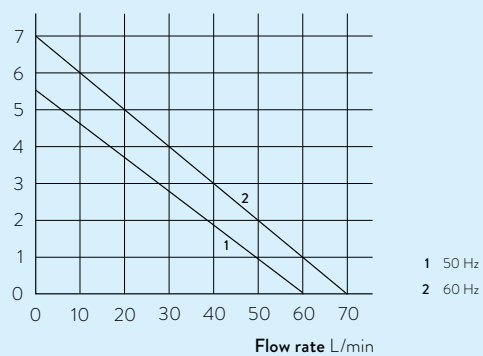
Pressure bar



LAUDA Integral IN 1030 T, IN 1330 TW, IN 1830 TW / Page 20

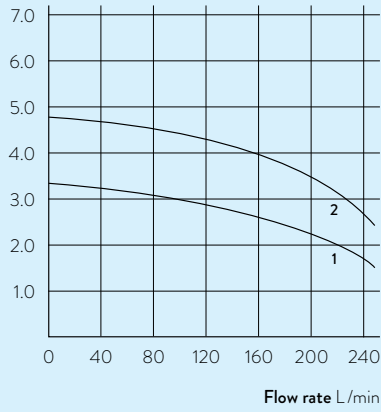
PUMP CHARACTERISTICS Heat transfer liquid: Water

Pressure bar



PUMP CHARACTERISTICS 50 Hz Heat transfer liquid: Water

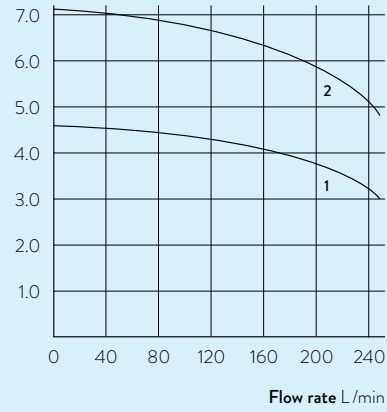
Pressure bar



- 2 UT 5005 W
- 1 UT 2505 W, UT 3505 W

PUMP CHARACTERISTICS 60 Hz Heat transfer liquid: Water

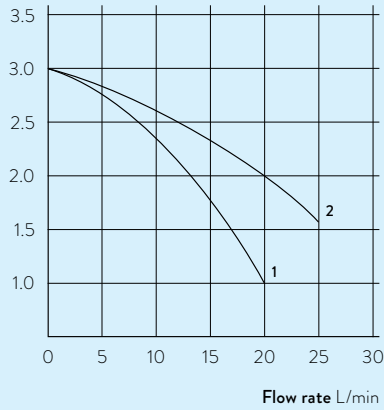
Pressure bar



- 2 UT 5005 W
- 1 UT 2505 W, UT 3505 W

PUMP CHARACTERISTIC Heat transfer liquid: Water

Pressure bar



- 2 S 4400
- 1 S 1200, S 2400

LAUDA CIRCULATION CHILLERS

Specific application examples

- Rotary evaporators
- Distillation systems
- Spectrometers
- Supply of cooling traps
- Digital printing
- Laser cutting
- Laser sorting
- Point welding
- Injection molding
- Tunnel drilling machines
- Centralized cooling water supply



LAUDA Microcool

Circulation chillers for reliable continuous operation in laboratory and research applications from -10 to 40°C

-10°C  40°C

Compact circulation chillers with outstanding price-performance ratio

The LAUDA Microcool line of user-friendly circulation chillers consists of four compact models with large LED display and membrane keypad, offering cooling capacities of 0.35 to 2 kW. The highlight of these devices is the premium quality centrifugal pump with magnetic coupling – unique to this price category: Magnetic coupling of pump and electric motor prevents any kind of seal issue from arising on the pump shaft, eliminating the chance for any fluid to leak.



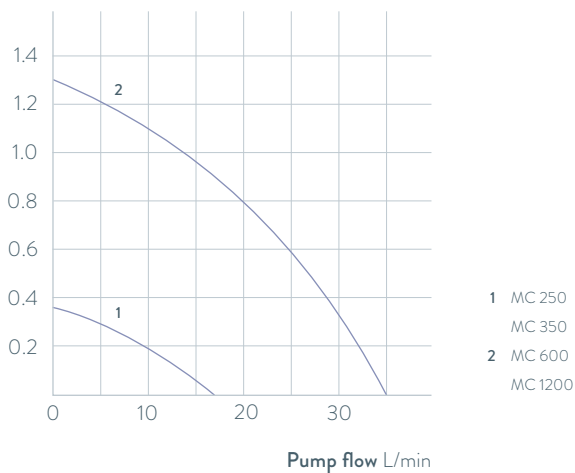
Illuminated viewing glass enables quick identification of the fill level



Standard-issue RS-232 interface and alarm contact

PUMP CHARACTERISTICS Heat transfer liquid: Water

Pressure bar



1 MC 250
MC 350
2 MC 600
MC 1200

Important functions

- Auto-start timer and auto shutdown function
- Filling opening at the top, drain connection at the rear
- Cooling capacity adapted via solenoid valve control, including automatic compressor control

Included accessories

Nipples, screw caps

Further accessories

Tubing

All technical data and power supply variants can be found in the ›Technical data‹ section.

More at www.lauda.de/de/1764

NEW
MC 2000



LAUDA Microcool

The compact MC 350 recirculating chiller fits easily on a lab bench. Somewhat larger models are also available having 600, 1,200 and 2,000 watts of cooling capacity and which can be positioned on the floor under a lab bench to save space.



Circulation chillers

Immersion and bath thermostats

Water baths

Deep-freezers

Stills

Digital products

Accessories, Service

-10°C  35°C

LAUDA Ultracool circulation chillers with an energy saving of up to 50 percent

Developed with a focus on energy efficiency, the LAUDA Ultracool circulation chillers make a pivotal contribution to reducing your operating costs. Depending on the operating conditions, the devices make it possible to reduce energy costs by up to 50 percent, with payback times of less than one year. The innovative operating concept enables the LAUDA Ultracool circulation chillers to be conveniently monitored and controlled from a distance – via a connected remote control or the integrated web server on a PC or laptop or connected to the LAUDA.LIVE Cloud via a 4G wireless gateway. This allows comfortable operation via PC or laptop.



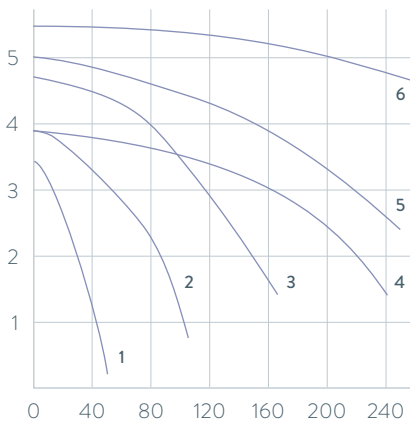
Suitable for outdoor installation (IP54)



LAUDA Ultracool UC 2/UC 4 in a compact size

PUMP CHARACTERISTIC Standard pumps (3 bar), 50 Hz; Heat transfer liquid: Water

Pressure bar



- 6 UC 80, UC 100
- 5 UC 65
- 4 UC 50
- 3 UC 24
- 2 UC 8, UC 14
- 1 UC 2, UC 4

Important functions

- High energy efficiency results in low operating costs
- Operation via LCD remote control unit or web server
- Increased temperature stability of ± 0.5 K
- Remote monitoring and maintenance via LAUDA.LIVE

Included accessories

Ethernet interface, remote control unit, stainless steel connections

Further accessories

Hose kits, reverse flow protection, 4G wireless gateway

All technical data and power supply variants can be found in the [Technical data](#) section.

More at www.lauda.de/de/1778

LAUDA.LIVE
ready



LAUDA Ultracool

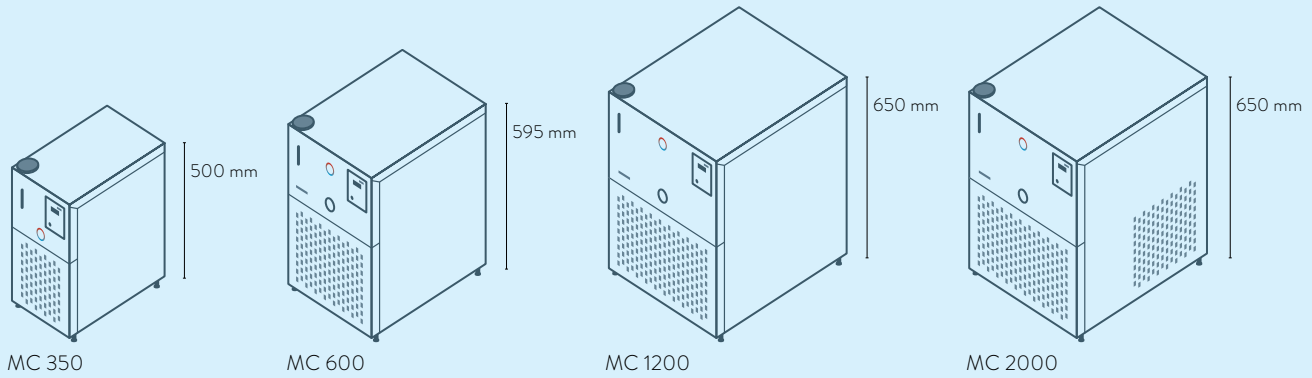
The energy-efficient LAUDA Ultracool circulation chillers comply with the Ecodesign Directive 2009/125/EC. This defines performance requirements with regard to energy efficiency (SEPR indices) that process circulation chillers in this performance class must fulfill. LAUDA Ultracool chillers meet and some even exceed these requirements. Depending on the operating conditions, the new circulation chillers are up to 50 percent more energy-efficient than conventional models.



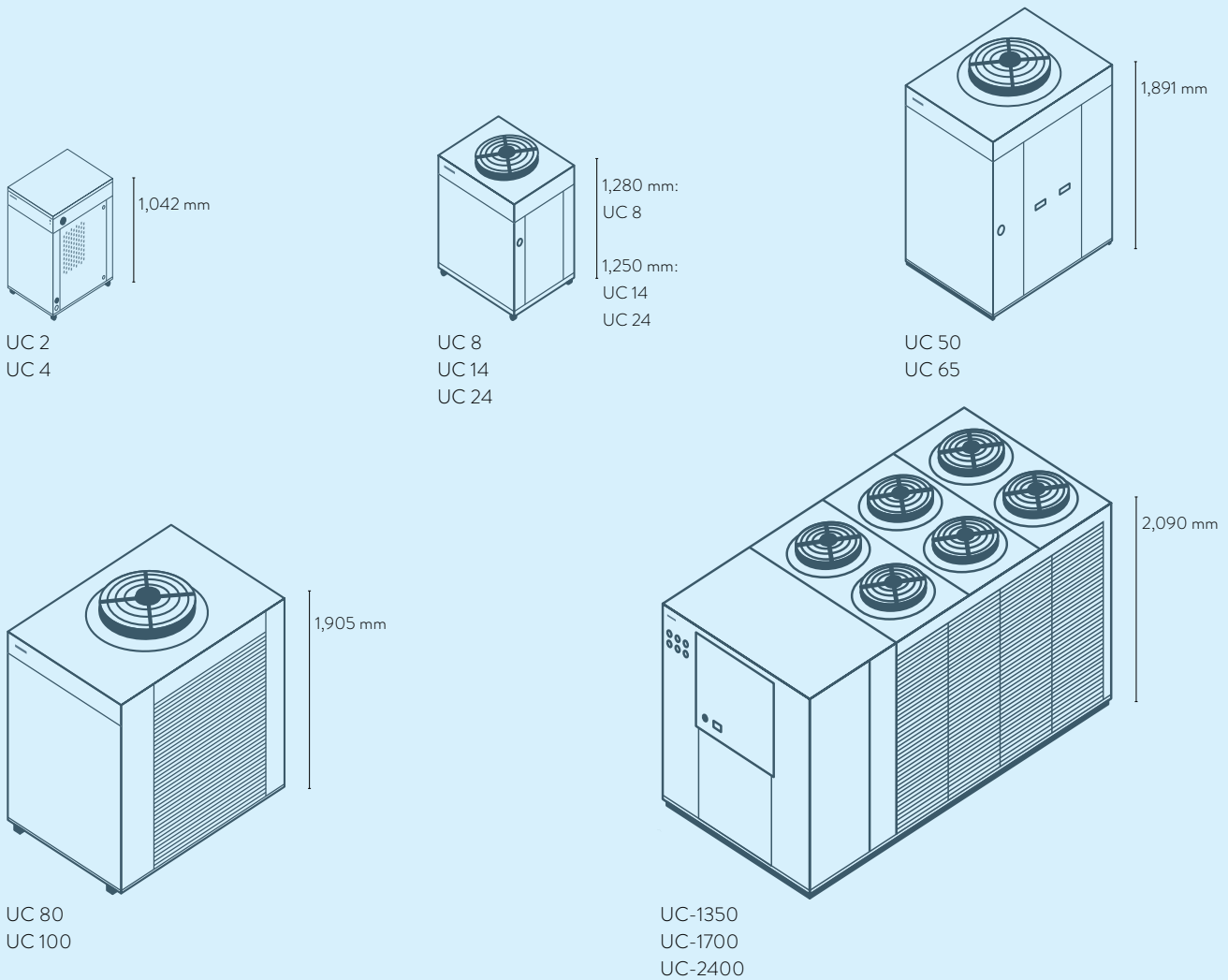
LAUDA Circulation chillers

Device type overview

LAUDA Microcool / Page 54



LAUDA Ultracool / Page 56



LAUDA Circulation chillers

Interfaces / Function overview

	Ethernet	RS-232	Malfunction contact
LAUDA Microcool / Page 54	-	S	S
LAUDA Ultracool / Page 56	S*	-	S

S = Series standard

S* = Ethernet with Modbus TCP/IP protocol

Operating element	Microcool	Ultracool
Display	7-Segment	LCD
Mode of operation	3-button	6-button
1-point calibration	✓	-
Programmer, programs/segments	-	-
Programmer, tolerance range function	-	-
Graphic temperature profile display	-	-
Pump pressure display (analog)	✓*	-
Pump pressure display (digital)	-	✓
Adjustable bypass	✓*	-
Level indicator (analog)	✓	-
Level indicator (digital)	-	-
Standby timer	✓	✓
Flow control instrument	-	-
Overflow	✓	-
Low-level alarm	✓	✓
Drain tap	-	✓
Drain screw	✓	-

* MC 600, MC 1200, MC 2000

LAUDA Circulation chillers

Technical data according to DIN 12876 standard

Device type	Working temperature range °C	Temperature stability* ±K	Ambient temperature range °C	Cooling of the refrigerating machine	Heater power max. kW	Cooling output kW					Pump pressure max. bar	Pump flow max. pressure L/min	Pump connection thread	Bath volume min. L
						20 °C	10 °C	0 °C	-10 °C	-20 °C				
LAUDA Microcool with natural refrigerant / Page 54														
MC 350	-10 ... 40	0.50	5 ... 40	Air	-	0.35	0.27	0.20	0.12	-	0.35	16	Ø 10 mm	4.0
MC 600	-10 ... 40	0.50	5 ... 40	Air	-	0.60	0.50	0.37	0.20	-	1.30	35	G ¾	4.0
MC 1200	-10 ... 40	0.50	5 ... 40	Air	-	1.20	1.05	0.75	0.40	-	1.30	35	G ¾	7.0
NEW MC 2000	-10 ... 40	0.50	5 ... 40	Air	-	2.00	1.70	1.25	0.70	-	1.30	35	G ¾	7.0

Bath volume max. L	Dimensions (W x D x H) mm	Protection Rating	Noise level dB (A)	Weight kg	Loading max. kW	Power supply V; Hz	Part Number	Device type
7.0	240 x 400 x 500	IP 32	57	30	0.34	220 V; 60 Hz & 230 V; 50 Hz	L004112	MC 350
8.0	350 x 480 x 595	IP 32	54	50	0.62	230 V; 50 Hz	L004455	MC 600
14.0	450 x 550 x 650	IP 32	59	63	0.82	230 V; 50 Hz	L004461	MC 1200
14.0	450 x 550 x 650	IP 32	60	63	1.10	230 V; 50 Hz	L004521	MC 2000

LAUDA Circulation chillers

Technical data

Device type	Working temperature range °C	Temperature stability ±K	Ambient temperature range °C	Cooling output at water outlet temperature ¹ kW								Number of refrigerant circuits	Motor fan			Max. discharge pressure bar
				35 - 25 °C	20 °C	15 °C	10 °C	5 °C	0 °C	-5 °C	-10 °C		No.	kW	m ³ /h	
LAUDA Ultracool with natural refrigerant / Page 56																
UC 2	-10...35	0.5	-15...50	3.1	3.1	2.8	2.6	2.0	1.7	1.4	1.2	1	1	0.2	3,050	3.4
UC 4	-10...35	0.5	-15...50	6.1	6.1	5.5	4.7	3.9	3.3	2.8	2.4	1	1	0.2	3,050	5.5
UC 4	-10...35	0.5	-15...50	6.1	6.1	5.5	4.7	3.9	3.3	2.8	2.4	1	1	0.2	3,050	3.4
UC 8	-10...35	0.5	-20...50	14.1	12.7	11.3	10.1	8.7	7.4	6.1	5.0	1	1	0.2	4,500	3.9
UC 8	-10...35	0.5	-20...50	14.1	12.7	11.3	10.1	8.7	7.4	6.1	5.0	1	1	0.5	4,500	6.8
UC 14	-10...35	0.5	-20...50	21.8	19.7	17.7	15.4	13.2	11.3	9.5	7.9	1	1	0.5	7,500	4.7
UC 14	-10...35	0.5	-20...50	21.8	19.7	17.7	15.4	13.2	11.3	9.5	7.9	1	1	1.0	7,500	6.8
UC 24	-10...35	0.5	-20...50	37.1	33.2	29.6	25.9	21.9	18.8	16.1	13.8	1	1	1.0	7,500	4.7
UC 24	-10...35	0.5	-20...50	37.1	33.2	29.6	25.9	21.9	18.8	16.1	13.8	1	1	1.0	7,500	5.8
UC 50	-10...35	0.5	-20...50	74.5	67.0	60.0	51.2	45.3	37.9	31.9	26.7	1	1	1.0	19,000	5.0
UC 50	-10...35	0.5	-20...50	74.5	67.0	60.0	51.2	45.3	37.9	31.9	26.7	1	1	2.6	19,000	6.5
UC 65	-10...35	0.5	-20...50	95.5	86.0	77.2	67.9	58.5	49.1	41.5	34.7	1	1	2.6	19,000	5.0
UC 65	-10...35	0.5	-20...50	95.5	86.0	77.2	67.9	58.5	49.1	41.5	34.7	1	1	2.6	19,000	7.2
UC 80	-10...35	1.0	-20...50	106.5	103.6	92.5	79.8	68.2	57.9	48.7	40.6	1	1	2.6	24,000	5.3

¹ at 25°C ambient temperature

² Rp = G = BSP (internal screw thread acc. to British Standard Pipe)

Pump flow max. L/min	Nominal discharge pressure bar	Pump flow nominal L/min	Pump connection thread ²	Volume water tank L	Dimensions (W x D x H) mm	Protection Rating	Noise level dB (A)	Weight kg	Loading nominal kW	Max. fuse A	Power supply V; Hz	SEPR	Part Number	Device type
42	3.3	5.6	Rp ½	12	510×680×1,042	IP 32	53.5	101	0.9	16	230 V; 50 Hz	8.70	L004586	UC 2
68.3	5.0	13.8	Rp ½	12	510×680×1,042	IP 32	57.9	103	1.8	16	230 V; 50 Hz	6.40	L004671	UC 4
42	2.8	13.8	Rp ½	12	510×680×1,042	IP 32	57.9	103	1.8	16	230 V; 50 Hz	6.40	L004588	UC 4
105	3.5	26.6	Rp 1	35	720×910×1,280	IP 54	61.0	150	3.2	25	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	5.80	L004662	UC 8
106	6.1	26.6	Rp 1	35	720×910×1,280	IP 54	61.0	150	3.8	25	400 V; 3/PE; 50 Hz	5.80	L004672	UC 8
166	3.2	43.8	Rp 1	35	720×910×1,250	IP 54	64.7	175	5.5	25	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	5.92	L004663	UC 14
106	5.5	43.8	Rp 1	35	720×910×1,250	IP 54	64.7	175	5.4	25	400 V; 3/PE; 50 Hz	5.92	L004673	UC 14
166	3.8	84.1	Rp 1	35	720×910×1,250	IP 54	64.7	180	9.7	32	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	5.30	L004590	UC 24
166	4.7	84.1	Rp 1	35	720×910×1,250	IP 54	64.7	180	9.7	32	400 V; 3/PE; 50 Hz	5.30	L004674	UC 24
250	3.1	150.0	Rp 1½	125	1,040×1,435×1,890	IP 54	68.7	410	16.4	50	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	5.72	L004664	UC 50
250	5.5	150.0	Rp 1½	125	1,040×1,435×1,890	IP 54	68.7	410	16.4	50	400 V; 3/PE; 50 Hz	5.72	L004675	UC 50
250	3.3	196.0	Rp 1½	125	1,040×1,435×1,890	IP 54	69.5	440	22.0	63	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	5.51	L004591	UC 65
367	6.6	196.0	Rp 1½	125	1,040×1,435×1,890	IP 54	69.5	440	23.7	63	400 V; 3/PE; 50 Hz	5.51	L004676	UC 65
367	4.6	250.0	Rp 2½	125	1,256×1,706×1,905	IP 54	67.5	700	26.0	63	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	5.47	L004665	UC 80

LAUDA Circulation chillers

Technical data

Device type	Working temperature range °C	Temperature stability ±K	Ambient temperature range °C	Cooling output at water outlet temperature ¹ kW								Number of refrigerant circuits	Motor fan			Max. discharge pressure bar
				35 - 25 °C	20 °C	15 °C	10 °C	5 °C	0 °C	-5 °C	-10 °C		No.	kW	m ³ /h	
LAUDA Ultracool with F-gas refrigerant / Page 56																
UC 2	-10...35	0.5	-15...50	3.1	3.1	2.8	2.4	2.0	1.7	1.4	1.2	1	1	0.2	3,050	3.4
UC 2	-10...35	0.5	-15...50	3.1	3.1	2.8	2.4	2.0	1.7	1.4	1.2	1	1	0.2	3,050	5.5
UC 4	-10...35	0.5	-15...50	6.1	6.1	5.5	4.8	3.9	3.3	2.8	2.4	1	1	0.2	3,050	3.4
UC 4	-10...35	0.5	-15...50	6.1	6.1	5.5	4.8	3.9	3.3	2.8	2.4	1	1	0.2	3,050	3.9
UC 8	-10...35	0.5	-20...50	13.3	13.3	12.0	10.2	8.5	7.0	5.4	4.4	1	1	0.5	4,500	6.8
UC 8	-10...35	0.5	-20...50	13.3	13.3	12.0	10.2	8.5	7.0	5.4	4.4	1	1	0.5	4,500	4.7
UC 14	-10...35	0.5	-20...50	22.4	20.3	18.4	15.8	13.4	11.1	9.3	7.6	1	1	1.0	7,500	6.8
UC 14	-10...35	0.5	-20...50	22.4	20.3	18.4	15.8	13.4	11.1	9.3	7.6	1	1	1.0	7,500	4.7
UC 24	-10...35	0.5	-20...50	34.0	30.9	28.1	24.3	20.8	17.3	14.5	12.0	1	1	1.0	7,500	5.8
UC 24	-10...35	0.5	-20...50	34.0	30.9	28.1	24.3	20.8	17.3	14.5	12.0	1	1	1.0	7,500	5.0
UC 50	-10...35	0.5	-20...50	67.5	65.6	59.4	51.2	43.7	36.4	30.4	25.2	1	1	2.6	19,000	6.5
UC 50	-10...35	0.5	-20...50	67.5	65.6	59.4	51.2	43.7	36.4	30.4	25.2	1	1	1.0	19,000	5.8
UC 65	-10...35	0.5	-20...50	87.5	85.2	77.4	66.9	57.3	47.8	40.1	33.3	1	1	1.0	19,000	5.0
UC 65	-10...35	0.5	-20...50	87.5	85.2	77.4	66.9	57.3	47.8	40.1	33.3	1	1	2.6	19,000	6.5
UC 80	-10...35	1.0	-20...50	104.3	101.4	91.8	79.0	67.5	56.2	47.1	39.0	1	1	3.0	24,000	5.2
UC 80	-10...35	1.0	-20...50	104.3	101.4	91.8	79.0	67.5	56.2	47.1	39.0	1	1	2.6	24,000	5.0
UC 100	-10...35	1.0	-20...50	124.7	121.4	110.2	95.3	81.7	68.3	57.5	47.8	1	1	3.0	24,000	5.4
UC 100	-10...35	1.0	-20...50	124.7	121.4	110.2	95.3	81.7	68.3	57.5	47.8	1	1	3.0	24,000	5.2
UC-1350	13...25	2.0	-15...45	182.1	182.1	163.7	-	-	-	-	-	2	6	3.6	57,000	5.5
UC-1700	13...25	2.0	-15...45	228.4	228.4	205.9	-	-	-	-	-	2	6	3.6	55,200	5.2
UC-2400	13...25	2.0	-15...45	336.9	336.9	308.8	-	-	-	-	-	2	6	7.5	66,000	5.2

¹ at 25°C ambient temperature

² Rp = G = BSP (internal screw thread acc. to British Standard Pipe)

Pump flow max. L/min	Nominal discharge pressure bar	Pump flow nominal L/min	Pump connection thread ²	Volume water tank L	Dimensions (W x D x H) mm	Protection Rating	Noise level dB (A)	Weight kg	Loading nominal kW	Max. fuse A	Power supply V; Hz	SEPR	Part Number	Device type
42	3.3	5.6	Rp ½	12	510×680×1,042	IP 32	53.5	90	1.0	16	230 V; 50 Hz	6.24	L003509*	UC 2
68.3	5.3	5.6	Rp ½	12	510×680×1,042	IP 32	53.5	93	1.2	16	230 V; 50 Hz	6.24	L003510*	UC 2
42	2.8	13.8	Rp ½	12	510×680×1,042	IP 32	57.9	91	1.8	16	230 V; 50 Hz	5.23	L003511*	UC 4
68.3	5.0	13.8	Rp ½	12	510×680×1,042	IP 32	57.9	91	2.0	16	230 V; 50 Hz	5.23	L003512*	UC 4
105	3.5	26.6	Rp 1	35	720×910×1,280	IP 54	61.0	152	3.4	25	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	6.44	L002853*	UC 8
106	6.1	26.6	Rp 1	35	720×910×1,280	IP 54	61.0	156	3.8	25	400 V; 3/PE; 50 Hz	6.44	L002944*	UC 8
105	3.2	43.8	Rp 1	35	720×910×1,250	IP 54	64.7	177	5.1	25	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	6.41	L002854*	UC 14
106	5.5	43.8	Rp 1	35	720×910×1,250	IP 54	64.7	154	5.4	25	400 V; 3/PE; 50 Hz	6.41	L002946*	UC 14
166	3.8	84.1	Rp 1	35	720×910×1,250	IP 54	64.7	184	8.0	32	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	5.63	L002855*	UC 24
166	4.7	84.1	Rp 1	35	720×910×1,250	IP 54	64.7	182	9.5	32	400 V; 3/PE; 50 Hz	5.63	L002947*	UC 24
242	3.1	150	Rp 1½	125	1,040×1,435×1,890	IP 54	68.7	411	14.8	50	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	5.37	L002856*	UC 50
250	5.5	150	Rp 1½	125	1,040×1,435×1,890	IP 54	68.7	429	16.5	50	400 V; 3/PE; 50 Hz	5.37	L002948*	UC 50
250	3.3	196	Rp 1½	125	1,040×1,435×1,890	IP 54	69.5	427	20.4	63	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	5.16	L002857*	UC 65
367	6.6	196	Rp 1½	125	1,040×1,570×1,890	IP 54	69.5	461	23.6	63	400 V; 3/PE; 50 Hz	5.16	L002949*	UC 65
367	4.6	250	Rp 2½	125	1,256×1,706×1,905	IP 54	67.2	682	23.0	80	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	6.87	L003684*	UC 80
500	5.1	250	Rp 2½	125	1,256×1,706×1,905	IP 54	67.2	682	23.3	80	400 V; 3/PE; 50 Hz	6.87	L003686*	UC 80
367	3.8	300	Rp 2½	125	1,256×1,706×1,905	IP 54	69.3	679	29.9	80	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz	6.20	L003685*	UC 100
500	5.0	300	Rp 2½	125	1,256×1,706×1,905	IP 54	69.3	700	30.2	80	400 V; 3/PE; 50 Hz	6.20	L003687*	UC 100
500	4.5	392	Rp 2½	500	1,660×3,400×2,090	IP 54	62.2	1570	43.8	150	400 V; 3/PE; 50 Hz	-	E6135221*	UC-1350
670	3.4	494	Rp 2½	500	1,660×3,400×2,090	IP 54	61.3	1630	54.9	150	400 V; 3/PE; 50 Hz	-	E6170221*	UC-1700
970	3.6	733	DIN-2566 DN80	500	1,660×3,585×2,090	IP 54	62.7	1690	71.4	200	400 V; 3/PE; 50 Hz	-	E6240221*	UC-2400

* Utilises traditional refrigerants (HFCs) in accordance with European legislation to control F-gases (EU) 573/2024. Detailed information can be found on the respective product detail page of the order number at www.lauda.de

LAUDA Circulation chillers

Power supply variants

Device type	Power supply V; Hz	Pump pressure max. bar	Pump flow max. pressure L/min	Loading max. kW	Plug code*	Part Number	Device type	Power supply V; Hz	Pump pressure max. bar	Pump flow max. pressure L/min	Loading max. kW	Plug code*	Part Number
LAUDA Microcool with natural refrigerant / Page 54													
MC 350	100 V; 50/60 Hz	0.35	16	0.3	14	L004453	MC 1200	230 V; 50 Hz	1.3	35	0.8	42	L004462
MC 350	220 V; 60 Hz / 230 V; 50 Hz	0.35	16	0.3	42	L004451	MC 1200	115 V; 60 Hz	1.3	35	0.7	14	L004464
MC 350	115 V; 60 Hz	0.35	16	0.3	14	L004452	MC 2000	230 V; 50 Hz	1.3	35	1.1	42	L004523
MC 600	115 V; 60 Hz	1.3	35	0.8	14	L004458	MC 2000	115 V; 60 Hz	1.3	35	1.3	14	L004524
MC 600	230 V; 50 Hz	1.3	35	0.6	42	L004456							
MC 600	220 V; 60 Hz	1.3	35	0.8	43	L004457							
LAUDA Ultracool with F-gas refrigerant / Page 56													
UC 2	230 V; 60 Hz	3.5	50	1.1	31	L003513	UC 4	230 V; 60 Hz	3.5	50	1.9	31	L003514
UC 2	230 V; 60 Hz	5.0	80	1.2	31	L003533	UC 4	230 V; 60 Hz	5.0	80	2.0	31	L003534
LAUDA Ultracool with natural refrigerant / Page 56													
UC 2	230 V; 60 Hz	3.5	50	1.1	31	L004587	UC 4	230 V; 60 Hz	3.5	50	1.9	31	L004589

*All data for the plug codes can be found on page 142

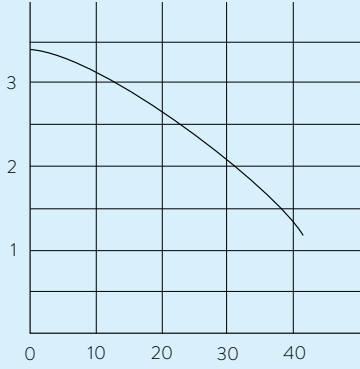
LAUDA Circulation chillers

More characteristics

LAUDA Ultracool / Page 56

PUMP CHARACTERISTIC Heat transfer liquid: Water

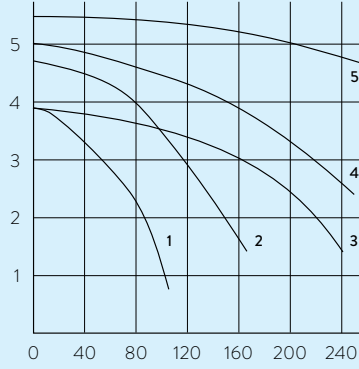
Pressure bar



UC 2, UC 4

PUMP CHARACTERISTIC Heat transfer liquid: Water

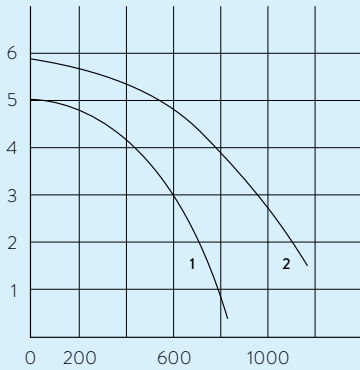
Pressure bar



- 5 UC 80, UC 100
- 4 UC 65
- 3 UC 50
- 2 UC 24
- 1 UC 8, UC 14

PUMP CHARACTERISTIC Heat transfer liquid: Water

Pressure bar



- 1 UC-1350
UC-1700
- 2 UC-2400

LAUDA IMMERSION AND BATH CIRCULATION THERMOSTATS



Specific application examples

- Sample preparation in chemical and pharmaceutical analysis
- Quality control of samples
- Biotechnology
- Materials testing
- Functional testing of electronic components
- Stress tests
- Notch impact testing
- Semiconductor coating



LAUDA Alpha

For inexpensive temperature control from -30 to 100 °C in the laboratory

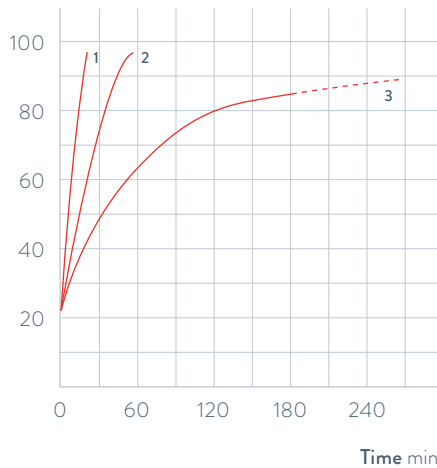
-30 °C  100 °C

Affordable thermostats with reliable technology in a modern design

LAUDA Alpha is the most cost-effective entry-level line of LAUDA bath thermostats. These reliable and user-friendly thermostats are reduced to the essentials in terms of their functions. Designed for use with non-flammable liquids, they can be used for internal temperature control tasks and, when used with a pump connection set, also for external temperature control tasks.

HEATING PERFORMANCE Heat transfer liquid: Water, bath closed

Bath temperature °C



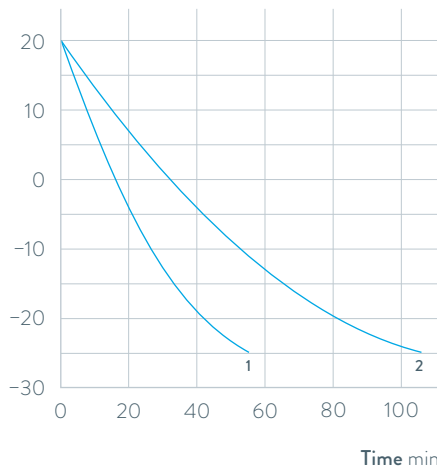
- 1 A6
- 2 A12
- 3 A24



Immersion thermostat with screw clamp for fixing

COOLING PERFORMANCE Heat transfer liquid: Ethanol, bath closed

Bath temperature °C



- 1 RA8
- 2 RA12

Important functions

- Deep-drawn stainless steel bath vessels
- Integrated timer function allows automatic device shutdown (Standby)
- Low-level and overtemperature protection for operation with non-flammable liquids

Included accessories

Screw clamp (for immersion thermostat), bath cover, pump connection set (for refrigeration thermostats), slip-on nozzle

Further accessories

Pump connection set, cooling coil, bath cover set

All technical data and power supply variants can be found in the [Technical data](#) section.

More at www.lauda.de/de/1724



LAUDA Alpha

The LAUDA Alpha device line, suitable for non-flammable liquids, covers a temperature range from -30 to 100 °C. Alpha comprises one immersion, three heating, and two cooling thermostats with natural refrigerants and is the optimal solution for basic applications in the laboratory.



Unlimited versatility in temperature control

-90 °C

300 °C

The new generation of temperature control technology

Powerful, sustainable, digital, and modular – LAUDA is redefining temperature control technology for the laboratory. The innovative LAUDA Universa product line offers a comprehensive modular system of bath circulation thermostats in three performance classes: ECO, PRO, and MAX. From economically optimized standard devices to powerful high-end thermostats, each device can be flexibly configured – perfectly tailored to your application.

MODULARITY



The modular design of the bath thermostats ensures maximum flexibility: standardized bath sizes, different performance control units and accessories can be combined with one another almost without exception. Modularity also ensures the perfect price-performance ratio.

- Bath volume: 4 to 42 liters
- Bath depth: 160, 200 and 320 mm

SUSTAINABILITY



Five pillars form the foundation for sustainable LAUDA bath thermostats:

- Latest innovative technology ensures maximum energy efficiency
- Environmentally friendly refrigerant
- Highest quality materials and sophisticated manufacturing processes ensure maximum durability
- Easy to repair
- Trade-in of old devices for recycling

PERFORMANCE



All bath thermostats are designed for both internal and external temperature control applications. Device characteristics include high precision when maintaining a constant temperature and maximum speed when reaching the target temperature, as well as outstanding dynamics in the event of temperature jumps:

- Max. cooling output 1.6 kW
- Max. heating output 3.7 kW
- Temperature range from -90 to 300 °C
- Temperature stability up to 0.01 K

DIGITIZATION



Wireless control of devices, analysis of temperature curves, and management of programs via WLAN and app, as well as the modular interface concept, allow LAUDA Universa bath circulators to be flexibly integrated into communication scenarios.

- Ethernet, USB, wireless network as standard
- Other interfaces available as accessories
- LAUDA Command app
- Remote maintenance and monitoring via LAUDA.LIVE

NEW

LAUDA.LIVE
ready



LAUDA Universa ECO –
The entry point
into the modular world
Temperature range from
–30 to 100 °C



LAUDA Universa PRO –
The modular solution
for versatile processes
Temperature range from
–45 to 200 °C



LAUDA Universa MAX –
The powerful solution
for the highest demands
Temperature range from
–90 to 300 °C

LAUDA Universa

LAUDA Universa stands for a new generation of bath circulators – reliable, precise, and powerful. Three clearly graded performance classes enable the optimal selection for a wide range of requirements in laboratories, research, and industry. Whether entry-level, all-rounder, or high-end system: All device variants impress with high temperature stability, strong heating and cooling performance, and modern features for greater efficiency and process reliability.

LAUDA Universa ECO

The smart choice for convenient basic temperature control from -30 to 100 °C

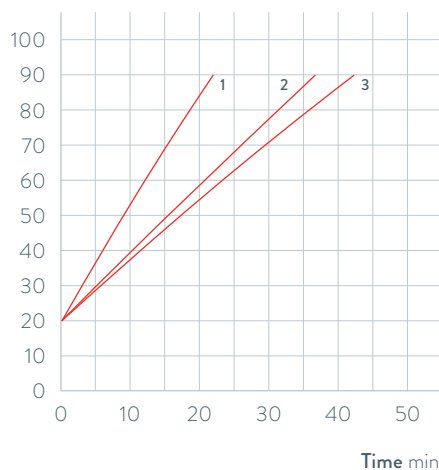
-30 °C  100 °C

Reliable. Compact. Economical.

For basic temperature control tasks in everyday laboratory work, the LAUDA Universa ECO product variant offers reliable performance at an attractive entry-level price. With 300 W cooling capacity, up to 2 kW heating capacity, a temperature range from -30 to 100 °C, and simple operation, the system is ideal for routine applications.

HEATING PERFORMANCE Heat transfer liquid: Water, bath closed

Bath temperature °C



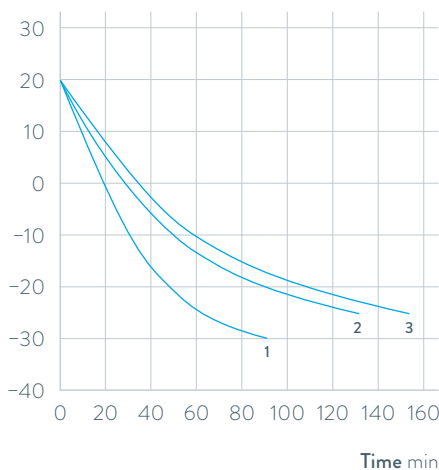
- 1 U 8 E
- 2 U 12 E
- 3 U 16 E



Immersion thermostat with clamping screw for fixing

COOLING PERFORMANCE Heat transfer liquid: Ethanol, bath closed

Bath temperature °C



- 1 U 830 E
- 2 U 1225 E
- 3 U 1625 E

Important functions

- Timer function
- The LAUDA Command app enables wireless device operation on external devices such as PCs, tablets, and smartphones in the network
- Remote monitoring and maintenance via LAUDA.LIVE

Included accessories

Mounting screw (for immersion thermostats), bath cover (for refrigeration thermostats), WLAN, Ethernet, and USB interfaces

Further accessories

Pump connection set, cooling coil, bath cover with ring openings or with feed-through, Command Professional app

All technical data and power supply variants can be found in the [Technical data](#) section.

More at www.lauda.de/de/1820

NEW

LAUDA.LIVE
ready



LAUDA Universa ECO

LAUDA Universa ECO is the entry-level model in the LAUDA Universa family and combines high sustainability with digital control. The energy-efficient thermostats with natural refrigerants are particularly resource-efficient thanks to speed-controlled compressors and fans. Their temperature range extends from -30 to 100 °C. Universa ECO includes an immersion thermostat, three heating thermostats, and three cooling thermostats. The heating thermostats are also available in versions with a transparent bath.



LAUDA Universa PRO

The all-rounder for versatile laboratory applications from -45 to $200\text{ }^{\circ}\text{C}$

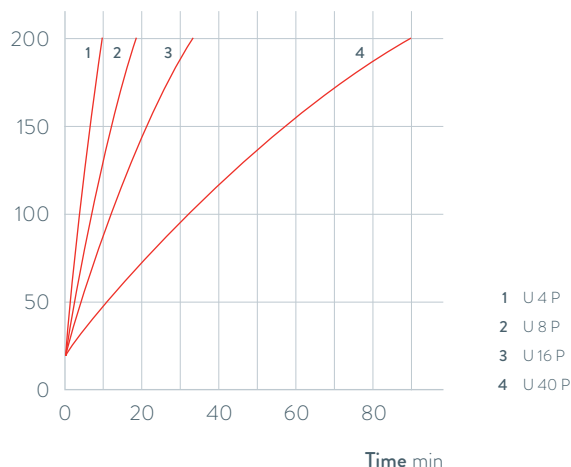


Flexible. Powerful. Dynamic.

LAUDA Universa PRO products combine powerful performance with digital intelligence. With 200 to 800 W cooling capacity, up to 2.5 kW heating capacity, temperature ranges from -45 to $200\text{ }^{\circ}\text{C}$, and numerous functions such as a program controller, fluid menu, adaptive bath edge ventilation, and weekly planner, they offer the perfect balance for demanding applications in the laboratory environment. In addition, a comprehensive connectivity package with Ethernet, USB, and WLAN as standard, as well as twelve additional interfaces as accessories, enables integration into numerous scenarios.

HEATING PERFORMANCE Heat transfer liquid: Therm 250, bath closed

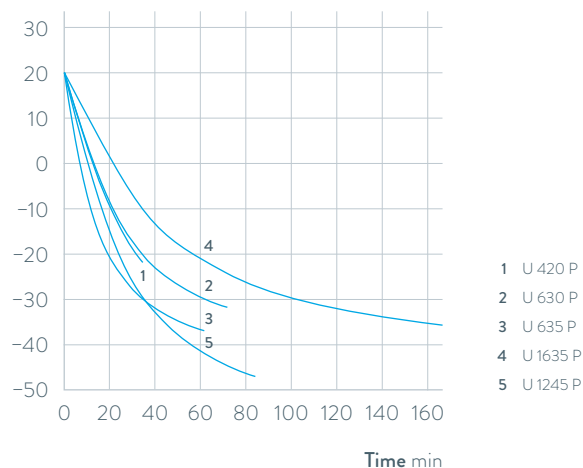
Bath temperature $^{\circ}\text{C}$



Adjustment of the flow distribution for internal and external circulation, directly on the front of the control head during operation

COOLING PERFORMANCE Heat transfer liquid: Ethanol, bath closed

Bath temperature $^{\circ}\text{C}$



Important functions

- Powerful pressure pump with 6 selectable power levels
- Programmer, fluid menu
- Can be retrofitted with two additional interface modules
- The LAUDA Command app enables wireless device operation on external devices such as PCs, tablets, and smartphones in the network
- Remote monitoring and maintenance via LAUDA.LIVE

Included accessories

Mounting screw (for immersion thermostats), cooling coil (for heating thermostats), bath cover, pump connection set (for cooling thermostats), olive connection set, WLAN, Ethernet, and USB interfaces

Further accessories

Pump connection set (for immersion and heating thermostats), bath cover, plug-in modules, Command Professional app

All technical data and power supply variants can be found in the [Technical data](#) section.

More at www.lauda.de/de/1820

NEW

LAUDA.LIVE
ready



LAUDA Universa PRO

LAUDA Universa PRO is the all-rounder for numerous temperature control applications. The energy-efficient thermostats feature speed-controlled compressors and fans, sophisticated cooling control, and are operated with natural refrigerants. The comprehensive interface concept offers maximum flexibility. The wide range of functions, the Command app, and LAUDA.LIVE make Universa PRO a versatile solution for demanding temperature control tasks. LAUDA Universa PRO offers one immersion thermostat, four heating thermostats with stainless steel baths, as well as three with transparent baths and five cooling thermostats. The variants cover a temperature range from -45 to 200°C .



LAUDA Universa MAX

The high-performance solution

for the most demanding requirements from -90 to 300 °C

-90 °C

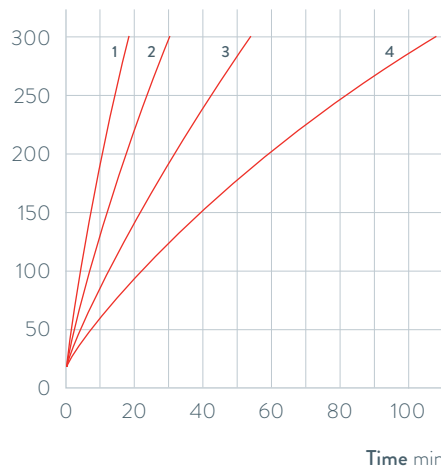
300 °C

Maximum performance. Precise control. Extreme temperature ranges.

As a high-end solution and the most powerful variant, Universa MAX offers up to 1.6 kW cooling capacity with a working temperature range from -90 to 300 °C. Like LAUDA PRO, they offer a wide range of functions with a program controller, fluid menu, adaptive bath edge ventilation, and weekly planner, but also feature additional functions such as self-adaptation and higher performance. They can be used with digital and cloud solutions such as Command app and LAUDA.LIVE and are already prepared for further developments in artificial intelligence such as predictive maintenance.

HEATING PERFORMANCE Heat transfer liquid: Therm 250, bath closed

Bath temperature °C



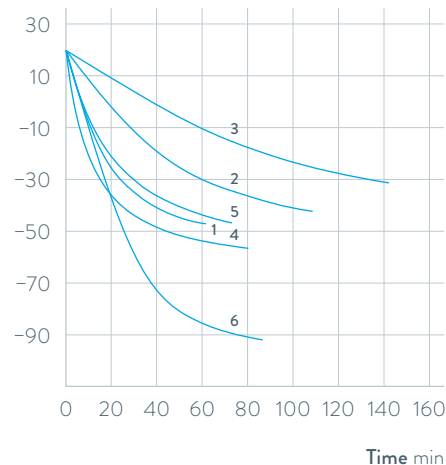
- 1 U 8 M
- 2 U 12 M
- 3 U 20 M
- 4 U 40 M



Equipped with Ethernet, USB, WLAN, and Pt100/LiBus as standard – expandable with two interface modules

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

Important functions

- Powerful pressure/suction pump with 8 selectable power levels
- Adaptive bath edge ventilation
- Programmer, weekly planner, calibration options, self-adaptation
- Can be retrofitted with two additional interface modules
- All device types with pressure-suction pump are also available with ball bearing pump as an option
- LAUDA Command app enables wireless device operation
- Remote monitoring and maintenance via LAUDA.LIVE

Included accessories

Cooling coil, pump connection, bath cover, WLAN, Ethernet and USB interfaces, olive connection set

Further accessories

Reverse flow protection, coolant valve, interface modules (see p. 86), jet pipes, Command Professional app

All technical data and power supply variants can be found in the [Technical data](#) section.

More at www.lauda.de/de/1820

NEW

LAUDA.LIVE
ready



LAUDA Universa MAX

LAUDA Universa MAX is the high-end class of the LAUDA Universa family. These powerful thermostats combine all the functions of the Universa PRO with additional features such as self-adaptation and increased device performance for pumping, heating, and cooling. Equipped with a pressure-suction pump, they offer maximum flexibility for internal and external temperature control tasks. The energy-efficient systems with natural refrigerants and comprehensive digital connectivity set new standards in performance, precision, and ease of use. Four heating and six cooling thermostats cover a temperature range from -90 to 300°C .



LAUDA Proline Kryomats

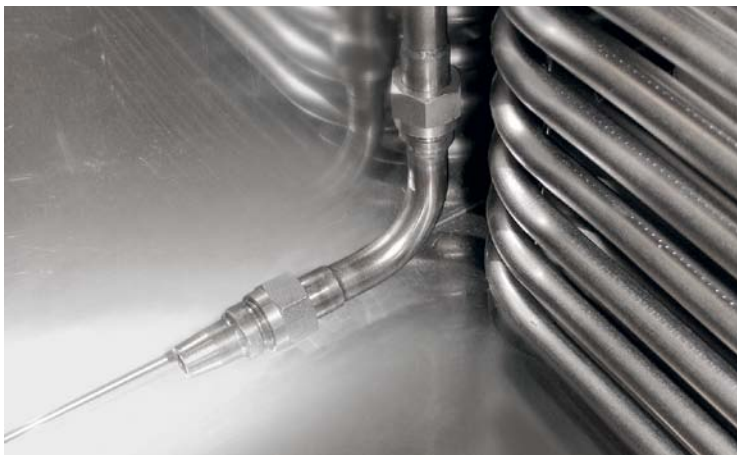
High-performance cooling thermostats from -90 to 200°C for use in process technology and material testing

-90°C

200°C

High cooling performance and compact design

The Proline Kryomats are cooling thermostats that feature the latest technology with high efficiency and an excellent price-performance ratio. The pressure pump is optimized for internal circulation and can be set to four levels – the standard-issue LAUDA Command remote control also makes it especially user-friendly. Furthermore, integrated bath edge and bath bridge heating prevent the formation of condensation caused by air humidity at low temperatures.



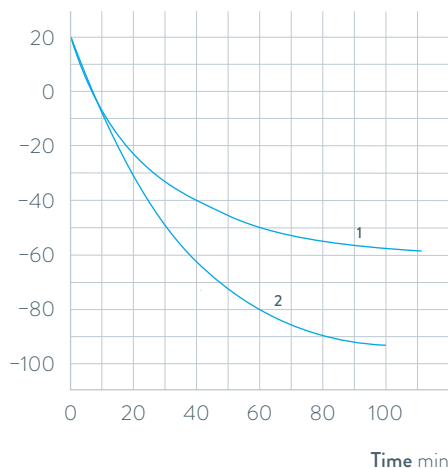
Optimal circulation and temperature distribution throughout the entire bath thanks to an adjustable pump nozzle



Spacious baths and large bath openings – ideal for bulky test specimens and effective throughput

COOLING PERFORMANCE Heat transfer liquid: Ethanol, bath closed

Bath temperature $^{\circ}\text{C}$



1 RP 4050 C

2 RP 4090 C

Important functions

- Removable Command operating unit with high-resolution, graphic LCD screen and individually selectable display functions
- Programmer with 150 temperature/time segments, can be divided into 5 programs
- Pump connections on side and rear, integrated bypass

Included accessories

Bath cover, tubing nipples

Further accessories

Additional pump, hanging baskets, plug-in modules: analog, contact, Ethernet, Profibus, and EtherCAT modules

All technical data and power supply variants can be found in the [Technical data](#) section.

More at www.lauda.de/de/1742



LAUDA Proline Kryomats

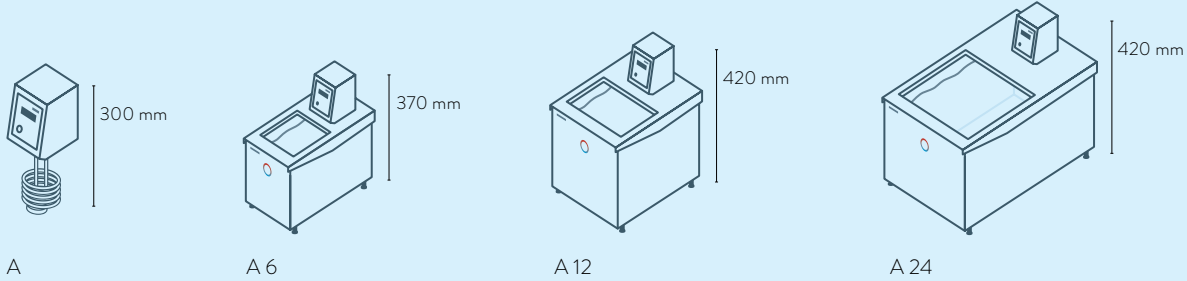
The air and water-cooled versions of the Proline Kryomats offer a large bath opening and a volume of 40 liters.



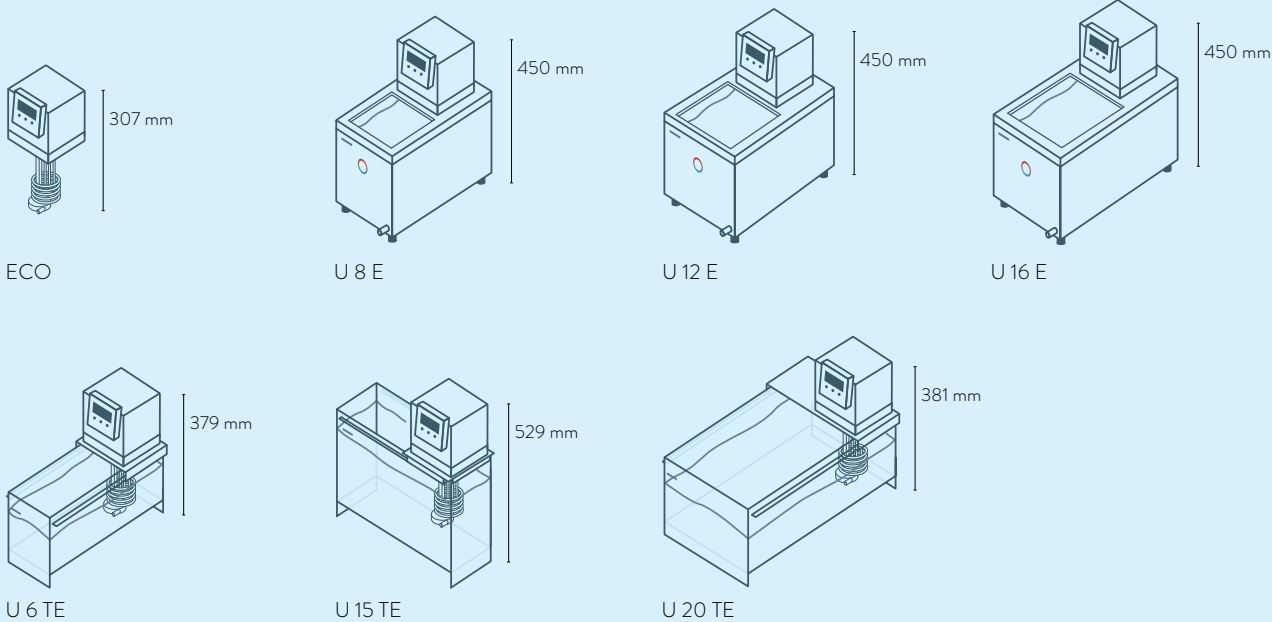
LAUDA Immersion and bath circulation thermostats

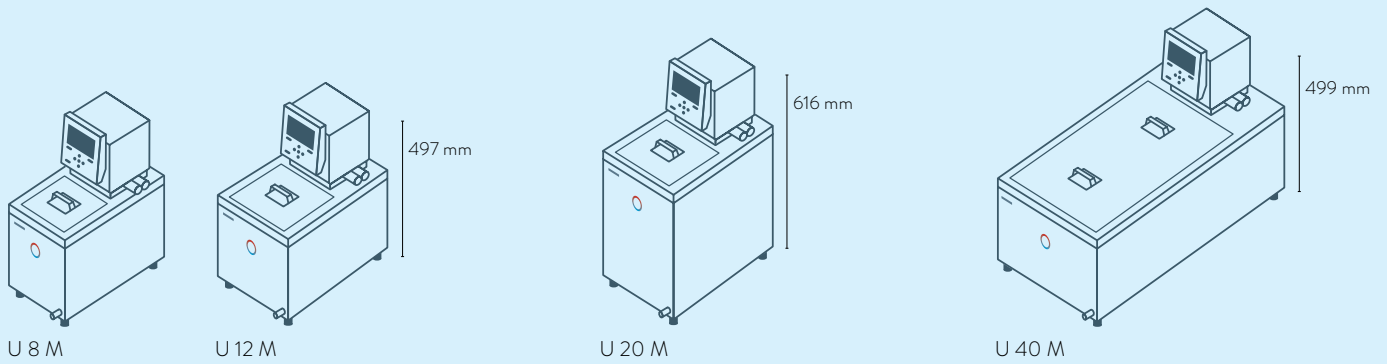
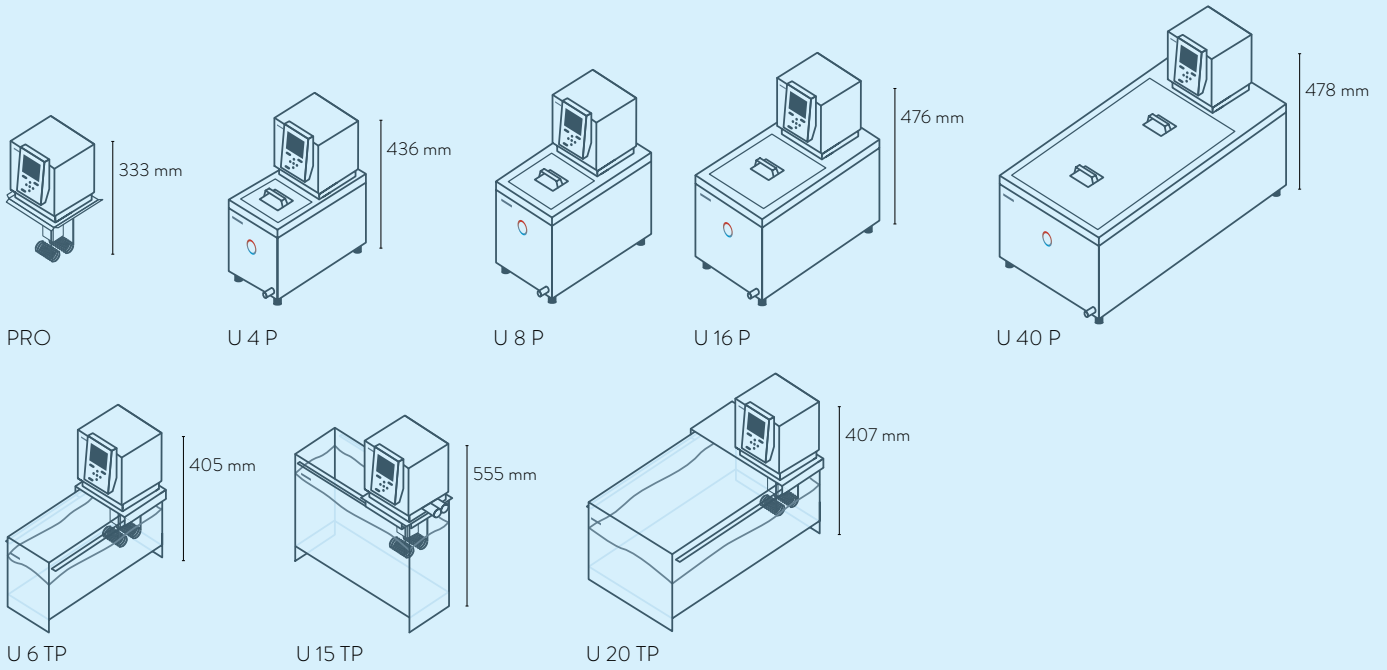
Device type overview

LAUDA Alpha / Page 70



LAUDA Universa ECO / Page 74

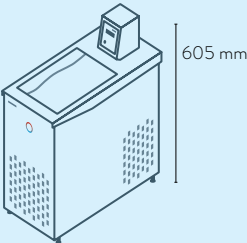




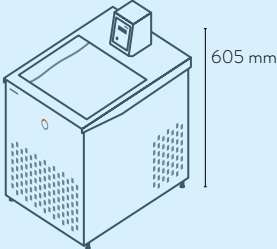
LAUDA Cooling thermostats

Device type overview

LAUDA Alpha / Page 70

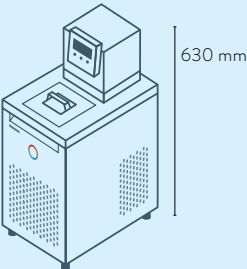


RA 8

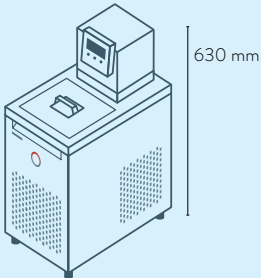


RA 12

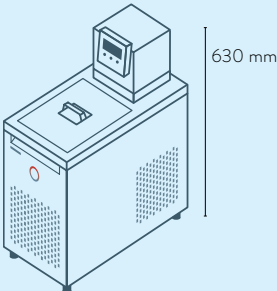
LAUDA Universa ECO / Page 74



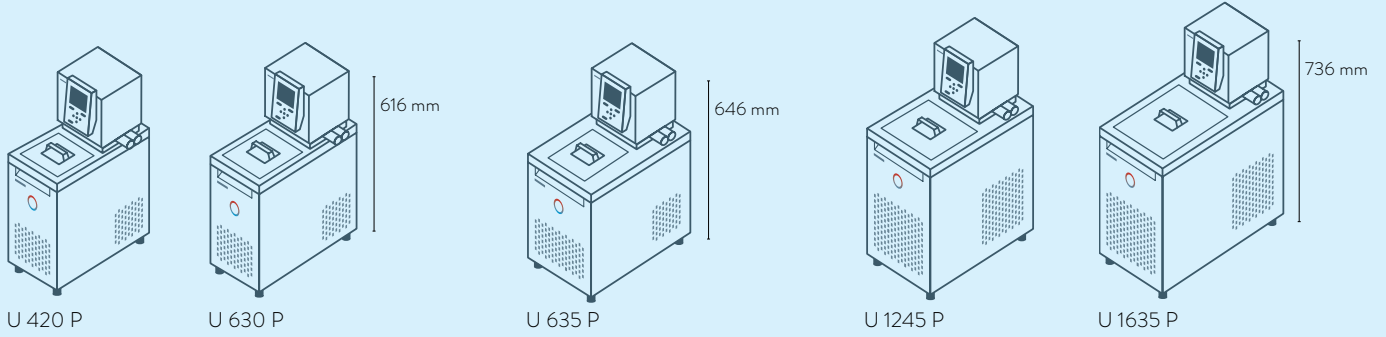
U 830 E



U 1225 E



U 1625 E



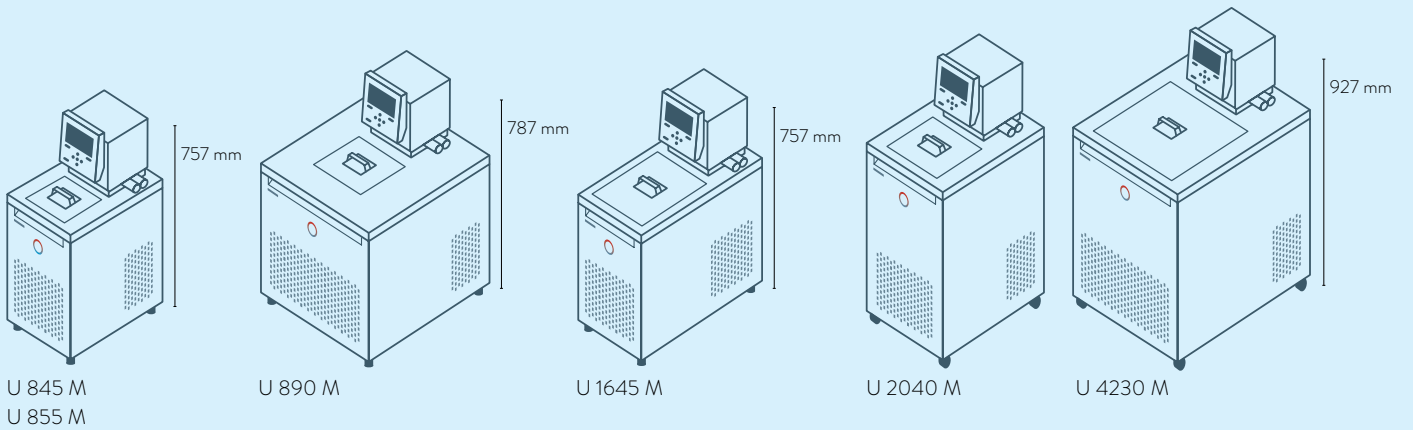
U 420 P

U 630 P

U 635 P

U 1245 P

U 1635 P



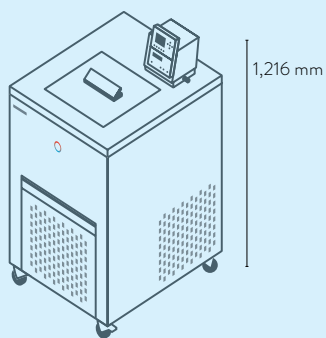
U 845 M
U 855 M

U 890 M

U 1645 M

U 2040 M

U 4230 M



RP 4050 C / RP 4050 CW
RP 4090 C / RP 4090 CW

LAUDA Immersion and bath circulation thermostats

Interfaces

Part Number	WLAN	USB Host (Typ A)	Ethernet	Pt100	LiBus module	RS-232 / 485	Analog module	Pt100 / LiBus module small cover	Pt100 / LiBus module large cover	RS-232 / 485 Advanced / LiBus	Contact Namur Advanced / LiBus	Contact D-Sub Advanced / LiBus	Profibus Advanced / LiBus	Ethernet Advanced / LiBus	EtherCAT M8 Advanced / LiBus*	Profinet RJ45 Advanced / LiBus	CAN D-Sub Advanced / LiBus	OPC UA RJ45 Advanced / LiBus	Modbus TCP Advanced / LiBus	Contact Namur	Contact D-Sub	Profibus	EtherCAT M8	EtherCAT RJ45	Number of module slots, large	Number of module slots, small
	LRZ 913	LRZ 912	LRZ 918	LRZ 925	LRZ 926	LRZ 927	LRZ 928	LRZ 929	LRZ 930	LRZ 931	LRZ 932	LRZ 933	LRZ 934	LRZ 935	LRZ 914	LRZ 915	LRZ 917	LRZ 922	LRZ 923							
LAUDA Alpha / Page 70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LAUDA Universa ECO / Page 74	S	S	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LAUDA Universa PRO / Page 76	S	S	S	-	-	-	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	-	-	-	Z	-	1	1
LAUDA Universa MAX / Page 78	S	S	S	S	S	-	Z	-	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	-	-	-	Z	-	2	-
LAUDA Proline Kryomat / Page 80	-	-	Z	S	-	S	Z	-	-	-	-	-	-	-	-	-	-	-	-	Z	Z	Z	Z	Z	2	-

S = Series standard
Z = Available as an accessory

* from Q3/2026

LAUDA interfaces



LRZ 912
Analog module



LRZ 913
RS-232/485
interface



LRZ 914
Contact module, 1 input,
1 output (NAMUR)



LRZ 915
Contact module,
3 inputs, 3 outputs



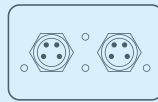
LRZ 917
Profibus module



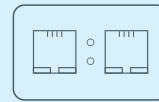
LRZ 918
Pt100/LiBus-Modul,
small cover



LRZ 921
Ethernet module



LRZ 922
EtherCAT module
with M8 connection



LRZ 923
EtherCAT module
with RJ45 connection



LRZ 925
External Pt100/LiBus-
module, large cover

LAUDA interfaces Advanced



LRZ 926
RS-232/485 module
Advanced, D-Sub 9-pin



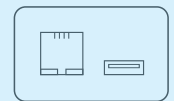
LRZ 927
Contact module NAMUR
Advanced, 1 input, 1 output



LRZ 928
Contact module D-Sub
Advanced, 3 inputs, 3 outputs



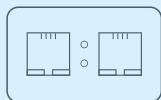
LRZ 929
Profibus module
Advanced, D-Sub 9-pin



LRZ 930
Ethernet module
Advanced, RJ45



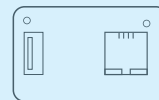
LRZ 931
EtherCAT module
Advanced, with M8 connection



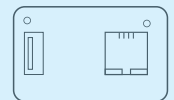
LRZ 932
Profinet module
Advanced, RJ45



LRZ 933
CAN module Advanced,
D-Sub 9-pin



LRZ 934
OPC UA module Advanced



LRZ 935
Modbus TCP module
Advanced

LAUDA Immersion and bath circulation thermostats

Function overview

Operating element	Alpha	Universa ECO	Universa PRO	Universa MAX	Proline Kryomate
Display	7-Segment	VA LC	TFT	TFT	LCD mono
Size	66 x 37 mm	2,9"; 77 x 38 mm	3,5"; 77 x 64 mm	5"; 121 x 76 mm	Base/Command
Mode of operation	3-button	3-button	Cursor softkey	Cursor softkey	Cursor softkey
Removable control	-	-	-	-	✓
Language	1 (english)	1 (english)	6	6	4
Data logging, export to USB stick	-	✓	✓	✓	-
Safe mode	-	-	-	✓	-
1-point calibration	✓	✓	✓	✓	✓
2-point calibration	-	-	-	✓	-
Self-adaptation control	-	-	-	✓	✓
Programmer, programs/segments	-	-	5 / 150	5 / 150	5 / 150
Programmer, tolerance range function	-	-	✓	✓	✓
Ramp function	-	-	✓	✓	✓
Timer function	-	✓	✓	✓	✓
Weekly timer	-	-	✓	✓	✓
Countdown function	✓	✓	-	-	-
Graphic temperature profile display	-	-	✓	✓	✓
Switch for dividing the pump flow rate	-	-	✓	✓	✓
Level indicator (digital)	-	-	-	✓	✓
User-defined fluids	-	-	✓	✓	-
T _{set} setting	-	-	✓	✓	-
Integrated web server	-	✓	✓	✓	-
Cloud connection	-	✓	✓	✓	-
Adaptive bath edge ventilation	-	-	✓	✓	-
Fluid menu	-	-	✓	✓	-
Standby timer	-	-	✓	✓	✓
Low level warning	-	-	-	✓	✓
Low level alarm	✓	✓	✓	✓	✓
Overtemperature shutdown point	-	-	✓	✓	✓
Automatic setting of temperature limits	-	-	✓	✓	-
Auto start	-	-	✓	✓	✓
Current consumption limit	-	-	✓	✓	-
Drain tap	-	✓	✓	✓	✓
Drain screw	✓*	-	-	-	-

* Alpha Cooling thermostats

LAUDA Immersion and bath circulation thermostats

Standard accessories

Device type	Bath cover	Cooling coil with M16x1 connection thread	Pump connection set with M16x1 stainless steel connections	2x hose olives 13.5 mm, 2x union nuts	Mounting screw
LAUDA Alpha with natural refrigerant / Page 70					
Immersion thermostats	-	-	-	-	Yes
Heating thermostats	-	-	-	-	-
Cooling thermostats	Yes	-	Nipple (Øa = 12 mm)	-	-
LAUDA Universa ECO with natural refrigerant / Page 74					
Immersion thermostats	-	-	-	-	Yes
Heating thermostats	-	-	-	-	-
Heating thermostats with transparent bath	-	-	-	-	-
Cooling thermostats	Yes	-	-	-	-
LAUDA Universa PRO with natural refrigerant / Page 76					
Immersion thermostats	-	-	-	-	Yes
Heating thermostats	-	Yes	-	Yes	-
Heating thermostats with transparent bath	-	Yes	-	Yes	-
Cooling thermostats	Yes	-	Yes	Yes	-
LAUDA Universa MAX with natural refrigerant / Page 78					
Heating thermostats	Yes	Yes	Yes	Yes	-
Cooling thermostats	Yes	-	Yes	Yes	-
LAUDA Proline Kryomat / Page 80					
Cooling thermostats	Yes	-	Yes	Yes	-

LAUDA Immersion and heating thermostats

Technical data according to DIN 12876 standard

Device type	Working temperature range °C	Working temperature range with water cooling °C	Operating temperature range °C	Temperature stability ±K	Safety fittings	Heater power max. kW	Pump type*	Pump pressure max. bar	Pump suction max. bar	Pump flow max. pressure L./min	Pump flow max. suction L./min	Pump connection thread mm	Nipples Øe	Bath volume min. L
LAUDA Alpha Immersion and heating thermostats / Page 70														
A	25 ... 100	20 ... 100	-25 ... 100	0.05	NFL	1.5	D	0.20	-	15.0	-	N/A	-	-
A 6	25 ... 100	20 ... 100	-25 ... 100	0.05	NFL	1.5	D	0.20	-	15.0	-	N/A	-	2.5
A 12	25 ... 100	20 ... 100	-25 ... 100	0.05	NFL	1.5	D	0.20	-	15.0	-	N/A	-	8.0
A 24	25 ... 100	20 ... 100	-25 ... 100	0.05	NFL	1.5	D	0.20	-	15.0	-	N/A	-	18.0
LAUDA Universa ECO Immersion and heating thermostats / Page 74														
ECO	35 ... 100	25 ... 100	-30 ... 100	0.05	NFL	2.2	D	0.20	-	15.0	-	N/A	-	-
U 6 TE	35 ... 100	20 ... 100	-20 ... 100	0.05	NFL	2.2	D	0.20	-	15.0	-	N/A	-	5.2
U 15 TE	35 ... 100	20 ... 100	-20 ... 100	0.05	NFL	2.2	D	0.20	-	15.0	-	N/A	-	13.2
U 20 TE	35 ... 100	20 ... 100	-20 ... 100	0.05	NFL	2.2	D	0.20	-	15.0	-	N/A	-	13.3
U 8 E	35 ... 100	20 ... 100	-30 ... 100	0.05	NFL	2.2	D	0.20	-	15.0	-	N/A	-	6.6
U 12 E	35 ... 100	20 ... 100	-30 ... 100	0.05	NFL	2.2	D	0.20	-	15.0	-	N/A	-	10.8
U 16 E	35 ... 100	20 ... 100	-30 ... 100	0.05	NFL	2.2	D	0.20	-	15.0	-	N/A	-	12.7

* D: Pressure pump (for circulating the temperature control fluid)

V (D): Variable speed pump (D with power levels)

Bath volume max. L	Bath opening (W x D) mm	Bath depth mm	Usable depth mm	Height top of bath mm	Dimensions (W x D x H) mm	Weight kg	Power supply V; Hz	Loading max. kW	Option WLAN	Option	Part Number	Device type
-	-	-	-	-	125×150×300	3.6	230 V; 50 Hz & 220 V; 60 Hz	1.5	-	-	L000618	A
5.5	145×161	150	130	212	181×332×370	6.5	230 V; 50 Hz & 220 V; 60 Hz	1.5	-	-	L000619	A 6
12.0	235×161	200	180	262	270×332×420	7.7	230 V; 50 Hz & 220 V; 60 Hz	1.5	-	-	L000620	A 12
25.0	295×374	200	180	262	332×535×420	10.5	230 V; 50 Hz & 220 V; 60 Hz	1.5	-	-	L000621	A 24
-	-	-	-	-	195×231×307	4.0	200-240 V; 50/60 Hz	2.4	- WLAN	-	L004282 L003967	ECO
8.0	130×270	160	140	206	189×435×379	5.9	200-240 V; 50/60 Hz	2.4	- WLAN	-	L004713 L004701	U 6 TE
15.0	263×130	310	290	356	432×189×529	7.1	200-240 V; 50/60 Hz	2.4	- WLAN	-	L004714 L004702	U 15 TE
20.0	300×343	160	140	208	363×510×381	8.8	200-240 V; 50/60 Hz	2.4	- WLAN	-	L004715 L004703	U 20 TE
8.8	150×150	200	180	280	230×400×450	13.0	200-240 V; 50/60 Hz	2.4	- WLAN	-	L004283 L003968	U 8 E
14.3	200×200	200	180	280	280×450×450	16.0	200-240 V; 50/60 Hz	2.4	- WLAN	-	L004284 L003969	U 12 E
17.1	200×300	200	180	280	280×550×450	17.0	200-240 V; 50/60 Hz	2.4	- WLAN	-	L004285 L003970	U 16 E

LAUDA Immersion and heating thermostats

Technical data according to DIN 12876 standard

Device type	Working temperature range °C	Working temperature range with water cooling °C	Operating temperature range °C	Temperature stability ±K	Safety fittings	Heater power max. kW	Pump type*	Pump pressure max. bar	Pump suction max. bar	Pump flow max. pressure L./min	Pump flow max. suction L./min	Pump connection thread mm	Nipples Øe	Bath volume min. L
LAUDA Universa PRO Immersion and heating thermostats / Page 76														
PRO	30 ... 200	20 ... 200	-30 ... 200	0.02	FL	2.8	V(D)	0.55	-	22.0	-	-	13.5	-
U 6 TP	30 ... 100	20 ... 100	-20 ... 100	0.01	FL	2.8	V(D)	0.55	-	22.0	-	-	13.5	5.0
U 15 TP	30 ... 100	20 ... 100	-20 ... 100	0.01	FL	2.8	V(D)	0.55	-	22.0	-	-	13.5	13.5
U 20 TP	30 ... 100	20 ... 100	-20 ... 100	0.01	FL	2.8	V(D)	0.55	-	22.0	-	-	13.5	15.0
U 4 P	30 ... 200	20 ... 200	-30 ... 200	0.01	FL	2.8	V(D)	0.55	-	22.0	-	-	13.5	3.0
U 8 P	40 ... 200	20 ... 200	-30 ... 200	0.01	FL	2.8	V(D)	0.55	-	22.0	-	-	13.5	5.8
U 16 P	40 ... 200	20 ... 200	-30 ... 200	0.01	FL	2.8	V(D)	0.55	-	22.0	-	-	13.5	11.5
U 40 P	40 ... 200	20 ... 200	-30 ... 200	0.01	FL	2.8	V(D)	0.55	-	22.0	-	-	13.5	27.5
LAUDA Universa MAX Heating thermostats / Page 78														
U 8 M	70 ... 300	20 ... 300	-30 ... 300	0.01	FL	3.7	VF	0.70	0.4	25.0	23	M16×1	13.5	5.8
U 12 M	70 ... 300	20 ... 300	-30 ... 300	0.01	FL	3.7	VF	0.70	0.4	25.0	23	M16×1	13.5	8.5
U 16 M	70 ... 300	20 ... 300	-30 ... 300	0.01	FL	3.7	VF	0.70	0.4	25.0	23	M16×1	13.5	11.5
U 20 M	65 ... 300	20 ... 300	-30 ... 300	0.01	FL	3.7	VF	1.10	-	32.0	-	M16×1	13.5	9.5
U 40 M	65 ... 300	20 ... 300	-30 ... 300	0.01	FL	3.7	VF	0.70	0.4	25.0	23	M16×1	13.5	29.0

* V (D): Variable pump (D with power levels)

VF: Pressure-suction pump with power levels

Bath volume max. L	Bath opening (W x D) mm	Bath depth mm	Usable depth mm	Height top of bath mm	Dimensions (W x D x H) mm	Weight kg	Power supply V; Hz	Loading max. kW	Option WLAN	Option**	Part Number	Device type
-	-	-	-	-	195×234×333	6.0	200-240 V; 50/60 Hz	2.1	- WLAN	-	L004222 L003890	PRO
6.0	130×270	160	140	206	189×438×405	6.0	200-240 V; 50/60 Hz	2.9	- WLAN	-	L004227 L003895	U 6 TP
15.0	263×130	310	290	356	432×191×555	8.0	200-240 V; 50/60 Hz	2.9	- WLAN	-	L004228 L003896	U 15 TP
20.0	300×343	160	140	208	363×513×407	9.0	200-240 V; 50/60 Hz	2.9	- WLAN	-	L004229 L003897	U 20 TP
5.0	130×100	160	140	240	190×330×436	12.0	200-240 V; 50/60 Hz	2.9	- WLAN	-	L004223 L003891	U 4 P
8.5	150×150	200	180	280	230×400×476	15.0	200-240 V; 50/60 Hz	2.9	- WLAN	-	L004224 L003892	U 8 P
17.0	200×300	200	180	280	280×550×476	18.0	200-240 V; 50/60 Hz	2.9	- WLAN	-	L004225 L003893	U 16 P
41.0	300×600	200	180	282	380×850×478	29.0	200-240 V; 50/60 Hz	2.9	- WLAN	-	L004226 L003894	U 40 P
8.5	150×150	200	180	280	230×400×497	17.0	200-240 V; 50/60 Hz	3.8	- WLAN WLAN	- KP KP	L004138 L004148 L003749 L003759	U 8 M
13.0	200×200	200	180	280	280×450×497	19.0	200-240 V; 50/60 Hz	3.8	- WLAN WLAN	- KP KP	L004139 L004149 L003750 L003760	U 12 M
17.0	200×300	200	180	280	280×550×497	22.0	200-240 V; 50/60 Hz	3.8	WLAN WLAN	- KP	L003822 L003823	U 16 M
22.0	200×200	320	300	400	280×450×617	24.0	200-240 V; 50/60 Hz	3.8	- WLAN	- -	L004140 L003751	U 20 M
42.0	300×600	200	180	282	380×850×499	36.0	200-240 V; 50/60 Hz	3.8	- WLAN WLAN	- KP KP	L004141 L004150 L003752 L003761	U 40 M

** KP: Ball bearing pump

LAUDA 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 type*	Pump pressure max. bar
					20 °C	10 °C	0 °C	-10 °C	-20 °C	-25 °C	-30 °C	-40 °C	-50 °C	-60 °C	-70 °C		

LAUDA Alpha Cooling thermostats with natural refrigerant / Page 70

RA 8	-25 ... 100	0.05	NFL	1.5	0.33	0.29	0.26	0.18	0.10	0.07	-	-	-	-	-	-	-	D	0.2
RA 12	-25 ... 100	0.05	NFL	1.5	0.33	0.29	0.26	0.18	0.10	0.07	-	-	-	-	-	-	-	D	0.2

LAUDA Universa ECO Cooling thermostats with natural refrigerant / Page 74

U 830 E	-30 ... 100	0.05	NFL	2.2	0.3	-	0.23	0.18	0.10	-	0.07	-	-	-	-	-	-	D	0.2
U 1225 E	-25 ... 100	0.05	NFL	2.2	0.3	-	0.22	0.15	0.07	-	-	-	-	-	-	-	-	D	0.2
U 1625 E	-25 ... 100	0.05	NFL	2.2	0.3	-	0.22	0.14	0.06	-	-	-	-	-	-	-	-	D	0.2

LAUDA Universa PRO Cooling thermostats with natural refrigerant / Page 76

U 420 P	-20 ... 200	0.02	FL	2.8	0.2 ²	-	0.18 ²	0.14 ²	0.07 ¹	-	-	-	-	-	-	-	-	V(D)	0.55
U 630 P	-30 ... 200	0.02	FL	2.8	0.3 ²	-	0.25 ²	0.19 ²	0.12 ¹	-	0.02 ¹	-	-	-	-	-	-	V(D)	0.55
U 635 P	-35 ... 200	0.02	FL	2.8	0.5 ²	-	0.47 ²	0.30 ²	0.17 ¹	-	0.06 ¹	-	-	-	-	-	-	V(D)	0.55
U 1245 P	-45 ... 200	0.02	FL	2.8	0.8 ²	-	0.73 ²	0.60 ²	0.45 ¹	-	0.26 ¹	0.12 ¹	-	-	-	-	-	V(D)	0.55
U 1635 P	-35 ... 200	0.02	FL	2.8	0.5 ²	-	0.43 ²	0.37 ²	0.15 ¹	-	0.05 ¹	-	-	-	-	-	-	V(D)	0.55

¹Pump output step 3

²Pump output step 6

* V: Variable pump (pressure pump with different power levels)

V (D): Variable pump (D with power levels)

Pump flow max. pressure L/min	Pump connection thread	Nipples \varnothing_e	Bath volume min. L	Bath volume max. L	Bath opening (W x D) mm	Bath depth mm	Usable depth mm	Height top of bath mm	Dimensions (W x D x H) mm	Weight kg	Power supply V; Hz	Loading max. kW	Option WLAN	Option	Part Number	Device type
15.0	N/A	13.5	5.0	7.5	165x177	160	140	450	235x500x605	29.0	230 V; 50 Hz & 220 V; 60 Hz	1.8	-	-	L004603	RA 8
15.0	N/A	13.5	9.5	14.5	300x203	160	140	450	365x500x605	37.0	230 V; 50 Hz & 220 V; 60 Hz	1.8	-	-	L004606	RA 12
15.0	-	-	6.4	8.5	150x150	200	180	460	260x480x630	28.0	220-240 V; 50/60 Hz	2.4	- WLAN	-	L004286 L003971	U 830 E
15.0	-	-	9.9	13.4	200x200	200	180	460	310x510x630	31.0	220-240 V; 50/60 Hz	2.4	- WLAN	-	L004287 L003972	U 1225 E
15.0	-	-	12.8	17.1	200x300	200	180	460	310x610x630	34.0	220-240 V; 50/60 Hz	2.4	- WLAN	-	L004288 L003973	U 1625 E
22.0	M16x1	13.5	1.8	4.0	130x100	160	140	420	210x410x616	26.0	220-240 V; 50/60 Hz	2.9	- WLAN	-	L004230 L003898	U 420 P
22.0	M16x1	13.5	3.2	5.7	130x150	160	140	420	215x460x616	28.0	220-240 V; 50/60 Hz	2.9	- WLAN	-	L004231 L003899	U 630 P
22.0	M16x1	13.5	3.2	5.7	130x150	160	140	450	290x480x646	34.0	220-240 V; 50/60 Hz	2.9	- WLAN	-	L004232 L003900	U 635 P
22.0	M16x1	13.5	8.5	13.0	200x200	200	180	540	310x510x736	44.0	220-240 V; 50/60 Hz	2.9	- WLAN	-	L004233 L003901	U 1245 P
22.0	M16x1	13.5	11.0	16.5	200x300	200	180	540	310x610x736	41.0	220-240 V; 50/60 Hz	2.9	- WLAN	-	L004234 L003902	U 1635 P

LAUDA 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 type*	Pump pressure max. bar
					20 °C	0 °C	-10 °C	-20 °C	-30 °C	-40 °C	-50 °C	-60 °C	-70 °C	-80 °C	-90 °C		

LAUDA Universa MAX Cooling thermostats with natural refrigerant / Page 78

U 845 M	-45 ... 200	0.01	FL	3.7	0.8 ³	0.70 ³	0.59 ³	0.44 ²	0.26 ²	0.12 ²	-	-	-	-	-	VF	0.7
U 855 M	-55 ... 200	0.01	FL	3.7	1.6 ³	1.25 ³	0.88 ³	0.62 ²	0.38 ²	0.18 ²	0.05 ²	-	-	-	-	VF	0.7
U 890 M	-90 ... 200	0.01	FL	3.7	0.8 ³	0.74 ³	0.72 ³	0.72 ²	0.68 ²	0.64 ²	0.60 ²	0.46 ²	0.28 ²	0.12 ²	0.02 ²	VF	0.7
U 1645 M	-45 ... 200	0.01	FL	3.7	1.6 ³	1.20 ³	0.86 ³	0.58 ²	0.35 ²	0.15 ²	-	-	-	-	-	VF	0.7
U 2040 M	-40 ... 200	0.01	FL	3.7	0.8 ³	0.71 ³	0.60 ³	0.45 ²	0.26 ²	0.10 ²	-	-	-	-	-	V(D)	1.1
U 4230 M	-30 ... 200	0.01	FL	3.7	0.8 ³	0.70 ³	0.59 ³	0.43 ²	0.18 ²	-	0.12 ²	-	-	-	-	V(D)	1.1

LAUDA Proline Kryomate Cooling thermostats / Page 80

RP 4050 C	-50 ... 200	0.05	FL	3.5	5.00 ¹	3.00 ¹	-	1.60 ¹	1.00 ¹	0.50 ¹	0.25 ¹	-	-	-	-	V(D)	0.5
RP 4050 CW	-50 ... 200	0.05	FL	3.5	6.00 ¹	3.50 ¹	-	1.80 ¹	1.10 ¹	0.60 ¹	0.25 ¹	-	-	-	-	V(D)	0.5
RP 4090 C	-90 ... 200	0.05	FL	3.5	3.00 ¹	2.90 ¹	-	2.50 ¹	2.30 ¹	2.00 ¹	1.60 ¹	1.30 ¹	0.80 ¹	0.50 ¹	0.15 ¹	V(D)	0.5
RP 4090 CW	-90 ... 200	0.05	FL	3.5	4.00 ¹	3.70 ¹	-	3.10 ¹	2.70 ¹	2.00 ¹	1.60 ¹	1.30 ¹	0.80 ¹	0.50 ¹	0.15 ¹	V(D)	0.5

¹ Pump output step 2

² Pump output step 4

³ Pump output step 8

* V (D): Variable pump (D with power levels)

VF: Pressure-suction pump with power levels

Pump flow max. pressure L/min	Pump connection thread	Nipples \varnothing_e	Bath volume min. L	Bath volume max. L	Bath opening (W x D) mm	Bath depth mm	Usable depth mm	Height top of bath mm	Dimensions (W x D x H) mm	Weight kg	Power supply V; Hz	Loading max. kW	Option WLAN	Option**	Part Number	Device type
25.0	M16x1	13.5	5.0	8.0	150x150	200	180	540	310x490x757	45.0	200-240 V; 50/60 Hz	3.8	- WLAN WLAN	- KP KP	L004142 L004151 L003753 L003762	U 845 M
25.0	M16x1	13.5	5.0	8.0	150x150	200	180	540	310x490x757	45.0	200-240 V; 50/60 Hz	3.8	- WLAN WLAN	- KP KP	L004143 L004152 L003754 L003763	U 855 M
25.0	M16x1	13.5	5.0	8.0	150x150	200	180	570	525x615x787	77.0	200-240 V; 50/60 Hz	3.8	- WLAN WLAN	- KP KP	L004144 L004153 L003755 L003764	U 890 M
25.0	M16x1	13.5	10.5	16.5	200x300	200	180	540	310x610x757	49.0	200-240 V; 50/60 Hz	3.8	- WLAN WLAN	- KP KP	L004146 L004154 L003757 L003765	U 1645 M
32.0	M16x1	13.5	9.0	21.0	200x200	320	300	710	350x540x927	57.0	200-240 V; 50/60 Hz	3.8	WLAN	- -	L004145 L003756	U 2040 M
32.0	M16x1	13.5	19.0	47.0	300x350	320	300	710	450x690x927	69.0	200-240 V; 50/60 Hz	3.8	WLAN	- -	L004147 L003758	U 4230 M
19.0	-	-	32.0	44.0	350x350	250	230	905	600x700x1,216	129.0	400 V; 3/N/PE; 50 Hz	5.0	-	-	L001653**	RP 4050 C
19.0	-	-	32.0	44.0	350x350	250	230	905	600x700x1,216	124.0	400 V; 3/N/PE; 50 Hz	5.0	-	-	L001657**	RP 4050 CW
19.0	M16x1	13.5	32.0	44.0	350x350	250	230	905	600x700x1,216	161.0	400 V; 3/N/PE; 50 Hz	7.0	-	-	L001655**	RP 4090 C
19.0	M16x1	13.5	32.0	44.0	350x350	250	230	905	600x700x1,216	160.0	400 V; 3/N/PE; 50 Hz	7.0	-	-	L001659**	RP 4090 CW

** Utilises traditional refrigerants (HFCs) in accordance with European legislation to control F-gases (EU) 573/2024.
Detailed information can be found on the respective product detail page of the order number at www.lauda.de

*** KP: Ball bearing pump

LAUDA Immersion and heating thermostats

Power supply variants

Device type	Power supply V; Hz	Heater power max. kW	Loading max. kW	Plug code*	Option WLAN	Option	Part Number	Device type	Power supply V; Hz	Heater power max. kW	Loading max. kW	Plug code*	Option WLAN	Option	Part Number
LAUDA Alpha / Page 70															
A	100 V; 50/60 Hz	1.0	1.0	14	-	-	L000634	A 12	115 V; 60 Hz	1.2	1.2	14	-	-	L000632
A	115 V; 60 Hz	1.2	1.2	14	-	-	L000630	A 24	115 V; 60 Hz	1.2	1.2	14	-	-	L000633
A 6	100 V; 50/60 Hz	1.0	1.0	14	-	-	L000635								
A 6	115 V; 60 Hz	1.2	1.2	14	-	-	L000631								
LAUDA Universa ECO / Page 74															
ECO	100-125 V; 50/60 Hz	1.4	1.5	14	-	-	L004296	U 12 E	100 V; 50/60 Hz	1.0	1.1	14	-	-	L004291
ECO	100 V; 50/60 Hz	1.0	1.1	14	WLAN	-	L003974	U 12 E	100-125 V; 50/60 Hz	1.4	1.5	14	WLAN	-	L003983
ECO	100 V; 50/60 Hz	1.0	1.1	14	-	-	L004289	U 12 E	100-125 V; 50/60 Hz	1.4	1.5	14	-	-	L004298
ECO	100-125 V; 50/60 Hz	1.4	1.5	14	WLAN	-	L003981	U 12 E	100 V; 50/60 Hz	1.0	1.1	14	WLAN	-	L003976
U 8 E	100-125 V; 50/60 Hz	1.4	1.5	14	-	-	L004297	U 16 E	100-125 V; 50/60 Hz	1.4	1.5	14	-	-	L004299
U 8 E	100 V; 50/60 Hz	1.0	1.1	14	WLAN	-	L003975	U 16 E	100-125 V; 50/60 Hz	1.4	1.5	14	WLAN	-	L003984
U 8 E	100 V; 50/60 Hz	1.0	1.1	14	-	-	L004290	U 16 E	100 V; 50/60 Hz	1.0	1.1	14	-	-	L004292
U 8 E	100-125 V; 50/60 Hz	1.4	1.5	14	WLAN	-	L003982	U 16 E	100 V; 50/60 Hz	1.0	1.1	14	WLAN	-	L003977
LAUDA Universa PRO / Page 76															
PRO	100-125 V; 50/60 Hz	1.5	1.5	14	-	-	L004261	U 4 P	100-125 V; 50/60 Hz	1.5	1.5	14	-	-	L004262
PRO	100-125 V; 50/60 Hz	1.5	1.5	14	WLAN	-	L003944	U 4 P	100-125 V; 50/60 Hz	1.5	1.5	14	WLAN	-	L003945
U 6 TP	100-125 V; 50/60 Hz	1.5	1.5	14	-	-	L004266	U 8 P	100-125 V; 50/60 Hz	1.5	1.5	14	-	-	L004263
U 6 TP	100-125 V; 50/60 Hz	1.5	1.5	14	WLAN	-	L003949	U 8 P	100-125 V; 50/60 Hz	1.5	1.5	14	WLAN	-	L003946
U 15 TP	100-125 V; 50/60 Hz	1.5	1.5	14	-	-	L004267	U 16 P	100-125 V; 50/60 Hz	1.5	1.5	14	-	-	L004264
U 15 TP	100-125 V; 50/60 Hz	1.5	1.5	14	WLAN	-	L003950	U 16 P	100-125 V; 50/60 Hz	1.5	1.5	14	WLAN	-	L003947
U 20 TP	100-125 V; 50/60 Hz	1.5	1.5	14	-	-	L004268	U 40 P	100-125 V; 50/60 Hz	1.5	1.5	14	-	-	L004265
U 20 TP	100-125 V; 50/60 Hz	1.5	1.5	14	WLAN	-	L003951	U 40 P	100-125 V; 50/60 Hz	1.5	1.5	14	WLAN	-	L003948

*All data for the plug codes can be found on page 142

Device type	Power supply V; Hz	Heater power max. kW	Loading max. kW	Plug code*	Option WLAN	Option**	Part Number	Device type	Power supply V; Hz	Heater power max. kW	Loading max. kW	Plug code*	Option WLAN	Option**	Part Number
LAUDA Universa MAX / Page 78															
U 8 M	100-125 V; 50/60 Hz	2.0	2.0	4	-	-	L004201	U 20 M	100-125 V; 50/60 Hz	2.0	2.0	4	-	-	L004203
U 8 M	100-125 V; 50/60 Hz	2.0	2.0	4	WLAN	-	L003861	U 20 M	100-125 V; 50/60 Hz	2.0	2.0	4	WLAN	-	L003863
U 8 M	100-125 V; 50/60 Hz	2.0	2.0	4	-	KP	L004211	U 40 M	100-125 V; 50/60 Hz	2.0	2.0	4	-	-	L004204
U 8 M	100-125 V; 50/60 Hz	2.0	2.0	4	WLAN	KP	L003871	U 40 M	100-125 V; 50/60 Hz	2.0	2.0	4	WLAN	-	L003864
U 12 M	100-125 V; 50/60 Hz	2.0	2.0	4	-	-	L004202	U 40 M	100-125 V; 50/60 Hz	2.0	2.0	4	-	KP	L004213
U 12 M	100-125 V; 50/60 Hz	2.0	2.0	4	WLAN	-	L003862	U 40 M	100-125 V; 50/60 Hz	2.0	2.0	4	WLAN	KP	L003873
U 12 M	100-125 V; 50/60 Hz	2.0	2.0	4	-	KP	L004212								
U 12 M	100-125 V; 50/60 Hz	2.0	2.0	4	WLAN	KP	L003872								

** KP: Ball bearing pump

LAUDA Cooling thermostats

Power supply variants

Device type	Power supply V; Hz	Heater power max. kW	Loading max. kW	Plug code*	Option WLAN	Option	Part Number	Device type	Power supply V; Hz	Heater power max. kW	Loading max. kW	Plug code*	Option WLAN	Option	Part Number
LAUDA Alpha with natural refrigerant / Page 70															
RA 8	115 V; 60 Hz	1,2	1,5	14	-	-	L004604	RA 12	115 V; 60 Hz	1,2	1,5	14	-	-	L004607
RA 8	100 V; 50/60 Hz	1,0	1,3	14	-	-	L004605	RA 12	100 V; 50/60 Hz	1,0	1,3	14	-	-	L004608
LAUDA Universa ECO with natural refrigerant / Page 74															
U 830 E	100 V; 50/60 Hz	1,0	1,2	14	-	-	L004293	U 1625 E	100 V; 50/60 Hz	1,0	1,2	14	-	-	L004295
U 830 E	100 V; 50/60 Hz	1,0	1,1	14	WLAN	-	L003978	U 1625 E	100 V; 50/60 Hz	1,0	1,1	14	WLAN	-	L003980
U 830 E	110-127 V; 60 Hz	1,4	1,5	14	-	-	L004300	U 1625 E	110-127 V; 60 Hz	1,4	1,5	14	-	-	L004302
U 830 E	110-127 V; 60 Hz	1,4	1,5	14	WLAN	-	L003985	U 1625 E	110-127 V; 60 Hz	1,4	1,5	14	WLAN	-	L003987
U 1225 E	110-127 V; 60 Hz	1,4	1,5	14	-	-	L004301								
U 1225 E	110-127 V; 60 Hz	1,4	1,5	14	WLAN	-	L003986								
U 1225 E	100 V; 50/60 Hz	1,0	1,2	14	-	-	L004294								
U 1225 E	100 V; 50/60 Hz	1,0	1,1	14	WLAN	-	L003979								
LAUDA Universa PRO with natural refrigerant / Page 76															
U 420 P	110-125 V; 60 Hz	1,5	1,5	14	-	-	L004269	U 635 P	100-125 V; 50/60 Hz	1,5	1,5	14	-	-	L004271
U 420 P	110-125 V; 60 Hz	1,5	1,5	14	WLAN	-	L003952	U 635 P	100-125 V; 50/60 Hz	1,5	1,5	14	WLAN	-	L003954
U 420 P	100 V; 50/60 Hz	1,1	1,2	14	-	-	L004435	U 1245 P	100-125 V; 50/60 Hz	1,5	1,5	14	-	-	L004272
U 420 P	100 V; 50/60 Hz	1,1	1,2	14	WLAN	-	L004122	U 1245 P	100-125 V; 50/60 Hz	1,5	1,5	14	WLAN	-	L003955
U 630 P	110-125 V; 60 Hz	1,5	1,5	14	-	-	L004270	U 1635 P	100-125 V; 50/60 Hz	1,5	0,0	14	-	-	L004273
U 630 P	110-125 V; 60 Hz	1,5	1,5	14	WLAN	-	L003953	U 1635 P	100-125 V; 50/60 Hz	1,5	1,5	14	WLAN	-	L003956
U 630 P	100 V; 50/60 Hz	1,1	1,2	14	-	-	L004436								
U 630 P	100 V; 50/60 Hz	1,1	1,2	14	WLAN	-	L004123								

*All data for the plug codes can be found on page 142

Device type	Power supply V; Hz	Heater power max. kW	Loading max. kW	Plug code*	Option WLAN	Option**	Part Number	Device type	Power supply V; Hz	Heater power max. kW	Loading max. kW	Plug code*	Option WLAN	Option**	Part Number
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LAUDA Universa MAX with natural refrigerant / Page 78

U 845 M	100-125 V; 50/60 Hz	2,0	2,0	4	-	-	L004205	U 1645 M	100-125 V; 50/60 Hz	2,0	2,0	4	-	-	L004209
U 845 M	100-125 V; 50/60 Hz	2,0	2,0	4	WLAN	-	L003865	U 1645 M	100-125 V; 50/60 Hz	2,0	2,0	4	WLAN	-	L003869
U 845 M	100-125 V; 50/60 Hz	2,0	2,0	4	-	KP	L004214	U 1645 M	100-125 V; 50/60 Hz	2,0	2,0	4	-	KP	L004217
U 845 M	100-125 V; 50/60 Hz	2,0	2,0	4	WLAN	KP	L003874	U 1645 M	100-125 V; 50/60 Hz	2,0	2,0	4	WLAN	KP	L003877
U 855 M	100-125 V; 50/60 Hz	2,0	2,0	4	-	-	L004206	U 2040 M	100-125 V; 50/60 Hz	2,0	2,0	4	-	-	L004208
U 855 M	100-125 V; 50/60 Hz	2,0	2,0	4	WLAN	-	L003866	U 2040 M	100-125 V; 50/60 Hz	2,0	2,0	4	WLAN	-	L003868
U 855 M	100-125 V; 50/60 Hz	2,0	2,0	4	-	KP	L004215	U 4230 M	100-125 V; 50/60 Hz	2,0	2,0	4	-	-	L004210
U 855 M	100-125 V; 50/60 Hz	2,0	2,0	4	WLAN	KP	L003875	U 4230 M	100-125 V; 50/60 Hz	2,0	2,0	4	WLAN	-	L003870

LAUDA Proline Kryomate with F-gas refrigerant / Page 80

RP 4050 C	208 V; 3/PE; 60 Hz	3,0	5,0	31	-	-	L001677	RP 4090 C	200 V; 3/PE; 50/60 Hz	2,8	7,0	31	-	-	L001703
RP 4050 C	200 V; 3/PE; 50/60 Hz	2,8	5,0	31	-	-	L001701	RP 4090 C	208 V; 3/PE; 60 Hz	3,0	7,0	31	-	-	L001679
RP 4050 CW	200 V; 3/PE; 50/60 Hz	2,8	5,0	31	-	-	L001705	RP 4090 CW	200 V; 3/PE; 50/60 Hz	2,8	7,0	31	-	-	L001707
								RP 4090 CW	208 V; 3/PE; 60 Hz	3,0	7,0	31	-	-	L001683

** KP: Ball bearing pump

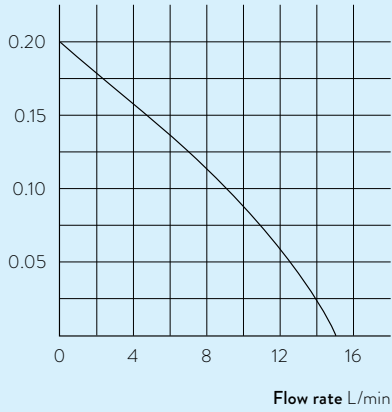
LAUDA Immersion and bath circulation thermostats

More characteristics

LAUDA Alpha / Page 7

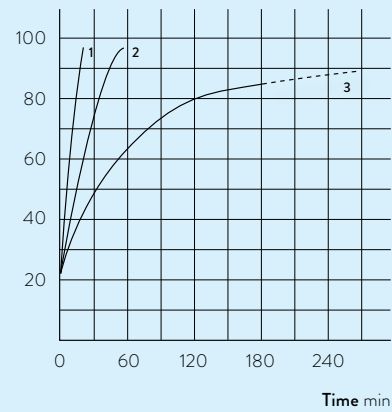
PUMP CHARACTERISTIC Heat transfer liquid: Water

Pressure bar



HEATING PERFORMANCE Heat transfer liquid: Water, bath closed

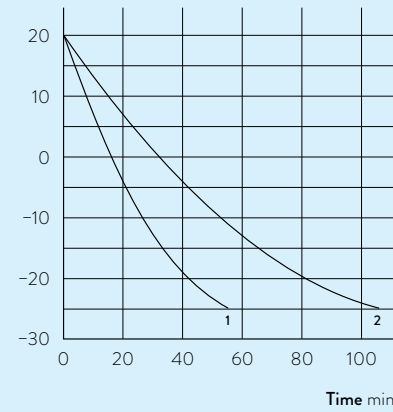
Bath temperature °C



- 1 A 6
- 2 A 12
- 3 A 24

COOLING PERFORMANCE Heat transfer liquid: Ethanol, bath closed

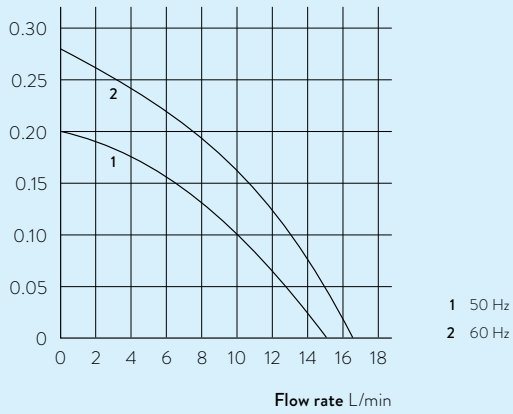
Bath temperature °C



- 1 RA 8
- 2 RA 12

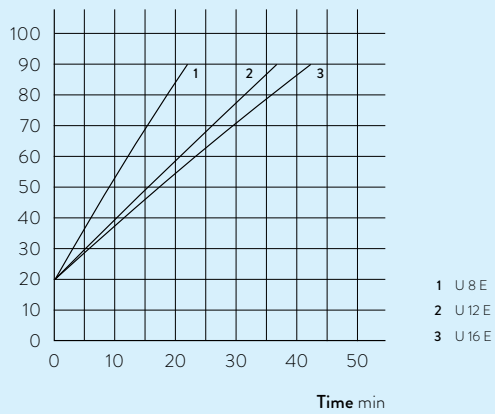
PUMP CHARACTERISTIC Heat transfer liquid: Water

Pressure bar



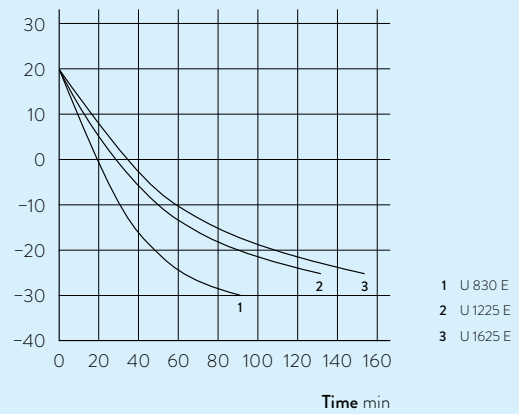
HEATING PERFORMANCE Heat transfer liquid: Water, bath closed

Bath temperature °C



COOLING PERFORMANCE Heat transfer liquid: Ethanol, bath closed

Bath temperature °C



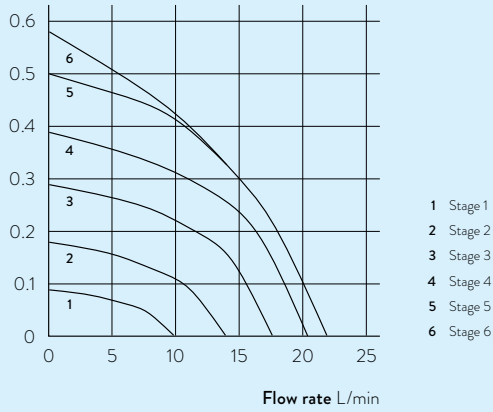
LAUDA Immersion and bath circulation thermostats

More characteristics

LAUDA Universa PRO / Page 76

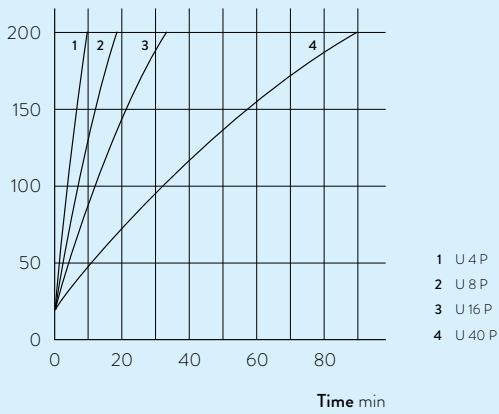
PUMP CHARACTERISTIC Heat transfer liquid: Water

Pressure bar



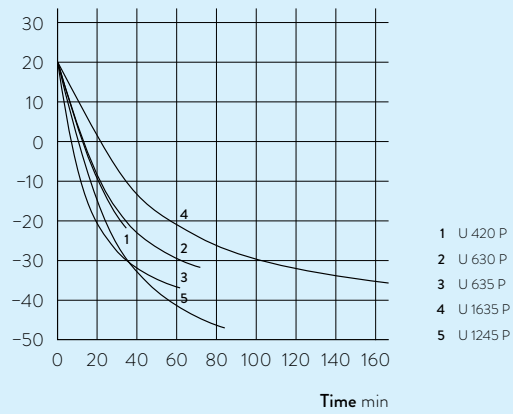
HEATING PERFORMANCE Heat transfer liquid: Therm 250, bath closed

Bath temperature °C



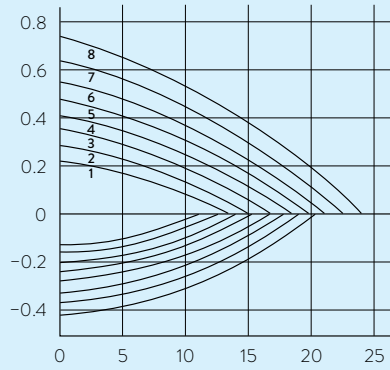
COOLING PERFORMANCE Heat transfer liquid: Ethanol, bath closed

Bath temperature °C



PUMP CHARACTERISTIC Heat transfer liquid: Water

Pressure bar



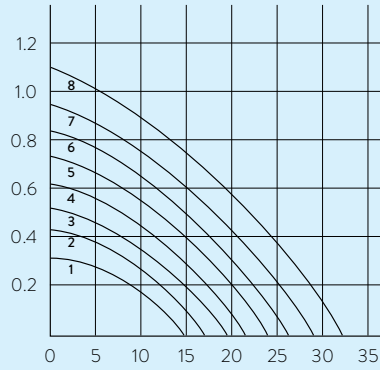
- 1 Stage 1
- 2 Stage 2
- 3 Stage 3
- 4 Stage 4
- 5 Stage 5
- 6 Stage 6
- 7 Stage 7
- 8 Stage 8

Suction

Flow rate L/min

PUMP CHARACTERISTIC Heat transfer liquid: Water

Pressure bar

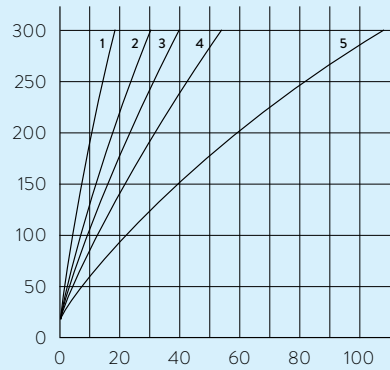


- 1 Stage 1
- 2 Stage 2
- 3 Stage 3
- 4 Stage 4
- 5 Stage 5
- 6 Stage 6
- 7 Stage 7
- 8 Stage 8

Flow rate L/min

HEATING PERFORMANCE Heat transfer liquid: Therm 250, bath closed, Pump output step 8

Bath temperature °C

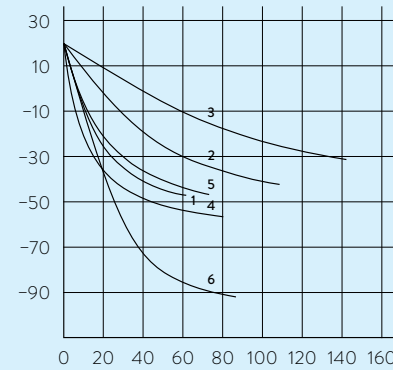


- 1 U 8 M
- 2 U 12 M
- 3 U 16 M
- 4 U 20 M
- 5 U 40 M

Time min

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

Time min

	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

LAUDA WATER BATHS

Specific application examples

- Preparation of cellular, biological and medical samples
- Incubation of microbiological tests
- Preparation of environmental samples
- Defrosting of samples
- Conducting of chemical reactions



LAUDA Hydro water baths

from 25 to 100 °C



Reliable and universal water baths

LAUDA offers an expanded range of laboratory technology with five water baths. The LAUDA Hydro water baths with a high-quality stainless steel interior provide the right bath depth and opening for every application with bath volumes from 8 to 41 liters. All water baths have a temperature range of up to 100 °C with a temperature stability of ± 0.1 K, which also permits applications in the boiling temperature range. A TFT display ensures intuitive operation with a temperature display in °C and °F.



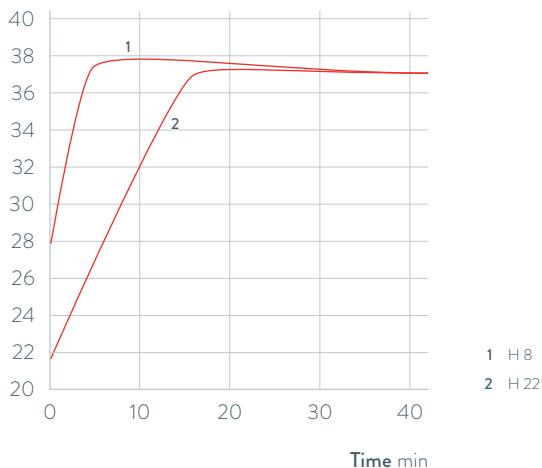
High-quality, welded stainless steel bath interior, equipped with a sieve plate as standard



Large, high-contrast TFT display with menu-guided controls

HEATING PERFORMANCE Heat transfer liquid: Water, bath closed

Bath temperature °C



1 H 8
2 H 22

Important functions

- Three user-specific timer functions
- Direct temperature control for rapid heating
- Visual and acoustic alarm in case of low level, over-/under-temperature as well as sensor break
- Lid design prevents condensation from dripping back on samples

Standard equipment

Double-walled, heat-insulating stainless steel lid and drain tap

Additional accessories

Adjustable water level controller, rack for test tubes of different diameters and bottles, Flat stainless-steel cover with ring inserts

All technical data and power supply variants can be found in the »Technical data« section.

More at www.lauda.de/de/1780



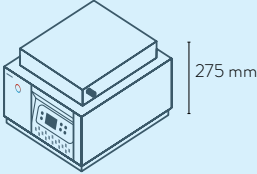
LAUDA Hydro water baths

The LAUDA Hydro water baths are optimally equipped for every laboratory application and ensure homogeneous temperature distribution without local overheating. LAUDA Hydro water baths with precision temperature distribution are designed for the requirements of biological, medical and biochemical laboratories.

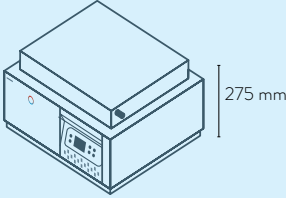


LAUDA Water baths

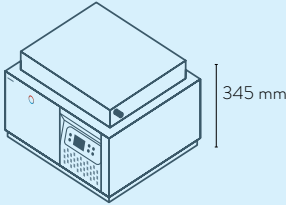
Device type overview



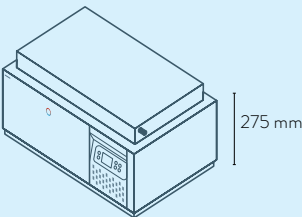
H 8



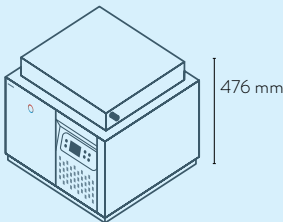
H 16



H 22



H 24



H 41

LAUDA Water baths

Technical data according to DIN 12876 standard

Device type	Working temperature range °C	Temperature stability ±K	Safety fittings	Heater power max. kW	Bath volume min. L	Bath volume max. L	Number of bath openings	Bath opening (W x D) mm	Bath depth mm	Usable depth mm	Height top of bath mm	Dimensions (W x D x H) mm	Weight kg	Power supply V; Hz	Loading max. kW	Part Number
LAUDA Hydro / Page 108																
H 8	25 ... 100	0.10	NFL	1.0	3.8	7.0	1	245×200	165	115	218	340×395×275	10	230 V; 50/60 Hz	1.0	L002901
H 16	25 ... 100	0.10	NFL	1.5	7.5	13.9	1	400×245	165	115	218	500×440×275	14	230 V; 50/60 Hz	1.5	L002902
H 22	25 ... 100	0.10	NFL	1.5	7.5	20.3	1	400×245	225	180	278	500×440×345	16	230 V; 50/60 Hz	1.5	L002903
H 24	25 ... 100	0.10	NFL	1.5	11.3	20.9	1	600×245	165	115	218	700×440×275	18	230 V; 50/60 Hz	1.5	L002904
H 41	25 ... 100	0.10	NFL	1.5	9.3	37.9	1	410×296	335	285	388	510×490×476	22	230 V; 50/60 Hz	1.5	L002905

LAUDA Water baths

Power supply variants

Device type	Power supply V; Hz	Loading max. kW	Plug code*	Part Number
LAUDA Hydro / Page 108				
H 8	115 V; 60 Hz	1.0	14	L002912
H 16	115 V; 60 Hz	1.5	14	L002913
H 22	115 V; 60 Hz	1.5	14	L002914
H 24	115 V; 60 Hz	1.5	14	L002915
H 41	115 V; 60 Hz	1.5	14	L002916

*All data for the plug codes can be found on page 142

LAUDA DEEP-FREEZERS



Specific application examples

- Secure storage of organic substances, vaccines or reference strains of microorganisms
- Cold storage of enzymes and test kits in laboratories and hospitals
- Storage in pharmaceutical and chemical facilities
- Storage in pharmaceutical logistics centers
- Maintaining the cold chain in intralogistics, for factory transport and road logistics



LAUDA Mobifreeze

The world's first mobile, battery-powered, ultra-low-temperature chest freezer: Four hours of battery life at -80°C

-86°C  -50°C

Mobile, battery-powered and precisely temperature-controlled: LAUDA Mobifreeze

Welcome to the world of professional cooling. Ultra-freezers from LAUDA guarantee safe and reliable deep-freezing. The mobile ultra-low-temperature chest freezer with active temperature control ensures that the cold chain is reliably maintained in intralogistics and for inter-factory transport in road logistics, without the risks and costs associated with dry ice. Thanks to excellent insulating properties, the ultra-low-temperature chest freezer is the perfect solution for transporting delicate and temperature-sensitive materials. Many extremely sensitive samples not only have to be stored under validated conditions, but also have to be transported under identical conditions. Our ultra-deep-freeze chest freezer guarantees mobile, low-temperature transport.



Temperature-controlled transport: the mobile, ultra-low-temperature chest freezer simplifies the management of your cold chain



The control panel with a brilliant 4.3-inch touchscreen offers easy operation and optimal readability



Simple and secure transport for sensitive and valuable substances under validated transport conditions

Important functions

- Hybrid use – mobile and stationary
- Intuitive operation: Touchscreen, password-protected user management
- Simple and secure maneuverability: Two swiveling heavy-duty casters, ergonomic handles and a dead man's brake, ram and impact protection
- Battery life of up to four hours, built-in data logger

Standard equipment

4.3-inch touchscreen, battery with increased anti-flammability (lithium iron phosphate), fully stainless steel, rust-free interior, high-quality vacuum insulation (VIP)

Further accessories

A000146 Factory certificate, A001383 External data logger, A000147 Calibration of external data logger, EZ 958 protective cover, RDP 033 anti-slip mat, A001762 transport box for bottles, racks for cryo boxes

All technical data and power supply variants can be found in the ›Technical data‹ section.

More at www.lauda.de/de/1810



LAUDA Mobifreeze

The LAUDA Mobifreeze mobile ultra-low-temperature chest freezer is the logistics solution for the transport of temperature-sensitive samples – entirely without dry ice. The temperature is freely adjustable between -50 and -86°C under the validated storage conditions of identical temperature stability. Controlled transport conditions guarantee seamless integration of the cold chain.



LAUDA Versafreeze

Freezing down to -86°C

with LAUDA freezer cabinets and chest freezers



Tailor-made solutions for long-term and secure storage

Vaccines, organic substances and valuable samples that need to be stored at low temperatures are irreplaceable. Only the highest-quality deep-freezers guarantee long-term stability and availability in these challenging conditions. Based on decades of experience and technical development, LAUDA has optimized its Versafreeze deep-freezers for the extreme conditions of ultra deep-freeze storage and set new standards.



High-performance operating unit with password-protected user management



Storage system/plug-in units: flexible loading options for optimum utilization of the usable volume



Insulation (from right to left):
Interior with stainless steel walls, tightly
meshed evaporator, thermal film, vacuum
panels, impermeable foam, appliance front

Powerful insulation technology with high-quality materials

Important functions

- Intuitive operation via touch screen, integrated data logger, password-protected access rights
- The multi-layered high-performance vacuum insulation protects against loss of coldness and minimizes the energy consumption of continuous operation
- Options: CO_2 or LN_2 safety cooling system, water cooling, set of drawers for freezer cabinets, factory certificate

Included accessories

Two feedthroughs $\varnothing 13$ mm, for incorporating additional control or alarm sensors, Ethernet RJ45 connection

Further accessories

Storage system/plug-in units, boxes, grid segmentations, external data logger, CO_2 and LN_2 safety cooling systems, water cooling

All technical data and power supply variants can be found in the [Technical data](#) section.

More at www.lauda.de/de/1790



LAUDA Versafreeze

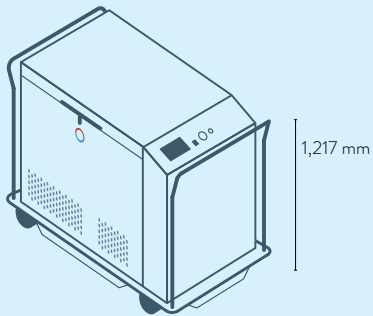
LAUDA Versafreeze appliances offer the greatest possible security for your samples, even in a power cut, thanks to long defrosting times. The integrated accumulator is a standard feature and ensures that the display and alarm functions are maintained for a period of up to 35 hours.



LAUDA Deep-freezers

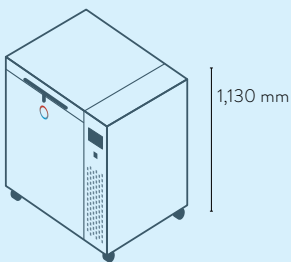
Device type overview

LAUDA Mobifreeze / Page 114

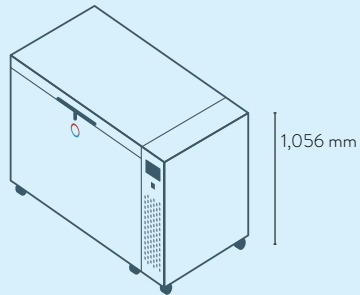


M 270

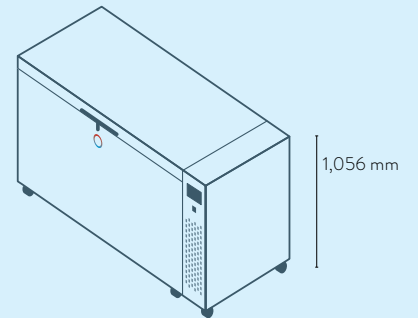
LAUDA Versafreeze Chest freezers / Page 116



VF 20040
VF 20085

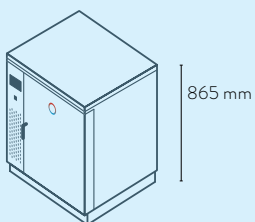


VF 55040
VF 55085

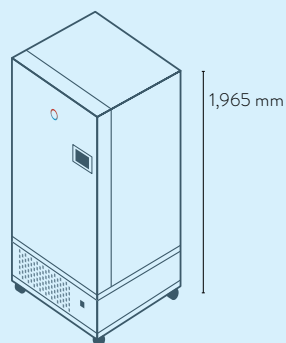


VF 75040
VF 75085

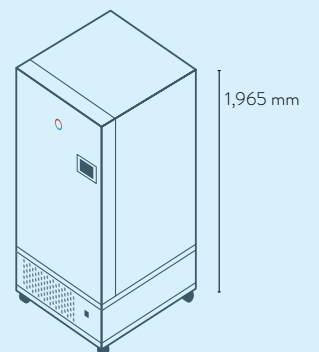
LAUDA Versafreeze Upright freezers / Page 116



VF 15040
VF 15085



VF 60040
VF 60085



VF 70040
VF 70085

LAUDA Deep-freezers

Technical data

Device type	Usable volume L	Temperature range	Cooling time to -80 °C / -40 °C h (without load)	Warm-up time -80 °C / -40 °C to 0 °C h (without load)	Interior dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Net weight kg	Capacity 50 mm cryoboxes	Part number
LAUDA Mobifreeze with natural refrigerant / Page 114									
M 270	270	-86 ... -50 °C	3	10	900×600×500	1,471×933×1,217	325	-	L003678
LAUDA Versafreeze Chest freezers with natural refrigerant / Page 116									
VF 20040 C	205	-40 ... 0 °C	3	6	790×520×500	960×790×1,130	188	135	L003335
VF 55040 C	556	-40 ... 0 °C	4	10	1,180×620×760	1,671×910×1,056	260	416	L003336
VF 75040 C	754	-40 ... 0 °C	5	10	1,600×620×760	2,102×910×1,056	310	572	L003337
VF 20085 C	205	-86 ... -50 °C	3	11	790×520×500	960×790×1,130	210	135	L003338
VF 55085 C	556	-86 ... -50 °C	4	19	1,180×620×760	1,671×910×1,056	280	416	L003339
VF 75085 C	754	-86 ... -50 °C	5	19	1,600×620×760	2,102×910×1,056	332	572	L003340
LAUDA Versafreeze Upright freezers with natural refrigerant / Page 116									
VF 15040	129	-40 ... 0 °C	5	12	480×480×560	904×776×865/837*	128	81	L003341
VF 60040	583	-40 ... 0 °C	6	17	738×600×1,320	980×1,029×1,965	334	420	L003342
VF 70040	731	-40 ... 0 °C	7	13	738×750×1,320	980×1,179×1,965	345	525	L003343
VF 15085	129	-86 ... -50 °C	5	18	480×480×560	904×776×865/837*	162	81	L003344
VF 60085	583	-86 ... -50 °C	6	27	738×600×1,320	980×1,029×1,965	356	420	L003345
VF 70085	731	-86 ... -50 °C	7	25	738×750×1,320	980×1,179×1,965	370	525	L003346

Power supply: 230 V; 50 Hz; Electrical connection: CEE7/7 angled (EU, Schuko), Mobifreeze: CEE7/7 straight

Other plug variants available.

* Height after removing the cover plate

LAUDA STILLS



Specific application examples

- Bacteriological and medical sample preparation
- Preparation of cell and tissue cultures
- Cleaning and sterilization processes
- Production of buffer solutions in quality, development and research laboratories
- Microbiological and analytical applications



LAUDA Puridest

Stills in a large number of variants –
the perfect solution for every application

High distillate quality

LAUDA Puridest stills provide ultra-pure, low-gas, sterile and pyrogen-free distillate for the dilution of reagents, sets of samples and more. LAUDA Puridests purify any raw water to produce a distillate with conductivities down to below $1.6 \mu\text{S}/\text{cm}$. It complies with DAB regulations and the international pharmacopeia requirements.



Our maxim is simplicity: LED indicators for operating status and cleaning requirement are equipped as standard



Equipped for any application: Puridest PD 4 D for the direct distillate extraction of mono- or bi-distillate



Puridest PD 4 DG

Important functions

- Device protected by water shortage protection in all models
- Energy savings through distillation of the heated cooling water
- Devices only require power and raw water
- Expensive cartridges, adsorbents and regular regeneration of ion exchangers can be dispensed with

Further accessories

Prefilter, dechlorite filter, phosphate cartridge, replacement cartridge, wall mounting, hose sets

Devices with options such as ›Separate water supply‹ or ›External level controller‹ on request.

All technical data and power supply variants can be found in the ›Technical data‹ section.

More at www.lauda.de/de/1791



LAUDA Puridest

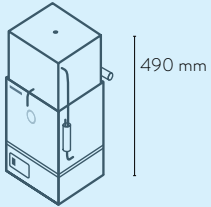
Decades of experience and technical development have set the standard: LAUDA Puridest stills are offered worldwide in four high-performance product lines with 9 model variants.



LAUDA Stills

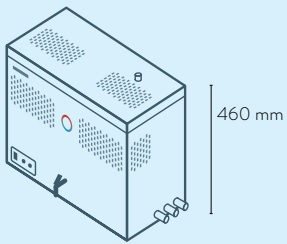
Device type overview

LAUDA Puridest Single water stills without storage tank / Page 122

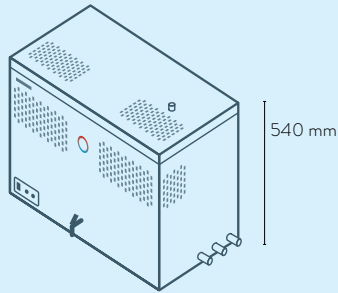


PD 4

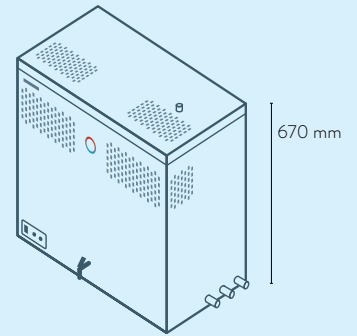
LAUDA Puridest Single water stills with storage tank / Page 122



PD 4 R

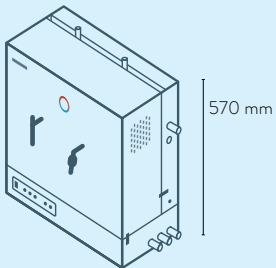


PD 8 R

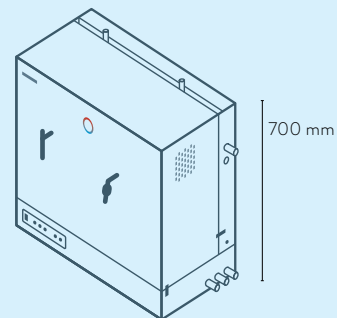


PD 12 R

LAUDA Puridest Double water stills / Page 122

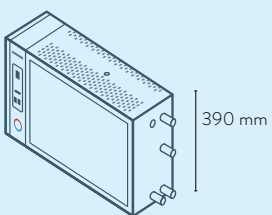


PD 4 D

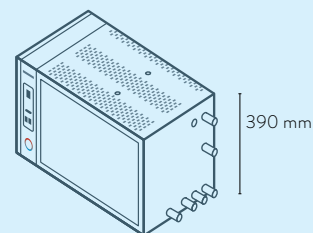


PD 8 D

LAUDA Single and double water stills made of glass / Page 122



PD 4 G

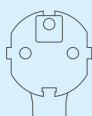


PD 4 DG
PD 8 G

LAUDA Stills

Technical data

Device type	Ambient temperature °C	Distillate type	Condenser material	Production output L/h	Conductivity stage 1* approx. µS/cm	Conductivity stage 2* approx. µS/cm	Tank volume L	Cooling water consumption L/min	Dimensions (W x D x H) mm	Weight kg	Mains voltage	Max. power consumption kW	Part Number
-------------	------------------------	-----------------	--------------------	-----------------------	----------------------------------------	----------------------------------------	---------------	------------------------------------	---------------------------	-----------	---------------	---------------------------	-------------



CEE7/7 plug, angled, 'Schuko' type

PD 4	10 ... 40	Mono	Stainless steel	4	2.3	-	-	0.67	280 × 250 × 490	7.5	230 V; 50/60 Hz	3.00	L003012
PD 4 R	10 ... 40	Mono	Stainless steel	4	2.3	-	8	0.8	620 × 330 × 460	21.4	230 V; 50/60 Hz	3.00	L003014
PD 4 G	10 ... 40	Mono	Glass	4	2.2	-	-	1.2	650 × 200 × 390	17.0	230 V; 50/60 Hz	3.00	L003018



IEC 60309 plug, 5-pole, CEE, red, 16 A

PD 8 R	10 ... 40	Mono	Stainless steel	8	2.3	-	16	1.2	780 × 410 × 540	35.3	400 V; 3/N/PE; 50/60 Hz	6.00	L003015
PD 12 R	10 ... 40	Mono	Stainless steel	12	2.3	-	24	3.3	780 × 410 × 670	40.5	400 V; 3/N/PE; 50/60 Hz	9.00	L003016
PD 8 G	10 ... 40	Mono	Glass	8	2.2	-	-	2.4	650 × 365 × 390	24.0	400 V; 3/N/PE; 50/60 Hz	6.00	L003019
PD 4 D	10 ... 40	Double	Stainless steel/Glass	4	2.2	1.6	-	2	550 × 280 × 570	27.5	400 V; 3/N/PE; 50/60 Hz	7.00	L003021
PD 8 D	10 ... 40	Double	Stainless steel/Glass	8	2.2	1.6	-	3.3	700 × 390 × 700	45.0	400 V; 3/N/PE; 50/60 Hz	11.50	L003022
PD 4 DG	10 ... 40	Double	Glass	4	2.2	1.6	-	2.4	650 × 365 × 390	24.0	400 V; 3/N/PE; 50/60 Hz	5.80	L003024



Cable without plug

PD 8 R	10 ... 40	Mono	Stainless steel	8	2.3	-	16	1.2	780 × 410 × 540	35.3	220 V; 3/PE; 50/60 Hz	6.00	L003115
PD 12 R	10 ... 40	Mono	Stainless steel	12	2.3	-	24	3.3	780 × 410 × 670	40.5	220 V; 3/PE; 50/60 Hz	9.00	L003116
PD 8 G	10 ... 40	Mono	Glass	8	2.2	-	-	2.4	650 × 365 × 390	24.0	220 V; 3/PE; 50/60 Hz	6.00	L003117
PD 4 D	10 ... 40	Double	Stainless steel/Glass	4	2.2	1.6	-	2	550 × 280 × 570	27.5	220 V; 3/PE; 50/60 Hz	7.00	L003118
PD 8 D	10 ... 40	Double	Stainless steel/Glass	8	2.2	1.6	-	3.3	700 × 390 × 700	45.0	220 V; 3/PE; 50/60 Hz	11.50	L003119
PD 4 DG	10 ... 40	Double	Glass	4	2.2	1.6	-	2.4	650 × 365 × 390	24.0	220 V; 3/PE; 50/60 Hz	5.80	L003120

*The quality of the conductivity depends on the selected model and raw water quality

LAUDA DIGITAL PRODUCTS

 3  5

1,55 bar

Tset

Text

Tint

ANZEIGE

Specific application examples

- Location-independent monitoring, control and configuration
- Machine-aided analysis and optimization
- Remote maintenance and parameterization via the LAUDA Helpdesk
- Control via mobile devices and PC

WUDA

▲ ! ☵ 25,0% ❄ 0,0%

27,00

°C

26,45

MENU

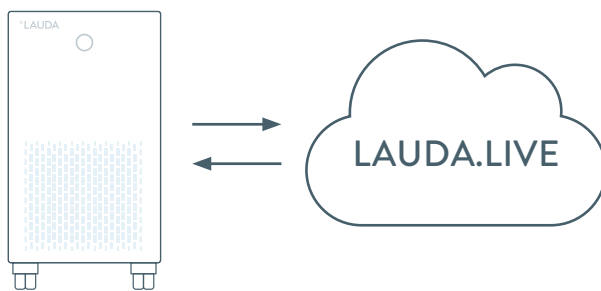
STOP

LAUDA.LIVE

Networked, efficient, future-proof –
a new approach to temperature control technology

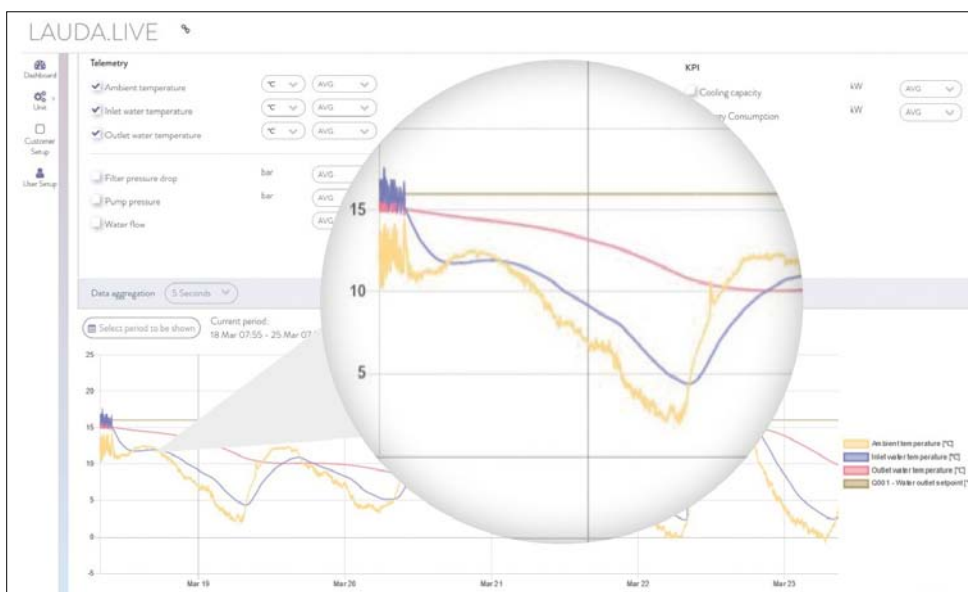
Ready for the future

LAUDA is leading constant temperature technology into the digital age and shaping the evolution of precision temperature control. Examples of such solutions include connectivity to cloud systems and the use of future-oriented technology such as artificial intelligence, especially through machine learning and the programming of corresponding algorithms. These digital solutions complement LAUDA's products and services.

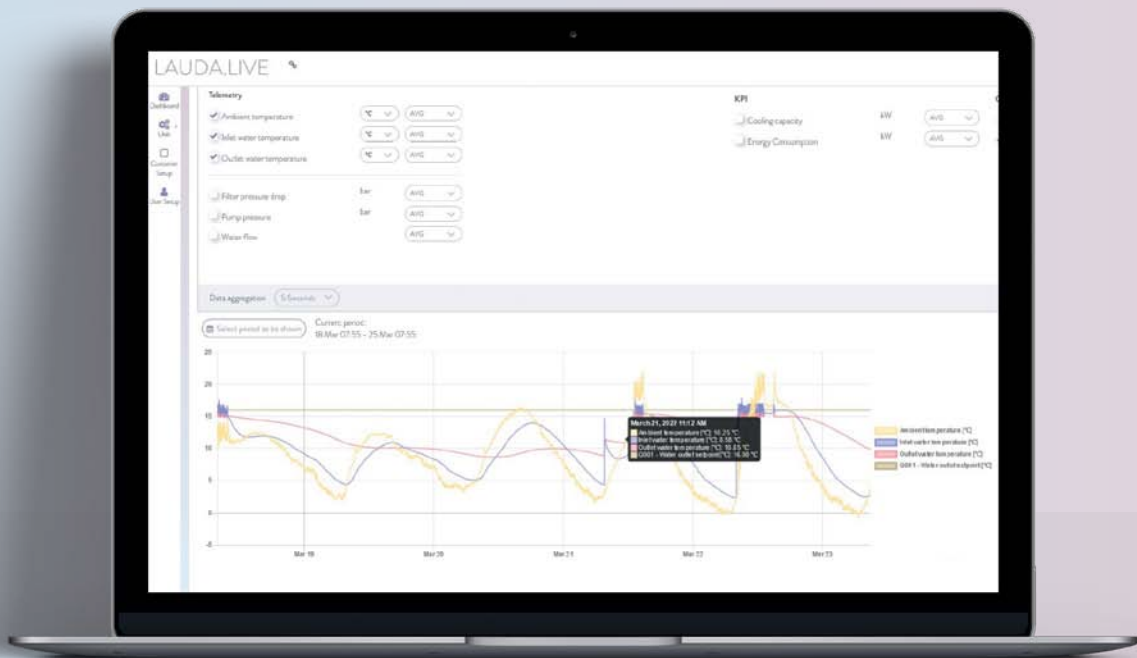


LAUDA.LIVE offers progressive remote maintenance and monitoring services, among other things, which allow devices and processes to be monitored and optimized in real-time via a secure live data connection. This type of remote monitoring and maintenance offers a significant advantage by maximizing operating times, improving efficiency and ensuring seamless operation, while reducing the need for on-site visits by service professionals.

- ✓ Reduction in downtimes and disruptions
- ✓ Remote maintenance for quick and easy troubleshooting
- ✓ Minimization of related costs such as travel expenses for services



Remote maintenance and monitoring with LAUDA.LIVE



LAUDA.LIVE

Using state-of-the-art communication technologies, it is possible for maintenance to be provided remotely as well. For example, real-time data can be viewed and, if necessary, analyzed with the LAUDA service team to identify and rectify possible problems. This allows the best solution strategy to be developed and implemented as quickly as possible.

LAUDA Command app

Temperature control at the tap of a finger

The **LAUDA Command app** is the central interface for the efficient control and monitoring of LAUDA constant temperature equipment. Whether a smartphone, tablet or PC, the app (iOS, Windows, Android) allows the user to define temperature setpoints, start or stop temperature control processes, and configure individual settings for LAUDA devices at any time and from anywhere within the company network. The installation site and operation are decoupled to allow access from any location.

Excellence in temperature control – precise, connected, professional

The LAUDA Command Professional app offers advanced functions that extend beyond those of the Command app, such as customized setting options, advanced analysis functions and sophisticated control options.

Download

App available for free at:



LAUDA Command (free)

- **Device selection:** Easy selection of the device in use
- **Temperature setpoint:** Direct input of the temperature setpoint (T_{set})
- **Modifying parameters:** Individual control variables, control parameters, level parameters, correcting variables and temperature limits can be set, depending on the application
- **Messages:** All alarms, error messages and warnings that may be triggered on the device appear in the app
- **Basic settings:** Administration of language, temperature units and much more in just a few clicks
- **Standby/operation:** Intuitive controls for switching the device on/off (standby)

Product lines	Embedded vers.
Integral IN	1.52 or higher
Variocool*	1.76 or higher
Universa	all versions

* Ethernet Ethernet Module Advanced (LRZ 930) required

LAUDA Command Professional

- **All advantages of LAUDA Command**
- **Programmer:** The programmer enables the user to program, save and start a temperature-time program. Five different programs can be saved, which can be exported and imported on other devices
- **Graphic temperature curve:** Temperature curves can be displayed graphically and exported as image files
- **Data recording:** Parameters in the graphic temperature curve can be recorded and exported for further analysis or reporting
- **Flow control:** In temperature control units, volume flows can be set and displayed in combination with the LAUDA flow control (FC 80 MID, FC 80 C)

Part number: D000089

Product line	Embedded vers.
Integral IN	1.57 or higher
Universa	all versions

LAUDA ACCESSORIES, HEAT TRANSFER LIQUIDS, SERVICE





LAUDA Accessories

Individual solutions, down to the finest detail

Tailored to your requirements

It makes no difference whether it concerns an optimized sample holder, improved handling or storage, mechanical accessories facilitate the daily temperature control, shaking or cultivating work. A wide variety of hose material in various cross-sections, optimized for the temperature range or also insulated as needed is the basis for the hydraulic connection of constant temperature equipment to applications. Adapters, distributors and taps provide flexibility. Remote controls, interfaces and through-flow control systems individually extend the connectivity, the range of functions and the operating convenience.

Electrical and electronic accessories:

- Flow controllers
- Flow control instruments
- Remote controls
- Solenoid valves
- Interface modules
- Temperature sensors
- Connecting cables and sockets



Hose material:

- Hose sets
- Polymer hoses
- Corrugated metal hoses
- Insulating hoses



Hydraulic components:

- Shut-off valves
- Adapters and fittings
- Cooling coils and heat exchangers
- Filter systems
- Distributors



Mechanical accessories:

- Bath covers
- Bath vessels
- Fastening components and mounts
- Boxes and baskets
- Racks
- Rising platforms
- Platforms
- Trays



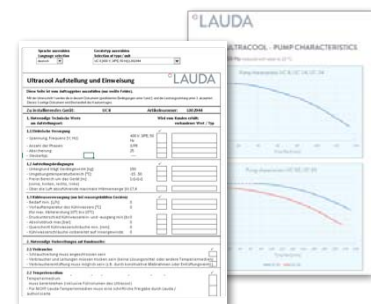
Consumables:

- Filter cartridges



Documentation:

- Certificates



Request the comprehensive LAUDA accessories brochure at info@lauda.de

Quickly find the right solution with the accessory finder: www.lauda.de/en/accessories



LAUDA Accessories

With LAUDA functional enhancements such as flow control, filling and emptying systems, hydraulic adapters and hose material, electrical and electronic components, mechanical components, consumables, or certificates, you get the right addition for your applications in the usual high LAUDA quality.

LAUDA Heat transfer liquids

For safe and reliable operation



Therm

OVERVIEW ›THERM‹

Heat transfer fluid / Chemical substance class	Temperature range for open/half-open systems						Temperature range for closed systems with cold oil overlay						Part number 5 L / 10 L / 20 L
	-100 °C	-50 °C	0 °C	100 °C	200 °C	300 °C	-100 °C	-50 °C	0 °C	100 °C	200 °C	300 °C	
Aqua 90 Water			5 °C		90 °C				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				40 °C		300 °C		LZB 153 / 253 / 353
Ultra 350 Mineral oil			30 °C		200 °C				30 °C		350 °C		LZB 107 / - / -



Kryo

OVERVIEW ›KRYO‹

Kryo 10 Water/antifreeze			-10 °C		90 °C								LZB 132 / 232 / 332
Kryo 15 Water/antifreeze			-20 °C		90 °C								LZB 133 / 233 / 333 / LZB 833 (200 L barrel)
Kryo 20 Silicone oil			-20 °C		170 °C								LZB 116 / 216 / 316
Kryo 30 Water/antifreeze			-30 °C		90 °C				-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 65 Mineral oil									-65 °C		140 °C		LZB 118 / 218 / 318 / LZB 818 (200 L barrel)
Kryo 70 A Silicone oil									-70 °C		220 °C		LZB 131 / 231 / 331
Kryo 95 Silicone oil			-95 °C		60 °C				-95 °C		160 °C		LZB 130 / 230 / 330

In open systems the heat transfer liquid is in direct contact with ambient air. Half-open systems are units with a bath opening and a bath cover (e. g. water baths, cooling thermostats).

In closed systems with cold oil overlay the thermally active heat transfer medium does not come into contact with ambient air (e. g. LAUDA Integral XT).

Request the comprehensive LAUDA heat transfer liquid brochure at info@lauda.de

More at www.lauda.de/de/1850

Recommendations for your LAUDA thermostats



Therm

OVERVIEW ›THERM‹

	Alpha	Universa ECO	Universa PRO	Universa MAX	Microcool	Ultracool	LOOP	PRO	Variocool	Integral T	Integral XT	Integral P	Ultratemp
	Immersion & bath circulation thermostats				Circulation chillers		Circulation and process thermostats						
Aqua 90	●	●	●	●	●	-	●	●	●	●	●	-	-
Therm 160	-	-	●	●	-	-	-	●	-	-	-	-	-
Therm 180	-	-	●	●	-	-	-	●	-	-	-	-	-
Therm 250	-	-	●	●	-	-	-	●	-	-	-	-	-
Ultra 301	-	-	●	●	-	-	-	-	-	●	●	-	-
Ultra 350	-	-	-	-	-	-	-	-	-	●	●	-	-



Kryo

OVERVIEW ›KRYO‹

Kryo 10	●	●	●	●	●	●	●	●	●	-	-	-	●
Kryo 15	●	●	●	-	●	●	●	●	●	●	●	-	●
Kryo 20	-	-	●	●	-	-	-	●	-	●	-	-	-
Kryo 30	●	●	●	●	●	-	●	●	●	●	●	●	-
Kryo 51	-	-	●	●	-	-	-	●	-	●	-	-	-
Kryo 60	-	-	●	●	-	-	-	●	-	-	-	-	-
Kryo 65	-	-	-	-	-	-	-	-	-	-	●	-	-
Kryo 70 A	-	-	-	-	-	-	-	-	-	-	●	-	-
Kryo 95	-	-	●	●	-	-	-	●	-	-	●	-	-

● Approved for product line

● Limited approval for product line

- Not approved for product line

OVERVIEW OF WATER ADDITIVES

Additive	Use	Recommended dosage	Part number
Algizid Aqustab	For preventing and combating algae growth in bath thermostats	1 ml / 20 L Water	LZB 929 (100 ml Bottle) LZB 429 (1 L Bottle) LZB 129 (5 L Canister)
Decalcifier	Citric acid-based descaler	-	LZB 126 (5 kg Canister)

LAUDA Service

For greater equipment availability

Our services – Your benefits

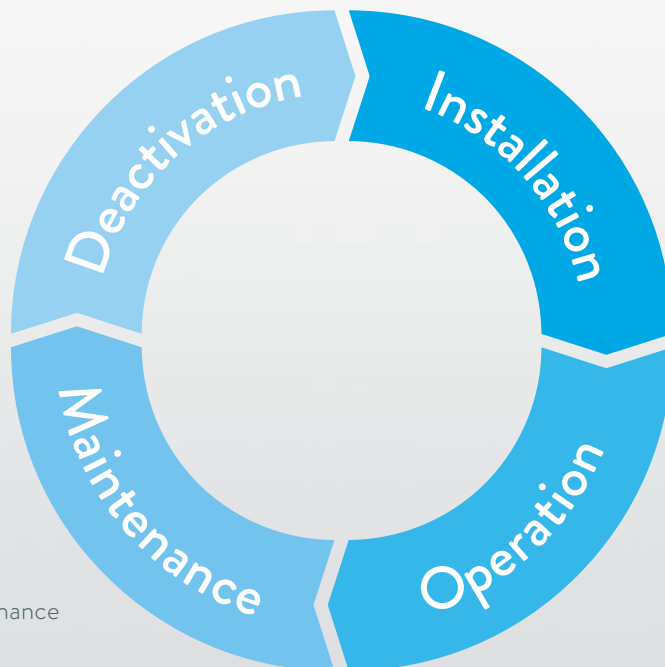
High product quality and comprehensive professional services form an inseparable unit. Regular care, service and maintenance by highly qualified LAUDA service specialists ensure the outstanding performance of your LAUDA devices.

Deactivation

- Sustainability

Installation

- Factory calibration
- Commissioning



Maintenance

- Preventive maintenance
- Optimized procurement management
- Connectivity box
- Digital products
- Repair

Operation

- Performance management
- Training



Request the LAUDA service brochure at info@lauda.de

More at www.lauda.de/de/service



LAUDA Service

Our services are tailored to your specific requirements.
Our service options give you time to address more important matters, regardless of the life cycle phase of your product.

LAUDA Service

For greater equipment availability

Your success is our goal

We are proud of our first-class service and are committed every day to not only maintaining this standard, but continuously exceeding it. With LAUDA at your side, you have a reliable partner who offers you a comprehensive and future-oriented service experience. Connect with us and see for yourself the quality of our worldwide service.

LAUDA.LIVE Services – Your central digital platform

LAUDA.LIVE Services bundles all important information and services related to your LAUDA products in one place. By entering your order and serial number, you get quick and easy access to device-specific content on a user-friendly interface.

The screenshot shows a user interface for 'Device Information'. On the left is a photograph of a white industrial thermostat on a black cart. To the right, the device name 'LAUDA Integral IN 550 XT Process thermostat' is displayed above a table of specifications:

Part no.	L002675
Serial no.	S2
Article life cycle	Active
Warranty	Until 18th December 2026 Activate warranty
Connectivity status	Online

Below the table, there is a section titled 'Further services' with the instruction 'Select additional services for your LAUDA product:'. This section contains four icons representing different services: Product Information (lightbulb), Remote Services (laptop with cursor), Accessories / Spare Parts (gears), and Contact Service (phone handset).

Your advantages at a glance:

✓ Warranty registration

Simple online registration for the LAUDA 5-year best warranty

✓ Spare parts & accessories

Device-specific list with direct ordering option

✓ Support tickets

Central point of contact for creating and tracking your service requests

✓ Product information

Complete documentation with technical data, specifications, and manuals

✓ Remote Services – your direct line to us

In the event of machine failures, our service technicians are available to assist you via remote access. Through remote diagnosis, we identify the necessary steps to get your system back up and running as quickly as possible. The convenient online appointment booking system makes it particularly easy to access our experts.



OUR 5-YEAR BEST GUARANTEE

We're going full throttle

With LAUDA's 5-year best guarantee, you can now enjoy five years of peace of mind. Because we are convinced of the outstanding quality and reliability of our temperature control units, we offer you an attractive guarantee package with numerous advantages. Activate your premium guarantee services with a simple one-time online registration within three months of the initial delivery of your new device and temperature control fluid.

Registration in just three steps

1. STEP

Enter the order number and serial number. The system will check the warranty eligibility of your new device.

2. STEP

Click on »Extend warranty« and enter your company and contact information.

3. STEP

Upload the delivery note for the device and temperature control fluid for the warranty check and warranty start date.

DONE!

Once completed, you will receive the official warranty confirmation, which can be viewed online.



SCAN NOW & FIND OUT MORE!
at www.lauda.de/en/best-warranty

Power plugs

Overview

Image	Plug code	Description	Image	Plug code	Description	Image	Plug code	Description
	2	CEE7/7 angled (EU, Schuko)		3	NEMA 6-20P (USA)		4	NEMA 5-20P (USA)
	5	GB2099 (CN)		6	BS1363 angled (UK)		7	IEC 60309, (blue), ›Caravan
	8	SEV 1011, SEV 5934/2 (CH, T23)		9	AS/NSZ 3112 (AUS)		10	NBR 14136 (BR)
	14	NEMA 5-15P (USA)		17	CEE7/7 straight (EU, Schuko)		21	IEC 60309, 5-pin, CEE, red, 16 A
	22	IEC 60309, 5-pin, CEE, red, 32 A		23	IEC 60309, 5-pin, CEE, red, 63 A		25	NEMA 5-15P (Japan)
	26	SEV 1011, SEV 5934/2 (CH, T12)		31	Mains cable without plug (HAR), Harmonized cable (DIN VDE 0281/DIN VDE 0282/DIN VDE 0292)		32	Mains cable without plug (AWG), American Wire Gauge, abbreviation AWG
	33	NEMA L16-30P twist lock; 30 A 480 V; 30 A, 3L+N+PE		34	NEMA L16-20P twist lock; 20 A 480 V; 20 A, 3L+N+PE		35	AS/NSZ 3112, SAA/3 (AUS) Australia, 250 V; 10 A
	36	NEMA 6-15P (USA) USA, 250 V; 15 A		37	NBR 14136, BR/3 (BR) Brazil, 250 V; 10 A		38	NEMA L15-30P twist lock; 30 A USA, 250 V; 30 A, 3L+PE
	40	NEMA L15-20P twist lock; 20 A USA, 250 V; 20 A, 3L+PE		42	Two mains cables with socket 6 and 8		43	Two mains cables with socket 6 and 17

The following brand names are registered trademarks of
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LAUDA Microcool®, LAUDA Universa®, LAUDA Variopumpe®,
Kryomat®, Kryopac®, Mobifreeze®, Ultratemp®, Variocool®

LAUDA DR. R. WOBSE R GMBH & CO. KG
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www.lauda.de

