

# °LAUDA

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## OVERALL BROCHURE CONSTANT TEMPERATURE EQUIPMENT 2020/2021

°FAHRENHEIT. °CELSIUS. °LAUDA.

# LAUDA CIRCULATION AND PROCESS THERMOSTATS

°LAUDA

## Specific application examples

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- 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 and 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.



max. 4l

min. 2l

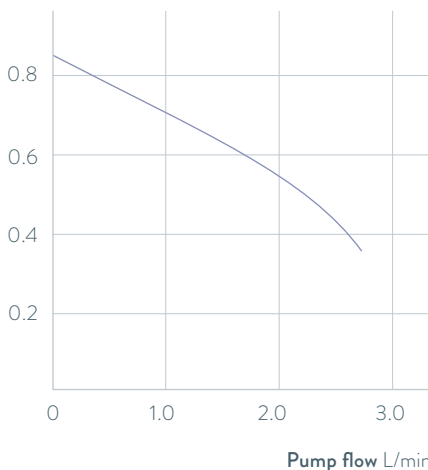
Simple three-button controls with OLED display



Standard-issue RS 232 interface for system integration into processes

## PUMP CHARACTERISTIC 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/1748](http://www.lauda.de/1748)



### LAUDA LOOP

The L100 and L250 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

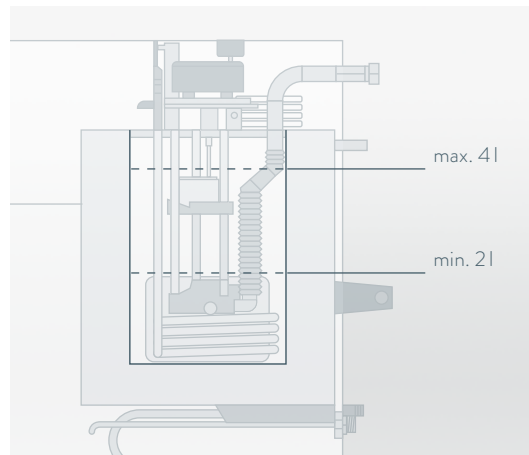


## Flexible operation, outstanding performance characteristics

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.



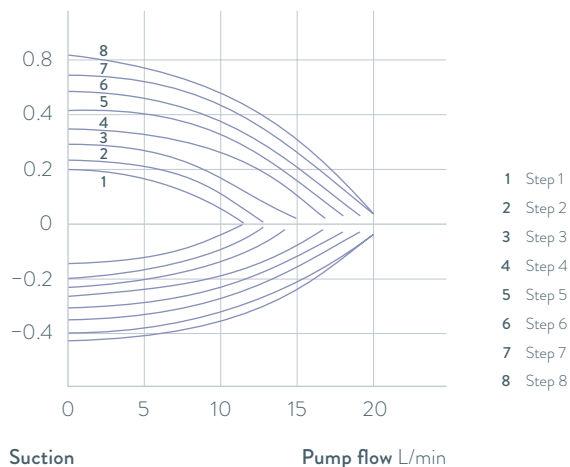
Many basic functions with the economic Base variant



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

## PUMP CHARACTERISTICS Water

Pressure bar



Suction

Pump flow 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/1750](http://www.lauda.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  $-30$  to  $150\text{ }^{\circ}\text{C}$



## High-performance process thermostats for effective control of external temperature control processes

LAUDA Integral T process thermostats are ideally suited for the effective control of external temperature control processes in a temperature range from  $-30$  to  $150\text{ }^{\circ}\text{C}$ . The 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. The Integral T also reliably handles classic areas of application, such as reaction control or climate simulation. Integral thermostats can be flexibly integrated in various communication scenarios thanks to the integrated web server, monitoring and control via PC or mobile devices and the modular interface concept.

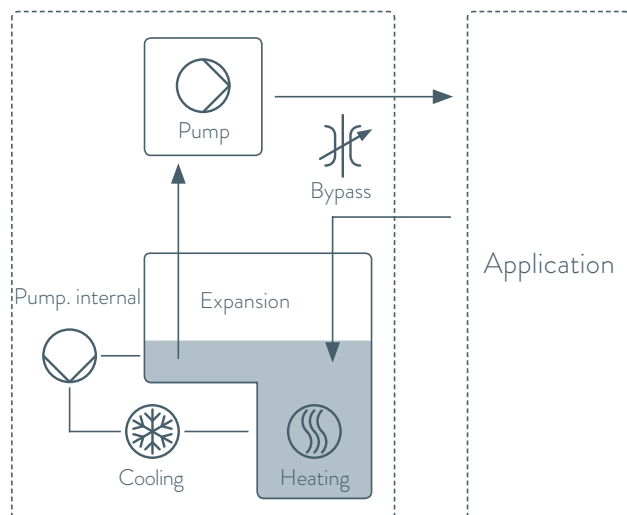


Three different housing sizes, depending on the output power



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

### 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/1752](http://www.lauda.de/1752)





### 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 20 kW for temperature control from  $-90$  to  $320$  °C

-90°C

320°C

## Process thermostats for dynamic temperature control tasks

LAUDA Integral XT process thermostats operate according to the flow principle with a cold oil blanket which allows the utilization of temperature control liquid over a significantly larger temperature range. The Integral XT process thermostats are ideal 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. An internal bypass also increases flexibility. Integral thermostats can be flexibly integrated in various communication scenarios thanks to the integrated web server, monitoring and control via PC or mobile devices and the modular interface concept.

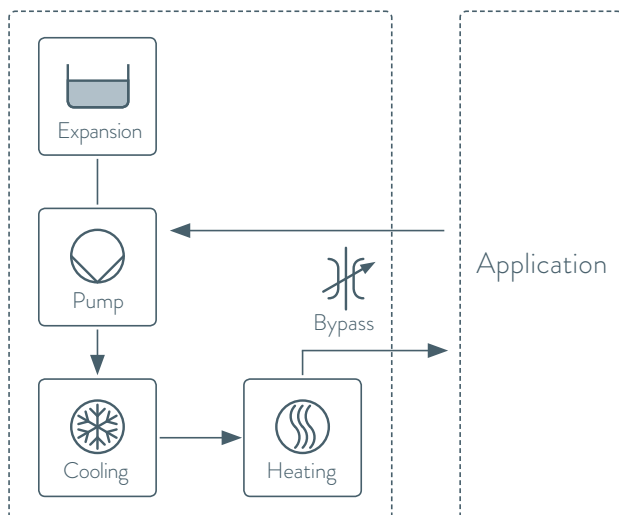


TFT display with different screens or temperature profiles



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 module slots available for retrofit
- Operation in internal LAN possible on web server via PC or tablet/smartphone

### Standard equipment

Ethernet and USB interfaces, Pt-100 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/1754](http://www.lauda.de/1754)



### LAUDA Integral XT

The Integral XT uses an eight-stage, robust and sealed 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 discharge pressure and volume flow rate.



# LAUDA Variocool

Cooling circulation thermostats from  $-20$  to  $80$  °C  
with cooling capacities up to 10 kW and powerful pumps

$-20$ °C   $80$ °C

## Comprehensive spectrum of services for demanding temperature control tasks

The LAUDA Variocool with optional heater is a fully fledged circulation thermostat suitable for use with non-flammable heat transfer liquid within a moderate temperature range.

Equipment incorporating different pumps, individual interface module expansions and the option of external temperature control allow operation as a standalone unit or full integration in a process control system.



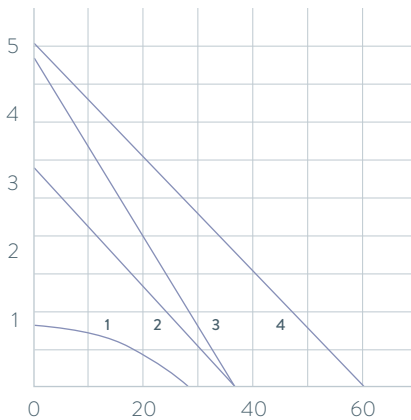
Malfunction Alarm contact included as standard, as well as module slots for additional interfaces



Flexible customization to applications due to optional heating and high performance pumps

## PUMP CHARACTERISTIC Water

Pressure bar



- 1 0,9 bar, 28 L/min
- 2 3,2 bar, 37 L/min
- 3 4,8 bar, 37 L/min
- 4 5,0 bar, 60 L/min

Pump flow 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/1756](http://www.lauda.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 circulation chillers in a tower design starting from the VC 5000 model are available with sound insulation.



# LAUDA Kryoheater Selecta

Process thermostats from  $-90$  to  $200$  °C

for high-performance, professional temperature control

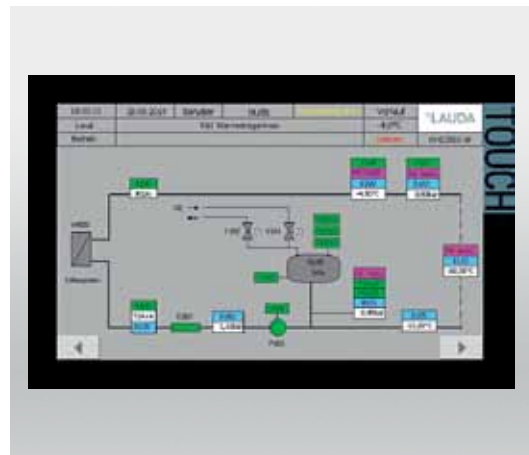


## High-performance temperature control – impressive energy efficiency and reliability

LAUDA process thermostats from the Kryoheater Selecta (KHS) product line are synonymous with high-performance temperature control, long service life, ease of maintenance and intuitive operation. Depending on the lowest required temperature, either a two-level compressor (down to  $-60$  °C) or a cascade cooling system (down to  $-90$  °C) is used. Condenser cooling is performed using cooling water and is controlled continuously and precisely. An incremental switch offers energy-saving and low-wear partial load operation via automatic compressor control.



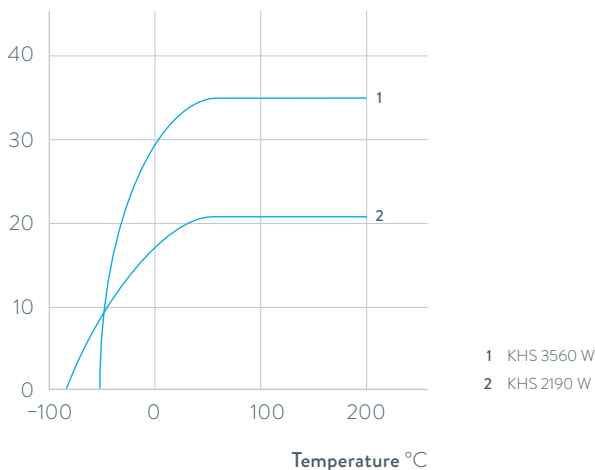
Secure and reliable use in production environment thanks to protection class IP 54 and the durable steel frame construction of the device



SPC controlling with 7" touch panel for intuitive operation and extensive data exchange with process control systems

## COOLING POWER Heat transfer liquid: Kryo 65 / Kryo 90

### Effective cooling power kW



1 KHS 3560 W  
2 KHS 2190 W

### Important functions

- Powerful, magnetically-coupled pump (high flow rate, even with pressure losses), speed-controlled or with flow pressure control
- Prepared for pressurized nitrogen overlay
- Visualization of pending faults, status display of all system components
- User management
- Free choice of analog or digital interface included in the standard delivery, other optional interfaces also available
- USB port and LEMO connector for external temperature probe as standard

### Available accessories

Thermostating and cooling water tubing, adapters

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

More at [www.lauda.de/1758](http://www.lauda.de/1758)



### LAUDA Kryoheater Selecta

The Kryoheater Selecta product line consists of the two devices KHS 3560 W and KHS 2190 W, which can be used in chemical and pharmaceutical production. They also perform impressively in simulations of the environmental conditions at inspection stations in the automotive and aerospace industry. The process thermostats are designed for pressurized operation with nitrogen. Benefits include the increase in maximum operating temperature and the extension in service life of the heat transfer liquids.



# LAUDA-Noah Semistat

Thermo-electric process thermostats  
for the semiconductor industry from  $-20$  to  $90^{\circ}\text{C}$

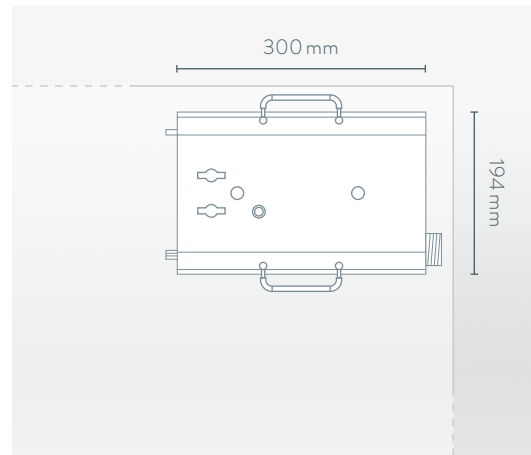


## Fast and precise temperature control for demanding processes

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-Noah 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.



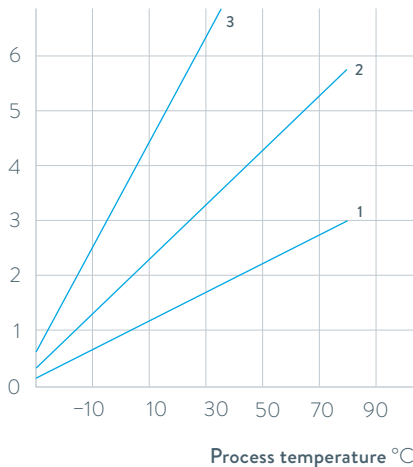
Dynamic, stable temperature control



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, no footprint required 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/1760](http://www.lauda.de/1760)





### LAUDA-Noah 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.

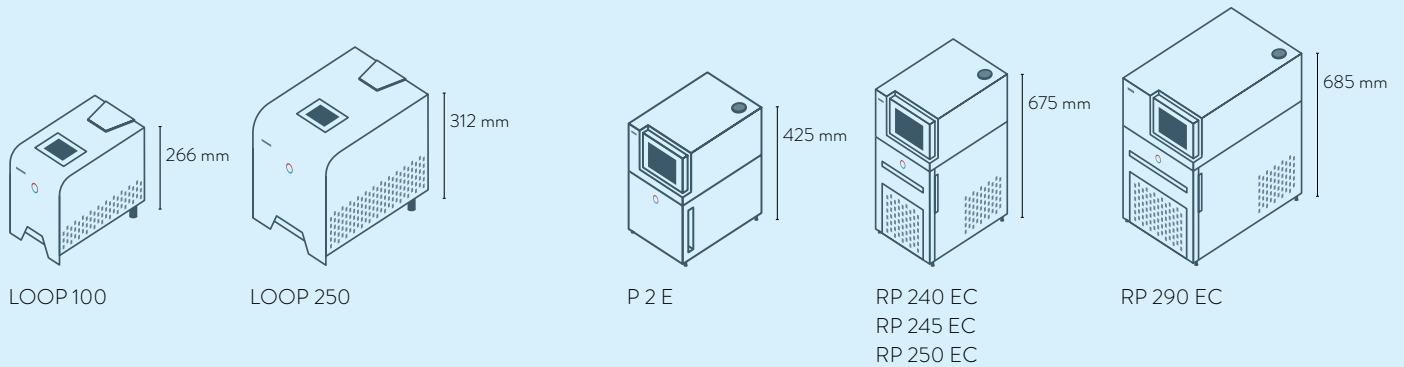


# LAUDA Circulation and process thermostats

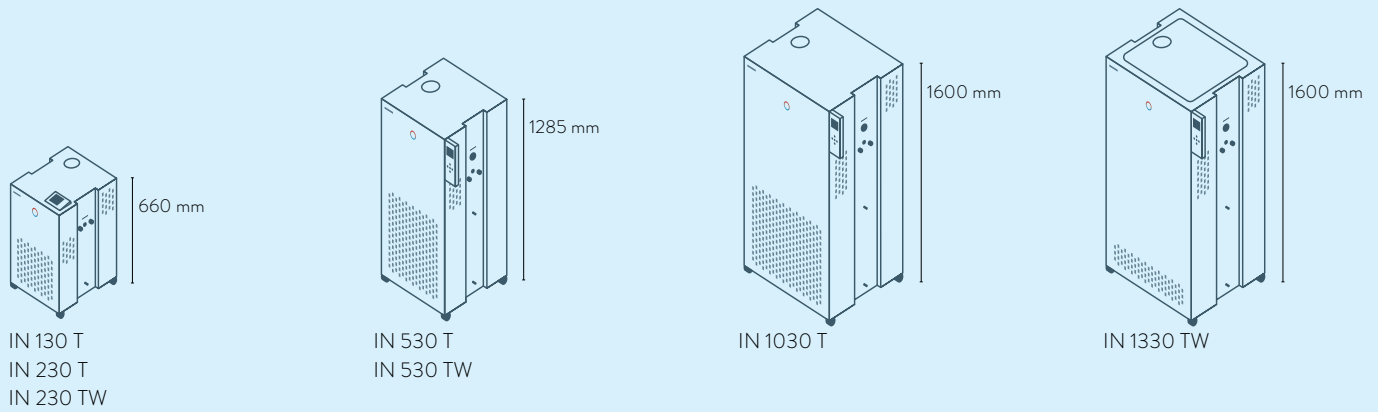
## Device type overview

LAUDA LOOP / Page 80

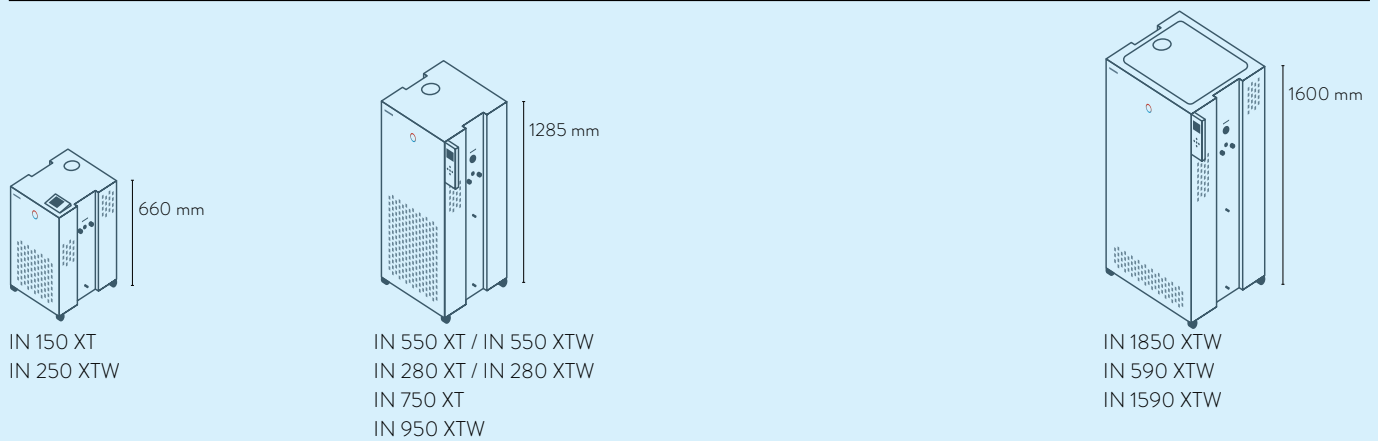
LAUDA PRO / Page 82



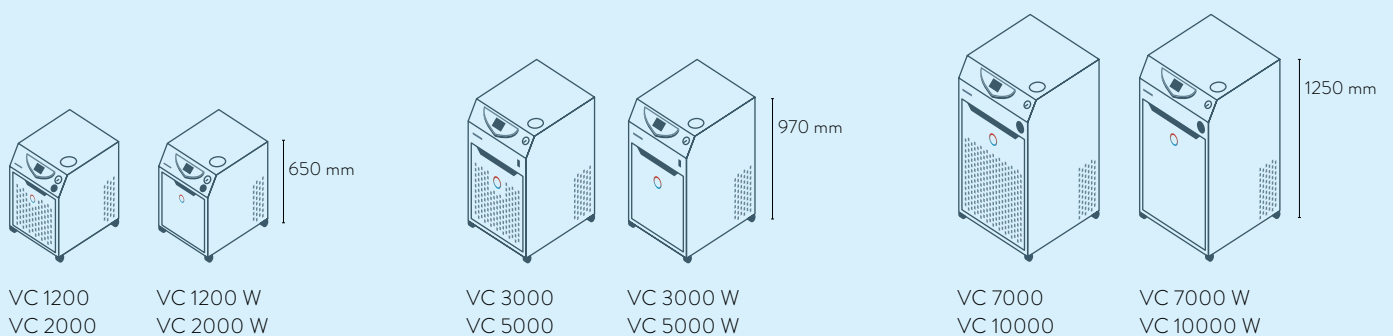
LAUDA Integral T / Page 84



LAUDA Integral XT / Page 86



LAUDA Variocool / Page 88



# LAUDA Circulation and process thermostats

## Interfaces

|                                    | Pt 100 (1) | Pt 100 (2) | USB | Ethernet | RS 232 / 485 | Analog | Namur contact | Sub-D contact | Profibus | EtherCat M8 | EtherCat RJ 45 | Modbus | Profinet | Malfunction contact | Number of module slots, large | Number of module slots, small |
|------------------------------------|------------|------------|-----|----------|--------------|--------|---------------|---------------|----------|-------------|----------------|--------|----------|---------------------|-------------------------------|-------------------------------|
| LAUDA LOOP / Page 80               | -          | -          | -   | -        | S            | -      | -             | -             | -        | -           | -              | -      | -        | -                   | -                             | -                             |
| LAUDA PRO / Page 82                | S          | -          | S   | S        | Z            | Z      | Z             | Z             | Z        | Z           | Z              | -      | -        | -                   | 1                             | -                             |
| LAUDA Integral T / Page 84         | S          | Z          | S   | S        | Z            | Z      | Z             | Z             | Z        | Z           | Z              | -      | -        | S                   | 2                             | -                             |
| LAUDA Integral XT / Page 86        | S          | Z          | S   | S        | Z            | Z      | Z             | Z             | Z        | Z           | Z              | -      | -        | S                   | 2                             | -                             |
| LAUDA Variocool / Page 88          | Z          | -          | S   | Z        | Z            | Z      | Z             | Z             | Z        | Z           | Z              | -      | -        | S                   | 1                             | 1                             |
| LAUDA Kryoheater Selecta / Page 90 | S          | -          | S   | -        | OD           | OD     | -             | -             | OD       | -           | OD             | -      | OD       | -                   | -                             | -                             |

S = Series standard  
 Z = Available as an accessory  
 OD = optional (cannot be retrofitted)



LRZ 912  
Analog module



LRZ 913  
RS 232/485 interface



LRZ 914  
Contact module with single input and single output (NAMUR)



LRZ 915  
Contact module with 3 inputs and 3 outputs



LRZ 917  
Profibus module



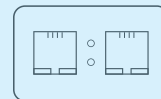
LRZ 918  
Pt100/LiBus-Modul, small cover



LRZ 921  
Ethernet module



LRZ 922  
EtherCAT module with M8 connection



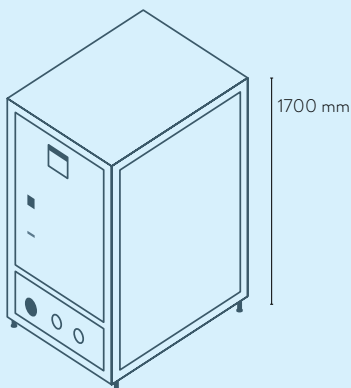
LRZ 923  
EtherCAT module with RJ45 connection



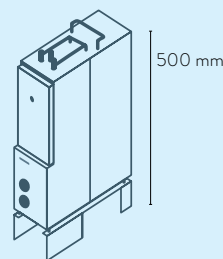
LRZ 925  
External Pt100/LiBus-module, large cover

LAUDA Kryoheater Selecta / Page 90

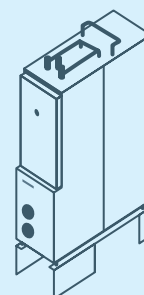
LAUDA-Noah Semistat / Page 92



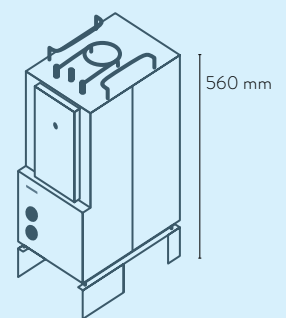
KHS 3560 W  
KHS 2190 W



S 1200



S 2400



S 4400

# LAUDA Circulation and process thermostats

## Function overview

| Operating element                    | LOOP             | PROE           | PROEC       | Integral T        | Integral XT       | Variocool      | Kryoheater Selecta |
|--------------------------------------|------------------|----------------|-------------|-------------------|-------------------|----------------|--------------------|
| Display                              | OLED             | OLED           | TFT         | TFT               | TFT               | TFT            | TFT                |
| Mode of operation                    | 3-button softkey | Cursor softkey | Multi-touch | Cursor softkey    | Cursor softkey    | Cursor softkey | Multi-touch        |
| Removable control                    | -                | ✓              | ✓           | Z                 | Z                 | -              | -                  |
| User management                      | -                | -              | ✓           | 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 / 5000  | 5 / 150           | 5 / 150           | 5 / 150        | OD                 |
| Programmer, tolerance range function | -                | ✓              | ✓           | ✓                 | ✓                 | ✓              | OD                 |
| Ramp function                        | -                | -              | ✓           | Z                 | Z                 | -              | OD                 |
| 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                 | -              | OD                 |
| Overflow                             | -                | ✓              | ✓           | ✓                 | ✓                 | -              | ✓                  |
| Low-level alarm                      | ✓                | ✓              | ✓           | ✓                 | ✓                 | ✓              | ✓                  |
| Drain tap                            | -                | ✓              | ✓           | ✓                 | ✓                 | ✓              | ✓                  |

Z = Available as an accessory

OD = optional (cannot be retrofitted)

# 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            |
| <b>LAUDA LOOP / Page 80</b>       |                              |                          |                                      |                      |                   |        |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| LOOP 100                          | 4 ... 80                     | 0.10                     | Air                                  | 0.2                  | -                 | -      | 0.12              | 0.06              | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| LOOP 250                          | 4 ... 80                     | 0.10                     | Air                                  | 0.4                  | -                 | -      | 0.25              | 0.13              | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| <b>LAUDA PRO / Page 82</b>        |                              |                          |                                      |                      |                   |        |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| 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 <sup>3</sup> | 0.60 <sup>3</sup> | 0.60 <sup>3</sup> | 0.41 <sup>3</sup> | 0.24 <sup>2</sup> | 0.12 <sup>2</sup> | 0.02 <sup>1</sup> | -                 | -                 | -                 | -                 | -                 |
| RP 240 EC                         | -40 ... 200                  | 0.05                     | Hybrid                               | 2.5                  | -                 | -      | 0.60 <sup>3</sup> | 0.60 <sup>3</sup> | 0.60 <sup>3</sup> | 0.41 <sup>3</sup> | 0.24 <sup>2</sup> | 0.12 <sup>2</sup> | 0.02 <sup>1</sup> | -                 | -                 | -                 | -                 | -                 |
| RP 245 E                          | -45 ... 200                  | 0.05                     | Hybrid                               | 2.5                  | -                 | -      | 0.80 <sup>3</sup> | 0.80 <sup>3</sup> | 0.80 <sup>3</sup> | 0.53 <sup>3</sup> | 0.34 <sup>2</sup> | 0.15 <sup>2</sup> | 0.04 <sup>2</sup> | -                 | -                 | -                 | -                 | -                 |
| RP 245 EC                         | -45 ... 200                  | 0.05                     | Hybrid                               | 2.5                  | -                 | -      | 0.80 <sup>3</sup> | 0.80 <sup>3</sup> | 0.80 <sup>3</sup> | 0.53 <sup>3</sup> | 0.34 <sup>2</sup> | 0.15 <sup>2</sup> | 0.04 <sup>2</sup> | -                 | -                 | -                 | -                 | -                 |
| RP 250 E                          | -50 ... 200                  | 0.05                     | Hybrid                               | 2.5                  | -                 | -      | 1.50 <sup>3</sup> | 1.44 <sup>3</sup> | 1.20 <sup>3</sup> | 0.84 <sup>3</sup> | 0.54 <sup>2</sup> | 0.29 <sup>2</sup> | 0.11 <sup>2</sup> | 0.02 <sup>1</sup> | -                 | -                 | -                 | -                 |
| RP 250 EC                         | -50 ... 200                  | 0.05                     | Hybrid                               | 2.5                  | -                 | -      | 1.50 <sup>3</sup> | 1.44 <sup>3</sup> | 1.20 <sup>3</sup> | 0.84 <sup>3</sup> | 0.54 <sup>2</sup> | 0.29 <sup>2</sup> | 0.11 <sup>2</sup> | 0.02 <sup>1</sup> | -                 | -                 | -                 | -                 |
| RP 290 E                          | -90 ... 200                  | 0.05                     | Hybrid                               | 2.5                  | -                 | -      | 0.80 <sup>3</sup> | 0.77 <sup>3</sup> | 0.74 <sup>3</sup> | 0.72 <sup>3</sup> | 0.70 <sup>2</sup> | 0.68 <sup>2</sup> | 0.64 <sup>2</sup> | 0.56 <sup>2</sup> | 0.39 <sup>2</sup> | 0.21 <sup>2</sup> | 0.09 <sup>2</sup> | 0.01 <sup>1</sup> |
| RP 290 EC                         | -90 ... 200                  | 0.05                     | Hybrid                               | 2.5                  | -                 | -      | 0.80 <sup>3</sup> | 0.77 <sup>3</sup> | 0.74 <sup>3</sup> | 0.72 <sup>3</sup> | 0.70 <sup>2</sup> | 0.68 <sup>2</sup> | 0.64 <sup>2</sup> | 0.56 <sup>2</sup> | 0.39 <sup>2</sup> | 0.21 <sup>2</sup> | 0.09 <sup>2</sup> | 0.01 <sup>1</sup> |
| <b>LAUDA Integral T / Page 84</b> |                              |                          |                                      |                      |                   |        |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| IN 130 T                          | -30 ... 120                  | 0.05                     | Air                                  | 2.7                  | -                 | 1.40   | 1.40              | 1.35              | 1.20              | 0.80              | 0.40              | 0.10              | -                 | -                 | -                 | -                 | -                 | -                 |
| IN 230 T                          | -30 ... 120                  | 0.05                     | Air                                  | 2.7                  | -                 | 2.20   | 2.20              | 1.90              | 1.50              | 1.00              | 0.60              | 0.15              | -                 | -                 | -                 | -                 | -                 | -                 |
| IN 230 TW                         | -30 ... 120                  | 0.05                     | Water                                | 2.7                  | -                 | 2.30   | 2.30              | 2.30              | 1.90              | 1.30              | 0.75              | 0.35              | -                 | -                 | -                 | -                 | -                 | -                 |
| IN 530 T                          | -30 ... 120                  | 0.05                     | Air                                  | 8.0                  | -                 | 5.00   | 5.00              | 4.50              | 3.80              | 2.60              | 1.50              | 0.60              | -                 | -                 | -                 | -                 | -                 | -                 |
| IN 530 TW                         | -30 ... 120                  | 0.05                     | Water                                | 8.0                  | -                 | 6.00   | 6.00              | 5.50              | 4.50              | 3.00              | 1.60              | 0.70              | -                 | -                 | -                 | -                 | -                 | -                 |
| IN 1030 T                         | -30 ... 150                  | 0.10                     | Air                                  | 8.0                  | -                 | 11.00  | 11.00             | 9.50              | 7.10              | 4.90              | 3.00              | 1.60              | -                 | -                 | -                 | -                 | -                 | -                 |
| IN 1330 TW                        | -30 ... 150                  | 0.10                     | Water                                | 16.0                 | -                 | 13.00  | 13.00             | 10.00             | 7.60              | 5.40              | 3.40              | 1.70              | -                 | -                 | -                 | -                 | -                 | -                 |

<sup>1</sup>Pump output step 2 <sup>2</sup>Pump output step 4 <sup>3</sup>Pump output step 8

| Pump pressure max. bar | Pump flow max. pressure L/min | Pump connection thread mm | 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                      | Cat. No. | Device type |
|------------------------|-------------------------------|---------------------------|--------------------|--------------------|---------------------------|-------------------|--------------------|-----------|-----------------|---|----------|-------------|
| 0.8                    | 2.6                           | Quick C. 1/4"             | 0.3                | 0.3                | 175×301×266               | IP 21             | 57                 | 6.9       | 0.2             | 100-240 V; 50/60 Hz                     | L000027  | LOOP 100    |
| 0.8                    | 2.6                           | Quick C. 1/4"             | 0.3                | 0.3                | 261×368×312               | IP 21             | 57                 | 11.9      | 0.4             | 100-240 V; 50/60 Hz                     | L000580  | LOOP 250    |
| 0.7                    | 22                            | M16×1                     | 2.4                | 4.4                | 250×365×425               | IP 21             | 47                 | 15.5      | 2.7             | 200-230 V; 50/60 Hz                     | L000019  | P 2 E       |
| 0.7                    | 22                            | M16×1                     | 2.4                | 4.4                | 250×365×425               | IP 21             | 47                 | 15.5      | 2.7             | 200-230 V; 50/60 Hz                     | L000020  | P 2 EC      |
| 0.7                    | 22                            | M16×1                     | 2.4                | 4.4                | 300×430×675               | IP 21             | 54                 | 46.0      | 3.7             | 230 V; 50 Hz                            | L000021  | RP 240 E    |
| 0.7                    | 22                            | M16×1                     | 2.4                | 4.4                | 300×430×675               | IP 21             | 54                 | 46.0      | 3.7             | 230 V; 50 Hz                            | L000023  | RP 240 EC   |
| 0.7                    | 22                            | M16×1                     | 2.4                | 4.4                | 300×430×675               | IP 21             | 54                 | 46.0      | 3.7             | 230 V; 50 Hz                            | L000022  | RP 245 E    |
| 0.7                    | 22                            | M16×1                     | 2.4                | 4.4                | 300×430×675               | IP 21             | 54                 | 46.0      | 3.7             | 230 V; 50 Hz                            | L000024  | RP 245 EC   |
| 0.7                    | 22                            | M16×1                     | 2.4                | 4.4                | 300×430×675               | IP 21             | 57                 | 47.0      | 3.7             | 230 V; 50 Hz                            | L002494  | RP 250 E    |
| 0.7                    | 22                            | M16×1                     | 2.4                | 4.4                | 300×430×675               | IP 21             | 57                 | 47.0      | 3.7             | 230 V; 50 Hz                            | L002495  | RP 250 EC   |
| 0.7                    | 22                            | M16×1                     | 2.4                | 4.4                | 390×600×685               | IP 21             | 56                 | 79.0      | 3.7             | 230 V; 50 Hz                            | L002502  | RP 290 E    |
| 0.7                    | 22                            | M16×1                     | 2.4                | 4.4                | 390×600×685               | IP 21             | 56                 | 79.0      | 3.7             | 230 V; 50 Hz                            | L002503  | RP 290 EC   |
| 3.5                    | 40                            | G 3/4                     | 3.6                | 8.7                | 430×550×760               | IP 21             | 61                 | 76.0      | 3.7             | 230 V; 50 Hz                            | L002663  | IN 130 T    |
| 3.5                    | 40                            | G 3/4                     | 3.6                | 8.7                | 430×550×760               | IP 21             | 63                 | 80.0      | 3.7             | 230 V; 50 Hz                            | L002664  | IN 230 T    |
| 3.5                    | 40                            | G 3/4                     | 3.6                | 8.7                | 430×550×760               | IP 21             | 58                 | 82.0      | 3.7             | 230 V; 50 Hz                            | L002665  | IN 230 TW   |
| 3.5                    | 40                            | G 3/4                     | 7.2                | 20.5               | 560×550×1325              | IP 21             | 62                 | 146.0     | 11.0            | 400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz | L002666  | IN 530 T    |
| 3.5                    | 40                            | G 3/4                     | 7.2                | 20.5               | 560×550×1325              | IP 21             | 62                 | 148.0     | 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               | 760×650×1605              | IP 21             | 69                 | 212.0     | 20.0            | 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               | 760×650×1605              | IP 21             | 59                 | 214.0     | 20.0            | 400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz | L002669  | IN 1330 TW  |

# 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            |
| <b>LAUDA Integral XT / Page 86</b> |                              |                          |                                      |                      |                    |                    |                    |                    |                    |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| IN 150 XT                          | -45 ... 220                  | 0.05                     | Air                                  | 3.5                  | 1.50 <sup>3</sup>  | 1.50 <sup>3</sup>  | 1.50 <sup>3</sup>  | 1.50 <sup>3</sup>  | 1.30 <sup>3</sup>  | 1.00 <sup>3</sup> | 0.70 <sup>2</sup> | 0.30 <sup>2</sup> | 0.06 <sup>2</sup> | -                 | -                 | -                 | -                 | -                 |
| IN 250 XTW                         | -45 ... 220                  | 0.05                     | Water                                | 3.5                  | 2.20 <sup>3</sup>  | 2.20 <sup>3</sup>  | 2.10 <sup>3</sup>  | 2.00 <sup>3</sup>  | 1.80 <sup>3</sup>  | 1.40 <sup>3</sup> | 1.00 <sup>2</sup> | 0.55 <sup>2</sup> | 0.20 <sup>2</sup> | -                 | -                 | -                 | -                 | -                 |
| IN 550 XT                          | -50 ... 220                  | 0.05                     | Air                                  | 8.0                  | 5.00 <sup>3</sup>  | 5.00 <sup>3</sup>  | 5.00 <sup>3</sup>  | 4.80 <sup>3</sup>  | 4.60 <sup>3</sup>  | 3.30 <sup>3</sup> | 2.30 <sup>2</sup> | 1.20 <sup>2</sup> | 0.50 <sup>2</sup> | 0.10 <sup>1</sup> | -                 | -                 | -                 | -                 |
| IN 550 XTW                         | -50 ... 220                  | 0.05                     | Water                                | 8.0                  | 5.80 <sup>3</sup>  | 5.80 <sup>3</sup>  | 5.80 <sup>3</sup>  | 5.80 <sup>3</sup>  | 5.40 <sup>3</sup>  | 4.00 <sup>3</sup> | 2.60 <sup>2</sup> | 1.45 <sup>2</sup> | 0.55 <sup>2</sup> | 0.12 <sup>1</sup> | -                 | -                 | -                 | -                 |
| IN 750 XT                          | -45 ... 220                  | 0.05                     | Air                                  | 8.0                  | 7.00 <sup>3</sup>  | 7.00 <sup>3</sup>  | 7.00 <sup>3</sup>  | 7.00 <sup>3</sup>  | 5.40 <sup>3</sup>  | 3.60 <sup>3</sup> | 2.60 <sup>2</sup> | 1.60 <sup>2</sup> | 0.80 <sup>2</sup> | -                 | -                 | -                 | -                 | -                 |
| IN 950 XTW                         | -50 ... 220                  | 0.05                     | Water                                | 8.0                  | 9.50 <sup>3</sup>  | 9.50 <sup>3</sup>  | 9.50 <sup>3</sup>  | 8.50 <sup>3</sup>  | 6.20 <sup>3</sup>  | 4.30 <sup>3</sup> | 3.00 <sup>2</sup> | 1.70 <sup>2</sup> | 0.90 <sup>2</sup> | 0.35 <sup>1</sup> | -                 | -                 | -                 | -                 |
| IN 1850 XTW                        | -50 ... 220                  | 0.05                     | Water                                | 16.0                 | 20.00 <sup>3</sup> | 20.00 <sup>3</sup> | 20.00 <sup>3</sup> | 15.00 <sup>3</sup> | 11.50 <sup>3</sup> | 8.50 <sup>3</sup> | 6.10 <sup>2</sup> | 3.60 <sup>2</sup> | 1.90 <sup>2</sup> | 1.10 <sup>1</sup> | -                 | -                 | -                 | -                 |
| IN 280 XT                          | -80 ... 220                  | 0.05                     | Air                                  | 4.0                  | 1.60 <sup>3</sup>  | 1.60 <sup>3</sup>  | 1.60 <sup>3</sup>  | 1.55 <sup>3</sup>  | 1.50 <sup>3</sup>  | 1.50 <sup>3</sup> | 1.70 <sup>2</sup> | 1.70 <sup>2</sup> | 1.65 <sup>2</sup> | 1.40 <sup>2</sup> | 0.85 <sup>2</sup> | 0.35 <sup>2</sup> | 0.15 <sup>2</sup> | -                 |
| IN 280 XTW                         | -80 ... 220                  | 0.05                     | Water                                | 4.0                  | 1.70 <sup>3</sup>  | 1.70 <sup>3</sup>  | 1.70 <sup>3</sup>  | 1.65 <sup>3</sup>  | 1.60 <sup>3</sup>  | 1.60 <sup>3</sup> | 1.80 <sup>2</sup> | 1.80 <sup>2</sup> | 1.80 <sup>2</sup> | 1.50 <sup>2</sup> | 0.90 <sup>2</sup> | 0.45 <sup>2</sup> | 0.18 <sup>2</sup> | -                 |
| IN 590 XTW                         | -90 ... 220                  | 0.05                     | Water                                | 8.0                  | 4.50 <sup>3</sup>  | 4.50 <sup>3</sup>  | 4.50 <sup>3</sup>  | 4.45 <sup>3</sup>  | 4.40 <sup>3</sup>  | 4.40 <sup>3</sup> | 4.60 <sup>2</sup> | 4.60 <sup>2</sup> | 4.50 <sup>2</sup> | 4.20 <sup>2</sup> | 2.70 <sup>2</sup> | 1.40 <sup>2</sup> | 0.60 <sup>2</sup> | 0.20 <sup>1</sup> |
| IN 1590 XTW                        | -90 ... 220                  | 0.05                     | Water                                | 12.0                 | 18.50 <sup>3</sup> | 18.50 <sup>3</sup> | 18.50 <sup>3</sup> | 15.00 <sup>3</sup> | 11.50 <sup>3</sup> | 8.70 <sup>3</sup> | 8.50 <sup>2</sup> | 8.50 <sup>2</sup> | 7.50 <sup>2</sup> | 6.00 <sup>2</sup> | 4.00 <sup>2</sup> | 2.20 <sup>2</sup> | 0.90 <sup>2</sup> | 0.35 <sup>1</sup> |
| XT 4 H                             | 80 ... 320                   | 0.05                     |                                      | 3.6                  | -                  | -                  | -                  | -                  | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| XT 4 HW                            | 30 ... 320                   | 0.10                     | Water                                | 3.6                  | 16.00 <sup>2</sup> | 9.00 <sup>2</sup>  | -                  | -                  | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| XT 8 H                             | 80 ... 320                   | 0.05                     |                                      | 8.0                  | -                  | -                  | -                  | -                  | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| XT 8 HW                            | 30 ... 320                   | 0.10                     | Water                                | 8.0                  | 16.00 <sup>2</sup> | 9.00 <sup>2</sup>  | -                  | -                  | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| <b>LAUDA Variocool / Page 88</b>   |                              |                          |                                      |                      |                    |                    |                    |                    |                    |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| VC 1200                            | -20 ... 80                   | 0.05                     | Air                                  | 1.5                  | -                  | -                  | 1.20               | 1.00               | 0.70               | 0.40              | 0.14              | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| VC 1200                            | -20 ... 80                   | 0.05                     | Air                                  | 2.3                  | -                  | -                  | 1.20               | 1.00               | 0.70               | 0.40              | 0.14              | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| VC 1200                            | -20 ... 80                   | 0.05                     | Air                                  | 2.3                  | -                  | -                  | 1.12               | 0.92               | 0.62               | 0.32              | 0.06              | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| VC 1200                            | -20 ... 80                   | 0.05                     | Air                                  | 1.5                  | -                  | -                  | 1.12               | 0.92               | 0.62               | 0.32              | 0.06              | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| VC 1200                            | -20 ... 80                   | 0.05                     | Air                                  | 1.5                  | -                  | -                  | 1.00               | 0.80               | 0.50               | 0.20              | 0.01              | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| VC 1200                            | -20 ... 80                   | 0.05                     | Air                                  | 2.3                  | -                  | -                  | 1.00               | 0.80               | 0.50               | 0.20              | 0.01              | -                 | -                 | -                 | -                 | -                 | -                 | -                 |

<sup>1</sup>Pump output step 2 <sup>2</sup>Pump output step 4 <sup>3</sup>Pump output step 8

| Pump pressure max. bar | Pump flow max. pressure L/min | Pump connection thread mm | 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                      | Cat. No. | Device type |
|------------------------|-------------------------------|---------------------------|--------------------|--------------------|---------------------------|-------------------|--------------------|-----------|-----------------|---|----------|-------------|
| 3.1                    | 65                            | M30×1,5                   | 2.5                | 8.7                | 430×550×760               | IP 21             | 60                 | 103.0     | 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                 | 105.0     | 3.7             | 230 V; 50 Hz                            | L002674  | IN 250 XTW  |
| 3.1                    | 65                            | M30×1,5                   | 4.8                | 17.2               | 560×550×1325              | IP 21             | 65                 | 171.0     | 12.0            | 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               | 560×550×1325              | IP 21             | 62                 | 176.0     | 12.0            | 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               | 560×550×1325              | IP 21             | 66                 | 169.0     | 12.0            | 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               | 560×550×1325              | IP 21             | 67                 | 173.0     | 12.0            | 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               | 760×650×1605              | IP 21             | 62                 | 272.0     | 20.0            | 400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz | L002680  | IN 1850 XTW |
| 3.1                    | 65                            | M30×1,5                   | 4.8                | 17.2               | 560×550×1325              | IP 21             | 62                 | 183.0     | 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               | 560×550×1325              | IP 21             | 60                 | 187.0     | 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               | 760×650×1605              | IP 21             | 61                 | 274.0     | 12.0            | 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               | 760×650×1605              | IP 21             | 63                 | 345.0     | 25.0            | 400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz | L002689  | IN 1590 XTW |
| 2.9                    | 45                            | M30×1,5                   | 2.6                | 8.1                | 335×550×660               | IP 21C            | 51                 | 60.0      | 3.7             | 230 V; 50 Hz                            | L001839  | XT 4 H      |
| 2.9                    | 45                            | M30×1,5                   | 2.6                | 8.1                | 335×550×660               | IP 21C            | 51                 | 64.0      | 3.7             | 230 V; 50 Hz                            | L001840  | XT 4 HW     |
| 2.9                    | 45                            | M30×1,5                   | 2.6                | 8.1                | 335×550×660               | IP 21C            | 51                 | 62.0      | 8.7             | 400 V; 3/PE; 50 Hz                      | L001845  | XT 8 H      |
| 2.9                    | 45                            | M30×1,5                   | 2.6                | 8.1                | 335×550×660               | IP 21C            | 51                 | 66.0      | 8.7             | 400 V; 3/PE; 50 Hz                      | L001846  | XT 8 HW     |
| 0.9                    | 28                            | G 3/4                     | 8.0                | 15.0               | 450×550×650               | IP 32             | 51                 | 54.0      | 2.6             | 230 V; 50 Hz                            | L000711  | VC 1200     |
| 0.9                    | 28                            | G 3/4                     | 8.0                | 15.0               | 450×550×650               | IP 32             | 51                 | 54.0      | 3.3             | 230 V; 50 Hz                            | L000712  | VC 1200     |
| 3.2                    | 37                            | G 3/4                     | 8.0                | 15.0               | 450×550×790               | IP 32             | 53                 | 54.0      | 3.3             | 230 V; 50 Hz                            | L000923  | VC 1200     |
| 3.2                    | 37                            | G 3/4                     | 8.0                | 15.0               | 450×550×790               | IP 32             | 53                 | 54.0      | 2.6             | 230 V; 50 Hz                            | L000921  | VC 1200     |
| 4.8                    | 37                            | G 3/4                     | 8.0                | 15.0               | 450×550×790               | IP 32             | 57                 | 54.0      | 2.6             | 230 V; 50 Hz                            | L000922  | VC 1200     |
| 4.8                    | 37                            | G 3/4                     | 8.0                | 15.0               | 450×550×790               | IP 32             | 57                 | 54.0      | 3.3             | 230 V; 50 Hz                            | L000924  | VC 1200     |



# 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 88 |                              |                          |                                      |                      |                   |        |       |       |      |        |        |        |        |        |        |        |        |        |
| VC 1200 W                 | -20 ... 80                   | 0.05                     | Water                                | 2.3                  | -                 | -      | 1.20  | 1.00  | 0.70 | 0.40   | 0.14   | -      | -      | -      | -      | -      | -      | -      |
| VC 1200 W                 | -20 ... 80                   | 0.05                     | Water                                | 1.5                  | -                 | -      | 1.20  | 1.00  | 0.70 | 0.40   | 0.14   | -      | -      | -      | -      | -      | -      | -      |
| VC 1200 W                 | -20 ... 80                   | 0.05                     | Water                                | 1.5                  | -                 | -      | 1.12  | 0.92  | 0.62 | 0.32   | 0.06   | -      | -      | -      | -      | -      | -      | -      |
| VC 1200 W                 | -20 ... 80                   | 0.05                     | Water                                | 2.3                  | -                 | -      | 1.12  | 0.92  | 0.62 | 0.32   | 0.06   | -      | -      | -      | -      | -      | -      | -      |
| VC 1200 W                 | -20 ... 80                   | 0.05                     | Water                                | 1.5                  | -                 | -      | 1.00  | 0.80  | 0.50 | 0.20   | 0.01   | -      | -      | -      | -      | -      | -      | -      |
| VC 1200 W                 | -20 ... 80                   | 0.05                     | Water                                | 2.3                  | -                 | -      | 1.00  | 0.80  | 0.50 | 0.20   | 0.01   | -      | -      | -      | -      | -      | -      | -      |
| VC 2000                   | -20 ... 80                   | 0.05                     | Air                                  | 1.5                  | -                 | -      | 2.00  | 1.50  | 1.06 | 0.68   | 0.38   | -      | -      | -      | -      | -      | -      | -      |
| VC 2000                   | -20 ... 80                   | 0.05                     | Air                                  | 2.2                  | -                 | -      | 2.00  | 1.50  | 1.06 | 0.68   | 0.38   | -      | -      | -      | -      | -      | -      | -      |
| VC 2000                   | -20 ... 80                   | 0.05                     | Air                                  | 1.5                  | -                 | -      | 1.92  | 1.42  | 0.98 | 0.60   | 0.30   | -      | -      | -      | -      | -      | -      | -      |
| VC 2000                   | -20 ... 80                   | 0.05                     | Air                                  | 2.2                  | -                 | -      | 1.92  | 1.42  | 0.98 | 0.60   | 0.30   | -      | -      | -      | -      | -      | -      | -      |
| VC 2000                   | -20 ... 80                   | 0.05                     | Air                                  | 2.2                  | -                 | -      | 1.80  | 1.30  | 0.86 | 0.48   | 0.18   | -      | -      | -      | -      | -      | -      | -      |
| VC 2000                   | -20 ... 80                   | 0.05                     | Air                                  | 1.5                  | -                 | -      | 1.80  | 1.30  | 0.86 | 0.48   | 0.18   | -      | -      | -      | -      | -      | -      | -      |
| VC 2000 W                 | -20 ... 80                   | 0.05                     | Water                                | 1.5                  | -                 | -      | 2.00  | 1.50  | 1.06 | 0.68   | 0.38   | -      | -      | -      | -      | -      | -      | -      |
| VC 2000 W                 | -20 ... 80                   | 0.05                     | Water                                | 2.2                  | -                 | -      | 2.00  | 1.50  | 1.06 | 0.68   | 0.38   | -      | -      | -      | -      | -      | -      | -      |
| VC 2000 W                 | -20 ... 80                   | 0.05                     | Water                                | 1.5                  | -                 | -      | 1.92  | 1.42  | 0.98 | 0.60   | 0.30   | -      | -      | -      | -      | -      | -      | -      |
| VC 2000 W                 | -20 ... 80                   | 0.05                     | Water                                | 2.2                  | -                 | -      | 1.92  | 1.42  | 0.98 | 0.60   | 0.30   | -      | -      | -      | -      | -      | -      | -      |
| VC 2000 W                 | -20 ... 80                   | 0.05                     | Water                                | 1.5                  | -                 | -      | 1.80  | 1.30  | 0.86 | 0.48   | 0.18   | -      | -      | -      | -      | -      | -      | -      |
| VC 2000 W                 | -20 ... 80                   | 0.05                     | Water                                | 2.2                  | -                 | -      | 1.80  | 1.30  | 0.86 | 0.48   | 0.18   | -      | -      | -      | -      | -      | -      | -      |
| 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                  | -                 | -      | 4.50  | 3.40  | 2.25 | 1.20   | 0.40   | -      | -      | -      | -      | -      | -      | -      |
| 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                  | -                 | -      | 4.50  | 3.40  | 2.25 | 1.20   | 0.40   | -      | -      | -      | -      | -      | -      | -      |
| VC 5000 W                 | -20 ... 80                   | 0.05                     | Water                                | 4.5                  | -                 | -      | 4.65  | 3.55  | 2.40 | 1.35   | 0.55   | -      | -      | -      | -      | -      | -      | -      |

| Pump pressure max. bar | Pump flow max. pressure L/min | Pump connection thread mm | 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   | Cat. No. | Device type |
|------------------------|-------------------------------|---------------------------|--------------------|--------------------|---------------------------|-------------------|-------------------|-----------|-----------------|----------------------|----------|-------------|
| 0.9                    | 28                            | G 3/4                     | 8.0                | 15.0               | 450×550×650               | IP 32             | 50                | 51.0      | 3.3             | 230 V; 50 Hz         | L000732  | VC 1200 W   |
| 0.9                    | 28                            | G 3/4                     | 8.0                | 15.0               | 450×550×650               | IP 32             | 50                | 51.0      | 2.6             | 230 V; 50 Hz         | L000731  | VC 1200 W   |
| 3.2                    | 37                            | G 3/4                     | 8.0                | 15.0               | 450×550×790               | IP 32             | 52                | 51.0      | 2.6             | 230 V; 50 Hz         | L000954  | VC 1200 W   |
| 3.2                    | 37                            | G 3/4                     | 8.0                | 15.0               | 450×550×790               | IP 32             | 52                | 51.0      | 3.3             | 230 V; 50 Hz         | L000956  | VC 1200 W   |
| 4.8                    | 37                            | G 3/4                     | 8.0                | 15.0               | 450×550×790               | IP 32             | 56                | 51.0      | 2.6             | 230 V; 50 Hz         | L000955  | VC 1200 W   |
| 4.8                    | 37                            | G 3/4                     | 8.0                | 15.0               | 450×550×790               | IP 32             | 56                | 51.0      | 3.3             | 230 V; 50 Hz         | L000957  | VC 1200 W   |
| 0.9                    | 28                            | G 3/4                     | 8.0                | 15.0               | 450×550×650               | IP 32             | 52                | 57.0      | 2.6             | 230 V; 50 Hz         | L000713  | VC 2000     |
| 0.9                    | 28                            | G 3/4                     | 8.0                | 15.0               | 450×550×650               | IP 32             | 52                | 57.0      | 3.3             | 230 V; 50 Hz         | L000714  | VC 2000     |
| 3.2                    | 37                            | G 3/4                     | 8.0                | 15.0               | 450×550×790               | IP 32             | 56                | 57.0      | 2.6             | 230 V; 50 Hz         | L000925  | VC 2000     |
| 3.2                    | 37                            | G 3/4                     | 8.0                | 15.0               | 450×550×790               | IP 32             | 56                | 57.0      | 3.3             | 230 V; 50 Hz         | L000927  | VC 2000     |
| 4.8                    | 37                            | G 3/4                     | 8.0                | 15.0               | 450×550×790               | IP 32             | 58                | 57.0      | 3.3             | 230 V; 50 Hz         | L000928  | VC 2000     |
| 4.8                    | 37                            | G 3/4                     | 8.0                | 15.0               | 450×550×790               | IP 32             | 58                | 57.0      | 2.6             | 230 V; 50 Hz         | L000926  | VC 2000     |
| 0.9                    | 28                            | G 3/4                     | 8.0                | 15.0               | 450×550×650               | IP 32             | 50                | 54.0      | 2.6             | 230 V; 50 Hz         | L000733  | VC 2000 W   |
| 0.9                    | 28                            | G 3/4                     | 8.0                | 15.0               | 450×550×650               | IP 32             | 50                | 54.0      | 3.3             | 230 V; 50 Hz         | L000734  | VC 2000 W   |
| 3.2                    | 37                            | G 3/4                     | 8.0                | 15.0               | 450×550×790               | IP 32             | 53                | 54.0      | 2.6             | 230 V; 50 Hz         | L000958  | VC 2000 W   |
| 3.2                    | 37                            | G 3/4                     | 8.0                | 15.0               | 450×550×790               | IP 32             | 53                | 54.0      | 3.3             | 230 V; 50 Hz         | L000960  | VC 2000 W   |
| 4.8                    | 37                            | G 3/4                     | 8.0                | 15.0               | 450×550×790               | IP 32             | 56                | 54.0      | 2.6             | 230 V; 50 Hz         | L000959  | VC 2000 W   |
| 4.8                    | 37                            | G 3/4                     | 8.0                | 15.0               | 450×550×790               | IP 32             | 56                | 54.0      | 3.3             | 230 V; 50 Hz         | L000961  | VC 2000 W   |
| 3.2                    | 37                            | G 3/4                     | 20.0               | 33.0               | 550×650×970               | IP 32             | 57                | 93.0      | 2.6             | 230 V; 50 Hz         | L000715  | VC 3000     |
| 4.8                    | 37                            | G 3/4                     | 20.0               | 33.0               | 550×650×970               | IP 32             | 61                | 93.0      | 2.6             | 230 V; 50 Hz         | L000929  | VC 3000     |
| 3.2                    | 37                            | G 3/4                     | 20.0               | 33.0               | 550×650×970               | IP 32             | 55                | 89.0      | 2.6             | 230 V; 50 Hz         | L000735  | VC 3000 W   |
| 4.8                    | 37                            | G 3/4                     | 20.0               | 33.0               | 550×650×970               | IP 32             | 59                | 89.0      | 2.6             | 230 V; 50 Hz         | L000962  | VC 3000 W   |
| 3.2                    | 37                            | G 3/4                     | 20.0               | 33.0               | 550×650×970               | IP 32             | 65                | 98.0      | 7.8             | 400 V; 3/N/PE; 50 Hz | L000728  | VC 5000     |
| 4.8                    | 37                            | G 3/4                     | 20.0               | 33.0               | 550×650×970               | IP 32             | 69                | 98.0      | 7.8             | 400 V; 3/N/PE; 50 Hz | L000948  | VC 5000     |
| 5.0                    | 60                            | G 3/4                     | 20.0               | 33.0               | 550×650×970               | IP 32             | 69                | 98.0      | 7.8             | 400 V; 3/N/PE; 50 Hz | L000949  | VC 5000     |
| 3.2                    | 37                            | G 3/4                     | 20.0               | 33.0               | 550×650×970               | IP 32             | 64                | 94.0      | 7.8             | 400 V; 3/N/PE; 50 Hz | L000746  | VC 5000 W   |
| 4.8                    | 37                            | G 3/4                     | 20.0               | 33.0               | 550×650×970               | IP 32             | 68                | 94.0      | 7.8             | 400 V; 3/N/PE; 50 Hz | L000981  | VC 5000 W   |
| 5.0                    | 60                            | G 3/4                     | 20.0               | 33.0               | 550×650×970               | IP 32             | 68                | 94.0      | 7.8             | 400 V; 3/N/PE; 50 Hz | L001995  | VC 5000 W   |

# 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 |
| <b>LAUDA Variocool / Page 88</b>          |                              |                          |                                      |                      |                   |        |       |       |       |        |        |        |        |        |        |        |        |        |
| VC 7000                                   | -20 ... 80                   | 0.10                     | Air                                  | 4.5                  | -                 | -      | 7.00  | 5.30  | 3.70  | 2.40   | 1.30   | -      | -      | -      | -      | -      | -      | -      |
| VC 7000                                   | -20 ... 80                   | 0.10                     | Air                                  | 4.5                  | -                 | -      | 6.50  | 4.80  | 3.20  | 1.90   | 0.80   | -      | -      | -      | -      | -      | -      | -      |
| VC 7000                                   | -20 ... 80                   | 0.10                     | Air                                  | 4.5                  | -                 | -      | 6.65  | 4.95  | 3.35  | 2.05   | 0.95   | -      | -      | -      | -      | -      | -      | -      |
| VC 7000 W                                 | -20 ... 80                   | 0.10                     | Water                                | 4.5                  | -                 | -      | 7.00  | 5.30  | 3.70  | 2.40   | 1.30   | -      | -      | -      | -      | -      | -      | -      |
| VC 7000 W                                 | -20 ... 80                   | 0.10                     | Water                                | 4.5                  | -                 | -      | 6.50  | 4.80  | 3.20  | 1.90   | 0.80   | -      | -      | -      | -      | -      | -      | -      |
| VC 7000 W                                 | -20 ... 80                   | 0.10                     | Water                                | 4.5                  | -                 | -      | 6.65  | 4.95  | 3.35  | 2.05   | 0.95   | -      | -      | -      | -      | -      | -      | -      |
| VC 10000                                  | -20 ... 80                   | 0.10                     | Air                                  | 7.5                  | -                 | -      | 10.00 | 7.60  | 5.30  | 3.50   | 2.00   | -      | -      | -      | -      | -      | -      | -      |
| VC 10000                                  | -20 ... 80                   | 0.10                     | Air                                  | 7.5                  | -                 | -      | 9.50  | 7.10  | 4.80  | 3.00   | 1.50   | -      | -      | -      | -      | -      | -      | -      |
| VC 10000                                  | -20 ... 80                   | 0.10                     | Air                                  | 7.5                  | -                 | -      | 9.65  | 7.25  | 4.95  | 3.15   | 1.65   | -      | -      | -      | -      | -      | -      | -      |
| VC 10000 W                                | -20 ... 80                   | 0.10                     | Water                                | 7.5                  | -                 | -      | 10.00 | 7.60  | 5.30  | 3.50   | 2.00   | -      | -      | -      | -      | -      | -      | -      |
| VC 10000 W                                | -20 ... 80                   | 0.10                     | Water                                | 7.5                  | -                 | -      | 9.50  | 7.10  | 4.80  | 3.00   | 1.50   | -      | -      | -      | -      | -      | -      | -      |
| VC 10000 W                                | -20 ... 80                   | 0.10                     | Water                                | 7.5                  | -                 | -      | 9.65  | 7.25  | 4.95  | 3.15   | 1.65   | -      | -      | -      | -      | -      | -      | -      |
| <b>LAUDA Kryoheater Selecta / Page 90</b> |                              |                          |                                      |                      |                   |        |       |       |       |        |        |        |        |        |        |        |        |        |
| KHS 3560 W                                | -60 ... 200                  | 0.50                     | Water                                | 18.0                 | 35.00             | -      | 35.00 | 32.00 | 30.00 | 29.00  | 18.00  | 14.00  | 10.00  | 6.00   | 2.50   | -      | -      | -      |
| KHS 2190 W                                | -90 ... 200                  | 0.50                     | Water                                | 18.0                 | 21.00             | -      | 21.00 | 20.00 | 18.00 | 15.00  | 11.00  | 10.50  | 10.00  | 9.50   | 9.00   | 6.30   | 3.50   | 1.00   |
| <b>LAUDA-Noah Semistat / Page 92</b>      |                              |                          |                                      |                      |                   |        |       |       |       |        |        |        |        |        |        |        |        |        |
| S 1200                                    | -20 ... 90                   | 0.10                     | Water                                | -                    | -                 | -      | 1.20  | 0.90  | 0.60  | 0.35   | 0.08   | -      | -      | -      | -      | -      | -      | -      |
| S 2400                                    | -20 ... 90                   | 0.10                     | Water                                | -                    | -                 | -      | 2.45  | 1.93  | 1.40  | 0.88   | 0.20   | -      | -      | -      | -      | -      | -      | -      |
| S 4400                                    | -20 ... 90                   | 0.10                     | Water                                | -                    | -                 | -      | 4.40  | 3.50  | 2.60  | 1.65   | 0.70   | -      | -      | -      | -      | -      | -      | -      |

| Pump pressure max. bar | Pump flow max. pressure L/min | Pump connection thread mm | 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   | Cat. No. | Device type |
|------------------------|-------------------------------|---------------------------|--------------------|--------------------|---------------------------|-------------------|--------------------|-----------|-----------------|----------------------|----------|-------------|
| 3.2                    | 37                            | G 1 1/4                   | 48.0               | 64.0               | 650×670×1250              | IP 32             | 66                 | 138.0     | 8.8             | 400 V; 3/N/PE; 50 Hz | L000729  | VC 7000     |
| 4.8                    | 37                            | G 1 1/4                   | 48.0               | 64.0               | 650×670×1250              | IP 32             | 69                 | 138.0     | 8.8             | 400 V; 3/N/PE; 50 Hz | L000950  | VC 7000     |
| 5.0                    | 60                            | G 1 1/4                   | 48.0               | 64.0               | 650×670×1250              | IP 32             | 69                 | 138.0     | 8.8             | 400 V; 3/N/PE; 50 Hz | L000951  | VC 7000     |
| 3.2                    | 37                            | G 1 1/4                   | 48.0               | 64.0               | 650×670×1250              | IP 32             | 60                 | 131.0     | 8.8             | 400 V; 3/N/PE; 50 Hz | L000747  | VC 7000 W   |
| 4.8                    | 37                            | G 1 1/4                   | 48.0               | 64.0               | 650×670×1250              | IP 32             | 64                 | 131.0     | 8.8             | 400 V; 3/N/PE; 50 Hz | L000982  | VC 7000 W   |
| 5.0                    | 60                            | G 1 1/4                   | 48.0               | 64.0               | 650×670×1250              | IP 32             | 64                 | 131.0     | 8.8             | 400 V; 3/N/PE; 50 Hz | L000983  | VC 7000 W   |
| 3.2                    | 37                            | G 1 1/4                   | 48.0               | 64.0               | 650×670×1250              | IP 32             | 67                 | 147.0     | 11.1            | 400 V; 3/N/PE; 50 Hz | L000730  | VC 10000    |
| 4.8                    | 37                            | G 1 1/4                   | 48.0               | 64.0               | 650×670×1250              | IP 32             | 70                 | 147.0     | 11.1            | 400 V; 3/N/PE; 50 Hz | L000952  | VC 10000    |
| 5.0                    | 60                            | G 1 1/4                   | 48.0               | 64.0               | 650×670×1250              | IP 32             | 70                 | 147.0     | 11.1            | 400 V; 3/N/PE; 50 Hz | L000953  | VC 10000    |
| 3.2                    | 37                            | G 1 1/4                   | 48.0               | 64.0               | 650×670×1250              | IP 32             | 61                 | 140.0     | 11.1            | 400 V; 3/N/PE; 50 Hz | L000748  | VC 10000 W  |
| 4.8                    | 37                            | G 1 1/4                   | 48.0               | 64.0               | 650×670×1250              | IP 32             | 65                 | 140.0     | 11.1            | 400 V; 3/N/PE; 50 Hz | L000984  | VC 10000 W  |
| 5.0                    | 60                            | G 1 1/4                   | 48.0               | 64.0               | 650×670×1250              | IP 32             | 65                 | 140.0     | 11.1            | 400 V; 3/N/PE; 50 Hz | L000985  | VC 10000 W  |
| 5.5                    | 85                            | DN 25                     | 15.0               | 55.0               | 920×1200×1700             | IP 54             | 68                 | 850.0     | 29.5            | 400 V; 3/PE; 50 Hz   | L001984  | KHS 3560 W  |
| 5.5                    | 85                            | DN 25                     | 15.0               | 55.0               | 920×1200×1700             | IP 54             | 68                 | 890.0     | 32.8            | 400 V; 3/PE; 50 Hz   | L001989  | KHS 2190 W  |
| 2.8                    | 22                            | 1/2"                      | 1.00               | 1.30               | 116×232×470               | -                 | -                  | 15        | -               | -                    | -        | S 1200      |
| 2.8                    | 22                            | 1/2"                      | 1.25               | 1.60               | 116×300×560               | -                 | -                  | 25        | -               | -                    | -        | S 2400      |
| 2.8                    | 27                            | 1/2"                      | 2.50               | 2.80               | 194×300×560               | -                 | -                  | 38        | -               | -                    | -        | S 4400      |

# LAUDA Circulation and process thermostats

## Power supply variants

| Device type         | Power supply V; Hz  | Heater power max. kW | Pump pressure max. bar | Pump flow max. pressure L /min | Loading max. kW | Plug code* | Cat. No. | Device type | Power supply V; Hz | Heater power max. kW | Pump pressure max. bar | Pump flow max. pressure L /min | Loading max. kW | Plug code* | Cat. No. |
|---------------------|---------------------|----------------------|------------------------|--------------------------------|-----------------|------------|----------|-------------|--------------------|----------------------|------------------------|--------------------------------|-----------------|------------|----------|
| LAUDA PRO / Page 82 |                     |                      |                        |                                |                 |            |          |             |                    |                      |                        |                                |                 |            |          |
| P 2 E               | 100-120 V; 50/60 Hz | 1.8                  | 0.7                    | 22.0                           | 1.9             | 32         | L000557  | RP 245 E    | 100 V; 50/60 Hz    | 1.3                  | 0.7                    | 22.0                           | 1.6             | 32         | L000541  |
| P 2 E               | 100-120 V; 50/60 Hz | 1.8                  | 0.7                    | 22.0                           | 1.9             | 4          | L000549  | RP 245 E    | 100 V; 50/60 Hz    | 1.3                  | 0.7                    | 22.0                           | 1.5             | 14         | L000533  |
| P 2 EC              | 100-120 V; 50/60 Hz | 1.8                  | 0.7                    | 22.0                           | 1.9             | 32         | L000561  | RP 245 E    | 120 V; 60 Hz       | 1.8                  | 0.7                    | 22.0                           | 1.9             | 32         | L000461  |
| P 2 EC              | 100-120 V; 50/60 Hz | 1.8                  | 0.7                    | 22.0                           | 1.9             | 4          | L000553  | RP 245 E    | 120 V; 60 Hz       | 1.8                  | 0.7                    | 22.0                           | 1.9             | 4          | L000453  |
| RP 240 E            | 100 V; 50/60 Hz     | 1.3                  | 0.7                    | 22.0                           | 1.6             | 32         | L000540  | RP 245 E    | 200 V; 50/60 Hz    | 1.9                  | 0.7                    | 22.0                           | 3.2             | 32         | L000521  |
| RP 240 E            | 100 V; 50/60 Hz     | 1.3                  | 0.7                    | 22.0                           | 1.5             | 14         | L000532  | RP 245 E    | 200 V; 50/60 Hz    | 1.9                  | 0.7                    | 22.0                           | 3.2             | 31         | L000505  |
| RP 240 E            | 120 V; 60 Hz        | 1.8                  | 0.7                    | 22.0                           | 1.9             | 32         | L000460  | RP 245 E    | 200 V; 50/60 Hz    | 1.9                  | 0.7                    | 22.0                           | 3.2             | 3          | L000489  |
| RP 240 E            | 120 V; 60 Hz        | 1.8                  | 0.7                    | 22.0                           | 1.9             | 4          | L000452  | RP 245 E    | 208-220 V; 60 Hz   | 2.3                  | 0.7                    | 22.0                           | 3.5             | 31         | L000425  |
| RP 240 E            | 200 V; 50/60 Hz     | 1.9                  | 0.7                    | 22.0                           | 3.2             | 3          | L000488  | RP 245 E    | 208-220 V; 60 Hz   | 2.3                  | 0.7                    | 22.0                           | 3.5             | 3          | L000313  |
| RP 240 E            | 200 V; 50/60 Hz     | 1.9                  | 0.7                    | 22.0                           | 3.2             | 32         | L000520  | RP 245 E    | 208-220 V; 60 Hz   | 2.3                  | 0.7                    | 22.0                           | 3.5             | 32         | L000441  |
| RP 240 E            | 200 V; 50/60 Hz     | 1.9                  | 0.7                    | 22.0                           | 3.2             | 31         | L000504  | RP 245 EC   | 100 V; 50/60 Hz    | 1.3                  | 0.7                    | 22.0                           | 1.6             | 32         | L000545  |
| RP 240 E            | 208-220 V; 60 Hz    | 2.3                  | 0.7                    | 22.0                           | 3.5             | 32         | L000440  | RP 245 EC   | 100 V; 50/60 Hz    | 1.3                  | 0.7                    | 22.0                           | 1.5             | 14         | L000537  |
| RP 240 E            | 208-220 V; 60 Hz    | 2.3                  | 0.7                    | 22.0                           | 3.5             | 3          | L000312  | RP 245 EC   | 120 V; 60 Hz       | 1.8                  | 0.7                    | 22.0                           | 1.9             | 4          | L000457  |
| RP 240 E            | 208-220 V; 60 Hz    | 2.3                  | 0.7                    | 22.0                           | 3.5             | 31         | L000424  | RP 245 EC   | 120 V; 60 Hz       | 1.8                  | 0.7                    | 22.0                           | 1.9             | 32         | L000465  |
| RP 240 EC           | 100 V; 50/60 Hz     | 1.3                  | 0.7                    | 22.0                           | 1.6             | 32         | L000544  | RP 245 EC   | 200 V; 50/60 Hz    | 1.9                  | 0.7                    | 22.0                           | 3.2             | 32         | L000529  |
| RP 240 EC           | 100 V; 50/60 Hz     | 1.3                  | 0.7                    | 22.0                           | 1.5             | 14         | L000536  | RP 245 EC   | 200 V; 50/60 Hz    | 1.9                  | 0.7                    | 22.0                           | 3.2             | 31         | L000513  |
| RP 240 EC           | 120 V; 60 Hz        | 1.8                  | 0.7                    | 22.0                           | 1.9             | 32         | L000464  | RP 245 EC   | 200 V; 50/60 Hz    | 1.9                  | 0.7                    | 22.0                           | 3.2             | 3          | L000497  |
| RP 240 EC           | 120 V; 60 Hz        | 1.8                  | 0.7                    | 22.0                           | 1.9             | 4          | L000456  | RP 245 EC   | 208-220 V; 60 Hz   | 2.3                  | 0.7                    | 22.0                           | 3.5             | 3          | L000321  |
| RP 240 EC           | 200 V; 50/60 Hz     | 1.9                  | 0.7                    | 22.0                           | 3.2             | 31         | L000512  | RP 245 EC   | 208-220 V; 60 Hz   | 2.3                  | 0.7                    | 22.0                           | 3.5             | 32         | L000449  |
| RP 240 EC           | 200 V; 50/60 Hz     | 1.9                  | 0.7                    | 22.0                           | 3.2             | 3          | L000496  | RP 245 EC   | 208-220 V; 60 Hz   | 2.3                  | 0.7                    | 22.0                           | 3.5             | 31         | L000433  |
| RP 240 EC           | 200 V; 50/60 Hz     | 1.9                  | 0.7                    | 22.0                           | 3.2             | 32         | L000528  | RP 250 E    | 200 V; 50/60 Hz    | 1.9                  | 0.7                    | 22.0                           | 3.2             | 3          | L002498  |
| RP 240 EC           | 208-220 V; 60 Hz    | 2.3                  | 0.7                    | 22.0                           | 3.5             | 32         | L000448  | RP 250 EC   | 200 V; 50/60 Hz    | 1.9                  | 0.7                    | 22.0                           | 3.2             | 3          | L002499  |
| RP 240 EC           | 208-220 V; 60 Hz    | 2.3                  | 0.7                    | 22.0                           | 3.5             | 3          | L000320  | RP 290 E    | 200 V; 50/60 Hz    | 1.9                  | 0.7                    | 22.0                           | 3.2             | 3          | L002506  |
| RP 240 EC           | 208-220 V; 60 Hz    | 2.3                  | 0.7                    | 22.0                           | 3.5             | 31         | L000432  | RP 290 EC   | 200 V; 50/60 Hz    | 1.9                  | 0.7                    | 22.0                           | 3.2             | 3          | L002507  |

\*All data for the plug codes can be found on page 150

| Device type | Power supply V; Hz | Heater power max. kW | Pump pressure max. bar | Pump flow max. pressure L /min | Loading max. kW | Plug code* | Cat. No. | Device type | Power supply V; Hz | Heater power max. kW | Pump pressure max. bar | Pump flow max. pressure L /min | Loading max. kW | Plug code* | Cat. No. |
|-------------|--------------------|----------------------|------------------------|--------------------------------|-----------------|------------|----------|-------------|--------------------|----------------------|------------------------|--------------------------------|-----------------|------------|----------|
|-------------|--------------------|----------------------|------------------------|--------------------------------|-----------------|------------|----------|-------------|--------------------|----------------------|------------------------|--------------------------------|-----------------|------------|----------|

**LAUDA Integral T / Page 84**

|           |                  |     |     |      |     |   |         |            |   |      |     |      |      |    |         |
|-----------|------------------|-----|-----|------|-----|---|---------|------------|---|------|-----|------|------|----|---------|
| IN 230 T  | 200 V; 50/60 Hz  | 2.2 | 3.5 | 40.0 | 3.2 | 3 | L002789 | IN 130 T   | 208-220 V; 60 Hz                        | 2.6  | 4.0 | 45.0 | 3.5  | 3  | L002788 |
| IN 230 TW | 200 V; 50/60 Hz  | 2.2 | 3.5 | 40.0 | 3.2 | 3 | L002790 | IN 1030 T  | 400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz | 8.0  | 5.5 | 60.0 | 20.0 | 33 | L002885 |
| IN 130 T  | 200 V; 50/60 Hz  | 2.2 | 3.5 | 40.0 | 3.2 | 3 | L002787 | IN 1330 TW | 400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz | 16.0 | 5.5 | 60.0 | 20.0 | 33 | L002886 |
| IN 230 TW | 208-220 V; 60 Hz | 2.6 | 4.0 | 45.0 | 3.5 | 3 | L002792 | IN 530 T   | 400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz | 8.0  | 3.5 | 40.0 | 11.0 | 34 | L002883 |
| IN 230 T  | 208-220 V; 60 Hz | 2.6 | 4.0 | 45.0 | 3.5 | 3 | L002791 | IN 530 TW  | 400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz | 8.0  | 3.5 | 40.0 | 11.0 | 34 | L002884 |

**LAUDA Integral XT / Page 86**

|             |   |      |     |       |      |    |         |            |   |     |     |      |      |    |         |
|-------------|---|------|-----|-------|------|----|---------|------------|---|-----|-----|------|------|----|---------|
| IN 250 XTW  | 200 V; 50/60 Hz                         | 3.1  | 3.1 | 65.0  | 3.2  | 3  | L002795 | IN 590 XTW | 400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz | 8.0 | 3.1 | 65.0 | 12.0 | 34 | L002897 |
| IN 150 XT   | 200 V; 50/60 Hz                         | 3.0  | 3.1 | 65.0  | 3.2  | 3  | L002793 | IN 280 XT  | 400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz | 4.0 | 3.1 | 65.0 | 9.0  | 34 | L002892 |
| IN 250 XTW  | 208-220 V; 60 Hz                        | 3.4  | 3.1 | 65.0  | 3.5  | 3  | L002796 | XT 4 H     | 200 V; 50/60 Hz                         | 2.7 | 2.9 | 45.0 | 3.2  | 3  | L001851 |
| IN 150 XT   | 208-220 V; 60 Hz                        | 3.3  | 3.1 | 65.0  | 3.5  | 3  | L002794 | XT 4 H     | 208-220 V; 60 Hz                        | 3.2 | 2.9 | 45.0 | 3.6  | 3  | L001847 |
| IN 750 XT   | 400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz | 8.0  | 3.1 | 65.0  | 12.0 | 34 | L002889 | XT 4 HW    | 200 V; 50/60 Hz                         | 2.7 | 2.9 | 45.0 | 3.2  | 3  | L001852 |
| IN 550 XT   | 400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz | 8.0  | 3.1 | 65.0  | 12.0 | 34 | L002887 | XT 4 HW    | 208-220 V; 60 Hz                        | 3.2 | 2.9 | 45.0 | 3.6  | 3  | L001848 |
| IN 280 XTW  | 400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz | 4.0  | 3.1 | 65.0  | 9.0  | 34 | L002893 | XT 8 H     | 200 V; 3/PE; 50/60 Hz                   | 8.0 | 2.9 | 45.0 | 8.7  | 31 | L001853 |
| IN 550 XTW  | 400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz | 8.0  | 3.1 | 65.0  | 12.0 | 34 | L002888 | XT 8 H     | 208-220 V; 3/PE; 60 Hz                  | 8.0 | 2.9 | 45.0 | 8.7  | 31 | L001849 |
| IN 1590 XTW | 400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz | 12.0 | 3.1 | 65.0  | 25.0 | 33 | L002898 | XT 8 HW    | 200 V; 3/PE; 50/60 Hz                   | 8.0 | 2.9 | 45.0 | 8.7  | 31 | L001854 |
| IN 1850 XTW | 400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz | 16.0 | 6.0 | 120.0 | 20.0 | 33 | L002895 | XT 8 HW    | 208-220 V; 3/PE; 60 Hz                  | 8.0 | 2.9 | 45.0 | 8.7  | 31 | L001850 |

# LAUDA Circulation and process thermostats

## Power supply variants

| Device type               | Power supply V; Hz | Heater power max. kW | Pump pressure max. bar | Pump flow max. pressure L /min | Loading max. kW | Plug code* | Cat. No. | Device type | Power supply V; Hz     | Heater power max. kW | Pump pressure max. bar | Pump flow max. pressure L /min | Loading max. kW | Plug code* | Cat. No. |
|---------------------------|--------------------|----------------------|------------------------|--------------------------------|-----------------|------------|----------|-------------|------------------------|----------------------|------------------------|--------------------------------|-----------------|------------|----------|
| LAUDA Variocool / Page 88 |                    |                      |                        |                                |                 |            |          |             |                        |                      |                        |                                |                 |            |          |
| VC 1200                   | 200 V; 50/60 Hz    | 1.1                  | 0.9                    | 28.0                           | 2.3             | 3          | L000768  | VC 2000     | 208-220 V; 60 Hz       | 1.3                  | 3.2                    | 37.0                           | 2.5             | 3          | L000990  |
| VC 1200                   | 200 V; 50/60 Hz    | 1.7                  | 0.9                    | 28.0                           | 2.9             | 3          | L000769  | VC 2000     | 208-220 V; 60 Hz       | 2.1                  | 3.2                    | 37.0                           | 3.2             | 3          | L000992  |
| VC 1200                   | 200 V; 50/60 Hz    | 1.7                  | 3.2                    | 37.0                           | 2.9             | 3          | L001018  | VC 2000     | 208-220 V; 60 Hz       | 1.3                  | 4.8                    | 37.0                           | 2.5             | 3          | L000991  |
| VC 1200                   | 200 V; 50/60 Hz    | 1.1                  | 3.2                    | 37.0                           | 2.3             | 3          | L001016  | VC 2000     | 208-220 V; 60 Hz       | 2.1                  | 4.8                    | 37.0                           | 3.2             | 3          | L000993  |
| VC 1200                   | 200 V; 50/60 Hz    | 1.7                  | 4.8                    | 37.0                           | 2.9             | 3          | L001019  | VC 2000 W   | 200 V; 50/60 Hz        | 1.7                  | 0.9                    | 28.0                           | 2.9             | 3          | L000779  |
| VC 1200                   | 200 V; 50/60 Hz    | 1.1                  | 4.8                    | 37.0                           | 2.3             | 3          | L001017  | VC 2000 W   | 200 V; 50/60 Hz        | 1.0                  | 0.9                    | 28.0                           | 2.3             | 3          | L000778  |
| VC 1200                   | 208-220 V; 60 Hz   | 1.3                  | 0.9                    | 28.0                           | 2.4             | 3          | L000751  | VC 2000 W   | 200 V; 50/60 Hz        | 1.7                  | 3.2                    | 37.0                           | 2.9             | 3          | L001037  |
| VC 1200                   | 208-220 V; 60 Hz   | 2.1                  | 0.9                    | 28.0                           | 3.1             | 3          | L000752  | VC 2000 W   | 200 V; 50/60 Hz        | 1.1                  | 3.2                    | 37.0                           | 2.3             | 3          | L001035  |
| VC 1200                   | 208-220 V; 60 Hz   | 1.3                  | 3.2                    | 37.0                           | 2.4             | 3          | L000986  | VC 2000 W   | 200 V; 50/60 Hz        | 1.7                  | 4.8                    | 37.0                           | 2.9             | 3          | L001038  |
| VC 1200                   | 208-220 V; 60 Hz   | 2.1                  | 3.2                    | 37.0                           | 3.1             | 3          | L000988  | VC 2000 W   | 200 V; 50/60 Hz        | 1.1                  | 4.8                    | 37.0                           | 2.3             | 3          | L001036  |
| VC 1200                   | 208-220 V; 60 Hz   | 1.3                  | 4.8                    | 37.0                           | 2.4             | 3          | L000987  | VC 2000 W   | 208-220 V; 60 Hz       | 1.3                  | 0.9                    | 28.0                           | 2.5             | 3          | L000761  |
| VC 1200                   | 208-220 V; 60 Hz   | 2.1                  | 4.8                    | 37.0                           | 3.1             | 3          | L000989  | VC 2000 W   | 208-220 V; 60 Hz       | 2.1                  | 0.9                    | 28.0                           | 3.2             | 3          | L000762  |
| VC 1200 W                 | 200 V; 50/60 Hz    | 1.0                  | 0.9                    | 28.0                           | 2.3             | 3          | L000776  | VC 2000 W   | 208-220 V; 60 Hz       | 2.1                  | 3.2                    | 37.0                           | 3.2             | 3          | L001008  |
| VC 1200 W                 | 200 V; 50/60 Hz    | 1.7                  | 0.9                    | 28.0                           | 2.9             | 3          | L000777  | VC 2000 W   | 208-220 V; 60 Hz       | 1.3                  | 3.2                    | 37.0                           | 2.5             | 3          | L001006  |
| VC 1200 W                 | 200 V; 50/60 Hz    | 1.1                  | 3.2                    | 37.0                           | 2.3             | 3          | L001031  | VC 2000 W   | 208-220 V; 60 Hz       | 2.1                  | 4.8                    | 37.0                           | 3.2             | 3          | L001007  |
| VC 1200 W                 | 200 V; 50/60 Hz    | 1.7                  | 3.2                    | 37.0                           | 2.9             | 3          | L001033  | VC 2000 W   | 208-220 V; 60 Hz       | 1.3                  | 4.8                    | 37.0                           | 2.5             | 3          | L001005  |
| VC 1200 W                 | 200 V; 50/60 Hz    | 1.1                  | 4.8                    | 37.0                           | 2.3             | 3          | L001032  | VC 3000     | 200 V; 50/60 Hz        | 1.0                  | 3.2                    | 37.0                           | 2.6             | 3          | L000772  |
| VC 1200 W                 | 200 V; 50/60 Hz    | 1.7                  | 4.8                    | 37.0                           | 2.9             | 3          | L001034  | VC 3000     | 200 V; 50/60 Hz        | 1.1                  | 4.8                    | 37.0                           | 2.6             | 3          | L001024  |
| VC 1200 W                 | 208-220 V; 60 Hz   | 2.1                  | 0.9                    | 28.0                           | 3.1             | 3          | L000760  | VC 3000     | 208-220 V; 60 Hz       | 1.3                  | 3.2                    | 37.0                           | 2.8             | 3          | L000755  |
| VC 1200 W                 | 208-220 V; 60 Hz   | 1.3                  | 0.9                    | 28.0                           | 2.4             | 3          | L000759  | VC 3000     | 208-220 V; 60 Hz       | 1.3                  | 4.8                    | 37.0                           | 2.8             | 3          | L000994  |
| VC 1200 W                 | 208-220 V; 60 Hz   | 2.1                  | 3.2                    | 37.0                           | 3.1             | 3          | L001003  | VC 3000 W   | 200 V; 50/60 Hz        | 1.0                  | 3.2                    | 37.0                           | 2.6             | 3          | L000780  |
| VC 1200 W                 | 208-220 V; 60 Hz   | 1.3                  | 3.2                    | 37.0                           | 2.4             | 3          | L001001  | VC 3000 W   | 200 V; 50/60 Hz        | 1.1                  | 4.8                    | 37.0                           | 2.6             | 3          | L001039  |
| VC 1200 W                 | 208-220 V; 60 Hz   | 2.1                  | 4.8                    | 37.0                           | 3.1             | 3          | L001004  | VC 3000 W   | 208-220 V; 60 Hz       | 1.3                  | 3.2                    | 37.0                           | 2.8             | 3          | L000763  |
| VC 1200 W                 | 208-220 V; 60 Hz   | 1.3                  | 4.8                    | 37.0                           | 2.4             | 3          | L001002  | VC 3000 W   | 208-220 V; 60 Hz       | 1.3                  | 4.8                    | 37.0                           | 2.8             | 3          | L001009  |
| VC 2000                   | 200 V; 50/60 Hz    | 1.7                  | 0.9                    | 28.0                           | 2.9             | 3          | L000771  | VC 5000     | 200 V; 3/PE; 50/60 Hz  | 3.4                  | 3.2                    | 37.0                           | 4.3             | 34         | L000773  |
| VC 2000                   | 200 V; 50/60 Hz    | 1.0                  | 0.9                    | 28.0                           | 2.3             | 3          | L000770  | VC 5000     | 200 V; 3/PE; 50/60 Hz  | 3.4                  | 4.8                    | 37.0                           | 4.3             | 34         | L001025  |
| VC 2000                   | 200 V; 50/60 Hz    | 1.7                  | 3.2                    | 37.0                           | 2.9             | 3          | L001022  | VC 5000     | 200 V; 3/PE; 50/60 Hz  | 3.4                  | 4.3                    | 60.0                           | 4.3             | 34         | L001026  |
| VC 2000                   | 200 V; 50/60 Hz    | 1.1                  | 3.2                    | 37.0                           | 2.3             | 3          | L001020  | VC 5000     | 208-220 V; 3/PE; 60 Hz | 4.1                  | 3.2                    | 37.0                           | 4.5             | 34         | L000756  |
| VC 2000                   | 200 V; 50/60 Hz    | 1.7                  | 4.8                    | 37.0                           | 2.9             | 3          | L001023  | VC 5000     | 208-220 V; 3/PE; 60 Hz | 4.1                  | 4.8                    | 37.0                           | 4.5             | 34         | L000995  |
| VC 2000                   | 200 V; 50/60 Hz    | 1.1                  | 4.8                    | 37.0                           | 2.3             | 3          | L001021  | VC 5000     | 208-220 V; 3/PE; 60 Hz | 4.1                  | 5.0                    | 60.0                           | 4.5             | 34         | L000996  |
| VC 2000                   | 208-220 V; 60 Hz   | 1.3                  | 0.9                    | 28.0                           | 2.5             | 3          | L000753  | VC 5000 W   | 200 V; 3/PE; 50/60 Hz  | 3.4                  | 3.2                    | 37.0                           | 4.3             | 34         | L000781  |
| VC 2000                   | 208-220 V; 60 Hz   | 2.1                  | 0.9                    | 28.0                           | 3.2             | 3          | L000754  | VC 5000 W   | 200 V; 3/PE; 50/60 Hz  | 3.4                  | 4.8                    | 37.0                           | 4.3             | 34         | L001040  |

\*All data for the plug codes can be found on page 150

| Device type | Power supply V; Hz | Heater power max. kW | Pump pressure max. bar | Pump flow max. pressure L /min | Loading max. kW | Plug code* | Cat. No. |
|-------------|--------------------|----------------------|------------------------|--------------------------------|-----------------|------------|----------|
|-------------|--------------------|----------------------|------------------------|--------------------------------|-----------------|------------|----------|

| Device type | Power supply V; Hz | Heater power max. kW | Pump pressure max. bar | Pump flow max. pressure L /min | Loading max. kW | Plug code* | Cat. No. |
|-------------|--------------------|----------------------|------------------------|--------------------------------|-----------------|------------|----------|
|-------------|--------------------|----------------------|------------------------|--------------------------------|-----------------|------------|----------|

LAUDA Variocool / Page 88

|           |                        |     |     |      |     |    |         |            |                        |     |     |      |     |    |         |
|-----------|------------------------|-----|-----|------|-----|----|---------|------------|------------------------|-----|-----|------|-----|----|---------|
| VC 5000 W | 200 V; 3/PE; 50/60 Hz  | 3.4 | 4.3 | 60.0 | 4.3 | 34 | L001041 | VC 7000 W  | 208-220 V; 3/PE; 60 Hz | 4.1 | 4.8 | 37.0 | 5.7 | 33 | L001012 |
| VC 5000 W | 208-220 V; 3/PE; 60 Hz | 4.1 | 3.2 | 37.0 | 4.5 | 34 | L000764 | VC 7000 W  | 208-220 V; 3/PE; 60 Hz | 4.1 | 5.0 | 60.0 | 5.7 | 33 | L001013 |
| VC 5000 W | 208-220 V; 3/PE; 60 Hz | 4.1 | 4.8 | 37.0 | 4.5 | 34 | L001010 | VC 10000   | 200 V; 3/PE; 50/60 Hz  | 5.7 | 3.2 | 37.0 | 7.6 | 33 | L000775 |
| VC 5000 W | 208-220 V; 3/PE; 60 Hz | 4.1 | 5.0 | 60.0 | 4.5 | 34 | L001011 | VC 10000   | 200 V; 3/PE; 50/60 Hz  | 5.7 | 4.8 | 37.0 | 7.6 | 33 | L001029 |
| VC 7000   | 200 V; 3/PE; 50/60 Hz  | 3.4 | 3.2 | 37.0 | 5.4 | 33 | L000774 | VC 10000   | 200 V; 3/PE; 50/60 Hz  | 5.7 | 4.3 | 60.0 | 7.6 | 33 | L001030 |
| VC 7000   | 200 V; 3/PE; 50/60 Hz  | 3.4 | 4.8 | 37.0 | 5.4 | 33 | L001027 | VC 10000   | 208-220 V; 3/PE; 60 Hz | 6.9 | 3.2 | 37.0 | 7.7 | 33 | L000758 |
| VC 7000   | 200 V; 3/PE; 50/60 Hz  | 3.4 | 4.3 | 60.0 | 5.4 | 33 | L001028 | VC 10000   | 208-220 V; 3/PE; 60 Hz | 6.9 | 4.8 | 37.0 | 7.7 | 33 | L000999 |
| VC 7000   | 208-220 V; 3/PE; 60 Hz | 4.1 | 3.2 | 37.0 | 5.7 | 33 | L000757 | VC 10000   | 208-220 V; 3/PE; 60 Hz | 6.9 | 5.0 | 60.0 | 7.7 | 33 | L001000 |
| VC 7000   | 208-220 V; 3/PE; 60 Hz | 4.1 | 4.8 | 37.0 | 5.7 | 33 | L000997 | VC 10000 W | 200 V; 3/PE; 50/60 Hz  | 5.7 | 3.2 | 37.0 | 7.6 | 33 | L000783 |
| VC 7000   | 208-220 V; 3/PE; 60 Hz | 4.1 | 5.0 | 60.0 | 5.7 | 33 | L000998 | VC 10000 W | 200 V; 3/PE; 50/60 Hz  | 5.7 | 4.8 | 37.0 | 7.6 | 33 | L001044 |
| VC 7000 W | 200 V; 3/PE; 50/60 Hz  | 3.4 | 3.2 | 37.0 | 5.4 | 33 | L000782 | VC 10000 W | 200 V; 3/PE; 50/60 Hz  | 5.7 | 4.3 | 60.0 | 7.6 | 33 | L001045 |
| VC 7000 W | 200 V; 3/PE; 50/60 Hz  | 3.4 | 4.8 | 37.0 | 5.4 | 33 | L001042 | VC 10000 W | 208-220 V; 3/PE; 60 Hz | 6.9 | 3.2 | 37.0 | 7.7 | 33 | L000766 |
| VC 7000 W | 200 V; 3/PE; 50/60 Hz  | 3.4 | 4.3 | 60.0 | 5.4 | 33 | L001043 | VC 10000 W | 208-220 V; 3/PE; 60 Hz | 6.9 | 4.8 | 37.0 | 7.7 | 33 | L001014 |
| VC 7000 W | 208-220 V; 3/PE; 60 Hz | 4.1 | 3.2 | 37.0 | 5.7 | 33 | L000765 | VC 10000 W | 208-220 V; 3/PE; 60 Hz | 6.9 | 5.0 | 60.0 | 7.7 | 33 | L001015 |



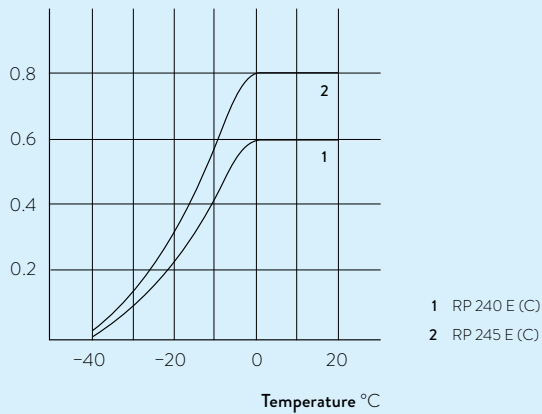
# LAUDA Circulation and process thermostats

## More characteristics

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**COOLING POWER** Heat transfer liquid: Ethanol

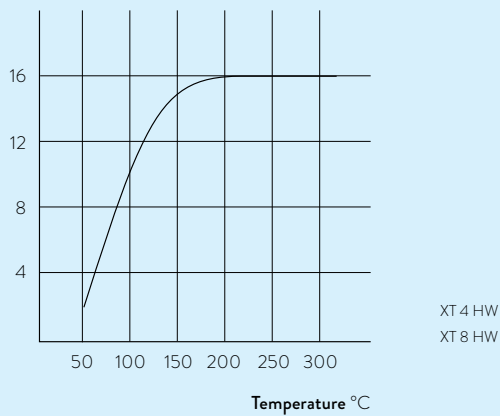
Effective cooling power kW



LAUDA Integral XT / Page 86

**COOLING POWER** Heat transfer liquid: Ultra 350

Effective cooling power kW



LAUDA-Noah Semistat / Page 92

**PUMP CHARACTERISTIC** Water

Pressure bar

