PRODUCT DATA SHEET

Published: 2026-11-24

LAUDA Integral IN 590 XTW Process thermostat
400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz
Part Number: L004822



Features

- Process thermostat with integrated cooling system for dynamic temperature control within external circuits
- Coloured TFT display for simultaneous indication of actual & set values and graphic illustration of the temperature profile
- Clear text menu navigation, six selectable languages DE, EN, FR, ES, IT, RU
- Management of heat transfer liquids with stored properties
- Easy input via cursor and soft keys. Additional Tmax key for overtemperature protection
- SelfCheck Assistant for system diagnosis
- ATEX-certified gas warning sensors with warning and switch-off function and external status interface for higher-level safety systems
- Quick-stop function via black push-button and connection contacts for remote release
- Fully electronic continuous controller with PID action for internal & external control
- Self adapt function for determination of control parameters
- PowerAdapt system for the use of the maximum possible amount of heat permitted by the power supply system
- Low-level and adjustable over-temperature protection with acoustic alarm for use with flammable and non-flammable liquids
- Powerful LAUDA Variopump (pressure pump) with 8 selectable output levels or control of outflow pressure
- USB and Ethernet interface equipped as standard
- Port for external Pt100 integrated, second external Pt100 feasible via interface module
- Remote fault indication through floating contact
- Option for upgrading up to 2 additional interfaces (RS 232/485, Profibus, analogue, contact or EtherCAT module)
- Integrated and adjustable bypass
- Programmer with 150 temperature/time segments that can be separated into 5 programs
- Digital display of pump pressure
- Very small internal volume and big non-thermostated expansion vessel (cold fluid layer system)
- Integrated web server for browser based operation in local area networks via PC, tablet or smart phone, secure data transfer due to authentication procedure and encryption
- CDA (Clean-Dry-Air) - Pressure superposition for refrigeration and hydraulic block

Reserve technical changes

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Geschäftsführer:
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Beirat: Dr. Gerhard Wobser

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Features

- SmartCool system for energy-saving digital cooling management including compressor on-off control
- Condenser cooling Water
- Utilizes natural refrigerants

Working temperature min.
-90 °C

Working temperature max.
220 °C

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Technical Features (according to DIN 12876)	
Working temperature range	-90 ... 220 °C
Ambient temperature range	5 ... 40 °C
Temperature stability	0.05 ± K
Heater power max.	8 kW
Current max.	24 A
Pump Pressure max.	3,1 bar
Pump flow rate max. (pressure)	65 L/min
In / Outlet connection thread (outside)	M30 x 1,5
Inlet/outlet hose size	3/4″
Filling volume min.	8 L
Filling volume max.	28.6 L
Water cooling connection thread (outside)	3/4 ″
Recommended cooling water temperature	15 °C
Cooling water temperature max.	30 °C
Cooling water consumption	23 L/min
Recommended pressure difference cooling water	3 bar
Pressure difference cooling water min.	0.8 bar
Max. pressure difference cooling water	10 bar
Maximum pressure cooling water	10 bar
Overall dimensions (WxDxH)	760 x 650 x 1605 mm
Weight	300 kg
Refrigerant stage 1	R-1270 (GWP 2); 0.380 kg; 0.0 t CO2-eq
Refrigerant stage 2	R-170 (GWP 6); 0.390 kg; 0.0 t CO2-eq
Minimum room size, depending on the refrigerant	41,4 m^3
Power supply	400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz
Power plug	Power cord with plug (NEMA L16-30P twist lock; 30 A)

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Power cord with plug (NEMA L16-30P twist lock; 30 A)

Temperature	Pump stage	Heat transfer liquid	Cooling Capacity 50 Hz	Cooling Capacity 60 Hz
200 °C	8	Thermal oil	6.5 kW	6.5 kW
100 °C	8	Thermal oil	6.5 kW	6.5 kW
20 °C	8	Ethanol	6.5 kW	6.5 kW
10 °C	8	Ethanol	6.4 kW	6.4 kW
0 °C	8	Ethanol	6.3 kW	6.3 kW
-10 °C	8	Ethanol	6.3 kW	6.3 kW
-20 °C	4	Ethanol	6.4 kW	6.4 kW
-30 °C	4	Ethanol	6 kW	6 kW
-40 °C	4	Ethanol	5.6 kW	5.6 kW
-50 °C	4	Ethanol	4.2 kW	4.2 kW
-60 °C	4	Ethanol	2.7 kW	2.7 kW
-70 °C	4	Ethanol	1.6 kW	1.6 kW
-80 °C	4	Ethanol	0.7 kW	0.7 kW
-90 °C	2	Ethanol	0.4 kW	0.4 kW

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Standard accessories

- 2 nipples 1/2" with screw cap G3/4 for cooling water

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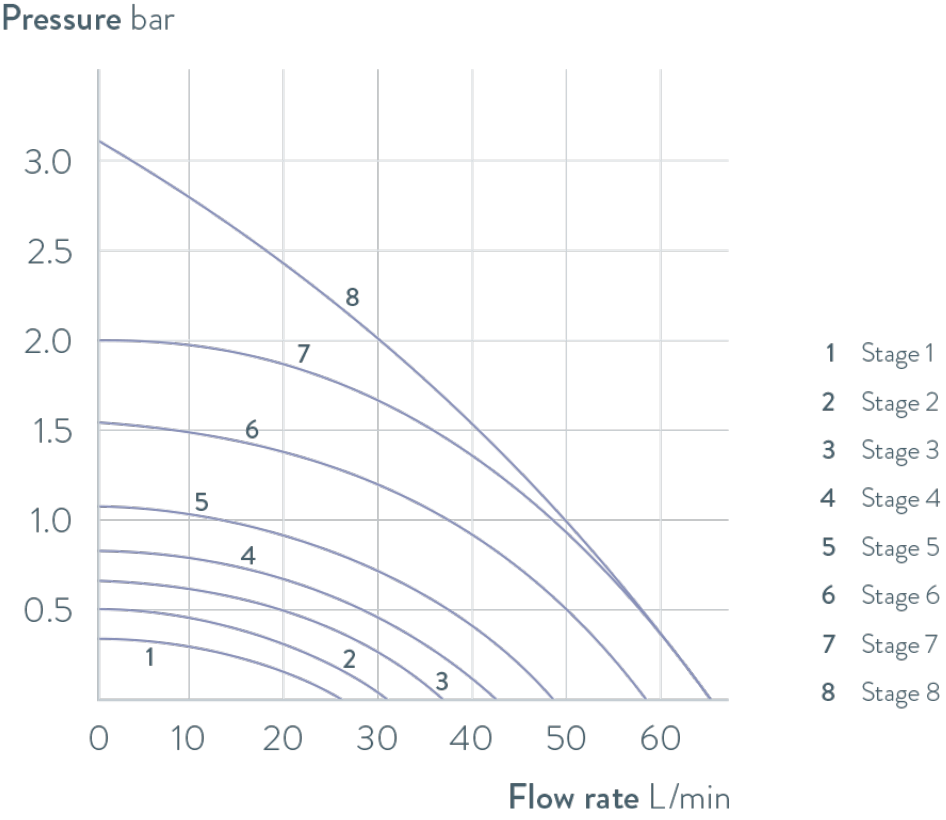
PUMP CHARACTERISTICS Heat transfer liquid: Water



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