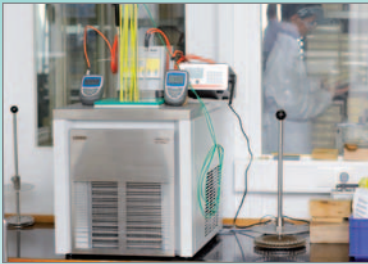


LAUDA Proline

Heating and cooling thermostats with temperatures from -90 up to 300 °C for professional use in research, application engineering and production



Proline

Application examples

- Temperature control for chemical synthesis
- Tests on electronic components at different temperatures
- Temperature control of measuring structures in process technology
- Heating and cooling of glass reactors

Proline Kryomats

Application examples

- Constant temperatures in the notch bending test and drop test
- Changing temperatures when determining the pour point, Brookfield test of lubricants and test of slide bearings

Intuitive operation, ultra high and low temperatures

LAUDA Proline thermostats are our solution for high performance and reliable temperature regulation. With their broad temperature range they fulfill high requirements. LAUDA Proline thermostats are available in two versions: in the basic version with the Master control head, and as a Command version with a removable

control unit for enhanced ease of operation. Master version devices can be retrofitted with the Command remote control, which are simply connected to the control head. The thermostat automatically recognises and controls all newly installed moduls.

Your advantages at a glance



The Proline advantages

Your benefits



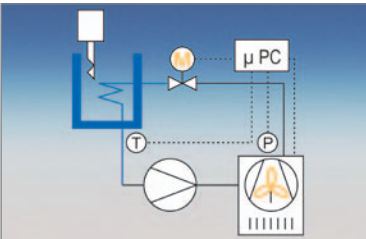
- Master or Command version
- 52 different devices
- Simple retrofitting from Master to Command version

- The right solution for every application
- Subsequent extension or adaptation to changing application requirements



- Graphical user guidance
- Adaptive control on cooling thermostats

- Easy and intuitive operation
- Saves time-consuming calculation of control parameters



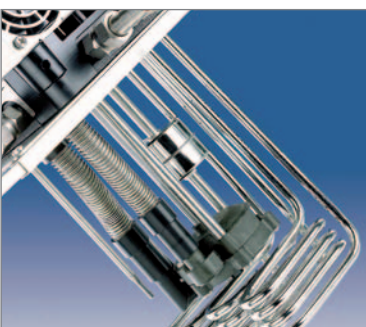
- Patented SmartCool system
- PowerAdapt system for adjustment of the power consumption

- Up to 75 percent energy saving with digital cooling management
- Use of the maximum available output from the power supply system



- Two insert ports can be combined with five different interface modules
- Easy distribution of the pump flow by means of bypass valve
- Pump connections on the side and rear

- High level of flexibility for the user allowing for broad range of system integration
- Simultaneous connection of two external applications
- Flexible connection of external applications from different sides



- High-performance pressure-suction-pump (Varioflex pump) with eight pump levels
- Up to 3.5 kW (230 V) heating power – even on all cooling thermostats via SmartCool system

- Suitable for internal and external applications
- Adaptation of the pump power to the respective application and bath size
- Rapid heating achieved

LAUDA Proline

Proline Master control head

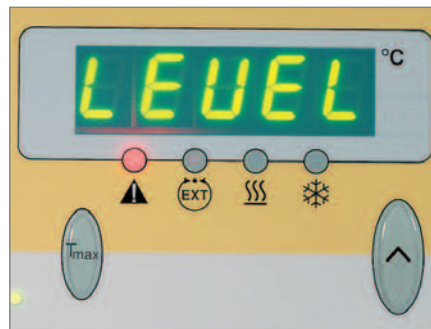
The Proline Master devices are designed with high thermostating accuracy and reliability for all applications from -90 up to 300 °C where operating parameters are not changed or modified frequently. They have all the basic features and safety functions required for professional thermostating during continuous use. A modular structure and bus technology have created an instrument capable of extending its function and performance as the application requires.



- Easy-to-read green LED display
- Convenient setting of set-temperature and Varioflex pump via three operation buttons
- Indicator lights for heating, cooling, external control and alarm
- Resolution of indication 0.01 °C, setting resolution selectable 0.1 or 0.01 °C
- Selectable operating temperature range and additional button for overtemperature protection
- External temperature control via Pt 100
- Optical and audible alarm function
- Simple temperature probe calibration
- Integrated mains network safety device
- Start mode control (automatic or manual)
- Two slots for LiBus modules
- LAUDA Wintherm Plus control software via RS 232/485 interface (optional)



Easy replacement of interface modules



Alarm message for malfunction



Upgradable to Command version

Proline Command control head

The Command control heads are the top models of the LAUDA Proline. The highly-efficient programmer fulfills all the requirements of complex thermostating processes – with real-time function. It offers the utmost in user-friendliness and optimum functionality, e.g. for an industrial testing lab. The simple menu-driven operation and the easy editing of test programs allow for quickly changing thermostating tasks. The Command console is removable and can easily be used as a remote control (with cable). Comprehensive basic equipment as with the Proline Master range.

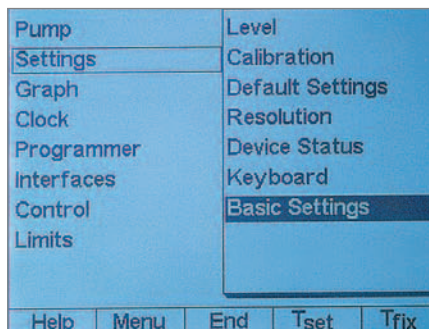


Basic equipment as Proline Master, plus:

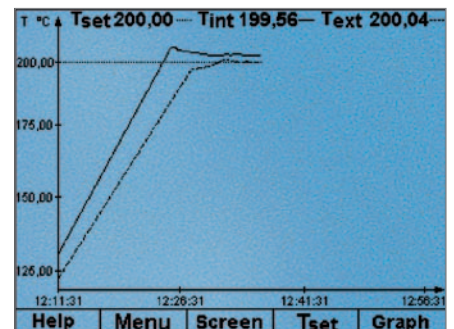
- 10-key console for setpoint adjustment of temperature
- Programmer with real-time clock, 150 temperature/time segments, for use in up to 5 programs, editable segments with loop and tolerance band function
- High resolution, back-lit, graphic LCD display with various display possibilities
- Detachable Command console for use as a remote control (up to 50 m)
- Eight freely selectable fixed temperatures with memory function
- Resolution of actual value display up to 0.001 °C
- RS 232/485 interface for LAUDA Wintherm Plus software
- Menu guidance in German, English, French and Spanish



An opto-decoupled RS 232/485 interface is integrated as standard



Drop-down menus make settings easy. Available in four languages.



Graphic display of temperature values

LAUDA Proline

Proline Heating thermostats with Master control head up to 19 liters

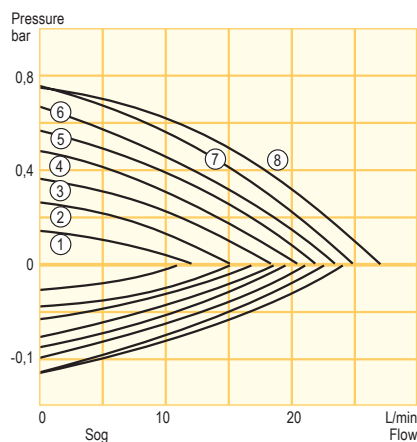
The heating thermostats of the LAUDA Proline with Master control head do not only shine because of their compact construction. The high heater power of 3.5 kW (230 V), two interfaces for various modules, a cooling coil fitted as a standard feature, and an integrated external control – these features make them particularly useful for users who require flexible thermostating operations while only rarely needing to adjust the settings.



Heating thermostat P 18



Pump characteristics Heat transfer liquid: Water



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

Temperature range

30...300 °C

Standard accessories

Bath cover · 2 nipples and 4 closing plugs for pump connections · 2 nipples for cooling coil

Recommended accessories

Constant level device (for P 8) · automatic filling device · through-flow cooler · reverse flow protection · tubes · solenoid valve for cooling water control · high-temperature cooler (water) · Optional modules: analogue, RS 232/485, contact, Profibus module



All technical data from page 90
Other power supply variants on page 98



Technical features		P 5	P 8	P 12	P 18
Working temperature range	°C	35...300	35...300	30...300	30...300
Temperature stability	±K	0.01	0.01	0.01	0.01
Heater power	kW	3.5	3.5	3.5	3.5
Pump pressure max.	bar	0.7	0.7	1.1*	0.7
Pump suction max.	bar	0.4	0.4	-	0.4
Pump flow (pressure) max.	L/min	25	25	32*	25
Pump flow (suction) max.	L/min	23	23	-	23
Bath volume	L	3.5...5.5	5.5...8	6.5...13.5	12.5...19
Bath opening/Bath depth	mm	150x50/200	150x150/200	150x150/320	300x200/200
Cat. No. 230 V; 50/60 Hz		LCB 0708	LCB 0710	LCB 0716**	LCB 0712

* Pressure pump only, pump characteristics see page 40

** Instead of pressure and suction pump: Varioflex pump featured on P 12 model with increased output

Proline Heating thermostats with Master control head up to 53 liters

The LAUDA Proline P 26, P 40 and P 50 heating thermostats are distinguished by particularly large-volume baths. All the below models are equipped with a Varioflex pump and cover the temperature range from 30 up to 300 °C. These stainless steel baths are ideally suited to direct thermostating inside the bath. The P 40 is particularly suitable for thermostating applications needing a large submersion depth. The P 26 and P 50 models with their wide baths, allow long or bulky test pieces to be placed in the bath or even enable a number of test pieces to be positioned alongside each other, for simultaneous testing.

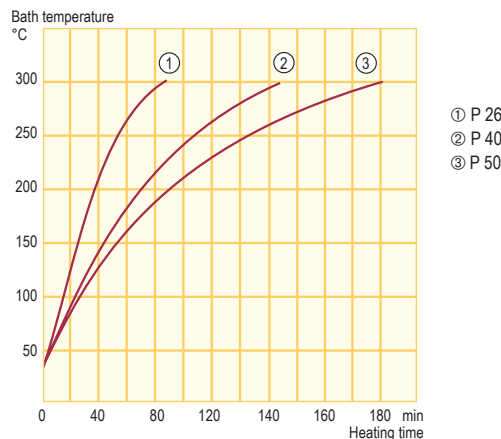
A circulation chamber on the P 40 and P 50 ensures good mixing in the bath and thus guarantees good temperature homogeneity, despite the large bath vessel.



Heating thermostat P 50



Heating curves Heat transfer liquid: Ultra 300, bath closed



Temperature range

30...300 °C

Standard accessories

Bath cover (only P 26) · 2 nipples and 4 closing plugs for pump connections · 2 nipples for cooling coil

Recommended accessories

Bath cover · automatic filling device · through-flow cooler · reverse flow protection · tubes · solenoid valve for cooling water control · high-temperature cooler (water) · rising platform (for P 40) · Optional modules: analogue, RS 232/485, contact, Profibus module



All technical data from page 90
Other power supply variants on page 98

Technical features		P 26	P 40	P 50
Working temperature range	°C	30...300	35...300*	30...300*
Temperature stability	±K	0.01	0.01	0.01
Heater power	kW	3.5	3.5	3.5
Pump pressure max.	bar	0.7	0.7	0.7
Pump suction max.	bar	0.4	0.4	0.4
Pump flow (pressure) max.	L/min	25	25	25
Pump flow (suction) max.	L/min	23	23	23
Bath volume	L	18...27	30...37	35...53
Bath opening/Bath depth	mm	300x350/200	250x250/450	300x750/200
Cat. No. 230 V; 50/60 Hz		LCB 0714	LCB 0728	LCB 0730

* max. temperature only achieved with closed bath cover

LAUDA Proline

Proline Heating thermostats with Command control head up to 19 liters

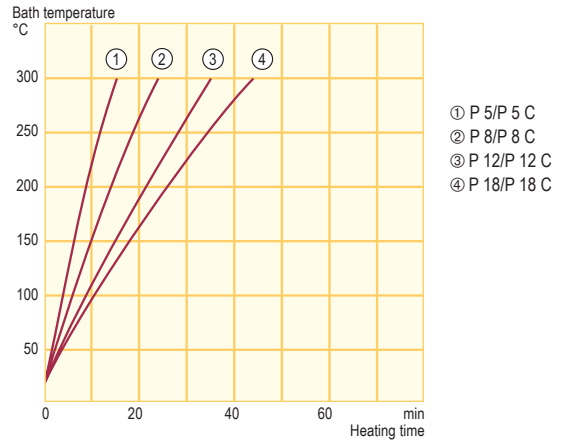
The Proline heating thermostats with Command control head (C) impress through an expanded scope of functions. Alongside a graphic LCD display, which enables current values to be displayed up to 0.001 °C resolution, an easily editable and convenient programmer with storage possibilities is available. The standard RS 232/485 interface enables communication with a computer. Work flexibly with Command: The Command remote control can be quickly and easily detached from the thermostat.



Heating thermostat P 18 C



Heating curves Heat transfer liquid: Ultra 300, bath closed



Temperature range

30...300 °C

Standard accessories

Bath cover · 2 nipples and 4 closing plugs for pump connections · 2 nipples for cooling coil

Recommended accessories

Constant level device (for P 8 C) · automatic filling device · through-flow cooler · reverse flow protection · tubes · solenoid valve for cooling water control · high-temperature cooler (water) · Optional modules: analogue, RS 232/485, contact, Profibus module



All technical data from page 90
Other power supply variants on page 98



Technical features		P 5 C	P 8 C	P 12 C	P 18 C
Working temperature range	°C	35...300	35...300	30...300	30...300
Temperature stability	±K	0.01	0.01	0.01	0.01
Heater power	kW	3.5	3.5	3.5	3.5
Pump pressure max.	bar	0.7	0.7	1.1*	0.7
Pump suction max.	bar	0.4	0.4	-	0.4
Pump flow (pressure) max.	L/min	25	25	32*	25
Pump flow (suction) max.	L/min	23	23	-	23
Bath volume	L	3.5...5.5	5.5...8	6.5...13.5	12.5...19
Bath opening/Bath depth	mm	150x50/200	150x150/200	150x150/320	300x200/200
Cat. No. 230 V; 50/60 Hz		LCB 0709	LCB 0711	LCB 0717**	LCB 0713

* Pressure pump only. Pump characteristics see page 40

** Instead of pressure and suction pump: Varioflex pump featured on P 12 model with increased output

Proline Heating thermostats with Command control head up to 53 liters

In order to enhance ease of use even further, P 26 C, P 40 C and P 50 C heating thermostats with large baths are also available with the Command control head which allows complex thermostating functions, particularly those with internal thermostating processes, to be easily mastered with the aid of an intuitive operation guidance system and the ability to edit programs rapidly.

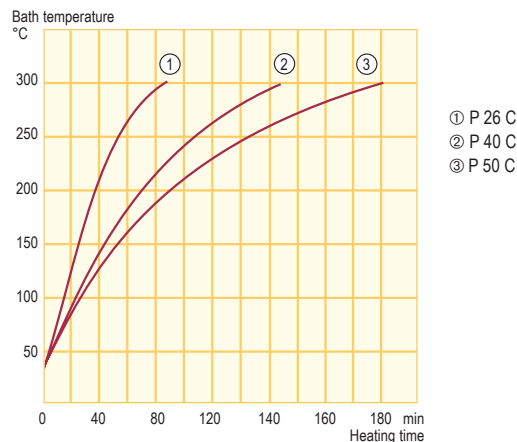
A circulation chamber on the P 40 and P 50 ensures good mixing in the bath and thus guarantees good temperature homogeneity, despite the large bath vessel.



Heating thermostat P 40 C



Heating curves Heat transfer liquid: Ultra 300, bath closed



Temperature range

30...300 °C

Standard accessories

Bath cover (only P 26 C) · 2 nipples and 4 closing plugs for pump connections · 2 nipples for cooling coil

Recommended accessories

Automatic filling device · bath cover · through-flow cooler · reverse flow protection · tubes · solenoid valve for cooling water control · high-temperature cooler (water) · rising platform (for P 40) · Optional modules: analogue, RS 232/485, contact, Profibus module



All technical data from page 90
Other power supply variants on page 98

Technical features		P 26 C	P 40 C	P 50 C
Working temperature range	°C	30...300	30...300*	30...300*
Temperature stability	±K	0.01	0.01	0.01
Heater power	kW	3.5	3.5	3.5
Pump pressure max.	bar	0.7	0.7	0.7
Pump suction max.	bar	0.4	0.4	0.4
Pump flow (pressure) max.	L/min	25	25	25
Pump flow (suction) max.	L/min	23	23	23
Bath volume	L	18...27	30...37	35...53
Bath opening/Bath depth	mm	300x350/200	250x250/450	300x750/200
Cat. No. 230 V; 50/60 Hz		LCB 0715	LCB 0729	LCB 0731

* Max. temperature achieved only with closed bath cover

LAUDA Proline

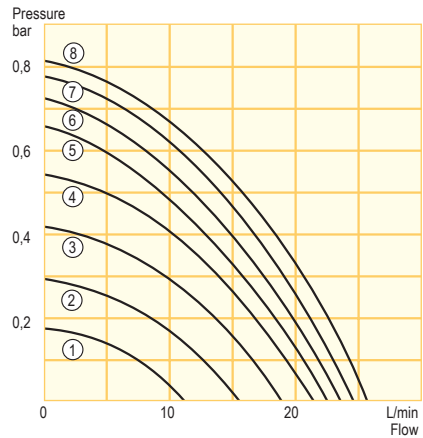
Proline Clear-view thermostats

LAUDA Proline clear-view thermostats for the direct observation of the samples: the PVL models come equipped with five layers of insulating glass and are suitable for low temperatures down to -60 °C. This makes them ideal for the use with the fully-automatic LAUDA PVS viscosity measuring system. The two-chamber principle in the measuring area ensures a constant level, irrespective of the loading and the temperature. The connection of a through-flow cooler or Proline RP 890 enables low temperature measurements down to -40 °C/-60 °C.



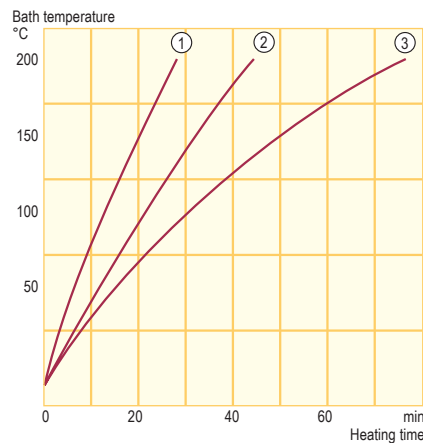
LAUDA PVS 1/4 viscosity measuring system with PV 24 clear-view thermostat
– Stands not included in scope of delivery –

Pump characteristics Heat transfer liquid: Water



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

Heating curves Heat transfer liquid: Therm 240, bath closed



- ① PV 15 (up to 230 °C)
PVL 15 (up to 100 °C)
- ② PV 24 (up to 230 °C)
PVL 24 (up to 100 °C)
- ③ PV 36

Temperature range

30...230 °C

Standard accessories

- 2 nipples and 4 closing plugs for pump connections
- 2 nipples for cooling coil

Recommended accessories

- Window heating system
- solenoid valve for cooling water



All technical data from page 90
Other power supply variants on page 98

Technical features		PV 15/PV 15 C	PV 24/PV 24 C	PV 36/PV 36 C	PVL 15/PVL 15 C	PVL 24/PVL 24 C
Working temperature range	°C	30...230	30...230	30...230	30...100	30...100
Operating temperature range	°C	0*...230	0*...230	0*...230	-60**...100	-60**...100
Temperature stability	±K	0.01	0.01	0.01	0.01	0.01
Heater power	kW	3.5	3.5	3.5	3.5	3.5
Pump pressure max.	bar	0.8	0.8	0.8	0.8	0.8
Pump suction max.	bar	–	–	–	–	–
Pump flow (pressure) max.	L/min	25	25	25	25	25
Pump flow (suction) max.	L/min	–	–	–	–	–
Bath volume	L	11...15	19...24	28...36	11...15	19...24
Bath opening/Bath depth	mm	230x135/320	405x135/320	585x135/320	230x135/320	405x135/320
Size of glass panel	mm	149x230	326x230	506x230	149x230	326x230
Cat. No. Master 230 V; 50/60 Hz		LCD 0276	LCD 0278	LCD 0280	LCD 0282	LCD 0284
Cat. No. Command 230 V; 50/60 Hz		LCD 0277	LCD 0279	LCD 0281	LCD 0283	LCD 0285

* Only achievable with LAUDA add-on cooler ** Only achievable with LAUDA Proline RP 890

Proline Bridge thermostats

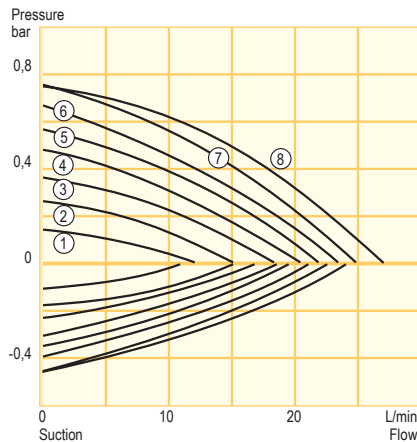
LAUDA Proline bridge thermostats are available in two versions with different pump models and immersion depths. The PB models have a pressure/suction pump and require a bath depth of 200 mm, while the PBD models have a more powerful pressure pump (D) and thermostat baths with a depth from 320 mm. In addition, both series of models differ in the selected control head: Master or Command (C). Through variably extendable telescopic rods, all models can be attached without problem to baths with a width of 310 mm up to 550 mm.



Bridge thermostat PBD C
– Bath not included in scope of delivery –

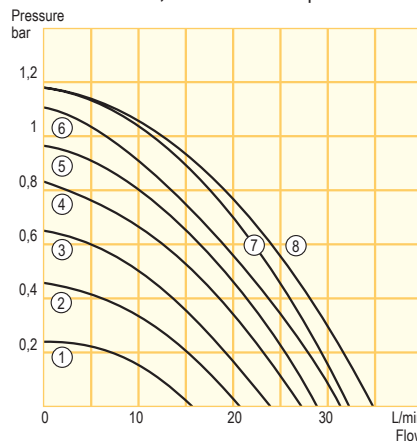


Pump characteristics for PB and PBC, Heat transfer liquid: Water



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

Pump characteristics for PBD and PBD C P 12 and P 12 C, Heat transfer liquid: Water



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

Temperature range

30...300 °C

Standard accessories

2 nipples and 4 closing plugs for pump connections · telescopic rods

Recommended accessories

Through-flow cooler · automatic filling device · water bath
Optional modules: analogue, RS 232/485, contact, Profibus module



All technical data from page 90
Other power supply variants on page 99

Technical features		PB/PB C	PBD/PBD C
Working temperature range	°C	30...300	30...300
Temperature stability	±K	0.01	0.01
Heater power	kW	3.5	3.5
Pump pressure max.	bar	0.7	1.1
Pump suction max.	bar	0.4	–
Pump flow (pressure) max.	L/min	25	32
Pump flow (suction) max.	L/min	23	–
Bath volume up to approx.	L	80	80
Bath opening	mm	telescopic rods can be extended for bath widths 310...550	
Bath depth min.	mm	200	320
Cat. No. Master 230 V; 50/60 Hz		LCG 0090	LCG 0092
Cat. No. Command 230 V; 50/60 Hz		LCG 0091	LCG 0093

LAUDA Proline

Proline Cooling thermostats with Master control head up to 8 liters

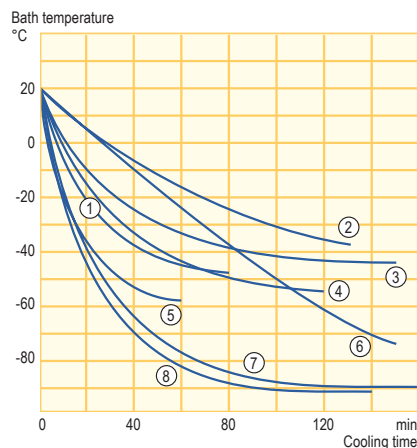
The Proline RP 845, RP 855, RP 870 and RP 890 cooling thermostats stand out above all for their compact dimensions and small footprint. With a cooling capacity of 1.6 kW at 20 °C, the RP 855 has a particularly high-performance design. The RP 890 low-temperature device enables you to reach temperatures down to -90 °C. The standard integrated bath bridge heating prevents ice build up as a result of condensation and humidity on all Proline cooling thermostats with a temperature range down to -90 °C.



Cooling thermostat RP 845



Cooling curves Heat transfer liquid: Ethanol, bath closed



- ① RP 845
- ② RP 3530
- ③ RP 1840
- ④ RP 1845
- ⑤ RP 855
- ⑥ RP 870
- ⑦ RP 1290
- ⑧ RP 890

Temperature range

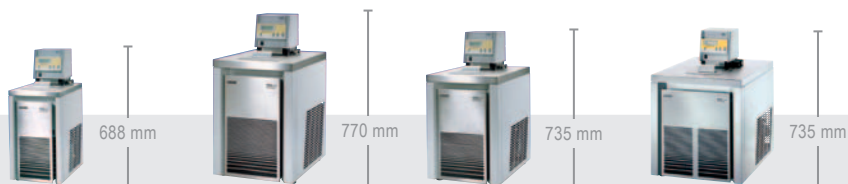
-90...200 °C

Standard accessories

Bath cover · 2 nipples and 4 closing plugs for pump connections · bath bridge heating for RP 890

Recommended accessories

Constant level device for RP 845 and RP 855 · reverse flow protection · automatic filling device · tubes · Option: bath bridge heating for RP 855 and RP 870 · Optional modules: analogue, RS 232/485, contact, Profibus module · set of castors for RP 890



All technical data from page 92
Other power supply variants on page 100

Technical features		RP 845	RP 855	RP 870	RP 890
Working temperature range*	°C	-45...200	-55...200	-70...200	-90...200
Temperature stability	±K	0.01	0.01	0.02	0.02
Heater power	kW	3.5	3.5	3.5	3.5
Cooling output at 20 °C	kW	0.8	1.6	0.38	1.1
Pump pressure max.	bar	0.7	0.7	0.7	0.7
Pump suction max.	bar	0.4	0.4	0.4	0.4
Pump flow (pressure) max.	L/min	25	25	25	25
Pump flow (suction) max	L/min	23	23	23	23
Bath volume	L	5.5...8	5.5...8	5.5...8	5.5...8
Bath opening/depth	mm	150x150/200	150x150/200	150x150/200	150x150/200
Cat. No. 230 V; 50 Hz		LCK 1885	LCK 1893	LCK 1895	LCK 1897

* Working temperature range is equal to ACC range

Proline Cooling thermostats with Master control head up to 35 liters

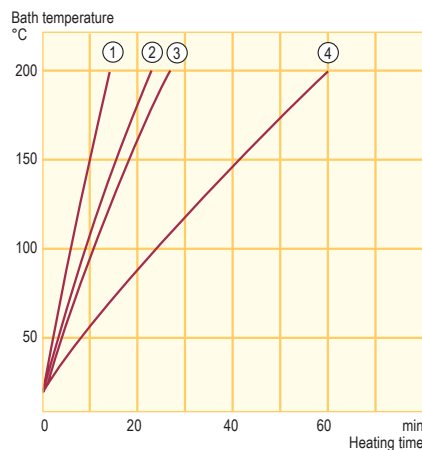
The Proline RP 1290, RP 1840, RP 1845 and RP 3530 cooling thermostats differ in terms of bath volume, achievable cooling capacity, and working temperature range. With bath capacities up to 35 liters, the RP 3530 provides a particularly large bath volume and the RP 1845 provides a particularly high cooling capacity of 1.6 kW.



Cooling thermostat RP 1845



Heating curves Heat transfer liquid: Ultra 300, bath closed



- ① RP 855
RP 845
RP 870
RP 890
- ② RP 1290
- ③ RP 1840
RP 1845
- ④ RP 3530

Temperature range

-88...200 °C

Standard accessories

Bath cover · 2 nipples and 4 closing plugs for pump connections · bath bridge heating for RP 1290

Recommended accessories

Reverse flow protection · automatic filling device · tubes · Optional modules: analogue, RS 232/485, contact, Profibus module · set of castors for RP 1290



All technical data from page 92
Other power supply variants on page 100



Technical features		RP 1290	RP 1840	RP 1845	RP 3530
Working temperature range*	°C	-88...200	-40...200	-50...200	-35...200
Temperature stability	±K	0.02	0.01	0.01	0.02
Heater power	kW	3.5	3.5	3.5	3.5
Cooling output at 20 °C	kW	1.1	0.9	1.6	0.9
Pump pressure max.	bar	0.7	0.7	0.7	0.7
Pump suction max.	bar	0.4	0.4	0.4	0.4
Pump flow (pressure) max.	L/min	25	25	25	25
Pump flow (suction) max	L/min	23	23	23	23
Bath volume	L	15...17.5	12.5...19	12.5...19	23...35
Bath opening/depth	mm	300x150/200	300x200/200	300x200/200	300x350/250
Cat. No. 230 V; 50 Hz		LCK 1899	LCK 1887	LCK 1891	LCK 1889

* Working temperature range is equal to ACC range

LAUDA Proline

Proline Cooling thermostats with Command control head up to 8 liters

The SmartCool system – an energy-saving, digital cooling management system – ensures that every temperature is run with the correct cooling capacity. It increases or reduces the cooling according to application requirements. The advantages are particularly effective for programmer operation and temperature ramping.

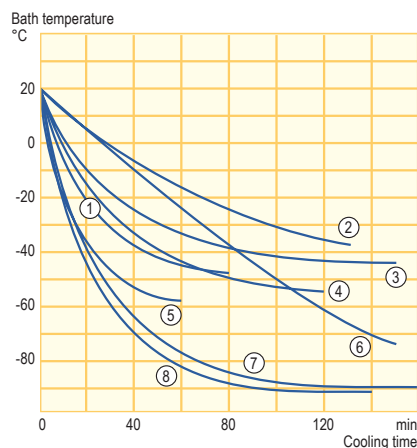
The Proline cooling thermostats with the Command control head (C) have a convincing extended range of functions. At 20 °C, RP 855 C has a particularly high cooling capacity of 1.6 kW. RP 890 C and RP 1290 C are designed for especially low temperatures. They differ in terms of bath volume and have bath bridge heating as a standard feature.



Cooling thermostat RP 845 C



Cooling curves Heat transfer liquid: Ethanol, bath closed



- ① RP 845 C
- ② RP 3530 C
- ③ RP 1840 C
- ④ RP 1845 C
- ⑤ RP 855 C
- ⑥ RP 870 C
- ⑦ RP 1290 C
- ⑧ RP 890 C

Temperature range

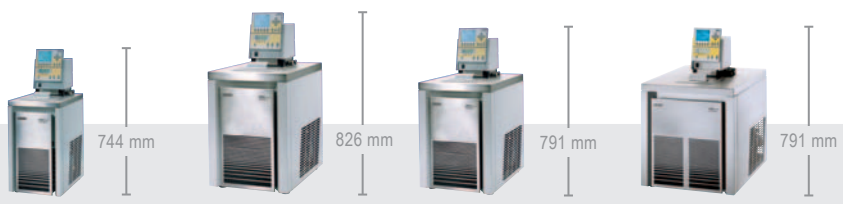
-90...200 °C

Standard accessories

Bath cover · 2 nipples and 4 closing plugs for pump connections · bath bridge heating for RP 890 C

Recommended accessories

Constant level device for RP 845 C und RP 855 C · reverse flow protection · automatic filling device · tubes · Option: bath bridge heating for RP 855 C and RP 870 C · Optional modules: analogue, RS 232/485, contact, Profibus module · set of castors for RP 890 C



All technical data from page 92
Other power supply variants on page 100

Technical features		RP 845 C	RP 855 C	RP 870 C	RP 890 C
Working temperature range*	°C	-45...200	-55...200	-70...200	-90...200
Temperature stability	±K	0.01	0.01	0.02	0.02
Heater power	kW	3.5	3.5	3.5	3.5
Cooling output at 20 °C	kW	0.8	1.6	0.38	1.1
Pump pressure max.	bar	0.7	0.7	0.7	0.7
Pump suction max.	bar	0.4	0.4	0.4	0.4
Pump flow (pressure) max.	L/min	25	25	25	25
Pump flow (suction) max.	L/min	23	23	23	23
Bath volume	L	5.5...8	5.5...8	5.5...8	5.5...8
Bath opening/depth	mm	150x150/200	150x150/200	150x150/200	150x150/200
Cat. No. 230 V; 50 Hz		LCK 1886	LCK 1894	LCK 1896	LCK 1898

* Working temperature range is equal to ACC range

Proline Cooling thermostats with Command control head up to 35 liters

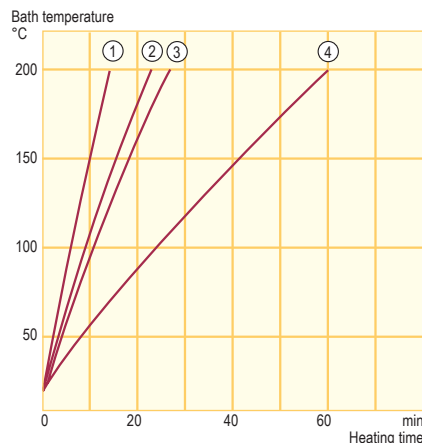
Thanks to their various capacity ranges and filling volumes, the Proline cooling thermostats which make up the Command range skilfully adapt to your requirements. The RP 1845 C works at a temperature range between -50 and 200 °C and, at 20 °C, has a cooling capacity of 1.6 kW. The RP 3530 C has a particularly large bath for internal sample thermostating.



Cooling thermostat RP 1840 C



Heating curves Heat transfer liquid: Ultra 300, bath closed



- ① RP 855 C
RP 845 C
RP 870 C
RP 890 C
- ② RP 1290 C
- ③ RP 1840 C
RP 1845 C
- ④ RP 3530 C

Temperature range

-88...200 °C

Standard accessories

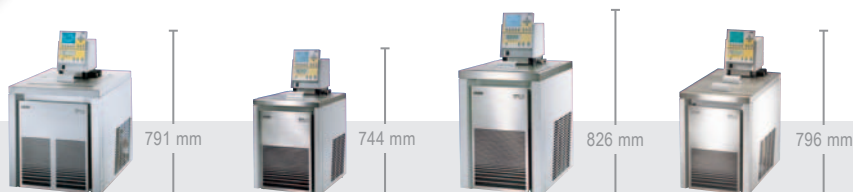
Bath cover · 2 nipples and 4 closing plugs for pump connections · bath bridge heating for RP 1290 C

Recommended accessories

Reverse flow protection · automatic filling device · tubes · Optional modules: analogue, RS 232/485, contact, Profibus module · set of castors for RP 1290 C



All technical data from page 92
Other power supply variants on page 100



Technical features		RP 1290 C	RP 1840 C	RP 1845 C	RP 3530 C
Working temperature range*	°C	-88...200	-40...200	-50...200	-35...200
Temperature stability	±K	0.02	0.01	0.01	0.02
Heater power	kW	3.5	3.5	3.5	3.5
Cooling output at 20 °C	kW	1.1	0.9	1.6	0.9
Pump pressure max.	bar	0.7	0.7	0.7	0.7
Pump suction max.	bar	0.4	0.4	0.4	0.4
Pump flow (pressure) max.	L/min	25	25	25	25
Pump flow (suction) max.	L/min	23	23	23	23
Bath volume	L	15...17.5	12.5...19	12.5...19	23...35
Bath opening/depth	mm	300x150/200	300x200/200	300x200/200	300x350/250
Cat. No. 230 V; 50 Hz		LCK 1900	LCK 1888	LCK 1892	LCK 1890

* Working temperature range is equal to ACC range