



1 Locator Plus Rack & Box Systems

NEW!

Available with or without ultrasonic level monitor, Thermo Scientific Locator Plus indexed rack and box systems allow quick, efficient sample retrieval and offer cost effective maximum storage capacity (up to 6.000 samples) combined with minimum liquid nitrogen consumption.

Thermo Scientific

- Outstanding temperature uniformity: samples are stored below -180C, even when less than 5cm of liquid nitrogen remains in the vessel
- Optional Ultrasonic Level Monitor safeguards irreplaceable samples with minimal liquid nitrogen evaporation and conduction
- Optional monitor provides continuous LED readout of liquid nitrogen level in 1/8 increments;
- Audible alarm sounds when nitrogen level falls below safe range; dry remote alarm contact for remote monitoring
- Advanced vacuum insulation minimizes liquid nitrogen evaporation and reduces operating costs
- Secure locking hasp prevents unauthorized entry

Description	For	No. of vials 2ml	Capacity	Dimensions (dia. x H) mm	PK	Cat. No.
Locator Jr Plus	5 Boxes	2000	61 l	558 x 733	1	4.010 428
Locator 4 Plus	10 Boxes	4000	121 l	558 x 953	1	4.010 430
Locator 6 Plus	10 Boxes	6000	175 l	660 x 953	1	4.010 431
Locator 8 Plus	10 Boxes	2000	121 l	558 x 972	1	4.010 433

2 Immersion thermostats MPC-E und CC-E

NEW!
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Immersion thermostats are the basis of many combinations of polycarbonate and stainless steel baths. Together with a cooling bath, exact and reproducible temperatures down to -30°C are possible.

Temp. control range °C:	(-30) 25 to 200°C
Safety class:	FL, III
Heating capacity kW:	2kW
suction max. (CC-E):	25L/min at 0.4bar
suction max. (MPC-E):	17L/min at 0.18bar
Immersion depth (CC-E, MPC-E):	150mm
(CC-E xd):	195mm

Type	Stability K	Pump cap. L/min / bar	Dimensions (W x D x H) mm	PK	Cat. No.
CC-E*	0,01	27 / 0,7	132 x 159 x 315	1	9.699 102
MPC-E*	0,05	20 / 0,2	132 x 153 x 312	1	9.699 109
CC-E xd	0,01	22 / 0,4	132 x 159 x 360	1	9.857 469

* according to DIN 12876, measured in 12-litre stainless steel bath.



Stable Temperatures bring life to the game

Much of what is now achievable in technology has its origins in some of the most demanding process solutions found in nature; for example, the incubation temperature of an egg is critical in ensuring life, and, so it is with many complex processes in the laboratory.

The renown, Huber temperature control systems guarantee optimum process stability in temperature critical processes.

More examples of temperature processes in nature can be found at www.huber-online.com.



Optimum process stability is decisive!



Temperature Control Systems

Unistats® offer previously unachievable thermodynamics for rapid temperature changes and wide temperature ranges with no oil change.



Circulation Thermostats

Circulating chillers with cooling capacities up to 50 kW; For environmentally friendly and economic cooling in the laboratory and industry.



Heating Thermostats

Immersion and bath thermostats for temperature control tasks in the laboratory. Available with the CC-Pilot® controller, or, with the low cost MPC® controller as a basic version.



Refrigerating Thermostats

Refrigerated thermostats ranging from the Ministat®, up to the powerful cryogenic thermostats for temperatures down to -90 °C.

For more information visit www.huber-online.com



Catalogue 2011/2012

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high precision thermoregulation



1 Thermostatic baths with polycarbonate tanks

The transparent polycarbonate baths are suitable for use up to 100°C. An immersion thermostat is mounted on the bath bridge for all models. With a pump adapter, this combination can also be used with external, closed applications. Models with the CC-Pilot controller have a variable speed pressure/suction pump and are therefore also suitable for external open applications.

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Temperature max.:	100°C
Stability at 70°C to DIN12876	
MPC-E:	0.05K
CC-E:	0.01K
Safety class:	FL, III
Bath depth:	150mm

Type	Bath capacity	Bath opening	Pressure pump cap.	Dimensions (W x D x H)	PK	Cat. No.
	L	mm	L/min bar	mm		
CC-106A	6	130 x 110	27 at 0.7	147 x 307 x 330	1	9.857 509
MPC-106A	6	130 x 110	20 at 0.2	147 x 307 x 330	1	9.857 474
CC-108A	8	130 x 210	27 at 0.7	147 x 407 x 330	1	9.857 512
MPC-108A	8	130 x 210	20 at 0.2	147 x 407 x 330	1	9.857 476
CC-110A	10	130 x 310	27 at 0.7	147 x 507 x 330	1	9.857 513
MPC-110A	10	130 x 310	20 at 0.2	147 x 507 x 330	1	9.857 477
CC-112A	12	303 x 161	27 at 0.7	333 x 360 x 335	1	9.857 514
MPC-112A	12	303 x 161	20 at 0.2	333 x 360 x 335	1	9.857 478
CC-118A	18	303 x 321	27 at 0.7	333 x 520 x 335	1	9.857 515
MPC-118A	18	303 x 321	20 at 0.2	333 x 520 x 335	1	9.857 479

Thermostatic baths with stainless steel tanks

The insulated stainless steel baths are suitable for use up to 200°C. All models have a bridge-mounted CC-E and MPC-E immersion thermostat. With a pump adapter, this combination can also be used with external*, closed applications. Models with the CC-Pilot controller have a variable speed pressure/suction pump and are therefore also suitable for external open applications.

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Stability to DIN 12876:	
Type CC:	0.02K
Type MPC:	0.05K
Max. temp.:	200°C
Safety class:	FL, III

Type	Bath capacity	Bath opening	Bath tank depth	Pressure pump cap.	Dimensions (W x D x H)	PK	Cat. No.
	L	mm	mm	L/min bar	mm		
CC-208B	8.5	230 x 127	150	27 at 0.7	290 x 350 x 375	1	9.699 105
MPC-208B	8.5	230 x 127	150	20 at 0.2	290 x 350 x 375	1	9.857 425 2
CC-212B	12	290 x 152	150	27 at 0.7	350 x 375 x 375	1	9.857 516
MPC-212B	12	290 x 152	150	20 at 0.2	350 x 375 x 375	1	9.857 426 3
CC-215B	15	290 x 152	200	27 at 0.7	350 x 375 x 425	1	9.857 517
MPC-215B	15	290 x 152	200	20 at 0.2	350 x 375 x 425	1	9.857 427
CC-220B	20	290 x 329	150	27 at 0.7	350 x 555 x 375	1	9.857 518
MPC-220B	20	290 x 329	150	20 at 0.2	350 x 555 x 375	1	9.857 428
CC-225B	25	290 x 329	200	27 at 0.7	350 x 555 x 425	1	9.857 519
MPC-225B	25	290 x 329	200	20 at 0.2	350 x 555 x 425	1	9.857 429

*with option level control



9.857 425



9.857 426

7. Heating and cooling technology

Temperature regulators/Thermostats, cryostats

1 Circulation Thermostats for heating

Good things come in small packages! Thanks to their low bath volumes the CC-202C/ MPC-202C und CC-205B/MPC-205B are especially suitable for controlling the temperature of small external applications. The temperature of small objects can also be controlled by placing them directly in the bath. The maximum working temperature is 200°C. The models with the CC-Pilot have a variable speed pressure/suction pump and are therefore suitable for externally open applications. The temperature stability, in accordance with DIN 12876, is 0.02K for the CC-models and 0.05K for the MPC-models.

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Temp. control range: (-30) 45 to 200°C
 Stability to DIN 12876: 0.02K for CC
 0.05K for MPC
 Safety class: FL, III
 Bath depth: 150mm
 Heating capacity: 2kW

Type	Bath opening	Dimensions (W x D x H)	Suction pump cap.	Pressure pump cap.	PK	Cat. No.
	mm	mm	L/min bar	L/min bar		
CC-202C	Ø 25	178 x 260 x 355	25/0,4	27/0,7	1	9.699 103
CC-205B	105 x 90	178 x 337 x 355	25/0,4	27/0,7	1	9.699 108
MPC-202C	Ø 25	178 x 260 x 355	17/0,18	20/0,2	1	9.857 380
MPC-205B	105 x 90	178 x 337 x 355	17/0,18	20/0,2	1	9.857 382

(-30): Range can be extended down to -30°C using accessory external cooling
 *also available as Advanced model (additional cost)

2 Heating bath circulators

For temperatures up to 300°C. Extremely compact models have a finely adjustable, "vpc" pressure/suction pump. Pump pressure can be controlled from the user menu, using an optional pressure sensor, so protecting your glassware or other delicate apparatus from damage.

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Temp. control range: (-20) 28 to 300°C
 Safety class: FL, III
 Pump data
 Pressure max.: 33L/min. at 0.7bar
 Suction max.: 22L/min. at 0.4bar
 Stability to DIN 12876: 0.02K

Type	Volume litres	Heating capacity W	Supply req., 50 Hz V	Dimensions (W x D x H) mm	PK	Cat. No.
CC-304B	5,0	2000	230	210 x 335 x 392	1	6.234 076
CC-308B	8,5 / 5.2*	3000	230	242 x 404 x 392	1	7.619 155
CC-315B	15 / 8.5*	3000/4000	230/400	335 x 382 x 433	1	9.857 473

(-20): Range can be extended down to -20°C using accessory external cooling
 *using displacement insert

3 Refrigerated circulator baths

Combinations of immersion circulators and insulated refrigeration baths are low-cost solutions for direct thermoregulation within the temperature range -20/-30°C to 200°C. The refrigeration baths operate with natural refrigerants. A pump adapter (optional) can be fitted for thermoregulation of externally closed applications. Models with the CC-Pilot controller have a variable speed pressure/suction pump and are therefore suitable for external open thermoregulation applications. The temperature stability is 0.02K for the CC-models and 0.05K for the MPC-models.

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Type	Temp.-working range °C	Cooling capacity kW at 0/-10/-20°C	Bath capacity L	Bath opening mm	Dimensions (W x D x H) mm	Pump cap. L/min / bar	PK	Cat. No.
K12-cc-NR	-20 ... +200	0.2/0.12/0.05	12	290 x 152	350 x 560 x 430	27 / 0,7	1	9.857 371
K12-mpc-NR	-20 ... +200	0.2/0.12/0.05	12	290 x 152	350 x 560 x 430	20 / 0,2	1	9.857 372
K15-cc-NR	-20 ... +200	0.2/0.12/0.05	15	290 x 152	350 x 560 x 430	27 / 0,7	1	9.857 373
K15-mpc-NR	-20 ... +200	0.2/0.12/0.05	15	290 x 152	350 x 560 x 430	20 / 0,2	1	9.857 374
K20-cc-NR	-30 ... +200	0.35/0.27/0.16	20	290 x 329	350 x 555 x 615	27 / 0,7	1	9.857 375
K20-mpc-NR	-30 ... +200	0.35/0.27/0.16	20	290 x 329	350 x 555 x 615	20 / 0,2	1	9.857 376
K25-cc-NR	-30 ... +200	0.35/0.27/0.16	25	290 x 329	350 x 555 x 615	27 / 0,7	1	9.857 377
K25-mpc-NR	-30 ... +200	0.35/0.27/0.16	25	290 x 329	350 x 555 x 615	20 / 0,2	1	9.857 378





1 Cooling Circulators, K6 serie

The K6 models are compact refrigeration bath circulators for temperatures from -25 to 200°C. These units are a combination of a miniature refrigerated bath and immersion circulator CC-E and MPC-E, in combination with a pump adapter they are suitable for external applications. The combination with the immersion circulator CC-E or MPC-E with its suction/pressure pump is suitable for externally open and closed applications. The temperature stability is better than 0.02K to DIN 12876. The K6 models and the powerful K6s-CC are low cost alternatives to the Ministat 125, the smallest refrigeration circulator in the world and bestseller since 1976.

Temperature stability to DIN 12876: 0.02K
 Safety class: FL, III
 Heating capacity: 2kW
 Pressure pump
 K6-cc-NR/K6s-cc-NR: 27L/min at 0.7 bar
 K6-mpc-NR/K6s-mpc-NR: 20L/min at 0.2 bar

Huber

Type	Temp. range °C	Bath capacity L	Bath opening mm	Cooling capacity kW at 0/-10/-20°C	Dimensions (W x D x H) mm	PK	Cat. No.
K6-cc-NR	-25 to 200	4.5	140 x 120	0.15/0.1/0.05	210 x 400 x 546	1	9.699 106
K6-mpc-NR	-25 to 200	4.5	140 x 120	0.15/0.1/0.05	210 x 400 x 546	1	9.857 447
K6s-cc-NR	-25 to 200	4.5	140 x 120	0.21/0.15/0.05	210 x 400 x 546	1	9.857 577
K6s-mpc-NR	-25 to 200	4.5	140 x 120	0.21/0.15/0.05	210 x 400 x 546	1	9.857 448



2 3 Baths and Circulators

The Huber circulators are split into two product lines, the CC-models and the simpler MPC models. Both model lines represent classically constructed laboratory circulators with open baths. Baths and circulators for heating applications up to +300°C are available, as well as models for heating and cooling applications from -90°C to +200°C. Immersion or bridge circulators are suitable for thermal control of existing baths. The Ministat, the smallest cooling and heating circulator in the world, is the first choice for operation in fume-hoods or integrating into systems.

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Circulators with CC-Pilot

Models with CC-Pilot Controller convincing in practice with their highly precise temperature control and a professional range of functions even in the basic version. The electronic upgrade function "E-grade" allows a simple and low cost expansion of functions at any time. Operation is simple using large colour displays, an easily understandable menu and an individually customisable display. Models with the CC-Pilot have powerful pressure and suction pumps with continuously variable speed control for adjusting circulation to the bath in use. Further connections are available via the optional Com.Ga@te, e.g. RS232 and RS485, analogue interface 4 to 20mA or 0 to 10V, standby signal and programmable alarm.



Circulators using the MPC-Controller

The functions of models with the low price MPC-controller concentrate on the essentials. MPC models are suitable for numerous typical laboratory applications, such as temperature control of samples, analysis, materials testing, as well as the external temperature control of test equipment or experimental constructions. The machine achieves a temperature stability of ±0.05°C and are fitted with an over temperature and low fluid level protection. The safety systems are according to class III/FL (DIN 12876) for use with flammable fluids. All MPC machines are also available as "Advanced" versions with RS232 interface and PT100 external sensor connection.

Advantages and Functions (model dependent):

- Working Temperatures from -90°C to +300°C
- Models for internal and external temperature control
- High heating and cooling powers up to 7kW
- Powerful controllable circulation pumps
- Function expansion with the E-grade system is available at any time
- High precision cascade temperature control
- Colour TFT display, individually adjustable
- Programmer with calendar/clock function
- User friendly operator guidance in 6 languages
- Comprehensive warning and safety functions

7. Heating and cooling technology Temperature regulators/Thermostats, cryostats

1 Cooling thermostat for a range of baths variostat® cc-NR

This unique immersion circulator can thermoregulate a wide range of baths between -30°C and 150°C. This innovative construction allows the user ultimate flexibility. The circulation can be adjusted to suit the bath size using the stepless, variable speed suction/pressure pump. The pump can also be controlled with an optional pressure sensor for external applications.

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Temperature stability to DIN 12876: 0.02K
 Heating capacity: 1kW
 Pump pressure max: 27 l/min/0.7 bar
 Max suction: 20 l/min/0.4 bar

Type	Temp. range °C	Bath capacity L	Cooling capacity kW at 100/20/0/-20/-30°C	PK	Cat. No.
variostat cc-NR	-30 to 150	variable	0.3/0.3/0.2/0.12/0.03	1	6.232 378

2 Compact refrigerated circulators - Ministat®

Ministats are extremely compact but powerful refrigerated circulators preferred for external temperature applications. In addition, small objects can be placed directly in the circulator bath for temperature control. Ministats are the smallest refrigeration circulators in the world. Their compact form allows them to be placed in small spaces, e.g. in a laboratory extraction hood. All three Ministats are available with air or water cooling, compliance with DIN 12876-1, class 3 allows them to be used unsupervised in continual operation. The maximum ambient temperature is 40°C. The pump speed of the powerful pressure/suction pump of the VPC (variable pressure control) is stepless variable and protects sensitive objects such as glass reactors against breakage by a soft start. All models are fitted with an active cooling power control, which serves for energy saving operation, and reduces waste heat given out into the laboratory. The CC-Pilot is responsible for highly exact temperature control. This plug and play controller offers the most modern control technology and comprehensively equipped with graphics display, programmer, ramp function, cascade control, calendar start, customisable user menus, RS232 etc. An analogue interface is available as an option. All components in contact with the thermal fluid are constructed of stainless steel or a high quality plastic. Typical applications are external closed systems e.g. photometer, refractometer, viscosimeter and research reactors.

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Type	Temp. range °C	Heating power W	Cooling capacity kW at 0 °C	Dimensions (W x D x H) mm	PK	Cat. No.
ministat 125w-cc-NR	-25 ... 150	1000	0.20	225 x 370 x 429	1	6.235 633
ministat 230-cc-NR	-40 ... 200	2000	0.38	255 x 450 x 476	1	6.232 424
ministat 230w-cc-NR	-40 ... 200	2000	0.38	255 x 450 x 476	1	6.233 587
ministat 240-cc-NR	-45 ... 200	2000	0.55	300 x 465 x 516	1	7.619 949
ministat 240w-cc-NR	-45 ... 200	2000	0.55	300 x 465 x 516	1	6.233 762



1


1 Compatible Control Refrigerated Circulators to -45°C

Huber, refrigerated, bath circulators in classic form perform safe and repeatable heating and cooling tasks in the lab. Natural refrigerants for environmentally friendly operation are available on request. A powerful variable speed pressure/suction pump allows the thermoregulation of objects in the bath or external applications. The pump speed is steplessly controlled. In combination with an optional pressure sensor the maximum pressure can be controlled. VPC (variable pressure control) ensures the best circulation and protects delicate glass apparatus from breakage due to overpressure. Small volume and high heating and cooling powers result in the shortest heating and cooling rates. All models have Active Cooling Control for cooling power control at the maximum working temperature and an automatic cooling power regulation for energy saving operation and reduced heat dissipation into the lab. All models have the CC Pilot control with Plug&Play technology: In the event of service the controller can simply be swapped. The CC Pilot can be used as a remote control (with data cable). The wide ranging functionality is supported by a large TFT display and simple operation. Huber refrigeration circulators can be equipped with a Combox to Namur standard enabling integration in a process control system. Typical applications for these classics are the thermoregulation of externally closed circulation systems, e.g. photometers, refractometers, viscosimeters, double-jacketed reactors and autoclaves.

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Specifications

Pump data

max. Pressure:

33L/min. at 0.7bar

max. Suction:

22L/min. at 0.4bar

Temp. stability acc. to DIN12876:

0.02K

Type	Temp. range °C	Volume litres	Heating power W	Cooling capacity KW at 100/20/0/-20/-30/-40°C	PK	Cat. No.
CC-405	-40 to 200	5	1500	0.7/0.7/0.7/0.45/0.18/0.03	1	9.857 495
CC-405w	-40 to 200	5	1500	0.7/0.7/0.7/0.45/0.18/0.03	1	9.857 496
CC-410wl	-45 to 200	22 / 8.5*	3000	0.8/0.8/0.8/0.5/0.15/0.1	1	9.857 497
CC-415	-40 to 200	5	1500	1.2/1.2/1.0/0.6/0.2/0.05	1	6.233 023
CC-415wl	-40 to 200	5	1500	1.2/1.2/1.0/0.6/0.2/0.05	1	9.857 499

*using displacement insert

2


2 Cryostats, to -55°C

Compact design and high cooling capacity at low temperatures.

Huber

Heating capacity

CC-505/CC-505wl:

1.5kW

CC-510 to CC-525w:

3.0kW

Pump data CC-505/CC-505wl

max. pressure:

33L/min./0.7bar

max. suction:

22L/min./0.4bar

Pump data CC-510 to CC-525w

max. pressure:

31L/min. /0.6bar

max. suction:

24L/min. /0.35bar

Supply requirement

CC-505/CC-505wl:

230V/50Hz

CC-510 to CC-525w:

400V/50Hz

Temp. stability acc. to DIN 12876:

±0.02K

Type	Temp. range °C	Volume litres	Cooling capacity KW at 100/20/0/-20/-40°C	PK	Cat. No.
CC-505	-50 to 200	5	1.2/1.2/1.0/0.6/0.15	1	9.857 460
CC-505wl	-50 to 200	5	1.2/1.2/1.0/0.6/0.15	1	9.857 461
CC-510	-50 to 100	18 / 11*	2.1/2.1/2.1/1.0/0.4	1	9.857 462
CC-510w	-50 to 100	18 / 11*	2.4/2.4/2.4/1.0/0.4	1	9.857 463
CC-515	-55 to 100	26 / 15*	3.3/3.3/3.3/1.6/0.6	1	9.857 464
CC-515w	-55 to 100	18 / 11*	3.3/3.3/3.3/1.6/0.6	1	9.857 465
CC-520w	-55 to 100	17 / 10*	5.0/5.0/5.0/3.0/1.5	1	9.857 466
CC-525w	-55 to 100	17 / 10*	7.0/7.0/5.0/3.0/1.5	1	9.857 467

*using displacement insert

1 Refrigerated Circulators to -90°C

The CC-805 is a low cost alternative for low temperature applications when low power is required.

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Pump data CC-805:

max. pressure: 33L/min at 0.7bar
 max. suction: 22L/min at 0.4bar

Pump data CC-820 to CC-906w:

max. pressure: 31L/min at 0.6bar
 max. suction: 24L/min at 0.35bar

Supply requirement: 400V 50Hz

CC-815: 230V 50Hz

Temp. stability acc. to DIN 12876: ±0.02K

Type	Temp. range	Volume	Heating power	Cooling capacity KW at	PK	Cat. No.
	°C	litres	W	100/20/0/-20/-40/-60°C		
CC-805	-80 to 100	5	1500	0.5/0.5/0.5/0.4/0.3/0.3	1	9.857 441
CC-815	-85 to 100	5	1500	1.0/1.0/1.0/0.8/0.75/0.6	1	9.857 444
CC-820	-80 to 100	17 / 10*	3000	1.2/1.2/1.2/1.1/0.9/0.6	1	9.857 442
CC-820w	-80 to 100	17 / 10*	3000	1.2/1.2/1.2/1.1/0.9/0.6	1	9.857 443
CC-905	-90 to 100	26 / 15*	3000	2.0/2.0/2.0/1.9/1.7/1.0	1	9.857 445
CC-905w	-90 to 100	26 / 15*	3000	2.0/2.0/2.0/1.9/1.7/1.0	1	9.857 446
CC-906w	-90 to 200	26 / 15*	3000	3.0/3.0/3.0/2.8/2.4/1.6	1	9.857 449

*using displacement insert

2 Software upgrade E-grade for controller CC-Pilot

E-grade - innovative activation keys for the functionality to suit your budget and process requirements

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Every application requires particular functions. If the circulator is to be used in a range of applications it will generally require greater functionality. The required functionality grows with the complexity of the application. The innovative „E-grade“ has the answer. Units with the CC-Pilot in the basic version have a comprehensive range of functions suited to the classical temperature control applications. The E-grade allows the functionality to be extended at any time to suit new process requirements and budget. E-grade stands for electronic upgrade and it is simple to do: To extend the functionality a unit specific code is entered via the controller. This code is specific to the serial number of the unit and is either already entered at the factory for new units or it can be activated at a later date. The code is sent by email. There is no requirement for a hardware or software update.



Type	PK	Cat. No.
E-grade "Exclusive"	1	9.699 100
E-grade "Professional"	1	9.699 101

We can supply this
 manufacturer's
 whole
 product range ! **huber**





1 "Petite fleur" - the baby Tango

The Tango is the original and smallest circulator of the Unistat® range, which has been the benchmark for many years. The "Petite Fleur" in comparison with the Tango Nuevo, is $\frac{2}{3}$ the size, $\frac{2}{3}$ the power and $\frac{2}{3}$ the price.

The Tango and the Unistat®s are suitable for externally open baths or closed applications, e.g. reactors. The first version of "Petite Fleur", the baby Tango, is designed for external, closed circuit applications. With the expansion tank and the large illuminated sight glass, it is instantly recognisable as a Unistat® with all the well known advantages.

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Heating capacity: 1.5kW
 Pressure pump VPC: 33L/min/0.9bar

Type	Temp. range °C	Cooling capacity KW at 200/20/0/-20/-30°C	Dimensions (W x D x H) mm	PK	Cat. No.
petite fleur air-conditioned	-40 to 200	0.48/0.48/0.45/0.27/0.16	260 x 450 x 504	1	6.235 884
petite fleur w, water conditioned	-40 to 200	0.48/0.48/0.45/0.27/0.16	260 x 450 x 504	1	9.857 486



2 Dynamic Temperature Control Systems Unistats®

The dynamic thermoregulation of the Unistat line introduced a revolution in fluid temperature control. Unistats are the ideal solution for fast and highly exact thermal control of external applications, e.g. reactors, autoclaves, miniplants, pilot systems, reaction calorimeters or distillation systems. In comparison to classical circulators Unistats are convincing in their unique thermodynamics for highly exact and reproducible results. The Unistat technology thereby guarantees to always have the shortest heating and cooling times as well as a large temperature range without bothersome fluid changes. There are over 50 models to choose from with cooling powers from 0.7kW to 130kW. What ever the application, Unistats provide professional scale-up offering the same stable process conditions from the development lab to production systems. Unistat temperature control systems make use of a professional range of functions for all requirements. The facilities encompass a colour touchscreen display, with comfortable menu guidance and a real-time graphics display of temperature progress, as well as an intelligent cascade temperature control and high performance speed controlled circulation pump. This is rounded off with a programmer, a ramp function, calendar start, customisable user menus, sensor calibration as well as analogue and digital interfaces. Additionally, Ethernet and USB connections are offered via the optional Web.G@te module. Remote access via a company network or the internet, or integration into a process control system are then possible. Temperature profiles and measurement data can be saved directly on a USB storage medium.

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Advantages and Functions:

- Working temperatures from -120°C to +425°C
- Previously unachievable performance
- Highly accurate, intelligent temperature control
- Maximum process stability and reproducibility
- The fastest heating and cooling rates
- High Cooling Power from 0.7 to 130kW
- Large temperature range without fluid change
- Increased thermal fluid life
- Incredibly compact
- Colour TFT display shows all process parameters
- Comprehensive warning and safety functions

1 Thermoregulator Circulators, Unistat®, -55°C

Huber

Heating capacity
 Tango/405 series: 1.5/3.0kW
 Unistat® 425/425w: 2.0kW
 Unistat® 430/430w: 4.0kW
 Unistat® 510: 6.0kW

Type	Temp. range °C	Pump cap. L/min / bar	Cooling capacity kW at 250/200/100/0/-20/-40°C	PK	Cat. No.
Tango nuevo	-45 to +250	55 / 0,9	0,7/0,7/0,7/0,7/0,4/0,06	1	9.857 778
Tango nuevo wl	-45 to +250	55 / 0,9	0,7/0,7/0,7/0,7/0,4/0,05	1	9.857 779
Unistat® 405	-45 to +250	55 / 0,9	1,0/1,0/1,0/1,0/0,6/0,15	1	9.857 780
Unistat® 405w	-45 to +250	55 / 0,9	1,3/1,3/1,3/1,3/0,7/0,15	1	9.857 781
Unistat® 410w	-45 to +250	55 / 0,9	2,5/2,5/2,5/1,5/0,8/0,2	1	9.857 300
Unistat® 425	-40 to +250	105 / 1,5	2,0/2,0/2,0/2,5/1,8/0,2	1	9.857 782
Unistat® 425w	-40 to +250	105 / 1,5	2,8/2,8/2,8/2,5/1,9/0,2	1	9.857 783
Unistat® 430	-40 to +250	90 / 1,7	3,5/3,5/3,5/3,5/2,2/0,3	1	9.857 784
Unistat® 430w	-40 to +250	90 / 1,7	3,5/3,5/3,5/3,5/2,2/0,3	1	9.857 785
Unistat® 510w	-50 to +250	105 / 1,5	5,3/5,3/5,3/5,3/2,8/0,9	1	9.857 786

Pump with VPC (Variable pressure control)

2 Thermoregulators, Unistat®, -85°C

Huber

Heating capacity
 Unistat® 705/705w series: 1.5/3.0kW
 Unistat® 815/815w series: 2.0kW
 Safety class: FL, III
 Supply requirements: 230/400V 50Hz (705/705w)
 400V 50Hz (815/815w)

Dimensions (WxDxH)
 Unistat 705/705w series: 425 x 400 x 720mm
 Unistat 815/815w series: 460 x 604 x 1342mm

Type	Temp. range °C	Pump cap. L/min / bar	Cooling capacity kW at 250/200/100°C	Cooling capacity kW at 0/-20/-40/-60/-80°C	PK	Cat. No.
Unistat® 705	-75 to 250	55 at 0.9	0.6/0.6/0.6	0.65/0.6/0.6/0.3/--	1	9.857 792
Unistat® 705w	-75 to 250	55 at 0.9	0.6/0.6/0.6	0.65/0.6/0.6/0.3/--	1	9.857 793
Unistat® 815	-85 to 250	40 at 0.9	1.3/1.3/1.3	1.5/1.5/1.4/1.2/0.2	1	9.857 794
Unistat® 815w	-85 to 250	40 at 0.9	1.5/1.5/1.5	1.5/1.5/1.4/1.2/0.2	1	9.857 795

Pump with VPC (Variable pressure control)





1 High temperature circulators Unistate® up to 400°C

Huber

Safety class:	FL, III
Cooling capacity kW at:	400/300/200/100°C
unistat® T305w HT/unistat T320w HT:	--/10/10/6.0
unistat® T330w HT/unistat T340w HT:	--/10/10/6.0
unistat® cc401w HT:	10/10/10/10

Type	Temp. range °C	Heating kW	Dimensions (W x D x H) mm	Supply req., 50 Hz V	PK	Cat. No.
unistat® T305	65 - 300*	3,0/6,0	425 x 250 x 635	230/400	1	9.857 301
unistat® T305 HT	65 - 300	3,0/6,	425 x 250 x 635	230/400	1	9.857 303
unistat® T305w HT	65 - 300*	3,0/6,0	425 x 250 x 635	230/400	1	9.857 304
unistat® T320	65 - 300*	12,0	460 x 554 x 1332	400	1	9.857 302
unistat® T320w HT	65 - 300*	12,0	460 x 554 x 1332	400	1	9.857 305
unistat® T330	65 - 300*	24,0	460 x 554 x 1332	400	1	9.857 306
unistat® T330w HT	65 - 300*	24,0	460 x 554 x 1332	400	1	9.857 307
unistat® T340	65 - 300*	48,0	600 x 704 x 1517	400	1	9.857 308
unistat® T340w HT	65 - 300*	48,0	600 x 704 x 1517	400	1	9.857 309
unistat® cc401	50 - 400	3,0/9,0	288 x 332 x 740	230/400	1	9.857 311
unistat® cc401w HT	50 - 400*	3,0/9,0	288 x 332 x 740	230/400	1	9.857 312
unistat® cc402	80 - 425	3,0/9,0	288 x 332 x 870	230/400	1	9.857 313
unistat® T350	65 - 300*	96,0	700 x 804 x 1515	400	1	9.857 314

* Range can be extended down to 15°C using accessory external cooling.



2 Unichiller® in alternative bench-top or tower housing formats

Huber

Unichillers are intelligent chillers which are used mainly as an environmentally friendly and economic alternative to tap water for process cooling. Low temperatures increase efficiency and recovery rates in condensation processes. In contrast to tap water a set-point can be selected between -10/-20°C to 40°C and controlled with a temperature stability of ±0.5°C. The product range includes 27 air cooled and 26 water cooled models, with cooling powers from 0.3kW to 50kW. Most models can be factory fitted with a heater if required. Housings are made of stainless steel to ensure long life. Compact, value-for-money units are available in classic look with cooling powers up to 2.5kW for cooling applications in the lab. Models from Minichiller to UC 025w are suitable for on or under the lab bench. The proven Huber tower housing models offer power with small footprints. These top models have the exchangeable Compatible Control CC-Pilot. These models are used in both research and production, the range of cooling powers available is from 1.6kW to 100kW. Unichillers with an optional heating become powerful process circulators (additional charge on request).



3 Chillers, Minichiller®

NEW!

Huber

Small, robust and cost effective with its stainless steel casing. The Minichiller® is the smallest Unichiller® in the World. Minichillers® are available with air or water-cooled refrigeration systems, illuminated level indicator, overflow and drain on the front. The filling port is on the top of the unit.

Supply req.:	230V 50Hz
Dimensions (WxDxH):	225 x 360 x 380mm

Type	Temp. range °C	Pump cap. L/min / bar	Cooling capacity kW at 15/0/-10°C	PK	Cat. No.
Minichiller® NR	-20 to 40	20 / 0,2	0,3/0,2/0,14	1	9.857 717
Minichiller® w-NR	-20 to 40	20 / 0,2	0,3/0,2/0,14	1	9.857 592

*Also available as "advanced" version.

(Advanced: -RS232/serial with the LAI commands G,v,L; (SpyLight compatible) -PT100 for sensor relocation (jacket control))

7. Heating and cooling technology Temperature regulators/Thermostats, cryostats

1 Unichillers®, bench-top

Conventional Unichiller units provide cooling powers from 0.3 to 2.5kW. Two, water-cooled models with tower profile housings ensure a minimal footprint. Excellent control is achieved using a modern, easy to use, microprocessor-based controller with a large display. Thanks to high safety standards and robust construction, they are particularly suited to continuous operation, removing process heat. With the exception of the two models in tower housings, all units can be factory fitted with optional heating and independent overtemperature protection. The maximum working temperature increases to 100°C and the temperature stability is ±0.5K. The new construction allows constant operation in ambient temperatures up to 40°C. The water-cooled models are especially quiet and require little cooling water even at full cooling power. Due to increasing costs of water the ROI is exceptionally short. All models with maximum pump pressure of 3bar have an adjustable bypass and pressure gauge.

All Unichiller also available as "advanced" version.
(Advanced: -RS232/serial with the LAI commands G,v,L; (SpyLight compatible) -PT100 for sensor relocation (jacket control))

Huber



Type	Temp. range °C	Supply req., 50 Hz V	Pump cap. L/min / bar	Cooling capacity kW at 15/0/-10°C	PK	Cat. No.
UC006	-20 to 40	230	30 at 0.7	0.6/0.5/0.22	1	9.857 360
UC007	-20 to 40	230	25 at 3.0	0.7/0.55/0.35	1	9.857 659
UC010	-10 to 40	230	25 at 3.0	1.0/0.8/0.5	1	9.857 361
UC012	-10 to 40	230	25 at 3.0	1.2/1.0/0.7	1	9.857 362
UC012w	-10 to 40	230	25 at 3.0	1.2/1.0/0.7	1	9.857 363
UC015	-10 to 40	230	25 at 3.0	1.5/1.0/0.4	1	9.857 364
UC015w	-10 to 40	230	25 at 3.0	1.5/1.0/0.4	1	9.857 365
UC022	-10 to 40	230	25 at 3.0	2.2/1.6/1.0	1	9.857 366
UC022w	-10 to 40	230	25 at 3.0	2.2/1.6/1.0	1	9.857 367
UC023w	-10 to 40	230	25 at 3.0	2.0/2.0/1.3	1	9.857 368
UC025	-10 to 40	230	25 at 3.0	2.5/2.0/1.2	1	9.857 369
UC025w	-10 to 40	230	25 at 3.0	2.5/2.0/1.2	1	9.857 370

2 Unichiller® (bench mounting) with water cooled refrigeration unit

The models UC006Tw and UC009Tw have a footprint of only 230 x 280mm and are therefore suitable for installation in laboratory furniture or in extract hoods. The water-cooled chillers emit almost no heat and require minimal amounts of cooling water.

Pump capacity 30 L/min, pressure 0.7 bar.
Supply requirements: 230V 50Hz

Huber



Type	Temp. range °C	Cooling capacity kW at 15 °C	Cooling capacity kW at 0/-10/-20°C	Dimensions (W x D x H) mm	PK	Cat. No.
UC006Tw-NR	-20 to 40	0.6	0.45/0.4/0.25	230 x 280 x 540	1	9.857 050
UC009Tw-NR	-25 to 40	0.9	0.7/0.4/0.2	230 x 280 x 540	1	9.857 053



7. Heating and cooling technology

Temperature regulators/Thermostats, cryostats

1 Unichiller® (free standing unit) with air cooled refrigeration unit

All models require 400V 50Hz supplies, except UC017T, UC020T and UC025T which require 230V 50Hz.

Huber

Optional: Natural cooling material on request.

Type	Temp. range °C	Pump cap. L/min / bar	Cooling capacity kW at 15/0/-10/-20°C	Dimensions (W x D x H) mm	PK	Cat. No.
UC017T	-10 to 40	27 at 3.0	1.7/0.9/0.4/-	450 x 510 x 1160	1	9.857 320
UC020T	-20 to 40	27 at 3.0	2.0/2.0/1.5/0.8	450 x 510 x 1160	1	9.857 321
UC025T	-10 to 40	27 at 3.0	2.5/1.2/0.6/-	450 x 510 x 1160	1	9.857 322
UC040T	-10 to 40	27 at 3.0	4.0/2.5/1.5/-	500 x 550 x 1420	1	9.857 323
UC045T	-20 to 40	27 at 3.0	4.5/4.5/2.9/1.5	500 x 550 x 1420	1	9.857 324
UC055T	-10 to 40	65 at 5.5	5.5/3.0/1.3/-	600 x 632 x 1610	1	9.857 325
UC060T	-20 to 40	65 at 5.5	6.0/6.0/3.9/2.0	600 x 630 x 1600	1	9.857 326
UC080T	-10 to 40	90 at 5.5	8.0/4.8/2.5/-	600 x 790 x 1610	1	9.857 327

2 Unichiller® (free-standing) with air cooled refrigeration unit

All models require 400V 50Hz supplies, except UC017Tw, UC020Tw and UC025Tw which require 230V 50Hz.

Huber

Option: Natural cooling material on request

Type	Temp. range °C	Pump cap. L/min / bar	Cooling capacity kW at 15/0/-10/-20°C	Dimensions (W x D x H) mm	PK	Cat. No.
UC017Tw	-10 to 40	27 at 3.0	1.7/0.9/0.4/-	400 x 440 x 1100	1	9.857 340
UC020Tw	-20 to 40	27 at 3.0	2.0/2.0/1.5/0.8	400 x 440 x 1100	1	9.857 341
UC025Tw	-10 to 40	27 at 3.0	2.5/1.2/0.6/-	400 x 440 x 1100	1	9.857 342
UC030Tw	-20 to 40	27 at 3.0	3.0/3.0/2.0/1.0	400 x 440 x 1100	1	9.857 343
UC040Tw	-10 to 40	27 at 3.0	4.0/2.5/1.5/-	400 x 440 x 1100	1	9.857 344
UC055Tw	-10 to 40	65 at 5.5	5.5/4.0/2.0/-	500 x 552 x 1261	1	9.857 345
UC060Tw	-20 to 40	65 at 5.5	6.0/6.0/3.8/2.1	500 x 552 x 1261	1	9.857 346
UC080Tw	-10 to 40	90 at 5.5	8.0/4.65/2.35/-	500 x 552 x 1261	1	9.857 347



3 Beer Forced Ageing Test Thermostats

We offer a special air or water cooled thermostat unit for the Beer Forced Ageing Test.

Huber

Both models are equipped with a comfortable programmer for the standard adjustment between 0°C and 60°C within a 24 hour cycle. The BFT 2 is for 20 bottles in the Original Eurobox. All models comply with Safety Class FL, III. The housing and bath are made entirely of stainless steel.

Dimensions (WxDxH):

BFT1/BFT1w:	420 x 565 x 719mm
BFT2/BFT2w:	670 x 715 x 1105mm
BFT4:	540 x 605 x 801mm

Type	Temp. range °C	Bath opening mm	Bath tank depth mm	Heating power W	Cooling capacity kW at 20 °C	PK	Cat. No.
BFT1	0 to 80	280 x 280	150	2000	1.0	1	9.857 420
BFT1w	0 to 80	280 x 280	150	2000	1.0	1	9.857 421
BFT2	0 to 80	530 x 400	360	3000	2.5	1	9.857 422
BFT2w	0 to 80	530 x 400	360	3000	2.5	1	9.857 423
BFT4	0 to 80	300 x 400	300	2000	0.35	1	9.857 424

1 Thread adapters

Huber

Type	PK	Cat. No.
M16x1 male - M16x1 male	1	9.857 176
M16x1 female - M16x1 female	1	9.857 177
M16x1 male - 1/2" male	1	9.857 178
M16x1 male - 1/2" female	1	9.857 179
M16x1 female - 1/2" male	1	9.857 180
M16x1 female - 1/2" female	1	9.857 181
M16x1 male - 3/4" female	1	9.857 182
M16x1 female - 3/4" female	1	9.857 183
M16x1 female - M30x1.5 male	1	9.857 184
M16x1 male - M30x1.5 male	1	9.857 185
M16x1 male - M30x1.5 female	1	9.857 186
M24x1.5 female - M16x1 male	1	6.227 404
M24x1.5 female - 3/4" NPT female	1	9.857 209
M24x1.5 male - M16x1 female	1	9.857 210
M24x1.5 male - 1/2" female	1	9.857 211
M24x1.5 female - 1/2" male	1	9.857 212
M24x1.5 male - M24x1.5 male	1	9.857 213
M30x1.5 male - M30x1.5 male	1	9.857 187
M30x1.5 female - 3/8" male	1	9.857 188
M30x1.5 male - 1/2" male	1	9.857 189
M30x1.5 male - 1/2" female	1	9.857 190
M30x1.5 female - 1/2" male	1	9.857 191
M30x1.5 female - 1/2" female	1	9.857 192
M30x1.5 male - 3/4" male	1	9.857 193
M30x1.5 male - 3/4" female	1	9.857 194
M30x1.5 female - 3/4" NPT male	1	9.857 208
M30x1.5 female - 3/4" female	1	9.857 195
M30x1.5 male - 1" male	1	9.857 196
M30x1.5 female - 1" female	1	9.857 197
1/2" female - 1/2" female	1	9.857 198
1/2" female - 3/4" NTP female	1	9.857 199
M38x1.5 female - 1" NPT male	1	9.857 200
M38x1.5 female - M30x1.5 male	1	9.857 201
M38x1.5 female - 3/4" male	1	9.857 202

1



2 Accessories M16x1

Huber

Accessories	PK	Cat. No.
Hose connector NW 8	1	9.857 145
Hose connector NW 12	1	9.857 146
Blank plug	1	9.857 147
Nut	1	9.857 148
Micro hose connector NW 3.2	1	9.857 149
Connector 90°	1	9.857 150
Ball valve	1	9.857 151
2-way Header	1	9.857 152
3-way Header	1	9.857 153
4-way Header	1	9.857 154
5-way Header	1	9.857 206
2-way Valve System	1	9.857 155
3-way Valve System	1	9.857 156
4-way Valve System	1	9.857 157
5-way Valve System	1	9.857 207

2



1


1 Thermofluides

NEW!

Huber

Huber thermal fluids have the best possible thermodynamic and environmental characteristics. The correct selection is vitally important and is dependent on the temperature range. Consideration must be given to the safety standards to ensure reliable and safe operation and optimal results. Maximum life of the fluids is also expected.

Description	Type	Capacity litres	Temp. range °C	PK	Cat. No.
Thermofluid MinOil	P20.190.40	5	+20 to +190° C	1	6.201 643
Thermofluid MinOil	P20.190.40	10	+20 to +190° C	1	6.239 618
Thermofluid SiOil	P20.275.50	5	+20 to +275° C	1	6.201 670
Thermofluid SiOil	P20.275.50	10	+20 to +275° C	1	6.203 535
Thermofluid SiOil	M20.235.20	5	-20 to +235° C	1	6.306 078
Thermofluid SiOil	M20.235.20	10	-20 to +235° C	1	6.250 420
Thermofluid SiOil	M40.165.10	5	-40 to +165° C	1	6.250 278
Thermofluid SiOil	M40.165.10	10	-40 to +165° C	1	6.304 378
Thermofluid SiOil	M60.115.05	5	-60 to +115° C	1	6.201 255
Thermofluid SiOil	M60.115.05	10	-60 to +115° C	1	6.225 263
Thermofluid SiOil	M90.055.03	5	-90 to +55° C	1	7.615 661
Thermofluid SiOil	M90.055.03	10	-90 to +55° C	1	6.202 172

2


2 Thermofluid DW-Therm

NEW!

Huber

DW-Therm is a mixture of isometric triethoxysilanes and has been developed for hydraulically sealed systems.

- broad working range from -90°C to +200°C (hydraulically sealed systems)
- excellent thermooxidative stability at high temperatures
- low viscosity at low temperatures
- low volatility and pleasant odour
- easy handling (no creeping like silicone oils)
- good compatibility with silicone oils
- insoluble in water and environmentally friendly
- not classified as dangerous goods, no known toxicity

Specifications

Appearance and odour:	transparent, colourless or yellow liquid with characteristic odour
Silane content:	99%
Viscosity:	2.0 - 2.2 mm ² /sec at 20°C
Density:	0.88g/cm ³ at 15°C
Boiling range	228 - 235°C
Solidification at:	-137°C
Flash point:	101°C
Ignition temperature:	265°C
Usage:	closed systems

Description	Type	Capacity L	Temp. range °C	PK	Cat. No.
Thermofluid DW-Therm	M90.200.02	10	-90 to +200°C	1	6.201 320

Thermofluid DW-Therm HT

NEW!

Huber

DW-Therm HT is a mixture of partially hydrogenated terphenyls. It is for use exclusively in high temperature unistats®.

- broad working range from +20°C to +330°C (hydraulically sealed system)
- long lifetime at high temperatures under inert atmosphere: 3-4 years
- good thermal properties for heat transfer
- high oxidation stability

Specifications

Appearance:	clear, orange coloured liquid
Content:	99.5% partially hydrogenated terphenyls
kinematic Viscosity:	32 mm ² /sec at 20°C
Density:	1.004 g/cm ³ at 20°C
Boiling starts at:	approx. 350°C
Pour point:	-33°C
Flash point:	approx. 190°C
Fire point:	approx. 218°C
Ignition temperature:	approx. 390°C
Usage:	closed systems

Description	Type	Capacity L	Temp. range °C	PK	Cat. No.
Thermofluid DW-Therm HT	P20.330.32	5	+20 to + 330° C	1	6.204 286
Thermofluid DW-Therm HT	P20.330.32	10	+20 to + 330° C	1	6.222 503

1 Hoses, metal

Insulated hoses of metal ensure the highest operational safety of your temperature control circuit. The high quality hoses offer the best heat transfer with optimum flow characteristics, hence reducing the power loss in external temperature control applications. The hoses are firmly screwed to the temperature control machine and the external application.

Huber

1



Type	Ext. diam. mm	Temp.-working range °C	Length cm	PK	Cat. No.
NW 12 M16 x 1	33	-50 to 200	100	1	9.857 214
NW 12 M16 x 1	33	-50 to 200	150	1	9.857 215
NW 12 M16 x 1	33	-50 to 200	200	1	9.857 216
NW 12 M16 x 1	33	-50 to 200	300	1	9.857 217
NW 12 M16 x 1	44	-100 to 350	100	1	9.857 121
NW 12 M16 x 1	44	-100 to 350	150	1	9.857 122
NW 12 M16 x 1	44	-100 to 350	200	1	9.857 045
NW 12 M16 x 1	44	-100 to 350	300	1	9.857 124
NW 12 M24 x 1.5	44	-100 to 350	100	1	9.857 218
NW 12 M24 x 1.5	44	-100 to 350	150	1	6.229 781
NW 12 M24 x 1.5	44	-100 to 350	200	1	9.857 219
NW 12 M24 x 1.5	44	-100 to 350	300	1	9.857 220
NW 12 M24 x 1.5	56	-120 to 400	100	1	9.857 046
NW 12 M24 x 1.5	56	-120 to 400	150	1	9.857 047
NW 12 M24 x 1.5	56	-120 to 400	200	1	9.857 048
NW 12 M24 x 1.5	56	-120 to 400	300	1	9.857 049
NW 20 M30 x 1.5	56	-100 to 350	100	1	9.857 125
NW 20 M30 x 1.5	56	-100 to 350	150	1	9.857 126
NW 20 M30 x 1.5	56	-100 to 350	200	1	9.857 127
NW 20 M30 x 1.5	56	-100 to 350	300	1	9.857 128
NW 25 M38 x 1.5	63	-100 to 350	100	1	9.857 129
NW 25 M38 x 1.5	63	-100 to 350	150	1	9.857 130
NW 25 M38 x 1.5	63	-100 to 350	200	1	9.857 131
NW 25 M38 x 1.5	63	-100 to 350	300	1	9.857 132

2 Thermoregulators Economy ED, EH, TopTech MB, MA and ME

NEW!

2

For thermoregulation of bath tanks up to 50 litres. With bath attachment clamp for wall thicknesses up to 26mm or retort stand mounting using accessory rod.

JULABO



Economy ED series

- Bright LED temperature display for actual and setpoint values, resolution 0.1°C
- Keypad for setpoint, switches automatically to the actual value
- PID1 temperature control
- Adjustable high temperature cut-out/dry-running protection (protection class 1 for non-flammable liquids, DIN 12876-1)

Economy EH series

- Enhanced temperature range up to 150°C
- Adjustable high temperature cut-out/dry-running protection (protection class 3 for flammable liquids, DIN 12876-1)

TopTech MB series

- Multi-Display (LED) for actual and setpoint values, warning/safety functions and pump stage
- PID2 temperature control with drift compensation
- ATC3 3-Point-Calibration
- Early warning system for low liquid level
- RS232 interface
- Adjustable high temperature cut-out/dry-running protection (protection class 1 for non-flammable liquids, DIN 12876-1)

TopTech MA series - as TopTech MB, but additionally with:

- PPC (Pump Pressure Control), electronically adjustable pump capacity
- Adjustable high temperature cut-out/dry-running protection (protection class 3 for flammable liquids, DIN 12876-1)

TopTech ME series - as TopTech MA, but additionally with:

- VFD Comfort Display, resolution 0.01°C
- Pt100 External sensor connection
- Programmer for 10 programme steps

Type	Temp. range °C	Temp. stability ± °C	Pump cap. L/min / bar	PK	Cat. No.
Economy ED	20 to 100	0.03	15 / 0.35	1	9.858 003
Economy EH	20 to 150	0.03	15 / 0.35	1	9.858 000
TopTech MB	20 to 100	0.02	10 / 0.12	1	9.858 001
TopTech MA	20 to 200	0.01	11-16 / 0.23-0.45	1	9.858 110
TopTech ME	20 to 200	0.01	11-16 / 0.23-0.45	1	9.858 004



1 Circulator baths, Economy ED, EH series and TopTech MB series

Open bath circulator for internal and external temperature tasks directly in the bath.

JULABO

Working temperature ranges:

- with stainless steel bath tank: up to 100°C (without suffix)
- with Plexiglas bath tank up to 60°C (Suffix 'A')
- with Makrolon bath tank up to 100°C (Suffix 'M')

Economy ED series

- Bright LED temperature display for actual and setpoint values, resolution 0.1°C
- Keypad for setpoint, switches automatically to the actual value
- PID1 temperature control
- Adjustable high temperature cut-out/dry-running protection (protection class 1)

Economy EH series

- Extended temperature range up to +150°C
- Adjustable high temperature cut-out/dry-running protection (protection class 3)

TopTech MB series

- Multi-Display (LED) for actual and set-point values, warning/safety functions and pump status
- PID2 temperature control with drift compensation
- ATC3 3-Point-Calibration
- Early warning system for low liquid level
- RS232 interface

Type	Temp. range	Temp. stability	Pump cap.	Capacity	PK	Cat. No.
	°C	± °C	L/min / bar	L		
Economy ED-5A	20 to 60	0.03	15 / 0.35	5	1	9.858 037
Economy ED-5M	20 to 100	0.03	15 / 0.35	5	1	9.857 812
Economy ED-5	20 to 100	0.03	15 / 0.35	4.5	1	9.858 032
Economy EH-5	20 to 150	0.03	15 / 0.35	4.5	1	9.858 036
Economy EH-13	20 to 150	0.03	15 / 0.35	13	1	9.858 056
Economy EH-19	20 to 150	0.03	15 / 0.35	19	1	9.858 057
Economy EH-27	20 to 150	0.03	15 / 0.35	27	1	9.858 058
Economy EH-33	20 to 150	0.03	15 / 0.35	33	1	9.858 059
Economy EH-39	20 to 150	0.03	15 / 0.35	39	1	9.858 060
TopTech MB-5A	20 to 60	0.02	10 / 0.12	5	1	9.858 034
TopTech MB-7A	20 to 60	0.02	10 / 0.12	7	1	9.858 035
TopTech MB-5M	20 to 100	0.02	10 / 0.12	5	1	9.857 820
TopTech MB-5	20 to 100	0.02	10 / 0.12	4.5	1	9.858 031

We can supply this
 manufacturer's
 whole
 product range !



Julabo

1 Circulator Baths, Economy ED and TopTech MB series

Open bath circulators only for lower temperature range tasks performed internally, directly in the bath.

Working temperature ranges:

- with stainless steel bath tank : up to 100°C (without suffix)
- with Plexiglas bath tank up to 60°C (Suffix 'A')
- with Makrolon bath tank up to 100°C (Suffix 'M')

Economy ED series

- Bright LED temperature display for actual and setpoint values, resolution 0.1°C
- Keypad for setpoint, switches automatically to the actual value
- PID1 temperature control
- Adjustable high temperature cut-out/dry-running protection

TopTech MB series

- Multi-Display (LED) for actual and setpoint values, warning/safety functions and pump status
- PID2 temperature control with drift compensation
- ATC3 3-Point-Calibration
- Early warning system for low liquid level
- RS232 interface

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Type	Temp. range	Temp. stability	Pump cap.	Capacity	PK	Cat. No.
	°C	± °C	L/min / bar	L		
Economy ED-5A/B	20 to 60	0.03	15 / 0.35	5	1	9.857 804
Economy ED-7A/B	20 to 60	0.03	15 / 0.35	7	1	9.857 805
Economy ED-5M/B	20 to 100	0.03	15 / 0.35	5	1	9.857 806
Economy ED-13A	20 to 60	0.03	15 / 0.35	13	1	9.858 028
Economy ED-19A	20 to 60	0.03	15 / 0.35	19	1	9.858 029
Economy ED-13M	20 to 100	0.03	15 / 0.35	13	1	9.857 807
Economy ED-19M	20 to 100	0.03	15 / 0.35	19	1	9.857 808
Economy ED-13	20 to 100	0.03	15 / 0.35	13	1	9.858 016
Economy ED-19	20 to 100	0.03	15 / 0.35	19	1	9.858 017
Economy ED-27	20 to 100	0.03	15 / 0.35	27	1	9.858 010
Economy ED-33	20 to 100	0.03	15 / 0.35	33	1	9.857 810
TopTech MB-13A	20 to 60	0.02	10 / 0.12	13	1	9.858 025
TopTech MB-19A	20 to 60	0.02	10 / 0.12	19	1	9.858 030
TopTech MB-13	20 to 100	0.02	10 / 0.12	13	1	9.858 011
TopTech MB-19	20 to 100	0.02	10 / 0.12	19	1	9.858 012

Heating circulator baths, TopTech MA, ME series

Principally for temperature control of external closed circuit systems. Smaller vessels can be thermostated directly in the bath tank. For working at lower temperature ranges the cooling coil is integrated.

TopTech MA series

- Multi-Display (LED) for actual and setpoint values, warning/safety functions and pump status
- PID2, temperature control with drift compensation
- ATC3, 3-point calibration
- early warning system for low liquid level
- RS232 interface
- PPC (Pump Pressure Control), electronically adjustable pump capacity

TopTech ME series - as TopTech MA, but with additional:

- VFD Comfort Display, resolution 0.01°C
- Pt100 external sensor connection

NEW!

JULABO



9.857 831

Type	Temp. range	Temp. stability	Pump cap.	PK	Cat. No.
	°C	± °C	L/min / bar		
TopTech MA-4	20 to 200	0.01	11-16 / 0.23-0.45	1	9.858 111
TopTech MA-6	20 to 200	0.01	11-16 / 0.23-0.45	1	9.858 112
TopTech MA-12	20 to 200	0.01	11-16 / 0.23-0.45	1	9.858 113
TopTech MA-26	20 to 200	0.01	11-16 / 0.23-0.45	1	9.858 114
TopTech ME-4	20 to 200	0.01	11-16 / 0.23-0.45	1	9.857 831
TopTech ME-6	20 to 200	0.01	11-16 / 0.23-0.45	1	9.857 824
TopTech ME-12	20 to 200	0.01	11-16 / 0.23-0.45	1	9.857 832
TopTech ME-26	20 to 200	0.01	11-16 / 0.23-0.45	1	9.857 833



9.857 833

1


1 Heating circulator baths HighTech HE, HL, SE, SL series

Principally for temperature control of external systems. Models with pressure and suction pump generally have a higher capacity and can be used for larger and open circuit systems. Smaller vessels can be thermoregulated directly in the bath tank. For working at lower temperature ranges the cooling coil is integrated.

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- HighTech HE, SE series** - as TopTech ME, but with additional:
- ICC (Intelligent Cascade Control), self-optimising temperature control
 - powerful pressure and suction pump. Pressure 0.4 to 0.7 bar, Suction 0.2 to 0.4 bar
- HighTech HL, SL series** - as HighTech HE, SE, but with additional:
- LCD Dialogue Display for convenient interactive operation
 - TCF Temperature Control Features to optimise control behaviour
 - integral programmer for 6 x 60 programme steps
 - connections for solenoid valve and HSP booster pump

Type	Temp. range	Temp. stability	Pump cap.	Suction	PK	Cat. No.
	°C	± °C	L/min / bar	bar		
HighTech HE-4	20 to 250	0.01	22-26 / 0.4- 0.7	0.2-0.4	1	9.858 044
HighTech SE-6	20 to 300	0.01	22-26 / 0.4- 0.7	0.2-0.4	1	9.858 049
HighTech SE-12	20 to 300	0.01	22-26 / 0.4- 0.7	0.2-0.4	1	9.858 047
HighTech SE-26	20 to 300	0.01	22-26 / 0.4- 0.7	0.2-0.4	1	9.858 048
HighTech HL-4	20 to 250	0.01	22-26 / 0.4- 0.7	0.2-0.4	1	9.858 050
HighTech SL-6	20 to 300	0.01	22-26 / 0.4- 0.7	0.2-0.4	1	9.858 054
HighTech SL-12	20 to 300	0.01	22-26 / 0.4- 0.7	0.2-0.4	1	9.858 051
HighTech SL-26	20 to 300	0.01	22-26 / 0.4- 0.7	0.2-0.4	1	9.858 052

2


2 Refrigerated circulator baths, Economy ED, EH series

For temperature control of external closed circuit systems, such as photometers, refractometers, viscometers etc. Smaller objects can be thermoregulated directly in the bath tank.

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Economy ED series

- bright LED temperature display for actual and setpoint values, resolution 0.1°C
- keypad for setpoint, switches automatically to the actual value
- PID1 temperature control
- adjustable high temperature cut-out/dry-running protection (protection class 1 for non-flammable liquids, DIN 12876-1)

Economy EH series

- extended temperature range up to +150°C
- adjustable high temperature cut-out/dry-running protection (protection class 3 for flammable liquids, DIN 12876-1)

Type	Temp. range	Temp. stability	Cooling capacity kW at 20/0/-20°C	Pump cap.	PK	Cat. No.
	°C	± °C		L/min / bar		
Economy F12-ED	-20 to 100	0.03	0.16/0.1/0.02	15 / 0.35	1	9.857 841
Economy F25-ED*	-28 to 100	0.03	0.26/0.2/0.06	15 / 0.35	1	9.858 062
Economy F26-ED**	-28 to 100	0.03	0.26/0.2/0.06	15 / 0.35	1	9.857 844
Economy F34-ED	-30 to 100	0.03	0.45/0.32/0.14	15 / 0.35	1	9.858 075
Economy F12-EH	-20 to 150	0.03	0.16/0.1/0.02	15 / 0.35	1	9.857 843
Economy F25-EH	-28 to 150	0.03	0.26/0.2/0.06	15 / 0.35	1	9.857 842
Economy F32-EH	-35 to 150	0.03	0.45/0.39/0.15	15 / 0.35	1	9.857 846
Economy F33-EH	-30 to 150	0.03	0,5/0,32/0,12	15 / 0.35	1	6.230 445
Economy F34-EH	-30 to 150	0.03	0.45/0.32/0.14	15 / 0.35	1	9.857 847
Economy F38-EH	-35 to 80	0.05	0.92/0.66/0.32	15 / 0.35	1	9.857 848

* Compact units. **Low-profile design.



1 Refrigerated circulator baths TopTech MA, ME series NEW!

For temperature control of external closed circuit systems, such as photometers, refractometers, viscometers etc. Smaller objects can be thermoregulated directly in the bath tank.

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- TopTech MA series** - as TopTech MB, but additionally with:
- PPC (Pump Pressure Control), electronically adjustable pump capacity
 - adjustable high temperature cut-out/dry-running protection (protection class 3 for flammable liquids, DIN 12876-1)
- TopTech ME series** - as TopTech MA, but additionally with:
- VFD Comfort Display, resolution 0.01°C
 - Pt100 external sensor connection
 - Programmer for 10 programme steps

Type	Temp. range	Temp. stability	Cooling capacity kW at 20/0/-20°C	Pump cap.	PK	Cat. No.
	°C	± °C		L/min / bar		
TopTech F12-MA	-20 to 200	0.02	0.16/0.1/0.02	11-16 / 0.23-0.45	1	9.858 115
TopTech F25-MA	-28 to 200	0.02	0.26/0.2/0.06	11-16 / 0.23-0.45	1	9.858 117
TopTech FP40-MA	-40 to 200	0.02	0.68/0.5/0.32/0.004	11-16 / 0.23-0.45	1	9.858 121
TopTech FP50-MA	-50 to 200	0.02	0.9/0.8/0.5/0.16	11-16 / 0.23-0.45	1	9.858 122
TopTech F25-ME*	-28 to 200	0.01	0.26/0.2/0.06	11-16 / 0.23-0.45	1	9.857 849
TopTech F26-ME**	-28 to 200	0.01	0.26/0.2/0.06	11-16 / 0.23-0.45	1	9.858 066
TopTech F32-ME	-35 to 200	0.01	0.45/0.39/0.15	11-16 / 0.23-0.45	1	9.857 857
TopTech F33-ME	-30 to 200	0.01	0.50/0.32/0.12	11-16 / 0.23-0.45	1	9.857 858
TopTech F34-ME	-30 to 150	0.01	0.45/0.32/0.14	11-16 / 0.23-0.45	1	9.857 859
TopTech FP40-ME	-40 to 200	0.01	0.68/0.5/0.32/0.04	11-16 / 0.23-0.45	1	9.857 862
TopTech FP50-ME	-50 to 200	0.01	0.9/0.8/0.5/0.16	11-16 / 0.23-0.45	1	9.857 863

* Compact units.
**Low-profile design.

2 Refrigerated circulator baths, HighTech HE, HL series

For temperature control of externally open and closed circuit systems. Smaller objects can be thermoregulated directly in the bath tank.

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- HighTech HE series** - as TopTech ME, but additionally with:
- ICC (Intelligent Cascade Control), self-optimizing temperature control
 - powerful pressure and suction pump, capacity max. 1.1 bar, electronically adjustable
- HighTech HL series** - as HighTech HE, but additionally with:
- LCD Dialogue Display, backlit for convenient interactive operation
 - TCF Temperature Control Features to optimise control behaviour
 - programmer for 6 x 60 programme steps
 - connections for solenoid valve and HSP booster pump

Type	Temp. range	Temp. stability	Cooling capacity KW at 20/0/-20/-30°C	Pump cap.	PK	Cat. No.
	°C	± °C		L/min / bar		
HighTech F25-HE	-28 to 200	0.01	0.26/0.20/0.06	22-26 / 0.4-0.7	1	9.858 063
HighTech F32-HE	-35 to 200	0.01	0.45/0.39/0.15	22-26 / 0.4-0.7	1	9.858 071
HighTech F34-HE	-30 to 150	0.01	0.45/0.32/0.14	22-26 / 0.4-0.7	1	9.857 867
HighTech FP40-HE	-40 to 200	0.01	0.68/0.5/0.32/0.04	22-26 / 0.4-0.7	1	9.858 455
HighTech FP45-HE	-42 to 200	0.01	0.85/0.7/0.42/0.08	22-26 / 0.4-0.7	1	9.858 458
HighTech FP50-HE	-50 to 200	0.01	0.9/0.8/0.5/0.16	22-26 / 0.4-0.7	1	9.858 456
HighTech F32-HL	-35 to 200	0.01	0.45/0.39/0.15	22-26 / 0.4-0.7	1	9.858 072
HighTech FP35-HL	-35 to 150	0.01	0.45/0.39/0.15	22-26 / 0.4-0.7	1	9.857 872
HighTech F25-HL	-28 to 200	0.01	0.26/0.20/0.06	22-26 / 0.4-0.7	1	9.858 064
HighTech F33-HL	-30 to 200	0.01	0.50/0.32/0.12	22-26 / 0.4-0.7	1	9.857 870
HighTech FP40-HL	-40 to 200	0.01	0.68/0.5/0.32/0.04	22-26 / 0.4-0.7	1	9.857 878
HighTech FP45-HL	-42 to 200	0.01	0.85/0.7/0.42/0.08	22-26 / 0.4-0.7	1	9.858 459
HighTech FP50-HL	-50 to 200	0.01	0.9/0.8/0.5/0.16	22-26 / 0.4-0.7	1	9.858 460

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1 Refrigerated circulator baths series Economy and HighTech

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The new CF series offers compact refrigerated/heating circulators. With small overall dimensions the units can even be placed on a very small surface or within a complex installation. All models offer a heating capacity of 2kW and safety class 3 according to DIN12876-1. The maximum ambient temperature of +40°C as well as ventilated air cooling allow the units to be positioned very closely together, with other units or directly under a fume hood. Furthermore all the models feature pump connections for external temperature applications and a bath opening for temperature control of small objects directly in the circulator bath. Wetted parts are made of high quality stainless steel or plastic. The instruments incorporate reliable Microprocessor electronics offering high temperature stability as well as warning and safety functions.

Economy line CF30, CF40

- Ergonomic design and easy operation
- Compact dimensions require minimal space
- Splash-proof keypad
- Large, bright LED temperature display
- Precise PID temperature control
- RS232 interface for PC connection
- Adjustable high temperature cut-out
- Pump connections for external temperature applications
- Bath opening for temperature control of small objects in the bath

HighTech line CF31, CF41

- Generally as Economy line but additionally with:
- Bright VFD display and interactive LCD dialogue display
 - Highly precise ICC cascade temperature control
 - RS232/RS485 interface for PC connection
 - Electronically adjustable pump output
 - External Pt100 sensor connection
 - Integrated programmer with 6x60 program steps
 - Early warning system for low liquid level
 - 3-point calibration
 - TCF Temperature Control Features

Type	Temp. range °C	Temp. stability ± °C	Cooling capacity kW at 20/0/-20°C	Pump cap. L/min / bar	Suction bar	PK	Cat. No.
CF30	-30 to 150	0.03	0.32/0.25/0.15	15 / 0.35	-	1	9.858 086
CF40	-40 to 150	0.03	0.47/0.4/0.28	15 / 0.35	-	1	9.858 087
CF31	-30 to 200	0.02	0.32/0.25/0.15	22-26 / 0.4-0.7	0.2-0.4	1	9.858 088
CF41	-40 to 200	0.02	0.47/0.4/0.28	22-26 / 0.4-0.7	0.2-0.4	1	9.858 089



7. Heating and cooling technology

Temperature regulators/Thermostats, cryostats

1 Ultra-low refrigerated Circulator Baths TopTech ME series and HighTech HL, SL series

Ultra-low refrigerated, circulators suitable for external heating and cooling tasks. Powerful circulating pump systems and high heating and cooling capacities guarantee short heat-up and cooling times. The inevitable dust accumulation that occurs in refrigeration systems is solved by means of an easily removed, vent grille. The units are equipped with handles or castors for easy manoeuvring. All models have a drain tap on the front, allowing the fluid to be emptied easily. Additionally the instruments are equipped with improved insulation to help avoid ice-formation, and have a visual liquid level display.

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TopTech ME series

- VFD Comfort Display, resolution 0.01°C
- keypad for setpoints, warning/safety values and menu functions
- PID3 cascade temperature control
- ATC3, 3-point calibration
- Pt100 external sensor connection for measurement and control
- PPC (Pump Pressure Control), electronically adjustable pump capacity
- early warning system for low liquid level (DBGM 203 06 059.8)
- adjustable high temperature cut-out, visible via display
- RS232 interface
- integral programmer for 10 programme steps
- Active Cooling Control

- ##### HighTech HL, SL series
- as TopTech ME series, but with additional
 - LCD Dialogue Display, backlit for convenient interactive operation
 - ICC (Intelligent Cascade Control), self-optimising temperature control
 - TCF Temperature Control Features to optimise control behaviour
 - RS232/RS485 interface
 - integral programmer for 6 x 60 programme steps
 - connections for solenoid valve and HSP booster pump

Type	Temp. range	Temp. stability	Cooling capacity kW at 20/0/-20/-40/-60/-80°C	Pump cap.	Suction	PK	Cat. No.
	°C	± °C		L/min / bar	bar		
FP51-SL	-51 to 200	0.05	2.0/1.5/1.0/0.26/-	22-26 / 0.4-0.7	0.2-0.4	1	9.858 464
F70-ME	-70 to 100	0.02	0.34/0.22/0.17/0.13/0.07/--	11-16 / 0.23-0.45	-	1	9.858 462
F81-ME	-81 to 100	0.02	0.45/0.38/0.36/0.32/0.27/0.07	11-16 / 0.23-0.45	-	1	9.858 463
F81-HL	-81 to 100	0.02	0.45/0.38/0.36/0.32/0.27/0.07	22-26 / 0.4-0.7	0.2-0.4	1	9.858 476
F95-SL	-95 to 0	0.05	--/1.7/1.5/1.3/1.1/0.36	22-26 / 0.4-0.7	0.2-0.4	1	9.857 888
FW95-SL	-95 to 0	0.05	--/1.7/1.5/1.3/1.1/0.36	22-26 / 0.4-0.7	0.2-0.4	1	9.857 889
FP52-SL	-60 to 100	0.05	3.0/2.8/1.6/0.65/0.1/--	22-26 / 0.4-0.7	0.2-0.4	1	9.858 466
FPW52-SL	-60 to 100	0.05	3.0/2.8/1.6/0.65/0.1/--	22-26 / 0.4-0.7	0.2-0.4	1	9.858 467
FP55-SL	-60 to 100	0.05	5.2/4.1/2.2/0.7/0.13/--	22-26 / 0.4-0.7	0.2-0.4	1	9.858 479
FPW55-SL	-60 to 100	0.05	5.2/4.1/2.2/0.7/0.13/--	22-26 / 0.4-0.7	0.2-0.4	1	9.858 465
FP90-SL	-90 to 100	0.05	1.8/1.7/1.6/1.35/0.75/0.15	22-26 / 0.4-0.7	0.2-0.4	1	9.858 473
FPW90-SL	-90 to 100	0.05	1.8/1.7/1.6/1.35/0.75/0.15	22-26 / 0.4-0.7	0.2-0.4	1	9.858 474
FPW91-SL	-91 to 100	0.20	5.2/4.7/4.0/3.5/2.3/0.8	22-26 / 0.4-0.7	0.2-0.4	1	9.857 898

FP-models: air-cooled
FPW-models: water-cooled

2 Ultra-low refrigerated circulator baths with extended temperature range

JULABO



Type	Temp. range	Temp. stability	Cooling capacity kW at 20/0/-20/-40/-60/-80°C	Pump cap.	Suction	PK	Cat. No.
	°C	± °C		L/min / bar	bar		
FP52-SL 150	-60 to 150	0.05	3.0/2.8/1.6/0.65 /0.1/--	22-26 / 0.4-0.7	0.2-0.4	1	9.857 899
FPW52-SL 150	-60 to 150	0.05	3.0/2.8/1.6/0.65 /0.1/--	22-26 / 0.4-0.7	0.2-0.4	1	9.857 900
FP55-SL 150	-55 to 150	0.05	5.2/4.1/2.2/0.7/0.13/--	22-26 / 0.4-0.7	0.2-0.4	1	9.857 901
FPW55-SL 150	-60 to 150	0.05	5.2/4.1/2.2/0.7 / 0.13/--	22-26 / 0.4-0.7	0.2-0.4	1	9.857 902
FP90-SL 150	-90 to 150	0.05	1.8/1.7/1.6/1.35/0.75 /0.15	22-26 / 0.4-0.7	0.2-0.4	1	9.857 903
FPW90-SL 150	-90 to 150	0.05	1.8/1.7/1.6/1.35/0.75 /0.15	22-26 / 0.4-0.7	0.2-0.4	1	9.857 904

FP-models: air-cooled
FPW-models: water-cooled

1 F250 EcoChiller Compact Recirculating Cooler

NEW!

JULABO

- Environmentally friendly operation with low energy consumption
- No side vents, instruments can be placed right next to other equipment
- All wetted parts made of stainless steel or high grade plastic
- Large, bright LED display
- Compact design and small foot print
- Splash-proof keypad
- Drain tap
- Easy filling

Due to its high efficiency the F250 is an economic and environmentally friendly alternative to conventional tap water cooling.

Type	Temp. range	Temp. stability	Cooling capacity kW at	Pressure	Flow rate	PK	Cat. No.
	°C	± °C	20/0/-10°C	bar	L / min.		
EcoChiller F250	+5 to +40	5.00	0.25/0.22/0.21	0.35	15	1	9.698 525

2 Flow coolers, FL series

NEW!

JULABO

- Working temperature range covers -20°C to +40°C, the temperature stability of the PID control is ±0.5°C
- splash-proof keypad with integral mains switch
- large, bright LED display
- reliable Microprocessor PID temperature control
- filling level indicator
- powerful immersion pumps, suitable for continuous operation
- permissible temperature within return line: +80°C max.
- easy filling from the top with hinged protective lid
- low liquid level protection with visual and audible alarm signal
- stainless steel bath tanks
- removable venting grille for cleaning of the condenser
- front drain
- no side vents
- RS232 interface for PC connection
- Ingress protection class acc. to IEC 529: IP21
- pressure indicator
- adjustable bypass for pump pressure

Type	Temp. range	Temp. stability	Cooling capacity kW at	Pressure	Flow rate	PK	Cat. No.
	°C	± °C	20/0/-10°C	bar	L / min.		
FL300	-20 to 40	0.50	0.3/0.2/0.15	0.35	15	1	9.698 530
FL601	-20 to 40	0.50	0.6/0.4/0.33	1.0	23	1	9.698 531
FL1201	-20 to 40	0.50	1.2/0.9/0.6	1.0	23	1	9.698 532
FL1203	-20 to 40	0.50	1.2/0.8/0.5	0.5-3.0	40	1	9.698 533
FL1701	-20 to 40	0.50	1.7/1.1/0.85	1.0	23	1	9.698 534
FL1703	-20 to 40	0.50	1.7/1.0/0.75	0.5-3.0	40	1	9.698 535
FL2503	-20 to 40	0.50	2.5/1.5/1.2	0.5-3.0	40	1	9.698 536
FI2506	-15 to 40	0.50	2.5/1.0/0.3	0.5-6.0	60	1	9.698 537
FL4003	-20 to 40	0.50	4.0/2.4/1.5	0.5-3.0	40	1	9.698 538
FL4006	-20 to 40	0.50	4.0/1.9/0.9	0.5-6.0	60	1	9.698 539
FL7006	-20 to 40	0.50	7.0/5.1/3.0	0.5-6.0	60	1	9.698 540
FL11006	-20 to 40	0.50	11.0/7.5/5.0	0.5-6.0	60	1	9.698 541
FL20006	-20 to 40	0.50	20.0/10/6	6.0	80	1	9.698 550

1

2


1 Flow coolers, FL series watercooled



JULABO



Type	Temp. range	Temp. stability	Cooling capacity kW at	Pressure	Flow rate	PK	Cat. No.
	°C	± °C	20/0/-10°C	bar	L / min.		
FLW1701	-20 to 40	0.50	1.7/1.1/0.85	1.0	23	1	9.698 542
FLW1703	-20 to 40	0.50	1.7/1.0/0.75	0.5-3.0	40	1	9.698 543
FLW2503	-20 to 40	0.50	2.7/1.7/1.0	0.5-3.0	40	1	9.698 544
FLW2506	-15 to 40	0.50	2.5/1.0/0.3	0.5-6.0	60	1	9.698 545
FLW4003	-20 to 40	0.50	4.3/2.2/1.3	0.5-3.0	40	1	9.698 546
FLW4006	-20 to 40	0.50	4.0/1.7/0.7	0.5-6.0	60	1	9.698 547
FLW7006	-20 to 40	0.50	7.4/5.5/3.1	0.5-6.0	60	1	9.698 548
FLW11006	-20 to 40	0.50	11.5/7.3/4.8	0.5-6.0	60	1	9.698 549
FLW20006	-20 to 40	0.50	20.0/11.0/6.0	6.0	80	1	9.698 551

2 Highly Dynamic Temperature Control Systems Presto A30/A40/W40



JULABO

The models of JULABOs new Presto generation set new standards for highly dynamic temperature control systems. They represent the optimal solution for highly precise external temperature control applications. The instruments feature extremely short heat-up and cool-down times, wide working temperature ranges and maximum performance with minimum dimensions. All models have an interactive touch screen for easy, menu-guided operation. The pump pressure is adjustable and displayed on the screen. Analog and a number of digital interfaces permit laboratory automation. Typical applications are temperature control of jacketed reactor vessels, reactor systems, autoclaves, distillations, pilot plants, semiconductor industries.

The advantages of PRESTO models:

- Extremely short heat-up and cool-down times
- Powerful circulating pump with adjustable pump pressure (only A40 and W40)
- Wide working temperature ranges without change of thermal fluid
- Large TFT touch screen for interactive operation
- Digital and analog interfaces
- Handles and castors allow for easy set-up
- Low filling volume
- Small dimensions

Specifications

	A30/A40/W40
Temperature range:	-30...+250°C/-40...+250°C/-40...+250°C
Temperature stability:	±0.01...0.05°C
Heating capacity:	2.8kW
Cooling capacity	
at +20°C:	0.5kW/1.2kW/1.2kW
at -20°C:	0.2kW/0.5kW/0.5kW
Temperature display:	TFT
Pump capacity	
Flow rate:	20l/min/40l/min/40l/min
Pressure:	0.5bar/1.7bar/1.7bar
Dimensions (WxDxH):	25 x 60 x 62cm/33 x 60 x 67cm/33 x 60 x 67cm
Cooling compressor:	Air-cooled/Air-cooled/Water-cooled

Type	PK	Cat. No.
A 30	1	9.857 915
A 40	1	9.857 916
W 40	1	9.857 917



High Temperature Circulators

Forte HT30-M1 and Forte HT60-M2

JULABO

Julabo High Temperature Circulators have a compact, closed design and are ideally suited for wide working temperature ranges.

- rapid heating
- high pump capacity, reducible via adapter
- small footprint
- minimal filling volume
- cooling water connections for applications at particularly high temperatures (cooling zone in unit)
- wide working temperature range without changing bath fluids
- avoids oxidation and cracking of the bath fluid. This ensures a prolonged lifetime of the bath fluids recommended by Julabo
- can be easily integrated into a miniplant installation
- time-saving filling process for the entire system with permanent air purge

Forte HT30-M1 and Forte HT60-M2 with C.U. cooling unit

Using the optional C.U. cooling unit, the working temperature range can be further extended downwards. Additionally a high cooling capacity is available if constant tap water cooling is carried out.

- temperature applications from +40°C with controlled tap water cooling
- rapid cooling to low temperature values
- dynamic control characteristics: Automatic control of exothermic reactions in the connected system

Type	Temp. range °C	Temp. stability ± °C	Heating capacity, kW	Pump cap. L/min / bar	PK	Cat. No.
Forte HT30-M1	+70 to +400	±0.01 to ± 0.1	3	14-18 / 0.8-1.2	1	9.858 400 1
Forte HT60-M2	+70 to +400	±0.01 to ± 0.1	7	14-18 / 0.8-1.2	1	6.300 656 2
Forte HT30-M1-C.U.	+40 to +400	±0.01 to ± 0.1	3	14-18 / 0.8-1.2	1	6.222 575 3
Forte HT60-M2-C.U.	+40 to +400	±0.01 to ± 0.1	7	14-18 / 0.8-1.2	1	9.858 404 4



7. Heating and cooling technology

Temperature regulators/Thermostats, cryostats

Remote control WirelessTEMP for temperature control instruments

Wireless monitoring and control of Julabo temperature control instruments via PC or remote control.

JULABO

The 'WirelessTEMP' series of products gives you a variety of ways to communicate with up to eight Julabo temperature control instruments using a PC or Julabo 'Remote Control'. 'WirelessTEMP' works with virtually all Julabo instruments equipped with an RS232 interface. Intelligent technology makes it easy to get started. Just switch on the system and connections will be established automatically. With 'WirelessTEMP Configurator' software, users can even set up complex networks with several separate, independent groups of instruments (PAN's). This enables disturbance-free operation in neighbouring laboratories.

- wireless monitoring and control of Julabo temperature control instruments
- wireless transmission and display of parameters, such as set points, actual values, output, warning messages and error messages from large distances
- communication with up to eight Julabo temperature control instruments

Benefits:

- a convenient way to operate Julabo instruments from your workstation
- spend less time and resources monitoring the instruments
- greater flexibility in choosing location for the instrument
- cost reduction, as the hassle of running cables is eliminated
- ideal solution as "Remote Display" for your application
- works with virtually all Julabo temperature control instruments with RS232 interface

Remote Control	Handy remote control unit for display and control of up to eight Julabo instruments
Transmitter	Send/receive module for JULABO temperature control instruments with RS232 interface
Wireless PC USB Stick	Send/receive module for PC's with USB interface
Router	Extends wireless range



9.858 105



9.858 107



9.858 109

Type	PK	Cat. No.
Remote Control	1	9.858 105
Remote Control (ATEX Version)	1	9.858 106
Transmitter	1	9.858 107
Wireless PC USB Stick	1	9.858 108
Router	1	9.858 109

ATEX version may be operated with batteries only, so a power supply unit is not included.

4 Thermostatic controllers, GD100K/GD100

Temperature range 0 to +100°C. With PID control, LED display, visual alarm and fault indication display.

Grant

Specifications

Temperature range without tank:	0 to 100°C
Temperature range with S tank*:	0 to 100°C
Temperature range with P tank*:	Amb. +5 to +99°C
Primary display:	4-digit LED
Secondary display:	none
Display resolution:	0.1
Number of recorded temp. values:	4
RS232 interface:	no
Relay:	no
Heating power at 220V to 240V:	1.4kW
Pump max. pressure:	no pump
Flow rate max.:	no pump
Total dimensions incl. clamp:	115mm x 145mm x 315mm



Type	Description	PK	Cat. No.
GD100K	with clamp	1	9.699 075
GD100	without clamp	1	9.699 076

* S= stainless steel, P= malleable plastic

1


1 Thermostatic controllers GD120K/GD120

Temperature range -20 to +120°C. As GD 100 series, but powerful external circulating pump, timer from 0 to 9999 minutes and variable alarm setting.

Grant

Specifications

Temperature range without tank:	-20 to +120°C
Temperature range with S tank*:	0 to 120°C
Temperature range with P tank*:	Amb. +5 to +99°C
Primary display:	4-digit LED
Secondary display:	none
Display resolution:	0.1
Number of stored temp. values:	4
RS232 interface:	no
Relay:	no
Heating power at 220 to 240 V:	1.4kW
Pump max. pressure:	270mbar
Flow rate max.:	17 L/min
Total dimensions excl. clamp:	115 x 145 x 315mm

Type	Description	PK	Cat. No.
GD120K	with clamp	1	9.699 077
GD120	without clamp	1	9.699 078

* S= stainless steel, P= malleable plastic

2


2 Thermostatic controllers GR150K/GR150

Temperature range -50 to +150°C. Soft-Touch rotor for simple navigation, LED display and separate 2-line LCD for programming, timer, visual and audible alarms, RS 232 interface, leistungsstarke Pumpe für den externen Kreislauf, powerful pump for external circulation, programmable relay, temperature limit for different liquid types. Connector for external Pt 1000 sensor, memory for 1 programme with up to 30 segments. Labwise PC software optional for programming from the user's PC.

Grant

Specifications

Temperature range without tank:	-50 to +150°C
Temperature range with S tank*:	0 to +150°C (for 5/12/18 litres) -15 to +150°C (for 26/38 litres)
Temperature range with P tank*:	Amb. +5 to +99°C
Primary display:	4-digit LED
Secondary display:	2-line LCD
Display resolution:	0.01
Number of stored temp. values:	4
RS 232 interface:	yes
Relay:	1
Heating power at 220 to 240 V:	2kW
Pump max. pressure:	270mbar
Flow rate max.:	17L/min
Total dimensions excl. clamp:	115 x 145 x 315mm

Type	Description	PK	Cat. No.
GR150K	with clamp	1	9.699 079
GR150	without clamp	1	9.699 080

* S= stainless steel, P= malleable plastic

7. Heating and cooling technology

Temperature regulators/Thermostats, cryostats

1 Thermostatic controllers GP200K/GP200

Temperature range -50 to +200°C. Generally as GR150 series, but with variable flow rate and programmable. Includes temperature ramp up to target temperature and relay. Five programmes can be stored with up to 30 segments.

Grant

Specifications

Temperature range without tank:	-50 to +200°C
Temperature range with S tank*:	0 to +200°C (for 5/12/18 litres)
Temperature range with P tank*:	-15 to +200°C (for 26/38 litres)
	Amb. +5 to +99°C
Primary display:	4-digit LED
Secondary display:	2-line LCD
Display resolution:	0.01 (LCD)
Number of stored temp. values:	4
RS 232 interface:	yes
Relay:	2
Heating power at 220 to 240 V:	2kW
Pump max. Pressure:	460mbar
Flow rate max.:	21L/min. (adj.)
Total dimensions excl. clamp:	115 x 145 x 315mm



Type	Description	PK	Cat. No.
GP200K	with clamp	1	9.699 081
GP200	without clamp	1	9.699 082

* S= stainless steel, P= malleable plastic

2 Drain syphon

For the rapid draining of baths.

Grant

Type	PK	Cat. No.
Drain syphon	1	9.699 096



3 Labwise software

Permits the remote set-up and programming of GR150 and GP200 thermostats from a PC. Real-time temperature/time profile and graphic representation of processes. Profile documentation and programme memory on disk. Requires Windows™ 98 software or higher.

Grant

Type	PK	Cat. No.
Labwise software	1	9.699 165



4 Thermostatic baths, Optima series, raised shelves

The effective liquid depth is reduced in order to place small or shallow containers in the bath.

Grant

For capacity litres	PK	Cat. No.
12	1	9.699 092
18	1	9.699 093
26	1	9.699 094
38	1	9.699 095



1 Test tube racks for Optima baths

Manufactured in stainless steel, with lifting handles. Available for test tubes with an external diameter of 10 to 13mm, 16 to 19mm or 30mm, 0.5ml or 1.5ml microcentrifuge tubes.

Grant

QR racks can only be used with 5 litre baths.

VR racks can only be used with 12, 18, 26 and 38 litre baths.

Max. number of racks per bath:

5 litres: S5, P5	1 x QR
12 litres: S12, P12	2 x VR
18 litres: S18, P18	4 x VR
26 litres: S26	4 x VR
38 litres: S38	6 x VR

Type	For tubes	Array	PK	Cat. No.
QR 13	30 x 10/13mm	30	1	9.699 130
QR 19	16 x 16/19mm	16	1	9.699 131
QR 24	10 x 24mm	10	1	9.699 132
QR 30	5 x 30mm	5	1	9.699 133
QR SE	44 x 0.5ml	44	1	9.699 134
QR LE	35 x 1.5ml	55	1	9.699 135
VR 13	65 x 10/13mm	65	1	9.699 136
VR 19	36 x 16/19mm	36	1	9.699 137
VR 24	23 x 24mm	23	1	9.699 138
VR 30	14 x 30mm	14	1	9.699 139
VR SE	102 x 0.5ml	102	1	9.699 140
VR LE	75 x 1.5ml	75	1	9.699 141



Thermostatic baths, Optima series, P tanks

Robust plastic baths for use at temperatures from ambient +5°C to +99°C. Supplied with bridge mounting plate for Optima series controllers without clamps and built-in lifting handles at casing ends. Liquid depth for all models min./max.: 80/140mm.

Grant

Type	Capacity	External dimensions (W x D x H) mm	PK	Cat. No.
	L			
P5	5	330 x 240 x 180	1	9.905 710 2
P12	12	350 x 415 x 180	1	9.905 711 3
P18	18	365 x 600 x 180	1	9.905 712 4



9.905 710



9.905 711



9.905 712

Thermostatic baths, Optima series, S tanks

Stainless steel baths with outer casing made of glass-reinforced plastic providing excellent insulation properties. Resistant to common acids and solvents. Supplied with bridge mounting plate for Optima series controllers without clamps and built-in lifting handles at casing ends. Grant

S5/S12/S18
 Operating range: 0 to 200°C
 Suitable immersion cooler: C1G
 Liquid depth min/max.: 80/140mm

S26/38
 Operating range: -15 to 200°C
 Suitable immersion cooler: C1G, C2G
 Liquid depth min/max.: 130/190mm

Type	Capacity	External dimensions (W x D x H) mm	PK	Cat. No.
	L			
S5	5	175 x 325 x 175	1	9.905 713 1
S12	12	325 x 350 x 175	1	9.905 714
S18	18	325 x 530 x 225	1	9.905 715
S26	26	325 x 530 x 225	1	9.905 716 2
S38	38	325 x 730 x 225	1	9.905 717 3



9.905 713



9.905 716



9.905 717

Thermostatic baths, Optima series, lids

Available in moulded plastic or stainless steel, flat or gabled with hinge as indicated (*). Grant

Type	Description	Material	For	PK	Cat. No.
PL 5	Flat	Stainless steel	bath P 5	1	9.699 085
PL 12	Flat	Plastic	bath P 12	1	9.699 086 4
PL 18	Flat	Plastic	bath P 18	1	9.699 087
FG 5	Flat	Stainless steel	bath S 5	1	9.699 088
LG 12	Gabled*	Stainless steel	bath S 12	1	9.699 089 5
LG 26	Gabled*	Stainless steel	bath S 18 and S 26	1	9.699 090
LG 38	Gabled*	Stainless steel	bath S 38	1	9.699 091



9.699 086



9.699 089



Thermostatic baths, Optima series

Complete units including plastic or stainless steel bath, bridge mounting plate and thermostatic controller. For 220-240V, 50/60Hz. Please refer to controller specifications for supply requirements. Accessory polypropylene spheres or a lid must be used at temperatures between 60 and 100°C. Above 100°C only a lid must be used. Accessory cooling is required for temperatures below ambient. **Please order lid separately.**

Grant

Type	Capacity L	Material	Temp. range °C	PK	Cat. No.
GD 100 P5	5	Plastic	+5 ...+99	1	9.699 193 1
GD 100 P12	12	Plastic	+5 ...+99	1	9.699 194 2
GD 100 P18	18	Plastic	+5 ...+99	1	9.699 195 3
GD 100 S5	5	Stainless steel	0 ...+100	1	9.699 196 4
GD 100 S12	12	Stainless steel	0 ...+100	1	9.699 197
GD 100 S18	18	Stainless steel	0 ...+100	1	9.699 198
GD 100 S26	26	Stainless steel	0 ...+100	1	9.699 199
GD 100 S38	38	Stainless steel	0 ...+100	1	9.699 200
GD 120 P5	5	Plastic	+15 ...+99	1	9.699 201
GD 120 P12	12	Plastic	+5 ...+99	1	9.699 202
GD 120 P18	18	Plastic	+5 ...+99	1	9.699 203
GD 120 S5	5	Stainless steel	0 ...+120	1	9.699 204
GD 120 S12	12	Stainless steel	0 ...+120	1	9.699 205
GD 120 S18	18	Stainless steel	0 ...+120	1	9.699 206
GD 120 S26	26	Stainless steel	-15 ...+120	1	9.699 207
GD 120 S38	38	Stainless steel	-15 ...+120	1	9.699 208
GR 150 P5	5	Plastic	+15 ...+99	1	9.699 209
GR 150 P12	12	Plastic	+5 ...+99	1	9.699 210
GR 150 P18	18	Plastic	+5 ...+99	1	9.699 211
GR 150 S5	5	Stainless steel	0 ...+150	1	9.699 212
GR 150 S12	12	Stainless steel	0 ...+150	1	9.699 213
GR 150 S18	18	Stainless steel	0 ...+150	1	9.699 214
GR 150 S26	26	Stainless steel	-15 ...+150	1	9.699 215
GR 150 S38	38	Stainless steel	-15 ...+150	1	9.699 216 5
GP 200 P5	5	Plastic	+15 ...+99	1	9.699 217
GP 200 P12	12	Plastic	+5 ...+99	1	9.699 218
GP 200 P18	18	Plastic	+5 ...+99	1	9.699 219
GP 200 S5	5	Stainless steel	0 ...+200	1	9.699 220
GP 200 S12	12	Stainless steel	0 ...+200	1	9.699 221 6
GP 200 S18	18	Stainless steel	0 ...+200	1	9.699 222
GP 200 S26	26	Stainless steel	-15 ...+200	1	9.699 223
GP 200 S38	38	Stainless steel	-15 ...+200	1	9.699 224



7 Heat exchange coil CW5

CW5 heat exchange coil for use with precision and general purpose stirred baths. Temperature range 2°C above coolant temperature. Coil diameter/1 mm 77/55, pipe bore inlet/outlet 7mm.

Grant

Type	PK	Cat. No.
CW5	1	9.920 764

We can supply this
 manufacturer's
 whole
 product range !



Grant