

Julabo
THE TEMPERATURE CONTROL COMPANY

DYNEO™

Refrigerated and Heating Circulators



ENGLISH



DYNEO™. The best for your laboratory.

Circulators are an important part of daily operations in many laboratories of research institutions and industrial companies worldwide. The JULABO DYNEO circulators have been developed with pioneering technologies for these laboratories and are manufactured to the highest quality standards in Germany.

With the DYNEO series we offer our customers the ideal instruments for internal and external applications in a wide working temperature range of -50 °C to +200 °C. The modern instrument is designed for easy and time-saving operation and provides quick access to all relevant functions via a central rotary dial. Thanks to the proven JULABO premium quality, all models meet the highest standards in terms of precision, reliability, and functionality.

With a wide selection of accessories, all DYNEO instruments can be adapted to customer-specific applications in a modular and individual way. Modern interfaces and an integrated programmer complete the intelligent design of the DYNEO models.



DYNEO – the laboratory circulators

Advantages at a glance 4

Refrigerated circulators 6

Heating circulators 18

Technical data 30



DYNEO. Everything you need. The advantages at a glance.



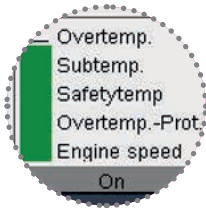
Wide range.

Refrigerated and heating circulator in various combinations and in various sizes. Maximum flexibility through a large selection of accessories.



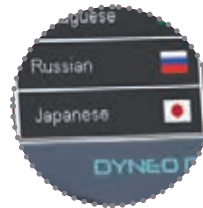
Brilliance. In color.

Large color display with vivid luminance is easy to read, even from a large distance.



Information. Everything clear.

Information in plain text on a large color screen.



Multi-lingual.

Operation in multiple languages.



Turn. Push. Go.

Easy operation of all parameters using the rotary dial.



Programmer. Integrated.

The integrated internal programmer makes it possible to automatically run temperature time profiles.



Powerful. Adjustable.

Strong pressure pump, continuously adjustable.



USB.

Remote control made easy using the integrated USB interface.



RS232.

Connection using the RS232 interface (optional).



Analog I/O.

Analog interfaces for integration into process control systems (optional).





Temperature. Under control.

External Pt100 sensor connection for precise measurement and control directly in the external application.



Fill level. Monitored.

Fill level indicator on the display for heat-transfer liquid.



Process stability.

Early warning - visual and acoustic - of critical states increases process stability.



Process. Under control.

Full regulation of the dynamics control, access to all important control parameters for individual process optimization.



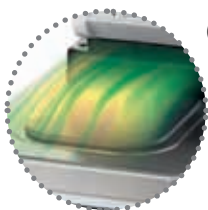
ATC3. Calibration.

'Absolute Temperature Calibration' for compensating a physically caused temperature difference, 3-point calibration.



Stable. Mobile.

Rubber feet keep JULABO Circulators standing firm. Larger and more powerful units also have integrated rollers for easy handling.



Condensation protection.

Superb design solution. Integrated ventilation directs air over the bath lid and minimizes condensation.



For higher demands

PID Temperature control with drift compensation and adjustable parameters, improved temperature stability for external applications, temperature stability ± 0.01 °C internal, $< \pm 0.1$ °C external.



Connection. Easy.

Inclined pump connections (M16x1) facilitate the connection of applications. Each unit includes 2 barbed fittings of 8/12 mm diameter each.



Space saving.

Place your JULABO Circulator right next to an application, another unit, or wall. That saves space. This is made possible by eliminating vents and connections on the sides.



Refrigerated Circulators



Refrigerated circulators of the DYNEO series are robust, reliable, and efficient. Thanks to their wide working temperature range, they are flexible enough for internal and external applications in laboratories and technical facilities worldwide.



Refrigerated Circulators

DYNEO DD refrigerated circulators

for working temperatures from -50 °C to +200 °C

Refrigerated circulators of the DYNEO series distinguish themselves with a great price-performance ratio. The instruments offer high heating/cooling capacities for short heat-up and cool-down times. The refrigerated circulators work precisely and reliably even at higher ambient temperatures up to +40 °C. Either in basic research, in material testing or in technical systems – the DYNEO refrigerated circulators offer functional solutions for every requirement and budget.

- Models suitable for internal and external applications
- Optimized cooling coil design provides more space in the bath
- Continuously adjustable, powerful pressure pump
- Flow rate 27 l/min, supply pressure 10.2 psi
- Easy change-over from internal to external circulation and vice versa
- Large color TFT display, multi-lingual user interface
- Ease of use via central rotary dial
- Integrated programmer
- External Pt100 sensor connection
- USB data port
- RS232 interface or analog interfaces (optional)
- Built-in drain tap for easy and safe drainage

DYNEO. Intelligent, simple control.

The DYNEO series offers a simple, modern control option with the unique rotary dial. The entire menu, all functions and settings are controlled directly via the central rotary dial on the front of the circulator.

The user receives tactile feedback on his inputs via the rotary dial. DYNEO's new, sophisticated operating concept allows easier, faster and more convenient access to all functions.



DYNEO™ DD-200F

Order No.	9 021 701	
Working temperature range °C	-20 ... +200	
Temperature stability °C	± 0.01	
Heating capacity kW	1	
Cooling capacity kW (Bath fluid: Ethanol)	+20 °C	0 °C
	0.2	0.15
	-10 °C	-20 °C
	0.1	0.02
Pump capacity	l/min	psi
Flow rate / Pressure	8 ... 27	1.5 ... 10.2
Bath opening / Bath depth inch	W × L / D 5.1 × 5.9 / 5.9	
Filling volume liters	3 ... 4	
Dimensions inch	W × L × H 9.1 × 15.4 × 25.6	



DYNEO™ DD-201F

Order No.	9 021 702	
Working temperature range °C	-20 ... +200	
Temperature stability °C	± 0.01	
Heating capacity kW	1	
Cooling capacity kW (Bath fluid: Ethanol)	+20 °C	0 °C
	0.2	0.15
	-10 °C	-20 °C
	0.1	0.02
Pump capacity	l/min	psi
Flow rate / Pressure	8 ... 27	1.5 ... 10.2
Bath opening / Bath depth inch	W × L / D 5.1 × 5.9 / 5.9	
Filling volume liters	3 ... 4	
Dimensions inch	W × L × H 17.3 × 16.1 × 17.3	

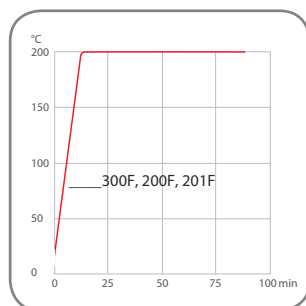


DYNEO™ DD-300F

Order No.	9 021 703	
Working temperature range °C	-25 ... +200	
Temperature stability °C	± 0.01	
Heating capacity kW	1	
Cooling capacity kW (Bath fluid: Ethanol)	+20 °C	0 °C
	0.3	0.27
	-10 °C	-20 °C
	0.19	0.08
Pump capacity	l/min	psi
Flow rate / Pressure	8 ... 23	1.5 ... 10.2
Bath opening / Bath depth inch	W × L / D 5.1 × 5.9 / 5.9	
Filling volume liters	3 ... 4	
Dimensions inch	W × L × H 9.4 × 16.5 × 26	

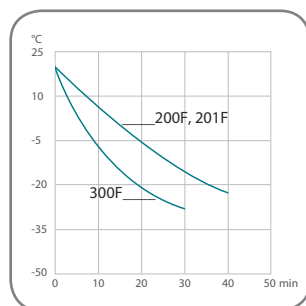
Heat-up time*

Bath fluid: Thermal



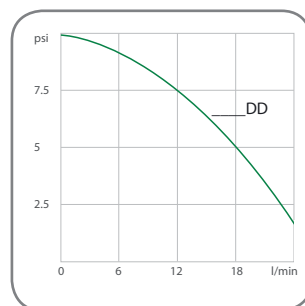
Cool-down time

Bath fluid: Ethanol



Pump capacity

Bath fluid: Water



*with 2 kW heater / 230V

Refrigerated Circulators



DYNEO™ DD-600F

Order No.	9 021 704		
Working temperature range °C	-35 ... +200		
Temperature stability °C	±0.01		
Heating capacity kW	1		
Cooling capacity kW (Bath fluid: Ethanol)	+20 °C	0 °C	-10 °C
	0.6	0.44	0.27
	-20 °C	-30 °C	-40 °C
	0.16	0.04	-
Pump capacity	l/min	psi	
Flow rate / Pressure	8 ... 23	1.5 ... 10.2	
Bath opening / Bath depth inch	W × L / D 8.7 × 5.9 / 5.9		
Filling volume liters	5 ... 7.5		
Dimensions inch	W × L × H		
	13 × 18.5 × 27.2		



DYNEO™ DD-601F

Order No.	9 021 705		
Working temperature range °C	-35 ... +200		
Temperature stability °C	±0.01		
Heating capacity kW	1		
Cooling capacity kW (Bath fluid: Ethanol)	+20 °C	0 °C	-10 °C
	0.6	0.44	0.27
	-20 °C	-30 °C	-40 °C
	0.16	0.04	-
Pump capacity	l/min	psi	
Flow rate / Pressure	8 ... 23	1.5 ... 10.2	
Bath opening / Bath depth inch	W × L / D 8.7 × 7.9 / 5.9		
Filling volume liters	8 ... 10		
Dimensions inch	W × L × H		
	14.2 × 18.1 × 29.1		



Applications

Temperature control of samples in a circulator bath or of an external application. For example: measuring cells, refractometers, polarimeters, photometers, viscometers, fermenters, electrophoresis chambers, chromatography columns, rotary evaporators, rheometers and more.



DYNEO™ DD-900F

Order No.	9 021 706		
Working temperature range °C	-38 ... +200		
Temperature stability °C	±0.01		
Heating capacity kW	1		
Cooling capacity kW (Bath fluid: Ethanol)	+20 °C	0 °C	-10 °C
	0.9	0.8	0.52
	-20 °C	-30 °C	-40 °C
	0.31	0.11	-
Pump capacity	l/min	psi	
Flow rate / Pressure	8 ... 23	1.5 ... 10.2	
Bath opening / Bath depth inch	W × L / D 10.2 × 7.9 / 13.8		
Filling volume liters	21 ... 30		
Dimensions inch	W × L × H 15.4 × 24.4 × 29.5		



DYNEO™ DD-1000F

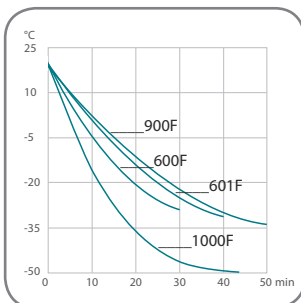
Order No.	9 021 707		
Working temperature range °C	-50 ... +200		
Temperature stability °C	±0.01		
Heating capacity kW	1		
Cooling capacity kW (Bath fluid: Ethanol)	+20 °C	0 °C	-10 °C
	1	0.96	0.73
	-20 °C	-30 °C	-40 °C
	0.51	0.25	0.11
Pump capacity	l/min	psi	
Flow rate / Pressure	8 ... 23	1.5 ... 10.2	
Bath opening / Bath depth inch	W × L / D 7.1 × 5.1 / 5.9		
Filling volume liters	5 ... 7.5		
Dimensions inch	W × L × H 16.5 × 19.3 × 27.6		



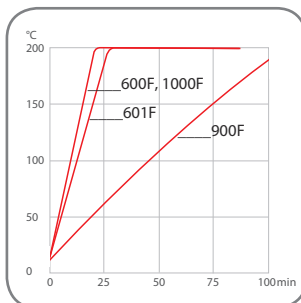
DYNEO™ DD-1001F

Order No.	9 021 708		
Working temperature range °C	-38 ... +100		
Temperature stability °C	±0.01		
Heating capacity kW	1.6 ... 2		
Cooling capacity kW (Bath fluid: Ethanol)	+20 °C	0 °C	-10 °C
	1	0.85	0.6
	-20 °C	-30 °C	-40 °C
	0.32	0.12	-
Pump capacity	l/min	psi	
Flow rate / Pressure	8 ... 23	x	
Bath opening / Bath depth inch	W × L / D 13.8 × 11.8 / 16.1		
Filling volume liters	42 ... 56		
Dimensions inch	W × L × H 17.7 × 25.2 × 37.4		

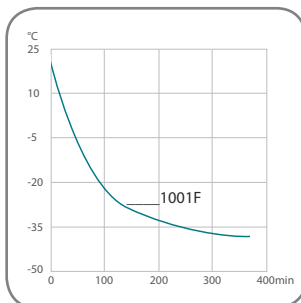
Cool-down time
Bath fluid: Ethanol



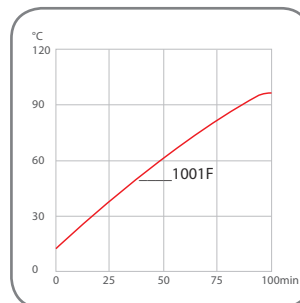
Heat-up time*
Bath fluid: Thermal



Cool-down time
Bath fluid: Ethanol



Heat-up time*
Bath fluid: Thermal



*with 2 kW heater / 230V

Refrigerated Circulator Accessories

JULABO Thermal bath fluids

JULABO Thermal bath fluids have been carefully chosen after long-term testing. They are highly suitable for all of your temperature control applications guaranteeing safe and reliable operation.

Choosing the proper bath fluid is critical for high performance temperature control. The viscosity and heat conductivity of the Thermal fluids are specifically selected for use with JULABO DYNEO temperature control instruments.

Advantages

- Wide temperature ranges
- Low viscosity
- High stability
- Good heat conductivity
- Minimum odor
- Long fluid life



Makes routine laboratory work easier

JULABO Thermal bath fluids are delivered in containers with a handy drain tap.



Thermal EG

Order No. 5 liters 8 940 125

Order No. 10 liters 8 940 124

Working temperature range °C -30 ... +80

Flash point °C not applicable

Fire point °C not applicable

Viscosity, (kinematic at +20 °C) mm²/s 4.07

Density (at +20 °C) g/cm³ 1.08

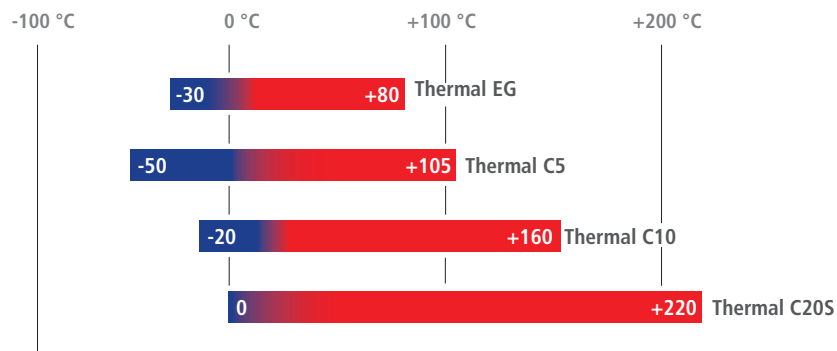
Pour point °C -70

Boiling point °C +108

Ignition temperature °C +430

Color light yellow

Working temperature ranges





Thermal C5

Order No. 5 liters	8 940 107
Order No. 10 liters	8 940 106
Working temperature range °C	-50 ... +105
Flash point °C	+124
Fire point °C	+142
Viscosity, (kinematic at +20 °C) mm ² /s	5.66
Density (at +20 °C) g/cm ³	0.92
Pour point °C	-100
Boiling point °C	+288
Ignition temperature °C	+350
Color	clear

Thermal C10

Order No. 5 liters	8 891 405
Order No. 10 liters	8 891 404
Working temperature range °C	-20 ... +160
Flash point °C	>+170
Fire point °C	+220
Viscosity, (kinematic at +20 °C) mm ² /s	10.8
Density (at +20 °C) g/cm ³	0.94
Pour point °C	<-60
Boiling point °C	+288
Ignition temperature °C	+370
Color	clear

Thermal C20S

Order No. 5 liters	8 891 409
Order No. 10 liters	8 891 408
Working temperature range °C	0 ... +220
Flash point °C	+230
Fire point °C	+264
Viscosity, (kinematic at +20 °C) mm ² /s	22.3
Density (at +20 °C) g/cm ³	0.95
Pour point °C	-70
Boiling point °C	+424
Ignition temperature °C	+385
Color	light brown

JULABO Thermal bath fluids based on silicone ...

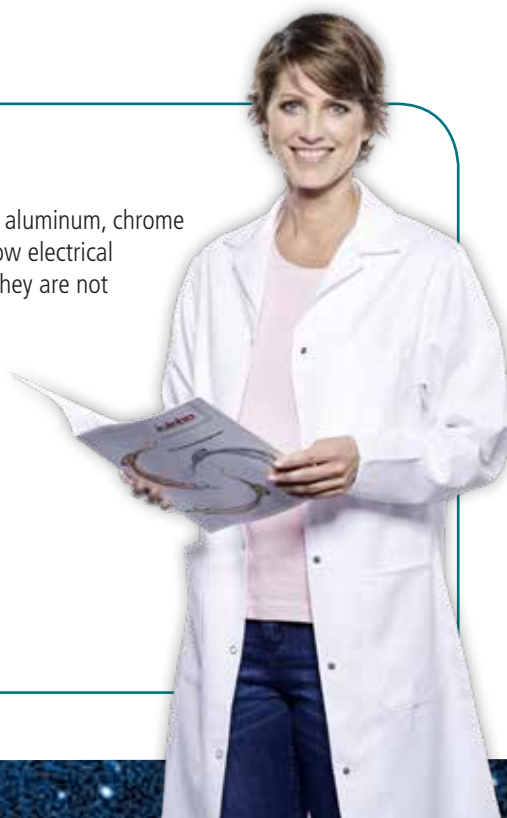
... are chemically inert substances which do not affect metals like iron, copper, zinc, aluminum, chrome or nickel. Compared to other fluids, JULABO Thermal fluids have an extraordinarily low electrical conductivity. When properly stored, the fluids will last for 12 months and longer as they are not susceptible to climatic influences.

JULABO Thermal bath fluids based on water-glycol ...

... (monoethyleneglycol with anti-corrosion additives) have excellent thermal characteristics and a low viscosity. In addition, they provide anti-freeze protection, i.e. they can be applied at temperatures below the freezing point of water.

More information on JULABO Thermal bath fluids ...

at www.julabo.us.



Refrigerated Circulator Accessories



Hollow balls to reduce heat loss, evaporation, oxygen input, odors, action of light

Order no.	Description	Suitable for
8 970 010	Hollow balls, Polypropylene®, 20 mm dia., 1000 pcs (up to +100 °C, for water only)	DYNEO



Heat exchangers / Cooling installations

Order no.	Description	Suitable for
9 970 240	Bath lid with built-in heat exchanger	DD-200F, DD-300F, DD-201F
9 970 242	Bath lid with built-in heat exchanger	DD-600F, DD-1000F, DD-601F



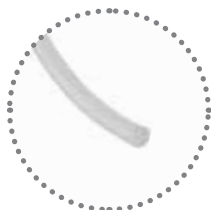
CR® tubing (-30 °C ... +120 °C)

Order no.	Description	Suitable for
8 930 008	1 m, 8 mm ID	DYNEO
8 930 010	1 m, 10 mm ID	DYNEO
8 930 012	1 m, 12 mm ID	DYNEO



Viton® tubing (-35 °C ... +200 °C)

Order no.	Description	Suitable for
8 930 108	1 m, 8 mm ID	DYNEO
8 930 110	1 m, 10 mm ID	DYNEO
8 930 112	1 m, 12 mm ID	DYNEO



PTFE tubing (-60 °C ... +180 °C)

Order no.	Description	Suitable for
8 930 140	PTFE tubing 8 mm ID × 10 mm OD per meter	DYNEO
8 930 142	PTFE tubing 12 mm ID × 14 mm OD per meter	DYNEO



Tubing insulation (-50 °C ... +100 °C)

Order no.	Description	Suitable for
8 930 410	1 m, for tubing 8-10 mm ID	CR® / Viton® tubing
8 930 412	1 m, for tubing 12 mm ID	CR® / Viton® tubing



Tube clamps

Order no.	Description	Suitable for
8 970 480	2 Tube clamps, size 1	CR® / Viton® tubing 8 mm ID
8 970 481	2 Tube clamps, size 2	CR® / Viton® tubing 10 - 12 mm ID



Metal tubing flexible, insulated, (-50 °C ... +200 °C)

Order no.	Description	Suitable for
8 930 220	0.5 m metal tubing, 2 fittings M16×1 female	DYNEO
8 930 221	1.0 m metal tubing, 2 fittings M16×1 female	DYNEO
8 930 222	1.5 m metal tubing, 2 fittings M16×1 female	DYNEO
8 930 223	3.0 m metal tubing, 2 fittings M16×1 female	DYNEO



Adapters and connectors

Order no.	Description	Suitable for
8 970 446	2 Barbed fittings for tubing 8 mm ID	DYNEO
8 970 447	2 Barbed fittings for tubing 10 mm ID	DYNEO
8 970 445	2 Barbed fittings for tubing 12 mm ID	DYNEO
8 970 443	1 Adapter M16×1 male to M16×1 male	DYNEO
8 970 490	2 Collar nuts M16×1 female	DYNEO
8 970 442	2 Elbow fittings 90°, M16×1 female/male	DYNEO
8 890 004	2 Adapters M16×1 female to NPT 1/4" male	DYNEO
8 890 005	2 Adapters M16×1 female to NPT 1/4" female	DYNEO
8 890 006	2 Adapters M16×1 female to NPT 3/8" male	DYNEO
8 890 007	2 Adapters M16×1 female to NPT 3/8" female	DYNEO
8 890 008	2 Adapters M16×1 female to NPT 1/2" male	DYNEO
8 890 009	2 Adapters M16×1 female to NPT 1/2" female	DYNEO
8 890 010	2 Adapters M16×1 male to NPT 1/4" female	DYNEO
8 891 008	1 Adapter M16×1 male to BSP 1/2" female	DYNEO
8 891 009	1 Adapter M16×1 male to BSP 3/4" female	DYNEO
8 890 011	2 Adapters M16×1 female to tube 1/4" male	DYNEO
8 890 012	2 Adapters M16×1 female to tube 3/8" male	DYNEO
8 890 013	2 Adapters M16×1 female to tube 1/2" male	DYNEO
8 890 024	2 Adapters M16×1 female to M16×1 female	DYNEO



Shut-off valves for loop circuit

Order no.	Description	Suitable for
8 970 456	Shut-off valve (-10 °C ... +100 °C), M16×1	DYNEO
8 970 457	Shut-off valve (-30 °C ... +200 °C), M16×1	DYNEO

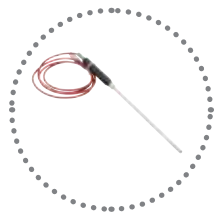


Distributing adapters

Order no.	Description	Suitable for
8 970 470	Twin distributing adapter with barbed fittings	Tubing 8 mm ID
8 970 471	Twin distributing adapter with barbed fittings	Tubing 12 mm ID
8 970 472	Twin distributing adapter with barbed fittings	Tubing 10 mm ID
8 970 473	Twin distributing adapter M16×1 female to 2 × M16×1 male	DYNEO

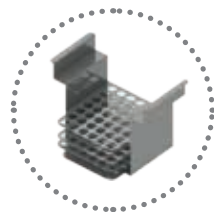


Refrigerated Circulator Accessories



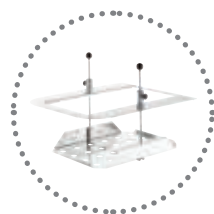
Pt100-Externfühler

Order no.	Description	Suitable for
8 981 003	External Pt100 sensor, 200 × 6 mm, diameter, st. steel, 1.5 m cable	DYNEO
8 981 006	External Pt100 sensor, 20 × 2 mm, st. steel, 1,5 m cable	DYNEO
8 981 010	External Pt100 sensor, 300 × 6 mm, diameter, st. steel, 1.5 m cable	DYNEO
8 981 013	External Pt100 sensor, 600 × 6 mm, st. steel/PTFE coated, 3 m cable	DYNEO
8 981 014	External Pt100 sensor, 1200 × 6 mm, st. steel/PTFE coated, 3 m cable	DYNEO
8 981 015	External Pt100 sensor, 300 × 6 mm, st. steel/PTFE coated, 3 m cable. Usable for working temperatures from -75 °C to 250 °C. Without handle.	DYNEO
8 981 016	External Pt100 sensor, 900 × 6 mm, st. steel/PTFE coated, 3 m cable. Usable for working temperatures from -75 °C to 250 °C. Without handle.	DYNEO
8 981 017	External Pt100 sensor 200 × 6 mm, st. steel/PTFE coated, 3 m cable. Usable for working temperatures from -75 to +250 °C. Without handle	DYNEO
8 981 020	M+R in-line Pt100 sensor, 1.5 m cable (measurement and control in external system).	DYNEO
8 981 103	3.5 m Extension cable for Pt100 sensor, Lemosa-type.	DYNEO



Test tube racks made out of stainless steel, up to +150 °C

Order no.	Description	Suitable for
9 970 320	Test tube rack for 30 tubes 100 × 17 mm dia.	DD-200F, DD-201F, DD-300F
9 970 321	Test tube rack for 42 tubes 75 × 12/13 mm dia.	DD-200F, DD-201F, DD-300F
9 970 322	Test tube rack for 42 tubes 40 × 10/11 mm dia.	DD-200F, DD-201F, DD-300F
9 970 323	Test tube rack for 10 Falcon tubes 50 ml	DD-200F, DD-201F, DD-300F



Immersion-height adjustable platforms

Order no.	Description	Suitable for
9 970 506	Immersion-height adjustable platform	DD-900F



Connection plugs

Order no.	Description	Suitable for
8 980 131	External Pt100 sensor plug	DYNEO
8 980 133	STANDBY plug, 3-pin	DYNEO with analog interfaces (option)
8 980 135	Alarm plug, 5-pin	DYNEO with analog interfaces (option)
8 980 136	REG-EPROG plug 6-pin	DYNEO with analog interfaces (option)



Software and hardware for instrument control, data recording, and visualization, interfaces

Order no.	Description	Suitable for
8 901 102	EasyTEMP Software (free of charge at www.julabo.com)	DYNEO
8 901 105	EasyTEMP Professional Software, incl. USB Dongle	DYNEO
9 900 110	USB cable 2 m, type A-B	DYNEO
9 900 112	USB 2.0 repeater extension cable, length = 5 m	DYNEO
9 900 114	USB 2.0 repeater extension cable, length = 10 m	DYNEO
8 980 073	RS232 interface cable, length 2.5 m with 9-pin plug/9-pin socket	DYNEO with RS232 interface (option)
8 980 074	RS232 interface cable, length 5 m with 9-pin plug/9-pin socket	DYNEO with RS232 interface (option)
8 980 031	Ethernet/RS232 interface converter for temperature control instruments with RS232	DYNEO with RS232 interface (option)
8 980 032	Ethernet/RS232 interface converter for up to 4 JULABO instruments using RS232 interface cable (8980074). Connection to an existing network via RJ45 cable (8980071).	DYNEO with RS232 interface (option)
8 980 033	Ethernet/RS232 interface converter for up to 8 JULABO instruments using RS232 interface cable (8980074). Connection to an existing network via RJ45 cable (8980071)	DYNEO with RS232 interface (option)



Calibration and testing certificates

Order no.	Description	Suitable for
8 902 901	1-point manufacturer's calibration certificate	DYNEO
8 902 903	3-point manufacturer's calibration certificate	DYNEO
8 902 905	5-point manufacturer's calibration certificate	DYNEO
8 903 025	Manufacturer's testing certificate for JULABO refrigeration units (with up to 1 kW cooling capacity at +20 °C)	Refrigerated Circulators



IQ/OQ Documentation for equipment qualification

Order no.	Description	Suitable for
2 310 110	IQ/OQ documentation, category 2	DYNEO refrigerated circulators



Preventative Maintenance Contracts

Order no.	Description	Suitable for
2 350 100	Preventative Maintenance Contract Standard includes the following services: Visual inspection, technical diagnostics, read-out of error memory, testing of tube connections and bath fluid, thorough cleaning of performance-reducing contaminations, testing of control behavior (temperature stability), sensor calibration as needed, testing/measuring of pump and cooling capacity (depending on model) and firmware update (if no hardware adjustment is required)	DYNEO
2 350 110	Preventative Maintenance Contract Premium includes all services listed above as well as spare and wear parts and labor required for installation and replacement	DYNEO

DYNEO **heating circulators** feature professional technology for demanding laboratory tasks. The portfolio permits a wide range of applications and includes heating immersion circulators and heating circulators.



Heating Circulators



Heating Circulators

DYNEO DD heating immersion circulators and heating circulators

for working temperatures from +20 °C to +200 °C

DYNEO heating circulators feature professional technology for demanding applications. These instruments facilitate internal temperature control in the bath or control of externally connected applications. The closed bath tanks are high-quality insulated.

- Models for internal and external applications from 3 to 26 liters
- Continuously adjustable, powerful pressure pump
- Flow rate 27 l/min, supply pressure 10.2 psi
- Easy change-over from internal to external circulation and vice versa
- Large color TFT display, multi-lingual user interface
- Ease of use via central rotary dial
- Integrated programmer
- External Pt100 sensor connection
- USB data port
- RS232 interface or analog interface (optional)
- Built-in drain tap for easy and safe drainage
- High-quality thermal insulation of the bath tank
- To adapt the DYNEO heating circulators to your individual application, we offer a comprehensive range of accessories (racks, bath lids, tubing, adapters, and more).



DYNEO™ DD

Order No. 9 021 000

Working temperature range °C ¹⁾ +20 ... +200

Temperature stability °C ±0.01

Heating capacity kW 1

Pump capacity l/min psi

Flow rate / Pressure 8 ... 27 1.5 ... 10.2

Dimensions inch W × L × H
5.2 × 6.3 × 14



Applications

External temperature applications, e.g., in combination with jacketed reaction vessels, distillation apparatuses, mini-plant applications, photometers, refractometers, and more. Temperature control applications of samples and objects in the internal bath.



DYNEO™ DD-BC4

Order No.	9 021 504	
Working temperature range °C ¹⁾	+20 ... +200	
Temperature stability °C	± 0.01	
Heating capacity kW	1	
Pump capacity	l/min	psi
Flow rate / Pressure	8 ... 27	1.5 ... 10.2
Bath opening / Bath depth inch	W × L / D 5.1 × 5.9 / 5.9	
Filling volume liters	3 ... 4.5	
Dimensions inch	W × L × H 9.1 × 16.1 × 16.5	



DYNEO™ DD-BC6

Order No.	9 021 506	
Working temperature range °C ¹⁾	+20 ... +200	
Temperature stability °C	± 0.01	
Heating capacity kW	1	
Pump capacity	l/min	psi
Flow rate / Pressure	8 ... 27	1.5 ... 10.2
Bath opening / Bath depth inch	W × L / D 5.1 × 7.9 / 5.9	
Filling volume liters	4.5 ... 6	
Dimensions inch	W × L × H 9.4 × 17.3 × 18.5	



DYNEO™ DD-BC12

Order No.	9 021 512	
Working temperature range °C ¹⁾	+20 ... +200	
Temperature stability °C	± 0.01	
Heating capacity kW	1	
Pump capacity	l/min	psi
Flow rate / Pressure	8 ... 27	1.5 ... 10.2
Bath opening / Bath depth inch	W × L / D 8.7 × 7.9 / 5.9	
Filling volume liters	8.5 ... 12	
Dimensions inch	W × L × H 13 × 19.3 × 18.5	

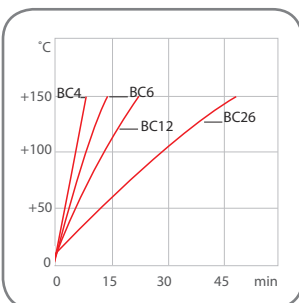


DYNEO™ DD-BC26

Order No.	9 021 526	
Working temperature range °C ¹⁾	+20 ... +200	
Temperature stability °C	± 0.01	
Heating capacity kW	1	
Pump capacity	l/min	psi
Flow rate / Pressure	8 ... 27	1.5 ... 10.2
Bath opening / Bath depth inch	W × L / D 10.2 × 7.9 / 13.8	
Filling volume liters	19 ... 26	
Dimensions inch	W × L × H 15.4 × 24.4 × 18.9	

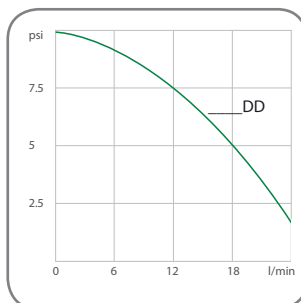
Heat-up time

Bath fluid: Thermal



Pump capacity

Bath fluid: Water



*with 2 kW heater / 230V

JULABO Thermal Bath Fluids

JULABO Thermal bath fluids have been carefully chosen following long term testing. They are highly suitable for all of your temperature control applications guaranteeing safe and reliable operation.

Choosing the proper bath fluid is critical for high performance temperature control. The viscosity and heat transfer characteristics of the Thermal fluids are specifically selected for use with JULABO CORIO temperature control instruments.

Advantages

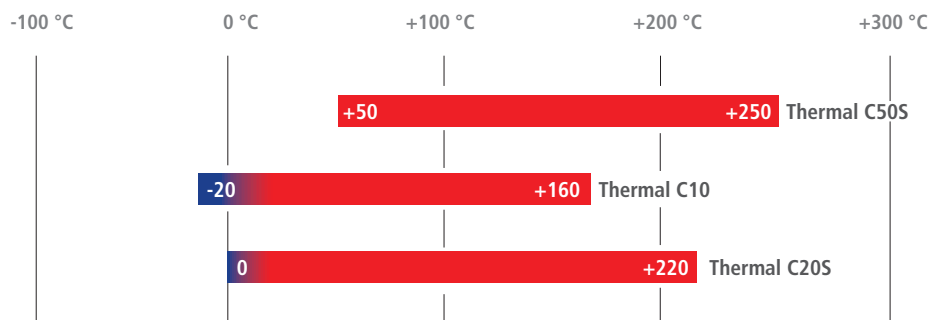
- Wide temperature ranges
- Low viscosity
- High stability
- Good heat conductivity
- Minimum odor
- Long fluid life



Makes routine laboratory work easier.

JULABO Thermal bath fluids are delivered in containers with a handy drain tap.

Working temperature ranges





Thermal C50S

Order No. 5 liters	8 940 103
Order No. 10 liters	8 940 102
Working temperature range °C	+20 ... +250
Flash point °C	+270
Fire point °C	+360
Viscosity, (kinematic at +20 °C) mm ² /s	55
Density (at +20 °C) g/cm ³	0.96
Pour point °C	<-60
Boiling point °C	>300
Ignition temperature °C	>+400
Color	light brown



Thermal C10

Order No. 5 liters	8 891 405
Order No. 10 liters	8 891 404
Working temperature range °C	-20 ... +160
Flash point °C	>+170
Fire point °C	+220
Viscosity, (kinematic at +20 °C) mm ² /s	10.8
Density (at +20 °C) g/cm ³	0.94
Pour point °C	<-60
Boiling point °C	+288
Ignition temperature °C	+370
Color	clear



Thermal C20S

Order No. 5 liters	8 891 409
Order No. 10 liters	8 891 408
Working temperature range °C	0 ... +220
Flash point °C	+230
Fire point °C	+264
Viscosity, (kinematic at +20 °C) mm ² /s	22.3
Density (at +20 °C) g/cm ³	0.95
Pour point °C	-70
Boiling point °C	+424
Ignition temperature °C	+385
Color	light brown

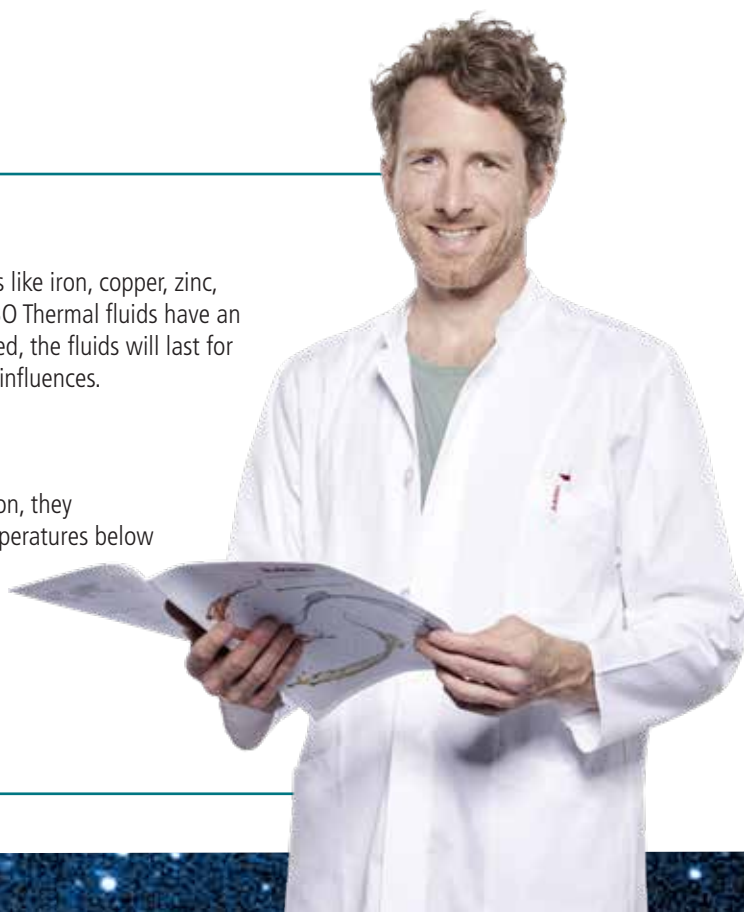
JULABO Thermal bath fluids based on silicone ...

... are chemically inert substances which do not affect metals like iron, copper, zinc, aluminum, chrome or nickel. Compared to other fluids, JULABO Thermal fluids have an extraordinarily low electrical conductivity. When properly stored, the fluids will last for 12 months and longer as they are not susceptible to climatic influences.

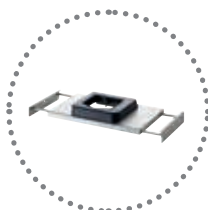
JULABO Thermal bath fluids based on water-glycol ...

... (monoethyleneglycol with anti-corrosion additives) have excellent thermal characteristics and a low viscosity. In addition, they provide anti-freeze protection, i.e. they can be applied at temperatures below the freezing point of water.

More information on JULABO Thermal bath fluids ...
at www.julabo.us.



Heating Circulator Accessories



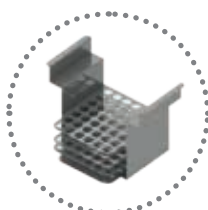
Assembly frames

Order no.	Description	Suitable for
9 970 201	Telescopic bridge, adjustable from 330 mm to 680 mm	DYNEO



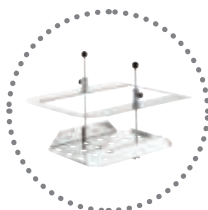
Hollow balls to reduce heat loss, evaporation, oxygen input, odors, action of light

Order no.	Description	Suitable for
8 970 010	Hollow balls, Polypropylene®, 20 mm dia., 1000 pcs (up to +100 °C, for water only)	DYNEO



Test tube racks made out of stainless steel, up to +150 °C

Order no.	Description	Suitable for
9 970 320	Test tube rack for 30 tubes 100 × 17 mm dia.	DD-BC4, DD-BC6
9 970 321	Test tube rack for 42 tubes 75 × 12/13 mm dia.	DD-BC4, DD-BC6
9 970 322	Test tube rack for 42 tubes 40 × 10/11 mm dia.	DD-BC4, DD-BC6
9 970 323	Test tube rack for 10 Falcon tubes 50 ml	DD-BC4, DD-BC6



Immersion-height adjustable platforms

Order no.	Description	Suitable for
9 970 506	Immersion-height adjustable platform	DD-BC26



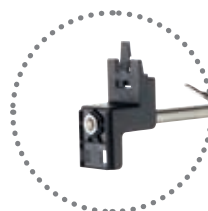
Universal bath attachment clamp

Order no.	Description	Suitable for
9 970 420	Bath attachment clamp for wall thickness up to 30 mm	DYNEO



Pump set for external temperature applications

Order no.	Description	Suitable for
9 970 141	Pump set (pump connections M16×1)	DYNEO



Stand attachment for laboratory stands

Order no.	Description	Suitable for
9 970 022	Stand attachment with rod 200x12 mm dia.	DYNEO



Heat exchangers / Cooling installations

Order no.	Description	Suitable for
9 970 240	Bath lid with built-in heat exchanger	DD-BC4, DD-BC6
9 970 242	Bath lid with built-in heat exchanger	DD-BC12
9 970 100	Installation cooling coil for counter-cooling with cooling water for installation into the existing assembly frame	DYNEO
9 970 101	DYNEO-on cooling coil for counter-cooling with cooling water for mounting on circulator head and use with the universal bath attachment clamp (without assembly frame)	DYNEO



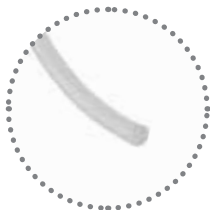
CR® tubing (-30 °C ... +120 °C)

Order no.	Description	Suitable for
8 930 008	1 m, 8 mm ID	DYNEO
8 930 010	1 m, 10 mm ID	DYNEO
8 930 012	1 m, 12 mm ID	DYNEO



Viton® tubing (-35 °C ... +200 °C)

Order no.	Description	Suitable for
8 930 108	1 m, 8 mm ID	DYNEO
8 930 110	1 m, 10 mm ID	DYNEO
8 930 112	1 m, 12 mm ID	DYNEO



PTFE tubing (-60 °C ... +180 °C)

Order no.	Description	Suitable for
8 930 140	PTFE tubing 8 mm ID × 10 mm OD per meter	DYNEO
8 930 142	PTFE tubing 12 mm ID × 14 mm OD per meter	DYNEO



Tubing insulation (-50 °C ... +100 °C)

Order no.	Description	Suitable for
8 930 410	1 m, for tubing 8 - 10 mm ID	CR® / Viton® tubing
8 930 412	1 m, for tubing 12 mm ID	CR® / Viton® tubing



Tube clamps

Order no.	Description	Suitable for
8 970 480	2 Tube clamps, size 1	CR® / Viton® tubing 8 mm ID
8 970 481	2 Tube clamps, size 2	CR® / Viton® tubing 10 - 12 mm ID



Metal tubing flexible, insulated, (-50 °C ... +200 °C)

Order no.	Description	Suitable for
8 930 220	0.5 m metal tubing, 2 fittings M16×1 female	DYNEO
8 930 221	1.0 m metal tubing, 2 fittings M16×1 female	DYNEO
8 930 222	1.5 m metal tubing, 2 fittings M16×1 female	DYNEO
8 930 223	3.0 m metal tubing, 2 fittings M16×1 female	DYNEO

Heating Circulator Accessories



Adapters and connectors

Order no.	Description	Suitable for
8 970 446	2 Barbed fittings for tubing 8 mm ID	DYNEO
8 970 447	2 Barbed fittings for tubing 10 mm ID	DYNEO
8 970 445	2 Barbed fittings for tubing 12 mm ID	DYNEO
8 970 443	1 Adapter M16×1 male to M16×1 male	DYNEO
8 970 490	2 Collar nuts M16×1 female	DYNEO
8 970 442	2 Elbow fittings 90°, M16×1 female/male	DYNEO
8 890 004	2 Adapters M16×1 female to NPT 1/4" male	DYNEO
8 890 005	2 Adapters M16×1 female to NPT 1/4" female	DYNEO
8 890 006	2 Adapters M16×1 female to NPT 3/8" male	DYNEO
8 890 007	2 Adapters M16×1 female to NPT 3/8" female	DYNEO
8 890 008	2 Adapters M16×1 female to NPT 1/2" male	DYNEO
8 890 009	2 Adapters M16×1 female to NPT 1/2" female	DYNEO
8 890 010	2 Adapters M16×1 male to NPT 1/4" female	DYNEO
8 891 008	1 Adapter M16×1 male to BSP 1/2" female	DYNEO
8 891 009	1 Adapter M16×1 male to BSP 3/4" female	DYNEO
8 890 011	2 Adapters M16×1 female to tube 1/4" male	DYNEO
8 890 012	2 Adapters M16×1 female to tube 3/8" male	DYNEO
8 890 013	2 Adapters M16×1 female to tube 1/2" male	DYNEO
8 890 024	2 Adapters M16×1 female to M16×1 female	DYNEO



Shut-off valves for loop circuit

Order no.	Description	Suitable for
8 970 456	Shut-off valve (-10 °C ... +100 °C), M16×1	DYNEO
8 970 457	Shut-off valve (-30 °C ... +200 °C), M16×1	DYNEO



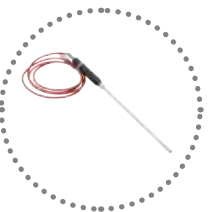
Distributing adapters

Order no.	Description	Suitable for
8 970 470	Twin distributing adapter with barbed fittings	Tubing 8 mm ID
8 970 471	Twin distributing adapter with barbed fittings	Tubing 12 mm ID
8 970 472	Twin distributing adapter with barbed fittings	Tubing 10 mm ID
8 970 473	Twin distributing adapter M16×1 female to 2 × M16×1 male	DYNEO



Connection plugs

Order no.	Description	Suitable for
8 980 131	External Pt100 sensor plug	DYNEO
8 980 133	STANDBY plug, 3-pin	DYNEO with analog interfaces (option)
8 980 135	Alarm plug, 5-pin	DYNEO with analog interfaces (option)
8 980 136	REG-EPROG plug 6-pin	DYNEO with analog interfaces (option)



External Pt100 sensors

Order no.	Description	Suitable for
8 981 003	External Pt100 sensor, 200 × 6 mm, diameter, st. steel, 1,5 m cable	DYNEO
8 981 006	External Pt100 sensor, 20 × 2 mm, st. steel, 1,5 m cable	DYNEO
8 981 010	External Pt100 sensor, 300 × 6 mm, diameter, st. steel, 1,5 m cable	DYNEO
8 981 013	External Pt100 sensor, 600 × 6 mm, st. steel/PTFE coated, 3 m cable	DYNEO
8 981 014	External Pt100 sensor, 1200 × 6 mm, st. steel/PTFE coated, 3 m cable	DYNEO

Order no.	Description	Suitable for
8 981 015	External Pt100 sensor, 300 × 6 mm, st. steel/PTFE coated, 3 m cable. Usable for working temperatures from -75 °C to 250 °C. Without handle.	DYNEO
8 981 016	External Pt100 sensor, 900 × 6 mm, st. steel/PTFE coated, 3 m cable. Usable for working temperatures from -75 °C to 250 °C. Without handle.	DYNEO
8 981 017	External Pt100 sensor 200 × 6 mm, st. steel/PTFE coated, 3 m cable. Usable for working temperatures from -75 to +250 °C. Without handle	DYNEO
8 981 020	M+R in-line Pt100 sensor, 1.5 m cable (measurement and control in external system).	DYNEO
8 981 103	3.5 m Extension cable for Pt100 sensor, Lemos-a-type.	DYNEO

Software and hardware for instrument control, data recording, and visualization, interfaces



Order no.	Description	Suitable for
8 901 102	EasyTEMP Software (free of charge at www.julabo.com)	DYNEO
8 901 105	EasyTEMP Professional Software, incl. USB Dongle	DYNEO
9 900 110	USB cable 2 m, type A-B	DYNEO
9 900 112	USB 2.0 repeater extension cable, length = 5 m	DYNEO
9 900 114	USB 2.0 repeater extension cable, length = 10 m	DYNEO
8 980 073	RS232 interface cable, length 2.5 m with 9-pin plug/9-pin socket	DYNEO with RS232 interface (option)
8 980 074	RS232 interface cable, length 5 m with 9-pin plug/9-pin socket	DYNEO with RS232 interface (option)
8 980 031	Ethernet/RS232 interface converter for temperature control instruments with RS232	DYNEO with RS232 interface (option)
8 980 032	Ethernet /RS232 interface converter for up to 4 JULABO instruments using RS232 interface cable (8980074). Connection to an existing network via RJ45 cable (8980071).	DYNEO with RS232 interface (option)
8 980 033	Ethernet /RS232 interface converter for up to 8 JULABO instruments using RS232 interface cable (8980074). Connection to an existing network via RJ45 cable (8980071)	DYNEO with RS232 interface (option)

Calibration and testing certificates



Order no.	Description	Suitable for
8 902 901	1-point manufacturer's calibration certificate	DYNEO
8 902 903	3-point manufacturer's calibration certificate	DYNEO
8 902 905	5-point manufacturer's calibration certificate	DYNEO
8 903 015	Manufacturer's testing certificate for JULABO instruments without integrated refrigeration unit (up to 1 kW cooling capacity at +20 °C)	DYNEO

IQ/OQ Documentation for equipment qualification



Order no.	Description	Suitable for
2 310 110	IQ/OQ documentation, category 1	DYNEO immersion and heating circulators

Preventative Maintenance Contracts



Order no.	Description	Suitable for
2 350 100	Preventative Maintenance Contract Standard includes the following services: Visual inspection, technical diagnostics, read-out of error memory, testing of tube connections and bath fluid, thorough cleaning of performance-reducing contaminations, testing of control behavior (temperature stability), sensor calibration as needed, testing/measuring of pump and cooling capacity (depending on model) and firmware update (if no hardware adjustment is required)	DYNEO
2 350 110	Preventative Maintenance Contract Premium includes all services listed above as well as spare and wear parts and labor required for installation and replacement	DYNEO

The **Julabo** advantages at a glance.

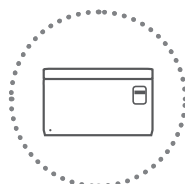
JULABO temperature control solutions – high-precision and speed

JULABO products include high-quality temperature control solutions to cover the temperature range -95 °C to +400 °C.



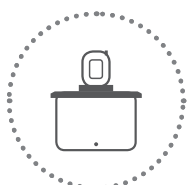
Refrigerated Circulators

The JULABO Refrigerated Circulators are suitable for internal and external applications and can be used within the temperature range -95 °C to +200 °C.



Water Baths and Shaking Water Baths

JULABO Water Baths and Shaking Water Baths can be used for a variety of applications within the temperature range +18 °C to +99.9 °C.



Heating Circulators

Heating Circulators are available in various designs including Heating Immersion Circulators, Open Heating Bath Circulators, or Heating Circulators and cover the temperature range +20 °C to +300 °C.



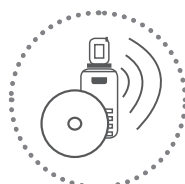
Additional Products

In addition, the JULABO product portfolio offers instruments for special requirements such as Calibration Baths, Visco Baths, Beer Forcing Test Baths, Immersion / Flow-Through Coolers, Temperature Controllers and Refrigerators for Chemicals.



Highly Dynamic Temperature Control Systems

The Highly Dynamic Temperature Control Systems from JULABO can be used for demanding temperature applications ranging from -92 °C to +400 °C. The PRESTO series offers unique high-performance specifications to meet these requirements.



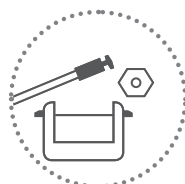
Wireless Communication & Software Solutions

JULABO facilitates the automation of applications. The temperature control instruments can be comfortably controlled and monitored via PC.



Recirculating Coolers

JULABO Recirculating Coolers are highly efficient and therefore offer an environmentally friendly and economic alternative to tap water cooling in the temperature range -25 °C to +130 °C.



Accessories

The extensive range of instrument accessories ensures JULABO products are adaptable for research and industry use.

Comprehensive service and on-site support

JULABO takes pride in offering customers expert advice for pairing the proper JULABO temperature control solution to their specific application. JULABO service and support options include installation and calibration, equipment qualification documentation and application training. These invaluable services ensure customer confidence in the operation and maintenance of any JULABO unit.

Individual requirements – individual products

JULABO's wide product range offers a solution for almost any application. However, if a specific application needs more than a standard product can offer, the JULABO specialists will work out an individual solution with you.



JULABO. Quality.

Highest quality standards to ensure a long product life.



Green technology.

Deliberately engineered with environmentally friendly materials and technologies.



Satisfied customers.

11 subsidiaries and more than 100 partners worldwide guarantee fast and qualified JULABO support.



100 % checked.

100 % testing. 100 % quality. Every JULABO product is shipped to customers after a successful final inspection.



Quick start.

Individual JULABO consultation and comprehensive manuals at your disposal.



Services 24/7.

Around the clock availability. You can find suitable accessories, data sheets, manuals, case studies and more at www.julabo.us.

Technical data

Model	Order No.	Working temperature range °C	Display	Display resolution	Temperature control	Temperature stability °C	Heating capacity kW	Cooling Refrigeration unit	+2
DD-200F	9 021 701	-20 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	1-stage air	0.2
DD-200F	9 021 701.D	-20 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	1-stage air	0.2
DD-200F	9 021 701.A	-20 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	1-stage air	0.2
DD-201F	9 021 702	-20 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	1-stage air	0.2
DD-201F	9 021 702.D	-20 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	1-stage air	0.2
DD-201F	9 021 702.A	-20 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	1-stage air	0.2
DD-300F	9 021 703	-25 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	1-stage air	0.3
DD-300F	9 021 703.D	-25 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	1-stage air	0.3
DD-300F	9 021 703.A	-25 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	1-stage air	0.3
DD-600F	9 021 704	-35 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	1-stage air	0.6
DD-600F	9 021 704.D	-35 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	1-stage air	0.6
DD-600F	9 021 704.A	-35 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	1-stage air	0.6
DD-601F	9 021 705	-35 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	1-stage air	0.6
DD-601F	9 021 705.D	-35 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	1-stage air	0.6
DD-601F	9 021 705.A	-35 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	1-stage air	0.6
DD-900F	9 021 706	-38 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	1-stage air	0.9
DD-900F	9 021 706.D	-38 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	1-stage air	0.9
DD-900F	9 021 706.A	-38 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	1-stage air	0.9
DD-1000F	9 021 707	-50 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	1-stage air	1
DD-1000F	9 021 707.D	-50 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	1-stage air	1
DD-1000F	9 021 707.A	-50 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	1-stage air	1
DD-1001F	9 021 708	-38 ... +100	3.5" TFT	0.01	PID3	± 0.01	1.6 ... 2	1-stage air	1
DD-1001F	9 021 708.D	-38 ... +100	3.5" TFT	0.01	PID3	± 0.01	1.6 ... 2	1-stage air	1
DD-1001F	9 021 708.A	-38 ... +100	3.5" TFT	0.01	PID3	± 0.01	1.6 ... 2	1-stage air	1
DD	9 021 000	+20 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	-	-
DD	9 021 000.D	+20 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	-	-
DD	9 021 000.A	+20 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	-	-
DD-BC4	9 021 504	+20 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	-	-
DD-BC4	9 021 504.D	+20 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	-	-
DD-BC4	9 021 504.A	+20 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	-	-
DD-BC6	9 021 506	+20 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	-	-
DD-BC6	9 021 506.D	+20 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	-	-
DD-BC6	9 021 506.A	+20 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	-	-
DD-BC12	9 021 512	+20 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	-	-
DD-BC12	9 021 512.D	+20 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	-	-
DD-BC12	9 021 512.A	+20 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	-	-
DD-BC26	9 021 526	+20 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	-	-
DD-BC26	9 021 526.D	+20 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	-	-
DD-BC26	9 021 526.A	+20 ... +200	3.5" TFT	0.01	PID3	± 0.01	1	-	-

Unless otherwise indicated, all data relates to the operation at nominal voltage and frequency and +20 °C ambient temperature. Cooling capacity measured according to DIN12876-2. Information regarding used refrigerants can be found under www.julabo.com.

Cooling capacity (kW) at bath temperature (°C) (Bath fluid: ethanol)						Type ☉ Pressure pump ☺ Circulating pump	Pump		Pump connection thread male	Filling volume liters	Classification according to DIN 12876-1
0	-10	-20	-30	-40	Pressure psi		Flow rate l/min				
0	0.15	0.1	0.02	-	-	☉	1.5 ... 10.2	8 ... 27	M16×1	3 ... 4	III (FL)
1	0.15	0.1	0.02	-	-	☉	1.5 ... 10.2	8 ... 27	M16×1	3 ... 4	III (FL)
2	0.15	0.1	0.02	-	-	☉	1.5 ... 10.2	8 ... 27	M16×1	3 ... 4	III (FL)
3	0.15	0.1	0.02	-	-	☉	1.5 ... 10.2	8 ... 27	M16×1	3 ... 4	III (FL)
4	0.15	0.1	0.02	-	-	☉	1.5 ... 10.2	8 ... 27	M16×1	3 ... 4	III (FL)
5	0.15	0.1	0.02	-	-	☉	1.5 ... 10.2	8 ... 27	M16×1	3 ... 4	III (FL)
6	0.27	0.19	0.08	-	-	☉	1.5 ... 10.2	8 ... 27	M16×1	3 ... 4	III (FL)
7	0.27	0.19	0.08	-	-	☉	1.5 ... 10.2	8 ... 27	M16×1	3 ... 4	III (FL)
8	0.27	0.19	0.08	-	-	☉	1.5 ... 10.2	8 ... 27	M16×1	3 ... 4	III (FL)
9	0.44	0.27	0.16	0.04	-	☉	1.5 ... 10.2	8 ... 27	M16×1	5 ... 7.5	III (FL)
10	0.44	0.27	0.16	0.04	-	☉	1.5 ... 10.2	8 ... 27	M16×1	5 ... 7.5	III (FL)
11	0.44	0.27	0.16	0.04	-	☉	1.5 ... 10.2	8 ... 27	M16×1	5 ... 7.5	III (FL)
12	0.44	0.27	0.16	0.04	-	☉	1.5 ... 10.2	8 ... 27	M16×1	8 ... 10	III (FL)
13	0.44	0.27	0.16	0.04	-	☉	1.5 ... 10.2	8 ... 27	M16×1	8 ... 10	III (FL)
14	0.44	0.27	0.16	0.04	-	☉	1.5 ... 10.2	8 ... 27	M16×1	8 ... 10	III (FL)
15	0.8	0.52	0.31	0.11	-	☉	1.5 ... 10.2	8 ... 27	M16×1	21 ... 30	III (FL)
16	0.8	0.52	0.31	0.11	-	☉	1.5 ... 10.2	8 ... 27	M16×1	21 ... 30	III (FL)
17	0.8	0.52	0.31	0.11	-	☉	1.5 ... 10.2	8 ... 27	M16×1	21 ... 30	III (FL)
18	0.96	0.73	0.51	0.25	0.11	☉	1.5 ... 10.2	8 ... 27	M16×1	5 ... 7.5	III (FL)
19	0.96	0.73	0.51	0.25	0.11	☉	1.5 ... 10.2	8 ... 27	M16×1	5 ... 7.5	III (FL)
20	0.96	0.73	0.51	0.25	0.11	☉	1.5 ... 10.2	8 ... 27	M16×1	5 ... 7.5	III (FL)
21	0.85	0.6	0.32	0.12	-	☉	1.5 ... 10.2	8 ... 27	M16×1	42 ... 56	III (FL)
22	0.85	0.6	0.32	0.12	-	☉	1.5 ... 10.2	8 ... 27	M16×1	42 ... 56	III (FL)
23	0.85	0.6	0.32	0.12	-	☉	1.5 ... 10.2	8 ... 27	M16×1	42 ... 56	III (FL)
24	-	-	-	-	-	☉	1.5 ... 10.2	8 ... 27	-	-	III (FL)
25	-	-	-	-	-	☉	1.5 ... 10.2	8 ... 27	-	-	III (FL)
26	-	-	-	-	-	☉	1.5 ... 10.2	8 ... 27	-	-	III (FL)
27	-	-	-	-	-	☉	1.5 ... 10.2	8 ... 27	M16×1	3 ... 4.5	III (FL)
28	-	-	-	-	-	☉	1.5 ... 10.2	8 ... 27	M16×1	3 ... 4.5	III (FL)
29	-	-	-	-	-	☉	1.5 ... 10.2	8 ... 27	M16×1	3 ... 4.5	III (FL)
30	-	-	-	-	-	☉	1.5 ... 10.2	8 ... 27	M16×1	4.5 ... 6	III (FL)
31	-	-	-	-	-	☉	1.5 ... 10.2	8 ... 27	M16×1	4.5 ... 6	III (FL)
32	-	-	-	-	-	☉	1.5 ... 10.2	8 ... 27	M16×1	4.5 ... 6	III (FL)
33	-	-	-	-	-	☉	1.5 ... 10.2	8 ... 27	M16×1	8.5 ... 12	III (FL)
34	-	-	-	-	-	☉	1.5 ... 10.2	8 ... 27	M16×1	8.5 ... 12	III (FL)
35	-	-	-	-	-	☉	1.5 ... 10.2	8 ... 27	M16×1	8.5 ... 12	III (FL)
36	-	-	-	-	-	☉	1.5 ... 10.2	8 ... 27	M16×1	19 ... 26	III (FL)
37	-	-	-	-	-	☉	1.5 ... 10.2	8 ... 27	M16×1	19 ... 26	III (FL)
38	-	-	-	-	-	☉	1.5 ... 10.2	8 ... 27	M16×1	19 ... 26	III (FL)

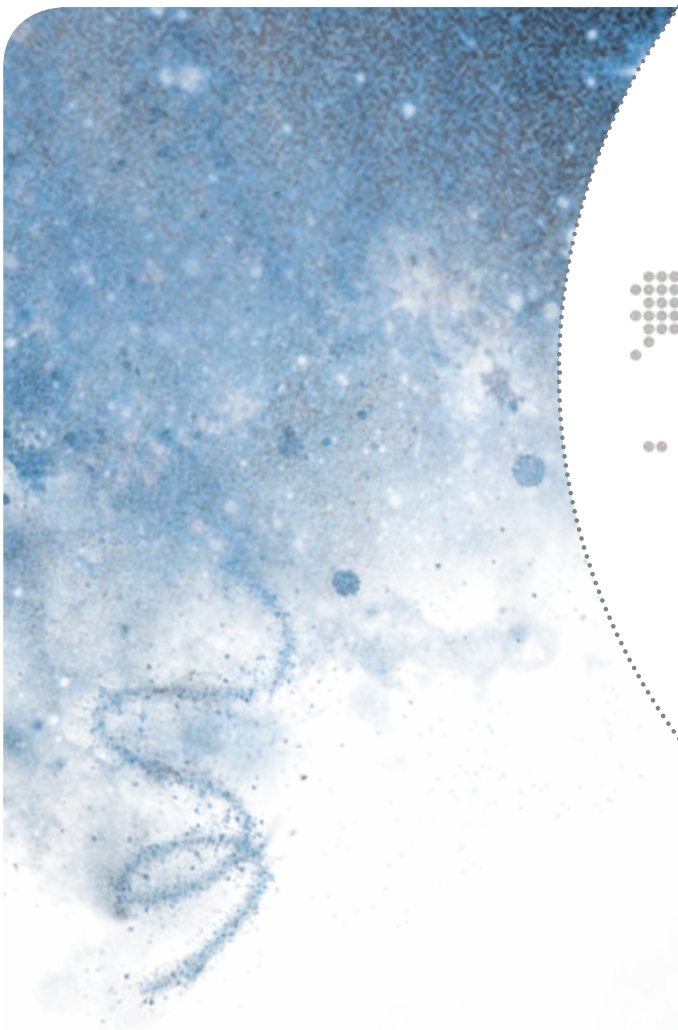
Mains connection	External Pt100 sensor connection	USB interface	RS232 interface	Analog interface	Permissible ambient temperature	Usable bath opening W × L / D	Dimensions W × L / D	Weight net	Model
V / Hz / A					°C	inch	inch	lbs	
115/50/15	yes	yes	no	no	+5 ... +40	5.1 × 5.9 / 5.9	9.1 × 15.4 × 25.6	56.7	DD-200F
115/50/15	yes	yes	yes	no	+5 ... +40	5.1 × 5.9 / 5.9	9.1 × 15.4 × 25.6	56.7	DD-200F
115/50/15	yes	yes	no	yes	+5 ... +40	5.1 × 5.9 / 5.9	9.1 × 15.4 × 25.6	56.7	DD-200F
115/60/15	yes	yes	no	no	+5 ... +40	5.1 × 5.9 / 5.9	17.3 × 16.1 × 17.3	54.5	DD-201F
115/60/15	yes	yes	yes	no	+5 ... +40	5.1 × 5.9 / 5.9	17.3 × 16.1 × 17.3	54.5	DD-201F
115/60/15	yes	yes	no	yes	+5 ... +40	5.1 × 5.9 / 5.9	17.3 × 16.1 × 17.3	54.5	DD-201F
115/60/x	yes	yes	no	no	+5 ... +40	5.1 × 5.9 / 5.9	9.4 × 16.5 × 26	61.1	DD-300F
115/60/x	yes	yes	yes	no	+5 ... +40	5.1 × 5.9 / 5.9	9.4 × 16.5 × 26	61.1	DD-300F
115/60/x	yes	yes	no	yes	+5 ... +40	5.1 × 5.9 / 5.9	9.4 × 16.5 × 26	61.1	DD-300F
115/60/12	yes	yes	no	no	+5 ... +40	8.7 × 5.9 / 5.9	13 × 18.5 × 27.2	78.7	DD-600F
115/60/12	yes	yes	yes	no	+5 ... +40	8.7 × 5.9 / 5.9	13 × 18.5 × 27.2	78.7	DD-600F
115/60/12	yes	yes	no	yes	+5 ... +40	8.7 × 5.9 / 5.9	13 × 18.5 × 27.2	78.7	DD-600F
115/60/12	yes	yes	no	no	+5 ... +40	8.7 × 7.9 / 5.9	14.2 × 18.1 × 29.1	84.2	DD-601F
115/60/12	yes	yes	yes	no	+5 ... +40	8.7 × 7.9 / 5.9	14.2 × 18.1 × 29.1	84.2	DD-601F
115/60/12	yes	yes	no	yes	+5 ... +40	8.7 × 7.9 / 5.9	14.2 × 18.1 × 29.1	84.2	DD-601F
115/60/16	yes	yes	no	no	+5 ... +40	10.2 × 7.9 / 13.8	15.4 × 24.4 × 29.5	114	DD-900F
115/60/16	yes	yes	yes	no	+5 ... +40	10.2 × 7.9 / 13.8	15.4 × 24.4 × 29.5	114	DD-900F
115/60/16	yes	yes	no	yes	+5 ... +40	10.2 × 7.9 / 13.8	15.4 × 24.4 × 29.5	114	DD-900F
115/60/16	yes	yes	no	no	+5 ... +40	7.1 × 5.1 / 5.9	16.5 × 19.3 × 27.6	112.9	DD-1000F
115/60/16	yes	yes	yes	no	+5 ... +40	7.1 × 5.1 / 5.9	16.5 × 19.3 × 27.6	112.9	DD-1000F
115/60/16	yes	yes	no	yes	+5 ... +40	7.1 × 5.1 / 5.9	16.5 × 19.3 × 27.6	112.9	DD-1000F
x	yes	yes	no	no	+5 ... +40	13.8 × 11.8 / 16.1	17.7 × 25.2 × 37.4	162.5	DD-1001F
x	yes	yes	yes	no	+5 ... +40	13.8 × 11.8 / 16.1	17.7 × 25.2 × 37.4	162.5	DD-1001F
x	yes	yes	no	yes	+5 ... +40	13.8 × 11.8 / 16.1	17.7 × 25.2 × 37.4	162.5	DD-1001F
115/50/11	yes	yes	no	no	+5 ... +40	-	13.2 × 16 × 35.5	5.5	DD
115/50/11	yes	yes	yes	no	+5 ... +40	-	13.2 × 16 × 35.5	5.5	DD
115/50/11	yes	yes	no	yes	+5 ... +40	-	13.2 × 16 × 35.5	5.5	DD
115/60/11	yes	yes	no	no	+5 ... +40	5.1 × 5.9 / 5.9	9.1 × 16.1 × 16.5	18.7	DD-BC4
115/60/11	yes	yes	yes	no	+5 ... +40	5.1 × 5.9 / 5.9	9.1 × 16.1 × 16.5	18.7	DD-BC4
115/60/11	yes	yes	no	yes	+5 ... +40	5.1 × 5.9 / 5.9	9.1 × 16.1 × 16.5	18.7	DD-BC4
115/60/11	yes	yes	no	no	+5 ... +40	5.1 × 7.9 / 5.9	9.4 × 17.3 × 18.5	21.4	DD-BC6
115/60/11	yes	yes	yes	no	+5 ... +40	5.1 × 7.9 / 5.9	9.4 × 17.3 × 18.5	21.4	DD-BC6
115/60/11	yes	yes	no	yes	+5 ... +40	5.1 × 7.9 / 5.9	9.4 × 17.3 × 18.5	21.4	DD-BC6
115/60/11	yes	yes	no	no	+5 ... +40	8.7 × 7.9 / 5.9	13 × 19.3 × 18.5	26.2	DD-BC12
115/60/11	yes	yes	yes	no	+5 ... +40	8.7 × 7.9 / 5.9	13 × 19.3 × 18.5	26.2	DD-BC12
115/60/11	yes	yes	no	yes	+5 ... +40	8.7 × 7.9 / 5.9	13 × 19.3 × 18.5	26.2	DD-BC12
115/60/11	yes	yes	no	no	+5 ... +40	10.2 × 7.9 / 13.8	15.4 × 24.4 × 18.9	41.2	DD-BC26
115/60/11	yes	yes	yes	no	+5 ... +40	10.2 × 7.9 / 13.8	15.4 × 24.4 × 18.9	41.2	DD-BC26
115/60/11	yes	yes	no	yes	+5 ... +40	10.2 × 7.9 / 13.8	15.4 × 24.4 × 18.9	41.2	DD-BC26

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Voltage options

Model	Order No.	Available mains voltages / Heating capacity in kW						
		230 V 50 Hz	208-230 V 60 Hz	208-230 V 50-60 Hz	100-115 V 50-60 Hz	115V 60 Hz	100 V 50 - 60 Hz	200 V 50 - 60 Hz
DD-200F	9 021 701	-	-	1.6 ... 2	0.8 ... 1	1	0.8	-
DD-200F	9 021 701.D	-	-	1.6 ... 2	0.8 ... 1	1	0.8	-
DD-200F	9 021 701.A	-	-	1.6 ... 2	0.8 ... 1	1	0.8	-
DD-201F	9 021 702	-	-	1.6 ... 2	0.8 ... 1	1	0.8	-
DD-201F	9 021 702.D	-	-	1.6 ... 2	0.8 ... 1	1	0.8	-
DD-201F	9 021 702.A	-	-	1.6 ... 2	0.8 ... 1	1	0.8	-
DD-300F	9 021 703	2	2	-	0.8 ... 1	1	0.8	-
DD-300F	9 021 703.D	2	2	-	0.8 ... 1	1	0.8	-
DD-300F	9 021 703.A	2	2	-	0.8 ... 1	1	0.8	-
DD-600F	9 021 704	-	-	1.6 ... 2	0.8 ... 1	1	0.8	1.5
DD-600F	9 021 704.D	-	-	1.6 ... 2	0.8 ... 1	1	0.8	1.5
DD-600F	9 021 704.A	-	-	1.6 ... 2	0.8 ... 1	1	0.8	1.5
DD-601F	9 021 705	-	-	1.6 ... 2	0.8 ... 1	1	0.8	1.5
DD-601F	9 021 705.D	-	-	1.6 ... 2	0.8 ... 1	1	0.8	1.5
DD-601F	9 021 705.A	-	-	1.6 ... 2	0.8 ... 1	1	0.8	1.5
DD-900F	9 021 706	-	-	1.6 ... 2	0.8 ... 1	1	-	1.5
DD-900F	9 021 706.D	-	-	1.6 ... 2	0.8 ... 1	1	-	1.5
DD-900F	9 021 706.A	-	-	1.6 ... 2	0.8 ... 1	1	-	1.5
DD-1000F	9 021 707	-	-	1.6 ... 2	0.8 ... 1	1	-	1.5
DD-1000F	9 021 707.D	-	-	1.6 ... 2	0.8 ... 1	1	-	1.5
DD-1000F	9 021 707.A	-	-	1.6 ... 2	0.8 ... 1	1	-	1.5
DD-1001F	9 021 708	-	-	1.6 ... 2	0.8 ... 1	-	-	1.5
DD-1001F	9 021 708.D	-	-	1.6 ... 2	0.8 ... 1	-	-	1.5
DD-1001F	9 021 708.A	-	-	1.6 ... 2	0.8 ... 1	-	-	1.5
DD	9 021 000	-	-	1.6 ... 2	0.8 ... 1	-	-	1.5
DD	9 021 000.D	-	-	1.6 ... 2	0.8 ... 1	-	-	1.5
DD	9 021 000.A	-	-	1.6 ... 2	0.8 ... 1	-	-	1.5
DD-BC4	9 021 504	-	-	1.6 ... 2	0.8 ... 1	-	-	1.5
DD-BC4	9 021 504.D	-	-	1.6 ... 2	0.8 ... 1	-	-	1.5
DD-BC4	9 021 504.A	-	-	1.6 ... 2	0.8 ... 1	-	-	1.5
DD-BC6	9 021 506	-	-	1.6 ... 2	0.8 ... 1	-	-	1.5
DD-BC6	9 021 506.D	-	-	1.6 ... 2	0.8 ... 1	-	-	1.5
DD-BC6	9 021 506.A	-	-	1.6 ... 2	0.8 ... 1	-	-	1.5
DD-BC12	9 021 512	-	-	1.6 ... 2	0.8 ... 1	-	-	1.5
DD-BC12	9 021 512.D	-	-	1.6 ... 2	0.8 ... 1	-	-	1.5
DD-BC12	9 021 512.A	-	-	1.6 ... 2	0.8 ... 1	-	-	1.5
DD-BC26	9 021 526	-	-	1.6 ... 2	0.8 ... 1	-	-	1.5
DD-BC26	9 021 526.D	-	-	1.6 ... 2	0.8 ... 1	-	-	1.5
DD-BC26	9 021 526.A	-	-	1.6 ... 2	0.8 ... 1	-	-	1.5

Unless otherwise indicated, all data relates to the operation at nominal voltage and frequency and +20 °C ambient temperature. Cooling capacity measured according to DIN12876-2.



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