Julabo

THE TEMPERATURE CONTROL COMPANY

DYNEO™

Refrigerated and Heating Circulators

ENGLISH


-25.00
80.00

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

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

Environmentally friendly.

Units with this symbol work with environmentally friendly, natural refrigerants.

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.

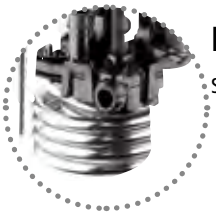
Operation in multiple languages.

Turn. Push. Go.

Easy operation of all parameters using the central 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. (optinal).

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.

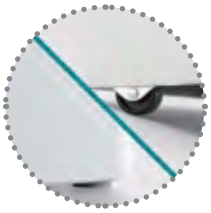
Early warning - visual and acoustic - of critical states increases process stability.

Process. Under control.

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

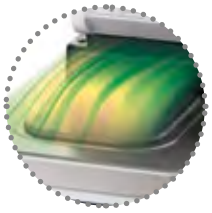
ATC3. Calibration.

'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, < ±0.1 °C external.

Connection. Easy.

Inclined pump connections (M16×1) 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.

DYNEO DD refrigerated circulators

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

The DYNEO circulator range focuses on your needs and offers innovative temperature control technology as well as functional solutions for demanding internal and external temperature applications. 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 0.7 bar
- 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 knop
- 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™ DD-200F

Order No.	9 021 701	
Working temperature range °C	-20 … +200	
Temperature stability °C	± 0.01	
Heating capacity kW	2	
	+20 °C	**0 °C**
Cooling capacity kW (Bath fluid: Ethanol)	0.2	0.15
	-10 °C	**-20 °C**
	0.1	0.02
Pump capacity Flow rate / Pressure	l / min	bar
	8 … 27	0.1 … 0.7
Bath opening / Bath depth cm	W × L / D 13 × 15 / 15	
Filling volume liters	3 … 4	
Dimensions cm	W × L × H 23 × 39 × 65	

DYNEO™ DD-201F

Order No.	9 021 702	
Working temperature range °C	-20 … +200	
Temperature stability °C	±0.01	
Heating capacity kW	2	
	+20 °C	**0 °C**
Cooling capacity kW (Bath fluid: Ethanol)	0.2	0.15
	-10 °C	**-20 °C**
	0.1	0.02
Pump capacity Flow rate / Pressure	l / min	bar
	8 … 27	0.1 … 0.7
Bath opening / Bath depth cm	W × L / D 13 × 15 / 15	
Filling volume liters	3 … 4	
Dimensions cm	W × L × H 44 × 41 × 44	

DYNEO. Intelligent, simple control.

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

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

DYNEO™ DD-300F

Order No.	9 021 703	
Working temperature range °C	-25 … +200	
Temperature stability °C	±0.01	
Heating capacity kW	2	
Cooling capacity kW (Bath fluid: Ethanol)	**+20 °C**	**0 °C**
	0.3	0.27
	-10 °C	**-20 °C**
	0.19	0.08
Pump capacity Flow rate / Pressure	l / min	bar
	8 … 27	0.1 … 0.7
Bath opening / Bath depth cm	W × L / D 13 × 15 / 15	
Filling volume liters	3 … 4	
Dimensions cm	W × L × H 24 × 42 × 66	

DYNEO™ DD-310F

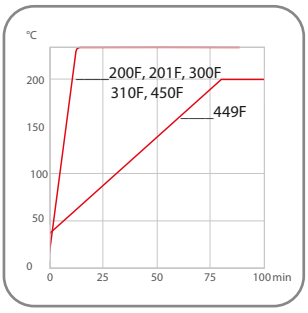
Order No.	9 021 713.N1*	
Working temperature range °C	-30 … +200	
Temperature stability °C	±0.01	
Heating capacity kW	2	
Cooling capacity kW (Bath fluid: Ethanol)	**+20 °C**	**0 °C**
	0.3	0.27
	-10 °C	**-20 °C**
	0.21	0.12
Pump capacity Flow rate / Pressure	l / min	bar
	8 … 27	0.1 … 0.7
Bath opening / Bath depth cm	W × L / D 13 × 15 / 15	
Filling volume liters	3 … 4	
Dimensions cm	W × L × H 23 × 40 × 65	

DYNEO™ DD-450F

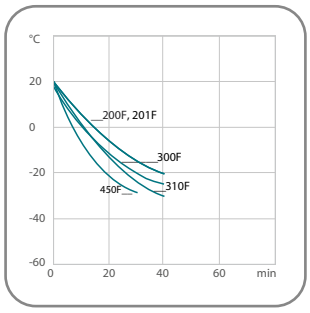
Order No.	9 021 714.N1*	
Working temperature range °C	-30 … +200	
Temperature stability °C	±0.01	
Heating capacity kW	2	
Cooling capacity kW (Bath fluid: Ethanol)	**+20 °C**	**0 °C**
	0.44	0.37
	-10 °C	**-20 °C**
	0.27	0.16
Pump capacity Flow rate / Pressure	l / min	bar
	8 … 27	0.1 … 0.7
Bath opening / Bath depth cm	W × L / D 13 × 15 / 15	
Filling volume liters	3 … 4	
Dimensions cm	W × L × H 23 × 40 × 65	

*also available with synthetic refrigerant (replace .N1 with .S1 in order number)

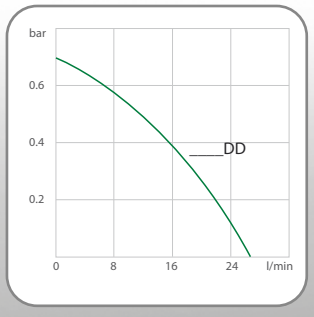
Heat-up time
Bath fluid: Thermal



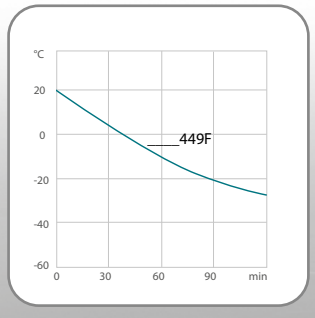
Cool-down time
Bath fluid: Ethanol



Pump capacity
Bath fluid: Water



Cool-down time
Bath fluid: Ethanol



DYNEO™ DD-449F

Order No.	9 021 716.N1	
Working temperature range °C	-32 … +200	
Temperature stability °C	±0.01	
Heating capacity kW	2	
Cooling capacity kW (Bath fluid: Ethanol)	**+20 °C**	**0 °C**
	0.44	0.27
	-10 °C	**-20 °C**
	0.35	0.2
Pump capacity Flow rate / Pressure	l / min	bar
	8 … 27	0.1 … 0.7
Bath opening / Bath depth cm	W × L / D 28 × 35 / 20	
Filling volume liters	21 … 30	
Dimensions cm	W × L × H 37 × 59 × 69	

DYNEO™ DD-600F

Order No.	**9 021 704**
Working temperature range °C	-35 … +200
Temperature stability °C	±0.01
Heating capacity kW	2
Cooling capacity kW (Bath fluid: Ethanol)	**+20 °C** 0.6 **0 °C** 0.44 **-10 °C** 0.27 **-20 °C** 0.16 **-30 °C** 0.04 **-40 °C** -
Pump capacity Flow rate / Pressure	l/min 8 … 27 bar 0.1 … 0.7
Bath opening / Bath depth cm	W × L / D 22 × 15 / 15
Filling volume liters	5 … 7.5
Dimensions cm	W × L × H 33 × 47 × 69

DYNEO™ DD-601F

Order No.	**9 021 705**
Working temperature range °C	-35 … +200
Temperature stability °C	±0.01
Heating capacity kW	2
Cooling capacity kW (Bath fluid: Ethanol)	**+20 °C** 0.6 **0 °C** 0.44 **-10 °C** 0.27 **-20 °C** 0.16 **-30 °C** 0.04 **-40 °C** -
Pump capacity Flow rate / Pressure	l/min 8 … 27 bar 0.1 … 0.7
Bath opening / Bath depth cm	W × L / D 22 × 15 / 20
Filling volume liters	8 … 10
Dimensions cm	W × L × H 33 × 47 × 74

DYNEO™ DD-900F

Order No.	**9 021 706**
Working temperature range °C	-38 … +200
Temperature stability °C	±0.01
Heating capacity kW	2
Cooling capacity kW (Bath fluid: Ethanol)	**+20 °C** 0.9 **0 °C** 0.8 **-10 °C** 0.52 **-20 °C** 0.31 **-30 °C** 0.11 **-40 °C** -
Pump capacity Flow rate / Pressure	l/min 8 … 27 bar 0.1 … 0.7
Bath opening / Bath depth cm	W × L / D 26 × 35 / 20
Filling volume liters	21 … 30
Dimensions cm	W × L × H 39 × 62 × 75

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-1000F

Order No.	**9 021 707**		
Working temperature range °C	-50 … +200		
Temperature stability °C	±0.01		
Heating capacity kW	2		
	+20 °C	**0 °C**	**-10 °C**
Cooling capacity kW (Bath fluid: Ethanol)	1	0.96	0.73
	-20 °C	**-30 °C**	**-40 °C**
	0.51	0.25	0.11
Pump capacity Flow rate / Pressure	l/min	bar	
	8 … 27	0.1 … 0.7	
Bath opening / Bath depth cm	W × L / D 18 × 13 / 15		
Filling volume liters	5 … 7.5		
Dimensions cm	W × L × H 42 × 49 × 74		

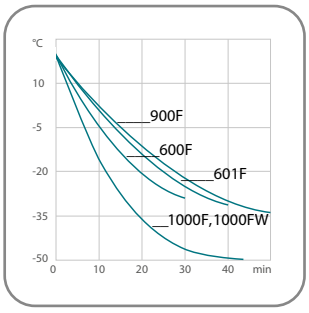
DYNEO™ DD-1000FW

Order No.	**9 021 727**		
Working temperature range °C	-50 … +200		
Temperature stability °C	±0.01		
Heating capacity kW	2		
	+20 °C	**0 °C**	**-10 °C**
Cooling capacity kW (Bath fluid: Ethanol)	1	0.96	0.73
	-20 °C	**-30 °C**	**-40 °C**
	0.51	0.25	0.11
Pump capacity Flow rate / Pressure	l/min	bar	
	8 … 27	0.1 … 0.7	
Bath opening / Bath depth cm	W × L / D 18 × 13 / 15		
Filling volume liters	5 … 7.5		
Dimensions cm	W × L × H 42 × 49 × 74		

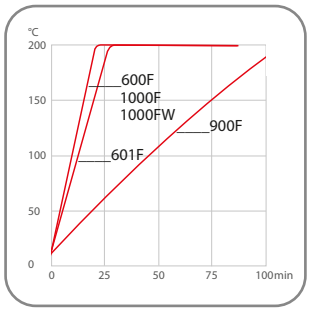
DYNEO™ DD-1001F

Order No.	**9 021 708**		
Working temperature range °C	-38 … +100		
Temperature stability °C	±0.01		
Heating capacity kW	2		
	+20 °C	**0 °C**	**-10 °C**
Cooling capacity kW (Bath fluid: Ethanol)	1	0.85	0.6
	-20 °C	**-30 °C**	**-40 °C**
	0.32	0.12	-
Pump capacity Flow rate / Pressure	l/min	bar	
	8 … 27	0.1 … 0.7	
Bath opening / Bath depth cm	W × L / D 35 × 41 / 30		
Filling volume liters	42 … 56		
Dimensions cm	W × L × H 45 × 64 × 95		

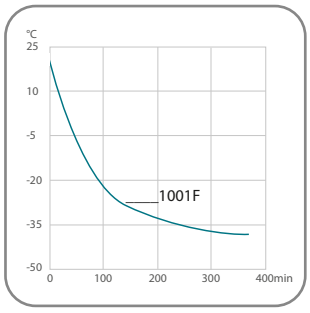
Cool-down time
Bath fluid: Ethanol



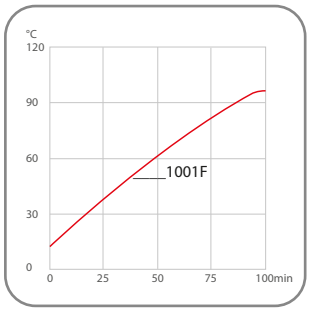
Heat-up time
Bath fluid: Thermal



Cool-down time
Bath fluid: Ethanol



Heat-up time
Bath fluid: Thermal



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

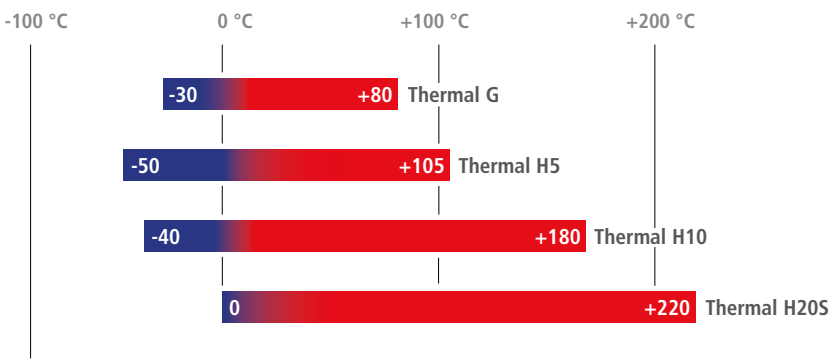
Thermal G

Order No. 5 liters	**8 940 125**
Order No. 10 liters	**8 940 124**
Working temperature range °C	-30 … +80
Flash point °C	-
Fire point °C	-
Viscosity, (kinematic at +20 °C) mm^2/s	4.13 mPas
Density (at +20 °C) g/cm^3	1.0681 g/cm^3
Pour point °C	-44
Boiling point °C	+109
Ignition temperature °C	+410
Color	light yellow

Makes routine laboratory work easier

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

Working temperature ranges



Thermal H5

Order No. 5 liters	**8 940 107**
Order No. 10 liters	**8 940 106**
Working temperature range °C	-50 … +105
Flash point °C	>+120
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 H10

Order No. 5 liters	**8 940 115**
Order No. 10 liters	**8 940 114**
Working temperature range °C	-40 … +180
Flash point °C	>+165
Fire point °C	+220
Viscosity, (kinematic at +20 °C) mm^2/s	10
Density (at +20 °C) g/cm^3	0.93
Pour point °C	<-60
Boiling point °C	+288
Ignition temperature °C	+370
Color	clear

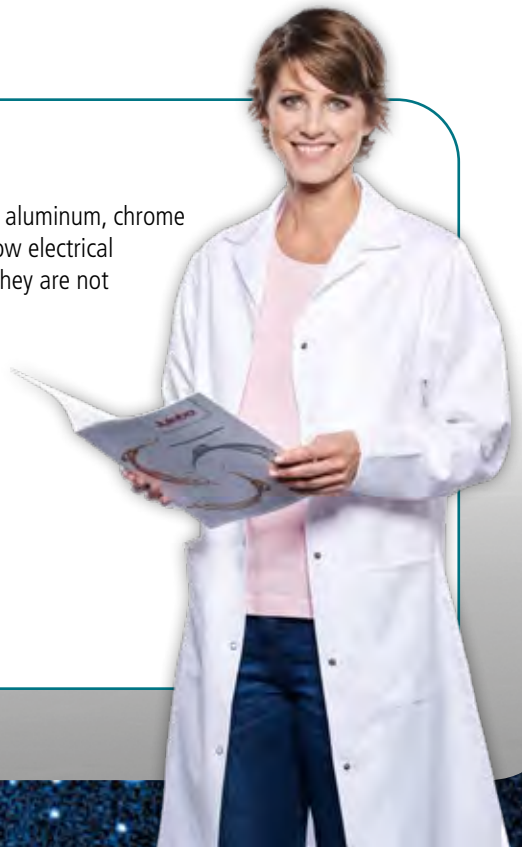
Thermal H20S

Order No. 5 liters	**8 940 109**
Order No. 10 liters	**8 940 108**
Working temperature range °C	0 … +220
Flash point °C	>+200
Fire point °C	+264
Viscosity, (kinematic at +20 °C) mm^2/s	20
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 …
… in our brochure 'Thermal Bath Fluids' at www.julabo.com.



Water bath protective media to prevent the formation of algae and bacteria and descaling agent

Order no.	Description	Suitable for
8 940 006	Aqua Stabil, 6 bottles, 100 ml each	DYNEO
8 940 012	Aqua Stabil, 12 bottles, 100 ml each	DYNEO
9 940 200	Descaling agent, 1 liter	DYNEO

Hollow balls to reduce heat loss, evaporation, oxygen input, odors, and 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-201F, DD-300F, DD-310F, DD-450F
9 970 242	Bath lid with built-in heat exchanger	DD-600F, DD-601F, DD-1000F

Lockable bath cover / Condensation trap

Order No.		Suitable for
9 970 243	Lockable bath cover	DD-200F, DD-201F, DD-300F, DD-310F, DD-450F
9 970 700	Condensation trap with bath lid	DD-600F, DD-601F, DD-1000F, DD-1000FW

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)

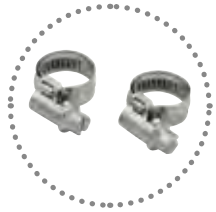
Order no.	Description	Suitable for
8 930 108	1 m, 8 mm ID	DYNEO
8 930 110	1 m, 10 mm ID	DYNEO
8 930 112	1 m, 12 mm ID	DYNEO

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 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 m metal tubing, 2 fittings M16×1 female	DYNEO
8 930 224	2 m metal tubing, 2 fittings M16×1 female	DYNEO

Adapters and connectors

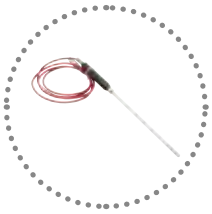
Order no.	Description	Suitable for
8 970 446	2 Barbed fittings for tubing 8 mm ID	DYNEO
8 970 447	2 Barbed fittings for tubing 10 mm ID	DYNEO
8 970 445	2 Barbed fittings for tubing 12 mm ID	DYNEO
8 970 443	1 Adapter M16×1 male to M16×1 male	DYNEO
8 970 490	2 Collar nuts M16×1 female	DYNEO
8 970 442	2 Elbow fittings 90°, M16×1 female/male	DYNEO
8 970 448	2 Elbow fittings 90°, M16×1 male/female, side length 1 × 54 mm / 1 × 120 mm	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
8 970 850	Shut-off valve (-60...+200°C), M16×1	DYNEO

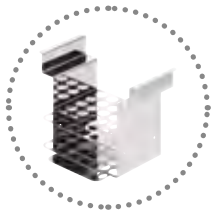
Distributing adapters

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



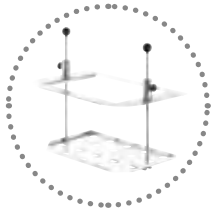
External Pt100 sensors

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
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, DD-310F, DD-450F
9 970 321	Test tube rack for 42 tubes 75 × 12/13 mm dia.	DD-200F, DD-201F, DD-300F, DD-310F, DD-450F
9 970 322	Test tube rack for 42 tubes 40 × 10/11 mm dia.	DD-200F, DD-201F, DD-300F, DD-310F, DD-450F
9 970 323	Test tube rack for 10 Falcon tubes 50 ml	DD-200F, DD-201F, DD-300F, DD-310F, DD-450F



Immersion-height adjustable platforms

Order no.	Description	Suitable for
9 970 506	Immersion-height adjustable platform	DD-449F, DD-900F

Castor platform

Order No.	Description	Suitable for
8 910 040	Castor platform	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)

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	DYNEO with RS232 interface (option)
8 980 032	Ethernet / RS232 interface converter for up to 4 JULABO instruments	DYNEO with RS232 interface (option)
8 980 033	Ethernet / RS232 interface converter for up to 8 JULABO instruments	DYNEO with RS232 interface (option)

Calibration and Manufacturer's 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 Units, Category 2	DYNEO

IQ / OQ Documentation

Order no.	Description	Suitable for
2 310 120	IQ / OQ Documentation, Category 2	DYNEO

Maintenance

Order no.	Description	Suitable for
2 350 102	Maintenance JULABO Units, Category 2 Maintenance includes preventive measures that help to maintain functionality, to minimize downtime as well as costs. A JULABO maintenance comprises works such as visual inspection, cleaning, functional test and includes a maintenance report.	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

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 0.7 bar
- 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	2	
Circulation capacity Flow rate / Pressure	l/min 8 … 27	bar 0.1 … 0.7
Dimensions cm	W × L × H 13.2 × 16 × 35.5	

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	2	
Pump capacity Flow rate / Pressure	l/min 8 … 27	bar 0.1 … 0.7
Bath opening / Bath depth cm	W × L / D 13 × 15 / 15	
Filling volume liters	3 … 4.5	
Dimensions cm	W × L × H 23 × 41 × 42	

DYNEO™ DD-BC6

Order No.	9 021 506	
Working temperature range °C [1]	+20 … +200	
Temperature stability °C	± 0.01	
Heating capacity kW	2	
Pump capacity Flow rate / Pressure	l/min 8 … 27	bar 0.1 … 0.7
Bath opening / Bath depth cm	W × L / D 13 x 15 / 20	
Filling volume liters	4.5 … 6	
Dimensions cm	W × L × H 24 × 44 × 47	

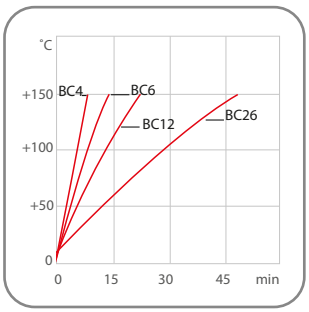
DYNEO™ DD-BC12

Order No.	9 021 512	
Working temperature range °C [1]	+20 … +200	
Temperature stability °C	± 0.01	
Heating capacity kW	2	
Pump capacity Flow rate / Pressure	l/min 8 … 27	bar 0.1 … 0.7
Bath opening / Bath depth cm	W × L / D 22 x 15 / 20	
Filling volume liters	8.5 … 12	
Dimensions cm	W × L × H 33 × 49 × 47	

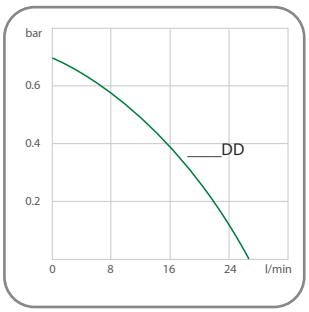
DYNEO™ DD-BC26

Order No.	9 021 526	
Working temperature range °C [1]	+20 … +200	
Temperature stability °C	± 0.01	
Heating capacity kW	2	
Pump capacity Flow rate / Pressure	l/min 8 … 27	bar 0.1 … 0.7
Bath opening / Bath depth cm	W × L / D 26 x 35 / 20	
Filling volume liters	19 … 26	
Dimensions cm	W × L × H 39 × 62 × 48	

Heat-up time
Bath fluid: Thermal



Pump capacity
Bath fluid: Water



[1] For temperature applications near or below ambient temperature: use a cooling coil or JULABO immersion cooler.

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.

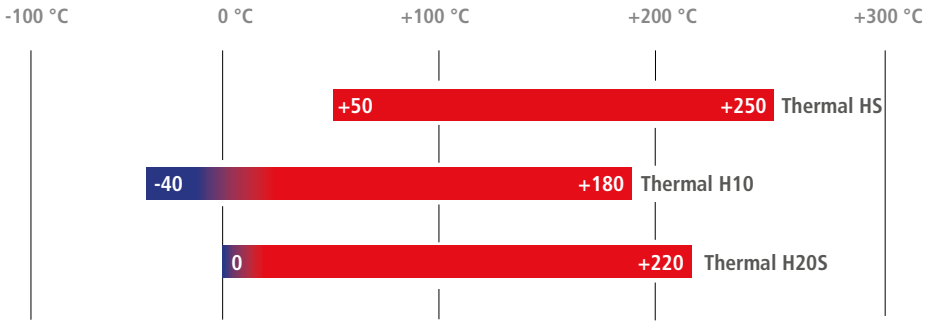
Advantages

- 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 HS

Order No. 5 liters	**8 940 103**
Order No. 10 liters	**8 940 102**
Working temperature range °C	+50 … +250
Flash point °C	>+250
Fire point °C	+360
Viscosity, (kinematic at +20 °C) mm^2/s	50 mm^2/s
Density (at +20 °C) g/cm^3	0.97 g/cm^3
Pour point °C	<-60
Boiling point °C	-
Ignition temperature °C	>+400
Color	light brown

Thermal H10

Order No. 5 liters	**8 940 115**
Order No. 10 liters	**8 940 114**
Working temperature range °C	-40 … +180
Flash point °C	>+165
Fire point °C	+220
Viscosity, (kinematic at +20 °C) mm^2/s	10
Density (at +20 °C) g/cm^3	0.93
Pour point °C	<-60
Boiling point °C	+288
Ignition temperature °C	+370
Color	clear

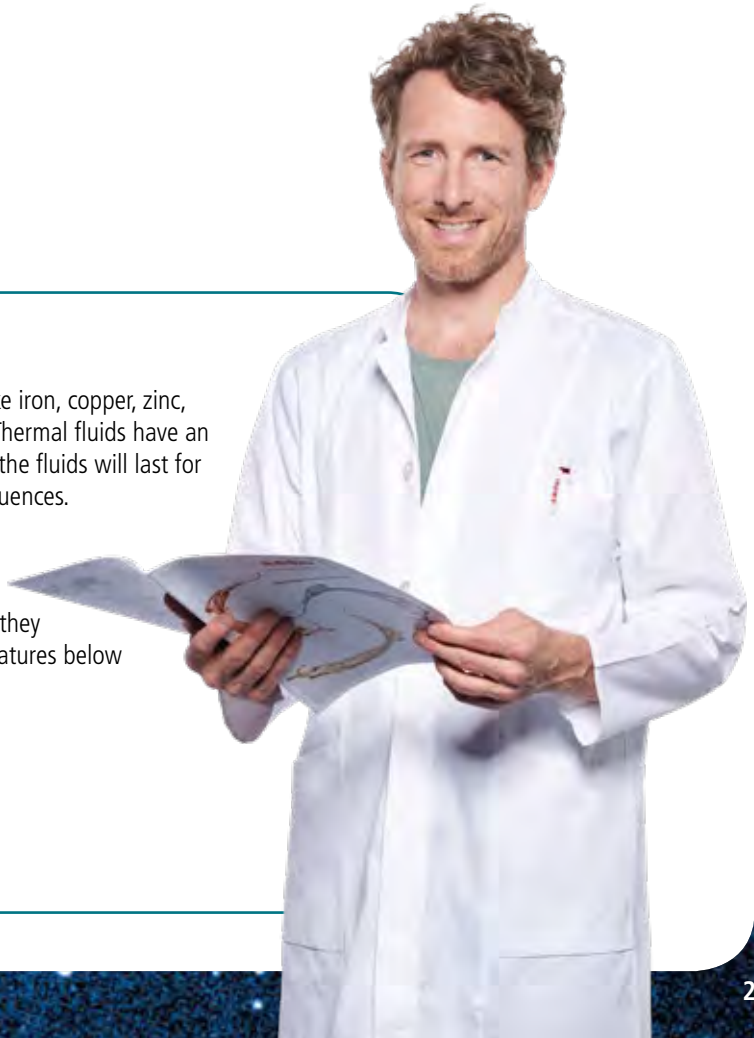
Thermal H20S

Order No. 5 liters	**8 940 109**
Order No. 10 liters	**8 940 108**
Working temperature range °C	0 … +220
Flash point °C	>+200
Fire point °C	+264
Viscosity, (kinematic at +20 °C) mm^2/s	20
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.

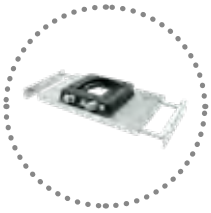
JULABO Thermal bath fluids based on water-glycol …
… (monoethyleneglycol with anti-corrosion additives) have excellent thermal characteristics and a low viscosity. In addition, they provide anti-freeze protection, i.e. they can be applied at temperatures below the freezing point of water.

More information on JULABO Thermal bath fluids …
… in our brochure ‚Thermal Bath Fluids' at www.julabo.com.



Water bath protective media to prevent the formation of algae and bacteria and descaling agent

Order no.	Description	Suitable for
8 940 006	Aqua Stabil, 6 bottles, 100 ml each	DYNEO
8 940 012	Aqua Stabil, 12 bottles, 100 ml each	DYNEO
9 940 200	Descaling agent, 1 liter	DYNEO

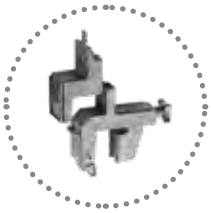


Extendable bridge

Order no.	Description	Suitable for
9 970 202	Extendable bridge, extendable from 330 mm to 680 mm with assembly frame	DYNEO

Hollow balls to reduce heat loss, evaporation, oxygen input, odors, and 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

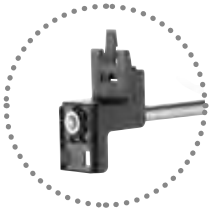


Universal bath attachment clamp

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	Add-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

Lockable bath cover

Order No.	Description	Suitable for
9 970 243	Lockable bath cover	DD-BC12

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)

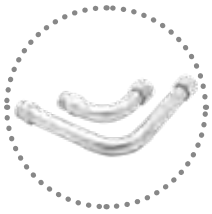
Order no.	Description	Suitable for
8 930 410	1 m, for tubing 8 - 10 mm ID	CR® / Viton® tubing
8 930 412	1 m, for tubing 12 mm ID	CR® / Viton® tubing

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 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 m metal tubing, 2 fittings M16×1 female	DYNEO
8 930 224	2 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
8 970 448	2 Elbow fittings 90°, M16×1 male/female, side length 1 × 54 mm / 1 × 120 mm	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
8 970 850	Shut-off valve (-60...+200°C), M16×1	DYNEO

Distributing adapters

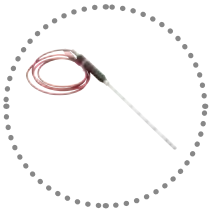
Order no.	Description	Suitable for
8 970 470	Twin distributing adapter with barbed fittings	Tubing 8 mm ID
8 970 471	Twin distributing adapter with barbed fittings	Tubing 12 mm ID
8 970 472	Twin distributing adapter with barbed fittings	Tubing 10 mm ID
8 970 473	Twin distributing adapter M16×1 female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

Castor platform

Order No.	Description	Suitable for
8 910 040	Castor platform	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
8 981 015	External Pt100 sensor, 300 × 6 mm, st.steel/PTFE coated, 3 m cable.	DYNEO
8 981 016	External Pt100 sensor, 900 × 6 mm, st.steel/PTFE coated, 3 m cable.	DYNEO
8 981 017	External Pt100 sensor 200 × 6 mm, st.steel/PTFE coated, 3 m cable.	DYNEO
8 981 020	M+R in-line Pt100 sensor, 1.5 m cable	DYNEO
8 981 103	3.5 m Extension cable for Pt100 sensor, Lemosa-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	DYNEO with RS232 interface (option)
8 980 032	Ethernet / RS232 interface converter for up to 4 JULABO instruments	DYNEO with RS232 interface (option)
8 980 033	Ethernet / RS232 interface converter for up to 8 JULABO instruments	DYNEO with RS232 interface (option)

Calibration and Manufacturer's 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 Units, Category 1	DYNEO

IQ / OQ Documentation

Order no.	Description	Suitable for
2 310 110	IQ / OQ Documentation, Category 1	DYNEO

Maintenance

Order no.	Description	Suitable for
2 350 101	Maintenance JULABO Units, Category 1 Maintenance includes preventive measures that help to maintain functionality, to minimize downtime as well as costs. A JULABO maintenance comprises works such as visual inspection, cleaning, functional test and includes a maintenance report.	DYNEO

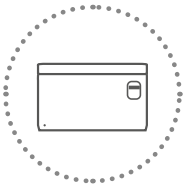
The Julabo advantages at a glance.

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.

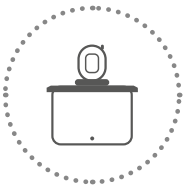
Refrigerated circulators

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

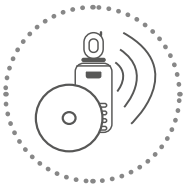
Heating circulators are available in various designs including heating immersion circulators, heating circulators with open bath, and heating circulators to cover a temperature range from +20 °C to +300 °C.

Additional products

In addition, the JULABO product portfolio offers instruments for special requirements such as calibration baths, beer forcing test baths, immersion / flow-through coolers and temperature controllers.

Highly dynamic temperature control systems

The highly dynamic temperature control systems from JULABO can be used for demanding temperature applications ranging from -93 °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

The high degree of efficiency of JULABO recirculating coolers makes them an environmentally-friendly and economic alternative to tap water cooling in the temperature range -25 °C to +130 °C.

Accessories

An extensive range of accessories allows for adaptation of JULABO products 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.

Custom requirements - custom products

JULABO's wide range of products provide a solution for almost any application. If no standard product can be used for a specific requirement, our specialists will work out a custom solution together 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 detailed manuals get your instruments up and running on site.

Services 24/7.
Around the clock availability. You can find suitable accessories, data sheets, manuals, case studies and more at www.julabo.com.

Technical data

Model	Order No.	Working temperature range °C	Display	Display resolution	Temperature control	Temperature stability °C	Heating capacity kW	Cooling Refrigeration unit	+20
DD-200F	9 021 701	-20 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.2
DD-200F	9 021 701.D	-20 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.2
DD-200F	9 021 701.A	-20 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.2
DD-201F	9 021 702	-20 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.2
DD-201F	9 021 702.D	-20 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.2
DD-201F	9 021 702.A	-20 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.2
DD-300F	9 021 703	-25 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.3
DD-300F	9 021 703.D	-25 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.3
DD-300F	9 021 703.A	-25 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.3
DD-310F	9 021 713.N1*	-30 ... +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.3
DD-310F	9 021 713.N1.A*	-30 ... +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.3
DD-310F	9 021 713.N1.D*	-30 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.3
DD-450F	9 021 714.N1*	-30 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.44
DD-450F	9 021 714.N1.D*	-30 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.44
DD-450F	9 021 714.N1.A*	-30 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.44
DD-449F	9 021 714.N1	-32 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.44
DD-449F	9 021 714.N1.D	-32 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.44
DD-449F	9 021 714.N1.A	-32 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.44
DD-600F	9 021 704	-35 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.6
DD-600F	9 021 704.D	-35 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.6
DD-600F	9 021 704.A	-35 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.6
DD-601F	9 021 705	-35 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.6
DD-601F	9 021 705.D	-35 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.6
DD-601F	9 021 705.A	-35 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.6
DD-900F	9 021 706	-38 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.9
DD-900F	9 021 706.D	-38 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.9
DD-900F	9 021 706.A	-38 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	0.9
DD-1000F	9 021 707	-50 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	1
DD-1000F	9 021 707.D	-50 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	1
DD-1000F	9 021 707.A	-50 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	1
DD-1000FW	9 021 727	-50 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage water	1
DD-1000FW	9 021 727.D	-50 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage water	1
DD-1000FW	9 021 727.A	-50 … +200	3.5" TFT	0.01	PID3	± 0.01	2	1-stage water	1
DD-1001F	9 021 708	-38 … +100	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	1
DD-1001F	9 021 708.D	-38 … +100	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	1
DD-1001F	9 021 708.A	-38 … +100	3.5" TFT	0.01	PID3	± 0.01	2	1-stage air	1
DD	9 021 000	+20 … +200	3.5" TFT	0.01	PID3	± 0.01	2	-	-
DD	9 021 000.D	+20 … +200	3.5" TFT	0.01	PID3	± 0.01	2	-	-
DD	9 021 000.A	+20 … +200	3.5" TFT	0.01	PID3	± 0.01	2	-	-
DD-BC4	9 021 504	+20 … +200	3.5" TFT	0.01	PID3	± 0.01	2	-	-
DD-BC4	9 021 504.D	+20 … +200	3.5" TFT	0.01	PID3	± 0.01	2	-	-
DD-BC4	9 021 504.A	+20 … +200	3.5" TFT	0.01	PID3	± 0.01	2	-	-
DD-BC6	9 021 506	+20 … +200	3.5" TFT	0.01	PID3	± 0.01	2	-	-
DD-BC6	9 021 506.D	+20 … +200	3.5" TFT	0.01	PID3	± 0.01	2	-	-
DD-BC6	9 021 506.A	+20 … +200	3.5" TFT	0.01	PID3	± 0.01	2	-	-
DD-BC12	9 021 512	+20 … +200	3.5" TFT	0.01	PID3	± 0.01	2	-	-
DD-BC12	9 021 512.D	+20 … +200	3.5" TFT	0.01	PID3	± 0.01	2	-	-
DD-BC12	9 021 512.A	+20 … +200	3.5" TFT	0.01	PID3	± 0.01	2	-	-
DD-BC26	9 021 526	+20 … +200	3.5" TFT	0.01	PID3	± 0.01	2	-	-
DD-BC26	9 021 526.D	+20 … +200	3.5" TFT	0.01	PID3	± 0.01	2	-	-
DD-BC26	9 021 526.A	+20 … +200	3.5" TFT	0.01	PID3	± 0.01	2	-	-

*also available with synthetic refrigerant (replace .N1 with .S1 in order number)

Cooling capacity (kW) at bath temperature (°C) (Bath fluid: ethanol)					Pump			Pump connection thread	Filling volume	Classification according to DIN 12876-1
					Type ⊙ Pressure pump ⊜ Circulating pump	Pressure	Flow rate			
0	-10	-20	-30	-40		bar	l/min	male	liters	
0.15	0.1	0.02	-	-	⊙	0.1 … 0.7	8 … 27	M16×1	3 … 4	III (FL)
0.15	0.1	0.02	-	-	⊙	0.1 … 0.7	8 … 27	M16×1	3 … 4	III (FL)
0.15	0.1	0.02	-	-	⊙	0.1 … 0.7	8 … 27	M16×1	3 … 4	III (FL)
0.15	0.1	0.02	-	-	⊙	0.1 … 0.7	8 … 27	M16×1	3 … 4	III (FL)
0.15	0.1	0.02	-	-	⊙	0.1 … 0.7	8 … 27	M16×1	3 … 4	III (FL)
0.15	0.1	0.02	-	-	⊙	0.1 … 0.7	8 … 27	M16×1	3 … 4	III (FL)
0.27	0.19	0.08	-	-	⊙	0.1 … 0.7	8 … 27	M16×1	3 … 4	III (FL)
0.27	0.19	0.08	-	-	⊙	0.1 … 0.7	8 … 27	M16×1	3 … 4	III (FL)
0.27	0.19	0.08	-	-	⊙	0.1 … 0.7	8 … 27	M16×1	3 … 4	III (FL)
0.27	0.21	0.12	0.02	-	⊙	0.1 … 0.7	8 … 27	M16×1	3 … 4	III (FL)
0.27	0.21	0.12	0.02	-	⊙	0.1 … 0.7	8 … 27	M16×1	3 … 4	III (FL)
0.27	0.21	0.12	0.02	-	⊙	0.1 … 0.7	8 … 27	M16×1	3 … 4	III (FL)
0.37	0.27	0.16	0.06	-	⊙	0.1 … 0.7	8 … 27	M16×1	3 … 4	III (FL)
0.37	0.27	0.16	0.06	-	⊙	0.1 … 0.7	8 … 27	M16×1	3 … 4	III (FL)
0.37	0.27	0.16	0.06	-	⊙	0.1 … 0.7	8 … 27	M16×1	3 … 4	III (FL)
0.35	0.27	0.2	0.06	-	⊙	0.1 … 0.7	8 … 27	M16×1	21 ... 30	III (FL)
0.35	0.27	0.2	0.06	-	⊙	0.1 … 0.7	8 … 27	M16×1	21 ... 30	III (FL)
0.35	0.27	0.2	0.06	-	⊙	0.1 … 0.7	8 … 27	M16×1	21 ... 30	III (FL)
0.44	0.27	0.16	0.04	-	⊙	0.1 … 0.7	8 … 27	M16×1	5 … 7.5	III (FL)
0.44	0.27	0.16	0.04	-	⊙	0.1 … 0.7	8 … 27	M16×1	5 … 7.5	III (FL)
0.44	0.27	0.16	0.04	-	⊙	0.1 … 0.7	8 … 27	M16×1	5 … 7.5	III (FL)
0.44	0.27	0.16	0.04	-	⊙	0.1 … 0.7	8 … 27	M16×1	8 … 10	III (FL)
0.44	0.27	0.16	0.04	-	⊙	0.1 … 0.7	8 … 27	M16×1	8 … 10	III (FL)
0.44	0.27	0.16	0.04	-	⊙	0.1 … 0.7	8 … 27	M16×1	8 … 10	III (FL)
0.8	0.52	0.31	0.11	-	⊙	0.1 … 0.7	8 … 27	M16×1	21 … 30	III (FL)
0.8	0.52	0.31	0.11	-	⊙	0.1 … 0.7	8 … 27	M16×1	21 … 30	III (FL)
0.8	0.52	0.31	0.11	-	⊙	0.1 … 0.7	8 … 27	M16×1	21 … 30	III (FL)
0.96	0.73	0.51	0.25	0.11	⊙	0.1 … 0.7	8 … 27	M16×1	5 … 7.5	III (FL)
0.96	0.73	0.51	0.25	0.11	⊙	0.1 … 0.7	8 … 27	M16×1	5 … 7.5	III (FL)
0.96	0.73	0.51	0.25	0.11	⊙	0.1 … 0.7	8 … 27	M16×1	5 … 7.5	III (FL)
0.96	0.73	0.51	0.25	0.11	⊙	0.1 … 0.7	8 … 27	M16×1	5 … 7.5	III (FL)
0.96	0.73	0.51	0.25	0.11	⊙	0.1 … 0.7	8 … 27	M16×1	5 … 7.5	III (FL)
0.96	0.73	0.51	0.25	0.11	⊙	0.1 … 0.7	8 … 27	M16×1	5 … 7.5	III (FL)
0.85	0.6	0.32	0.12	-	⊙	0.1 … 0.7	8 … 27	M16×1	42 … 56	III (FL)
0.85	0.6	0.32	0.12	-	⊙	0.1 … 0.7	8 … 27	M16×1	42 … 56	III (FL)
0.85	0.6	0.32	0.12	-	⊙	0.1 … 0.7	8 … 27	M16×1	42 … 56	III (FL)
-	-	-	-	-	⊙	0.1 … 0.7	8 … 27	-	-	III (FL)
-	-	-	-	-	⊙	0.1 … 0.7	8 … 27	-	-	III (FL)
-	-	-	-	-	⊙	0.1 … 0.7	8 … 27	-	-	III (FL)
-	-	-	-	-	⊙	0.1 … 0.7	8 … 27	M16×1	3 … 4.5	III (FL)
-	-	-	-	-	⊙	0.1 … 0.7	8 … 27	M16×1	3 … 4.5	III (FL)
-	-	-	-	-	⊙	0.1 … 0.7	8 … 27	M16×1	3 … 4.5	III (FL)
-	-	-	-	-	⊙	0.1 … 0.7	8 … 27	M16×1	4.5 … 6	III (FL)
-	-	-	-	-	⊙	0.1 … 0.7	8 … 27	M16×1	4.5 … 6	III (FL)
-	-	-	-	-	⊙	0.1 … 0.7	8 … 27	M16×1	4.5 … 6	III (FL)
-	-	-	-	-	⊙	0.1 … 0.7	8 … 27	M16×1	8.5 … 12	III (FL)
-	-	-	-	-	⊙	0.1 … 0.7	8 … 27	M16×1	8.5 … 12	III (FL)
-	-	-	-	-	⊙	0.1 … 0.7	8 … 27	M16×1	8.5 … 12	III (FL)
-	-	-	-	-	⊙	0.1 … 0.7	8 … 27	M16×1	19 … 26	III (FL)
-	-	-	-	-	⊙	0.1 … 0.7	8 … 27	M16×1	19 … 26	III (FL)
-	-	-	-	-	⊙	0.1 … 0.7	8 … 27	M16×1	19 … 26	III (FL)

Mains connection V / Hz / A	External Pt100 sensor connection	USB interface	RS232 interface	Analog interface	Permissible ambient temperature °C	Usable bath opening W × L / D cm	Dimensions W × L × H cm	Weight net kg	Model
230/50/12	yes	yes	no	no	+5 … +40	13 × 15 / 15	23 × 39 × 65	25.7	**DD-200F**
230/50/12	yes	yes	yes	no	+5 … +40	13 × 15 / 15	23 × 39 × 65	25.7	**DD-200F**
230/50/12	yes	yes	no	yes	+5 … +40	13 × 15 / 15	23 × 39 × 65	25.7	**DD-200F**
230/50/12	yes	yes	no	no	+5 … +40	13 × 15 / 15	44 × 41 × 44	24.7	**DD-201F**
230/50/12	yes	yes	yes	no	+5 … +40	13 × 15 / 15	44 × 41 × 44	24.7	**DD-201F**
230/50/12	yes	yes	no	yes	+5 … +40	13 × 15 / 15	44 × 41 × 44	24.7	**DD-201F**
230/50/12	yes	yes	no	no	+5 … +40	13 × 15 / 15	24 × 42 × 66	27.7	**DD-300F**
230/50/12	yes	yes	yes	no	+5 … +40	13 × 15 / 15	24 × 42 × 66	27.7	**DD-300F**
230/50/12	yes	yes	no	yes	+5 … +40	13 × 15 / 15	24 × 42 × 66	27.7	**DD-300F**
230/50/13	yes	yes	no	no	+5 … +40	13 × 15 / 15	23 × 40 × 65	27.4	**DD-310F**
230/50/13	yes	yes	yes	no	+5 … +40	13 × 15 / 15	23 × 40 × 65	27.4	**DD-310F**
230/50/13	yes	yes	no	yes	+5 … +40	13 × 15 / 15	23 × 40 × 65	27.4	**DD-310F**
230/50/13	yes	yes	no	no	+5 … +40	13 × 15 / 15	23 × 40 × 65	27.7	**DD-450F**
230/50/13	yes	yes	yes	no	+5 … +40	13 × 15 / 15	23 × 40 × 65	27.7	**DD-450F**
230/50/13	yes	yes	no	yes	+5 … +40	13 × 15 / 15	23 × 40 × 65	27.7	**DD-450F**
230/50/12	yes	yes	no	no	+5 … +40	28 × 35 / 20	37 × 59 × 69	39.5	DD-449F
230/50/12	yes	yes	yes	no	+5 … +40	28 × 35 / 20	37 × 59 × 69	39.5	DD-449F
230/50/12	yes	yes	no	yes	+5 … +40	28 × 35 / 20	37 × 59 × 69	39.5	DD-449F
230/50/14	yes	yes	no	no	+5 … +40	22 × 15 / 15	33 × 47 × 69	35.7	**DD-600F**
230/50/14	yes	yes	yes	no	+5 … +40	22 × 15 / 15	33 × 47 × 69	35.7	**DD-600F**
230/50/14	yes	yes	no	yes	+5 … +40	22 × 15 / 15	33 × 47 × 69	35.7	**DD-600F**
230/50/14	yes	yes	no	no	+5 … +40	22 × 15 / 20	36 × 46 × 74	38.2	**DD-601F**
230/50/14	yes	yes	yes	no	+5 … +40	22 × 15 / 20	36 × 46 × 74	38.2	**DD-601F**
230/50/14	yes	yes	no	yes	+5 … +40	22 × 15 / 20	36 × 46 × 74	38.2	**DD-601F**
230/50/16	yes	yes	no	no	+5 … +40	26 × 35 / 20	39 × 62 ×75	51.7	**DD-900F**
230/50/16	yes	yes	yes	no	+5 … +40	26 × 35 / 20	39 × 62 ×75	51.7	**DD-900F**
230/50/16	yes	yes	no	yes	+5 … +40	26 × 35 / 20	39 × 62 ×75	51.7	**DD-900F**
230/50/16	yes	yes	no	no	+5 … +40	18 × 13 / 15	42 × 49 ×70	51.2	**DD-1000F**
230/50/16	yes	yes	yes	no	+5 … +40	18 × 13 / 15	42 × 49 ×70	51.2	**DD-1000F**
230/50/16	yes	yes	no	yes	+5 … +40	18 × 13 / 15	42 × 49 ×70	51.2	**DD-1000F**
230/50/16	yes	yes	no	no	+5 … +40	18 × 13 / 15	42 × 49 × 74	51.2	**DD-1000FW**
230/50/16	yes	yes	yes	no	+5 … +40	18 × 13 / 15	42 × 49 × 74	51.2	**DD-1000FW**
230/50/16	yes	yes	no	yes	+5 … +40	18 × 13 / 15	42 × 49 × 74	51.2	**DD-1000FW**
230/50/16	yes	yes	no	no	+5 … +40	35 × 41 / 30	45 × 64 ×95	73.7	**DD-1001F**
230/50/16	yes	yes	yes	no	+5 … +40	35 × 41 / 30	45 × 64 × 95	73.7	**DD-1001F**
230/50/16	yes	yes	no	yes	+5 … +40	35 × 41 / 30	45 × 64 × 95	73.7	**DD-1001F**
230/50/12	yes	yes	no	no	+5 … +40	-	13.2 × 16 × 35.5	2.5	**DD**
230/50/12	yes	yes	yes	no	+5 … +40	-	13.2 × 16 × 35.5	2.5	**DD**
230/50/12	yes	yes	no	yes	+5 … +40	-	13.2 × 16 × 35.5	2.5	**DD**
230/50/12	yes	yes	no	no	+5 … +40	13 × 15 / 15	23 × 41 × 42	8.5	**DD-BC4**
230/50/12	yes	yes	yes	no	+5 … +40	13 × 15 / 15	23 × 41 × 42	8.5	**DD-BC4**
230/50/12	yes	yes	no	yes	+5 … +40	13 × 15 / 15	23 × 41 × 42	8.5	**DD-BC4**
230/50/12	yes	yes	no	no	+5 … +40	13 × 15 / 20	24 × 44 × 47	9.7	**DD-BC6**
230/50/12	yes	yes	yes	no	+5 … +40	13 × 15 / 20	24 × 44 × 47	9.7	**DD-BC6**
230/50/12	yes	yes	no	yes	+5 … +40	13 × 15 / 20	24 × 44 × 47	9.7	**DD-BC6**
230/50/12	yes	yes	no	no	+5 … +40	22 × 15 / 20	33 × 49 × 47	11.9	**DD-BC12**
230/50/12	yes	yes	yes	no	+5 … +40	22 × 15 / 20	33 × 49 × 47	11.9	**DD-BC12**
230/50/12	yes	yes	no	yes	+5 … +40	22 × 15 / 20	33 × 49 × 47	11.9	**DD-BC12**
230/50/12	yes	yes	no	no	+5 … +40	26 × 35 / 20	39 × 62 × 48	18.7	**DD-BC26**
230/50/12	yes	yes	yes	no	+5 … +40	26 × 35 / 20	39 × 62 × 48	18.7	**DD-BC26**
230/50/12	yes	yes	no	yes	+5 … +40	26 × 35 / 20	39 × 62 × 48	18.7	**DD-BC26**

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.

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	115 V 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-310F	9 021 713.N1*	-	-	1.6 … 2	0.8 … 1	1	0.8	1.5
DD-310F	9 021 713.N1.A*	-	-	1.6 … 2	0.8 … 1	1	0.8	1.5
DD-310F	9 021 713.N1.D*	-	-	1.6 … 2	0.8 … 1	1	0.8	1.5
DD-450F	9 021 714.N1*	-	-	1.6 … 2	0.8 … 1	1	0.8	1.5
DD-450F	9 021 714.N1.D*	-	-	1.6 … 2	0.8 … 1	1	0.8	1.5
DD-450F	9 021 714.N1.A*	-	-	1.6 … 2	0.8 … 1	1	0.8	1.5
DD-449F	9 021 716.N1	-	-	1.6 … 2	0.8 … 1	1	0.8	1.5
DD-449F	9 021 716.N1.A	-	-	1.6 … 2	0.8 … 1	1	0.8	1.5
DD-449F	9 021 716.N1.D	-	-	1.6 … 2	0.8 … 1	1	0.8	1.5
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-1000FW	9 021 727	-	-	1.6 … 2	0.8 … 1	1	-	1.5
DD-1000FW	9 021 727.D	-	-	1.6 … 2	0.8 … 1	1	-	1.5
DD-1000FW	9 021 727.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.

GERMAN Headquarters

JULABO GmbH
Gerhard-Juchheim-Strasse 1
77960 Seelbach
Germany

Tel. +49 7823 51-0
Fax +49 7823 2491
info.de@julabo.com
www.julabo.com

ITALY
JULABO Italia SRL
www.julabo.com

UK
JULABO UK, Ltd.
www.julabo.com

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