

## CORIO" | DYNEO" | MAGIO"

Heating and Refrigerated Circulators



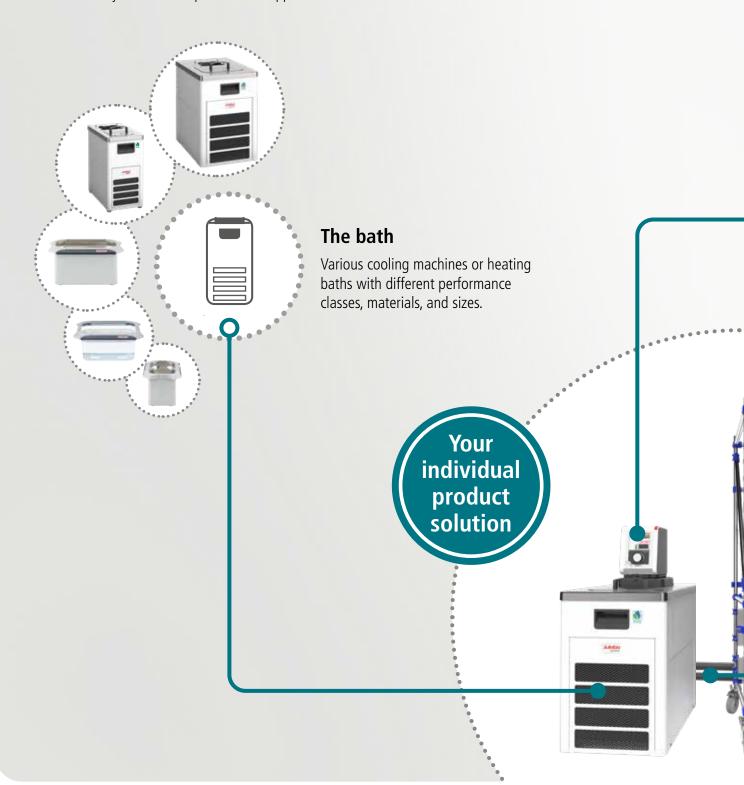
# Welcome to the universe of JULABO circulators

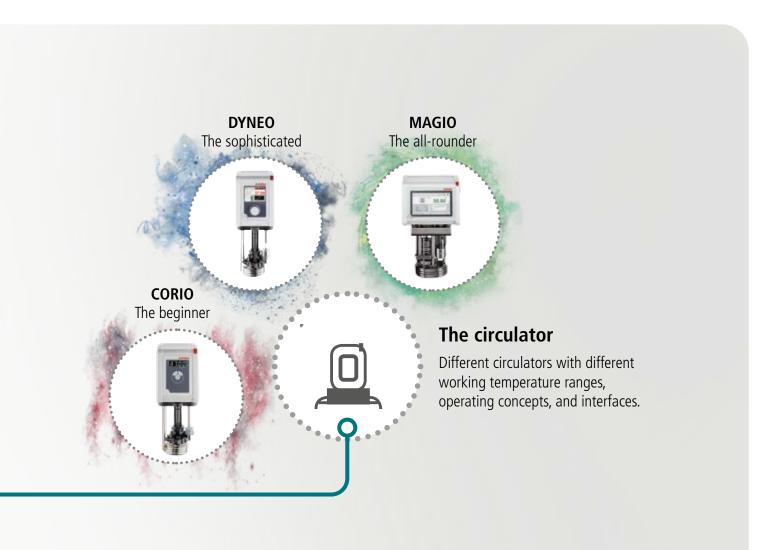


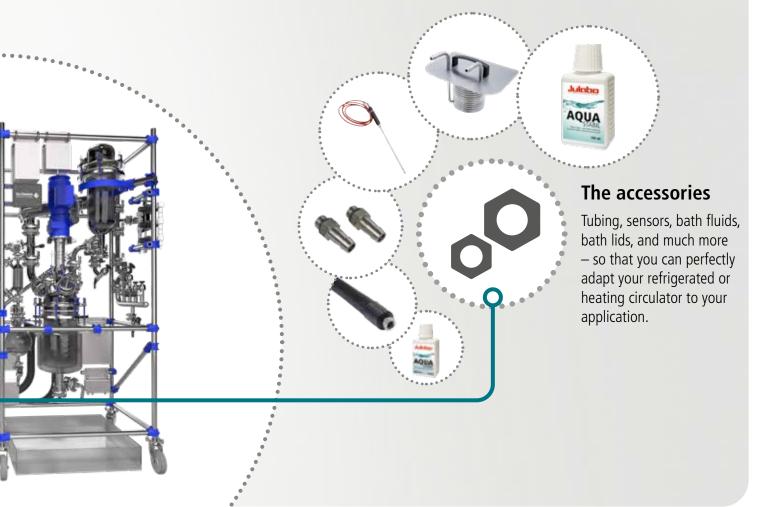


# The perfect temperature control system for any requirement

All JULABO circulators, refrigerated and heating baths are developed and built to be modular. Combined with our extensive range of accessories, the result is a wide range of options that are perfectly tailored to any customer requirement or application.







## Overview of heating baths and cooling machines

Different applications or laboratory experiments require different solutions with respect to the working temperature range, bath volume, material, or heating and cooling capacities of the circulators used. Our broad portfolio of cooling machines and heating baths offers a high degree of flexibility when selecting the right device for almost every conceivable requirement.



#### **Product features of heating baths**



#### Open stainless steel bath tanks

- Working temperature range: +20 °C ... +150 °C
- 7 basic variants with bath volumes of 3.5 l ... 41 l
- All components that come into contact with medium made of stainless steel
- Integrated drain screw (except for B5)



#### Transparent bath tanks

- Working temperature range: +20 °C ... +100 °C
- 4 basic variants with bath volumes of 3.5 l ... 27 l
- All components that come into contact with medium made of polycarbonate



#### Stainless steel bath tanks with bath cover

- Working temperature range: +20 °C ... +300 °C
- 4 basic variants with bath volumes of 3 I ... 26 I
- All components that come into contact with medium made of stainless steel
- Integrated drain tap for safe and easy drainage
- Integrated cooling coil for counter cooling



#### **Tailored solutions**

Not all applications can be temperature controlled with a standard solution. Existing systems may need to be upgraded, adapted, or expanded.

Our Business Unit Solutions has its own in-house development team of engineers and designers and specializes in optimizing or modifying existing equipment in order to meet individual customer requirements.







#### **Product features of cooling machines**

- Wide selection of different performance classes with cooling capacities from 200 W ... 2500 W
- Working temperature range of -90 °C to +200 °C depending on cooling capacity
- Bath volume of 3 I ... 56 I
- Space-saving design (ventilation outlets and connections on front and rear only)
- Optimized cooling coil design provides more space in the bath
- Easily removable venting grid on air-cooled models
- Bath cover and drain tap included





#### High energy efficiency

The majority of JULABO cooling machines have been developed with a focus on energy efficiency. This means significant savings with respect to the operating costs for numerous applications, which also means faster payback of the procurement cost. At the same time, the lower energy consumption positively contributes to climate protection.



#### Climate-friendly refrigerants

Many models work with natural, climate-friendly refrigerants like propane or propylene. These natural refrigerants have a very low GWP and no or very little influence on the greenhouse effect.



## **Heating and refrigerated circulators**

The CORIO series offers the best price-performance ratio in the entry-level range of circulator technology. Equipped with all important core functions, the CORIO models are optimized for simple, daily routine work and are an integral tool at the laboratories of many research institutions and industrial enterprises worldwide.

The plain, modern design of CORIO circulators focuses on simple, user-friendly operation and provides quick access to all necessary functions. With a wide selection of accessories, all CORIO models are modular and can be adapted individually to the customer's application.



#### **Product features of CORIO**

- Working temperature range of -50 °C ... +200 °C depending on model
- Models for internal and external applications
- Heating capacity of 2 kW
- Bright display that is easy to read from a distance
- Internal timer function
- Particularly quiet
- ATC (Absolute Temperature Calibration), PID1 Control, and Active Cooling Control for precise temperature control
- Automatic shut-off in case of high temperature or low liquid level
- Connectivity: CORIO CD features a USB port, while CORIO CP features a USB port and a RS232 interface



#### **Applications**

Temperature control for samples in a circulator bath, or temperature control for external applications such as measuring cells, refractometers, polarimeters, photometers, viscometers, fermenters, electrophoresis chambers, chromatography columns, rotary evaporators, rheometers, and more.





#### Best price-performance ratio.

The CORIO series is manufactured in Germany to the highest quality standards and offers the best price-performance ratio for the entry-level range of circulator technology.



#### Internal & external.

The pump is adjusted using the lever located directly below the display. This makes it easy to switch between internal and external circulation (CORIO CD/CP).



#### Exact.

PID1 Control and Active Cooling Control for precise temperature control.



#### Easy maintenance.

The front grid of the refrigerated circulators can be easily removed for cleaning and maintenance. Without tools.









## Heating and refrigerated circulators

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#### **CORIO C**

- Working temperature range of +20 °C .... +100 °C
- Circulating pump for internal bath applications (water only)
- Circulation flow rate/pressure: 6 l/min | 0.1 bar
- Class I (NFL) according to DIN 12876-1

#### **CORIO CD**

- Working temperature range of -40 °C ... +150 °C
- Pressure pump for internal and external applications
- Pump flow rate/pressure: 15 l/min | 0.35 bar
- Easy pump switching between internal and external circulation (external pump connections M16x1)
- USB port
- Class III (FL) according to DIN 12876-1

#### **CORIO CP**

- Working temperature range of -50 °C ... +200 °C
- Continuously adjustable pressure pump for internal and external applications
- Pump flow rate/pressure: 8 ... 27 l/min | 0.1 ... 0.7 bar
- Easy pump switching between internal and external circulation (external pump connections M16x1)
- USB port and RS232 interface
- Early warning system for low liquid level
- Class III (FL) according to DIN 12876-1



#### Optional pump set.

Mount a pump set on the CORIO CD and CP heating immersion circulator in just a few easy steps. In no time at all, your circulator is ready for temperature control of an external application.

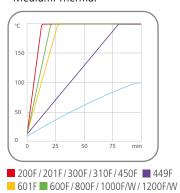


#### Flexible installation.

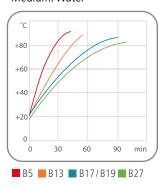
A universal bath attachment clamp is included with orders of CORIO heating immersion circulators. This clamp makes it easy to mount the circulators on both rectangular and round bath tanks.



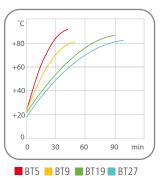
## **Heat-up time** Medium: Thermal



## **Heat-up time** Medium: Water

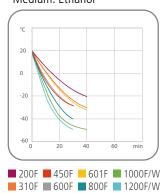


## **Heat-up time** Medium: Water



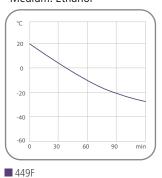
#### Cool-down time

Medium: Ethanol



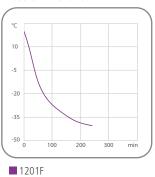
#### Cool-down time

Medium: Ethanol



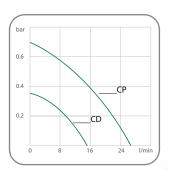
#### Cool-down time

Medium: Ethanol



#### **Pump capacity**

Medium: Water





# CORIO"

			Working temperature range (°C)	Temperature stability (°C)							Pum	р		Usable bath opening W x D / BT (cm)	
			temp C)	ture s							(bar)	ø.	Bath volume (l)	ath o }T (cn	
	del	Order no.	Working to	pera		Coc	oling ca	apacity	(°C)		Pressure (bar)	Flow rate (I/min)	h volt	ble b	
	Model	Ord		Ten	20	0	-10	-20	-30	-40	Pr	Ho (/m	Bat	Usa W x	
Heating immersion circulators	С	9 011 000	+20 +100	±0.03	-	-	-	-	-	-	0.1	6	-	-	
	CD	9 012 000	+20 +150	±0.03	-	-	-	-	-	-	0.35	15	-	-	
CORIO C	СР	9 013 000	+20 +200	±0.02	-	-	-	-	-	-	0.1 0.7	8 27	-	-	
Open heating bath circulators	C-BT5	9 011 305	+20 +100	± 0.03	-	-	-	-	-	-	0.1	6	3.5 5	15 × 15 / 15	
	C-BT9	9 011 309	+20 +100	± 0.03	-	-	-	-	-	-	0.1	6	6 9	23 × 15 / 15	
	C-BT19	9 011 319	+20 +100	± 0.03	-	-	-	-	-	-	0.1	6	14 19	30 × 35 / 15	
	C-BT27	9 011 327	+20 +100	± 0.03	-	-	-	-	-	-	0.1	6	20 27	30 × 35 / 20	
CORIO C-BT9	C-B5	9 011 405	+20 +100	± 0.03	-	-	-	-	-	-	0.1	6	3.5 5	15 × 15 / 15	
	C-B13	9 011 413	+20 +100	± 0.03	-	-	-	-	-	-	0.1	6	9 13	30 × 18 / 15	
	C-B17	9 011 417	+20 +100	± 0.03	-	-	-	-	-	-	0.1	6	13 17	30 × 18 / 20	
-	C-B19	9 011 419	+20 +100	± 0.03	-	-	-	-	-	-	0.1	6	14 19	30 × 35 / 15	
-	C-B27	9 011 427	+20 +100	± 0.03	-	-	-	-	-	-	0.1	6	17 27	30 × 35 / 20	
CORIO C-B17															
Heating circulators with open bath	CD-BT5	9 012 305	+20 +100	± 0.03	-	-	-	-	-	-	0.35	15	3.5 5	15 × 15 / 15	
100	CD-BT19	9 012 319	+20 +100	± 0.03	-	-	-	-	-	-	0.35	15	14 19	30 × 35 / 15	
	CD-BT27	9 012 327	+20 +100	± 0.03	-	-	-	-	-	-	0.35	15	20 27	30 × 35 / 20	
( )	CD-B5	9 012 405	+20 +150	± 0.03	-	-	-	-	-	-	0.35	15	3.5 5	15 × 15 / 15	
CORIO CD-BT19	CD-B13	9 012 413	+20 +150	± 0.03	-	-	-	-	-	-	0.35	15	9 13	30 × 18 / 15	
	CD-B17	9 012 417	+20 +150	± 0.03	-	-	-	-	-	-	0.35	15	13 17	30 × 18 / 20	
0	CD-B19	9 012 419	+20 +150	± 0.03	-	-	-	-	-	-	0.35	15	14 19	30 × 35 / 15	
With.	CD-B27	9 012 427	+20 +150	± 0.03	-	-	-	-	-	-	0.35	15	17 27	30 × 35 / 20	
and the second	CD-B33	9 012 433	+20 +150	± 0.03	-	-	-	-	-	-	0.35	15	26 39	66 × 32 / 15	
CORIO CD-B19	CD-B39	9 012 439	+20 +150	± 0.03	-	-	-	-	-	-	0.35	15	35 41	33 × 30 / 30	
Heating circulators	CD-BC4	9 012 504	+20 +150	± 0.03	-	-	-	-	-	-	0.35	15	3 4.5	13 × 15 / 15	
U	CP-BC4	9 013 504	+20 +200	± 0.02	-	-	-	-	-	-	0.1 0.7	8 27	3 4.5	13 × 15 / 15	
	CD-BC6	9 012 506	+20 +150	± 0.03	-	-	-	-	-	-	0.35	15	6 7.5	13 × 15 / 20	
	CP-BC6	9 013 506	+20 +200	± 0.02	-	-	-	-	-	-	0.1 0.7	8 27	6 7.5	13 × 15 / 20	
CORIO CP-BC4	CD-BC12	9 012 512	+20 +150	± 0.03	-	-	-	-	-	-	0.35	15	8.5 12	22 × 15 / 20	
1	CP-BC12	9 013 512	+20 +200	± 0.02	-	-	-	-	-	-	0.1 0.7	8 27	8.5 12	22 × 15 / 20	
	CD-BC26	9 012 526	+20 +150	± 0.03	-	-	-	-	-	-	0.35	15	19 26	26 × 35 / 20	
	CP-BC26	9 013 526	+20 +200	± 0.02	-	-	-	-	-	-	0.1 0.7	8 27	19 26	26 × 35 / 20	
CORIO CP-BC12															



		ıce						*			*	
		Classified in accordance with DIN 12876-1		a)			. 7	74				
Dimensions W x D x H (cm)	( <b>6</b> ;	l in ac 12876		RS232 interface						-6.7 1985		
Dimensions W x D x H (c	Weight (kg)	sified DIN	USB port	32 int	230 V	Availal 208-230 V	ble mains vol 208-230 V	tages / heatin	ig capacity ( 115 V	(kW) 100 V	200 V	<u> </u>
			USB	RS2	50 Hz	60 Hz	50/60 Hz	50/60 Hz	60 Hz	50/60 Hz	50/60 Hz	Model
13.2 × 16 × 36.2	1.9	I (NFL)	-	-	-	-	1.6 2	0.8 1	-	-	-	С
13.2 × 16 × 36.6	2.6	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	-	CD
13.2 × 16 × 36.2	2.5	III (FL)	yes	yes	-	-	1.6 2	0.8 1	-	-	-	СР
23 × 38 × 38	4.8	I (NFL)	-	-	-	-	1.6 2	0.8 1	-	-	-	C-BT5
32 × 38 × 38	3.9	I (NFL)	-	-	-	-	1.6 2	0.8 1	-	-	-	C-BT9
38 × 58 × 38	7	I (NFL)	-	-	-	-	1.6 2	0.8 1	-	-	-	C-BT19
38 × 58 × 43	7.2	I (NFL)	-	-	-	-	1.6 2	0.8 1	-	-	-	C-BT27
23 × 38 × 41	7.3	I (NFL)	-	-	-	-	1.6 2	0.8 1	-	-	-	C-B5
38 × 40 × 42	8.2	I (NFL)	-	-	-	-	1.6 2	0.8 1	-	-	-	C-B13
38 × 40 × 47	9.3	I (NFL)	-	-	-	-	1.6 2	0.8 1	-	-	-	C-B17
38 × 58 × 42	10.5	I (NFL)	-	-	-	-	1.6 2	0.8 1	-	-	-	C-B19
38 × 58 × 47	13	I (NFL)	-	-	-	-	1.6 2	0.8 1	-	-	-	C-B27
23 × 38 × 38	5.7	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	-	CD-BT5
38 × 58 × 38	8	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	-	CD-BT19
38 × 58 × 43	8.1	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	-	CD-BT27
23 × 38 × 41	8.2	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	-	CD-B5
38 × 40 × 42	9.1	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	-	CD-B13
38 × 40 × 47	9.3	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	-	CD-B17
38 × 58 × 42	11.5	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	-	CD-B19
38 × 58 × 47	13	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	-	CD-B27
91 × 36 × 43	21	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	-	CD-B33
54 × 34 × 57	18	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	-	CD-B39
23 × 41 × 42	8.8	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	-	CD-BC4
23 × 41 × 42	8.5	III (FL)	yes	yes	-	-	1.6 2	0.8 1	-	-	-	CP-BC4
24 × 44 × 47	10	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	-	CD-BC6
24 × 44 × 47	10	III (FL)	yes	yes	2	-	1.6 2	0.8 1	-	-	-	CP-BC6
33 × 49 × 47	12.2	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	-	CD-BC12
33 × 49 × 47	12	III (FL)	yes	yes	-	-	1.6 2	0.8 1	-	-	-	CP-BC12
39 × 62 × 48	19	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	-	CD-BC26
39 × 62 × 48	19	III (FL)	yes	yes	-	-	1.6 2	0.8 1	-	-	-	CP-BC26

Unless specified otherwise, all data relates to operation at nominal voltage/frequency and an ambient temperature of +20°C. Cooling capacity measured according to DIN 12876-2. For information on the refrigerants used, visit: www.julabo.com.

## CORIO

CP-200F 9013 701.N1 -20 +150 ±0.03 0.22 0.17 0.13 0.06 - 0.035 15 3 4 13 × 15 / 15			<del>-</del>	Order no.	Working temperature range (°C)	Temperature stability (°		Cod	oling ca	pacity	(°C)		Pressure (bar)	ate	Bath volume (l)	Usable bath opening W x D / BT (cm)	
CD-200F 9013 701 M1 -20 +150 ±0.03 0.22 0.17 0.13 0.06 0.035 15 3 4 13 x 15 / 15	Refrigerated circul	ators	Model	Orde	Worl	Tem	20					-40	Press	Flow ra (I/min)	Bath	Usak W x	
CD-201F 9012 702 -20+150 ± 0.03 0.22 0.16 0.12 0.06 - 0.035 15 34 13×15/15 CP-201F 9013 702 -20+200 ± 0.03 0.2 0.15 0.1 0.02 - 0.010.7 827 34 13×15/15 CD-300F 9012 703 -25+150 ± 0.03 0.31 0.28 0.20 0.11 - 0.035 15 34 13×15/15 CP-300F 9013 703 -25+200 ± 0.03 0.3 0.27 0.19 0.08 - 0.010.7 827 34 13×15/15 CP-300F 9013 703 -25+200 ± 0.03 0.31 0.28 0.22 0.13 0.03 - 0.35 15 34 13×15/15 CP-310F 9013 713.N1 30+150 ± 0.03 0.31 0.28 0.22 0.13 0.03 - 0.35 15 34 13×15/15 CP-450F 9013 713.N1 30+200 ± 0.03 0.45 0.38 0.28 0.17 0.07 - 0.35 15 34 13×15/15 CP-450F 9013 714.N1 -30+150 ± 0.03 0.45 0.38 0.28 0.17 0.07 - 0.35 15 34 13×15/15 CP-449F 9013 716.N1 -32+150 ± 0.03 0.45 0.36 0.28 0.21 0.07 - 0.35 15 2026 28×35/20 CP-449F 9013 716.N1 -32+150 ± 0.03 0.44 0.35 0.27 0.2 0.16 0.06 - 0.107 827 2026 28×35/20 CP-600F 9013 704 -35+150 ± 0.03 0.6 0.46 0.29 0.18 0.06 - 0.35 15 575 22×15/15 CP-600F 9013 704 -35+150 ± 0.03 0.6 0.44 0.27 0.16 0.04 - 0.107 827 575 22×15/15/20 CP-601F 9013 705 -35+200 ± 0.03 0.6 0.44 0.27 0.16 0.04 - 0.107 827 575 22×15/15/20 CP-601F 9013 707 -40+150 ± 0.03 0.6 0.44 0.27 0.16 0.04 - 0.107 827 575 18×13/15 CP-600F 9013 707 -40+150 ± 0.03 0.6 0.44 0.27 0.16 0.04 - 0.107 827 575 18×13/15 CP-600F 9013 707 -40+150 ± 0.03 0.6 0.40 0.27 0.16 0.04 - 0.107 827 575 18×13/15 CP-600F 9013 707 -40+150 ± 0.03 0.6 0.40 0.27 0.16 0.04 - 0.107 827 575 18×13/15 CP-600F 9013 717N1 -40+150 ± 0.03 0.8 0.75 0.58 0.4 0.25 0.11 0.107 827 575 18×13/15 CP-1000F 9013 717N1 -40+150 ± 0.03 0.8 0.75 0.58 0.4 0.25 0.11 0.107 827 575 18×13/15 CP-1200F 9013 717N1 -40+150 ± 0.03 1.25 1.1 0.88 0.63 0.8 0.21 0.35 15 575 18×13/15 CP-1200F 9013 717N1 -40+150 ± 0.03 1.25 1.1 0.88 0.63 0.80 0.21 0.35 15 575 18×13/15 CP-1200F 9013 717N1 -40+150 ± 0.03 1.25 1.1 0.88 0.63 0.80 0.21 0.35 15 575 18×13/15 CP-1200F 9013 717N1 -40+150 ± 0.03 1.25 1.1 0.88			CD-200F	9 012 701.N1	-20 +150	± 0.03	0.22	0.17	0.13	0.06	-	-	0.35	15	3 4	13 × 15 / 15	
CONDICIDATION POLICY PROTECTION CONDICIDATION PROTECTION PROTECTIO	A Comment		CP-200F	9 013 701.N1	-20 +200	± 0.03	0.2	0.15	0.1	0.02	-	-	0.1 0.7	8 27	3 4	13 × 15 / 15	
CORD CD-200F 9012 773 -25+150 ±0.03 0.31 0.28 0.20 0.11 0.35 15 34 13×15/15 15 CP-300F 9013 773 -25+200 ±0.03 0.3 0.27 0.19 0.08 0.107 827 34 13×15/15 15 34 13×15/	10		CD-201F	9 012 702	-20 +150	± 0.03	0.22	0.16	0.12	0.06	-	-	0.35	15	3 4	13 × 15 / 15	
CP-300F 9013 703 -25 +200 ± 0.03 0.3 0.27 0.19 0.08 0.110.7 827 34 13×15/15  CP-310F 9012 713.N1 -30 +150 ± 0.03 0.31 0.28 0.22 0.13 0.03 - 0.35 15 34 13×15/15  CP-310F 9013 713.N1 -30 +200 ± 0.03 0.3 0.27 0.21 0.12 0.02 - 0.10.7 827 34 13×15/15  CP-450F 9012 714.N1 -30 +150 ± 0.03 0.44 0.37 0.27 0.16 0.06 - 0.10.7 827 34 13×15/15  CP-450F 9013 714.N1 -30 +200 ± 0.03 0.44 0.37 0.27 0.16 0.06 - 0.10.7 827 34 13×15/15  CP-449F 9013 716.N1 -32 +150 ± 0.03 0.44 0.37 0.27 0.16 0.06 - 0.10.7 827 34 13×15/15  CP-600F 9013 704 -35 +200 ± 0.03 0.44 0.35 0.27 0.2 0.06 - 0.10.7 827 2026 28×35/20  CP-600F 9013 704 -35 +200 ± 0.03 0.6 0.46 0.29 0.18 0.06 - 0.10.7 827 575 22×15/15  CP-601F 9012 705 -35 +200 ± 0.03 0.6 0.44 0.27 0.16 0.04 - 0.10.7 827 575 22×15/15  CP-601F 9012 707 -40 +150 ± 0.03 0.6 0.46 0.29 0.18 0.06 - 0.35 15 575 18×13/15  CP-601F 9012 707 -40 +150 ± 0.03 1.0 0.08 0.75 0.5 0.27 0.13 0.35 15 5 75. 18×13/15  CP-1000F 9012 707 -40 +150 ± 0.03 1.0 0.08 0.75 0.5 0.27 0.13 0.35 15 5 75. 18×13/15  CP-1000F 9013 715.N1 -40 +150 ± 0.03 1.0 0.08 0.73 0.5 0.25 0.11 0.1 0.7 8 27 5 75. 18×13/15  CP-800F 9013 715.N1 -40 +150 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 75. 18×13/15  CP-1200F 9013 715.N1 -40 +150 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 75. 18×13/15  CP-1200F 9013 717.N1 -50 +200 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 75. 18×13/15  CP-1200F 9013 715.N1 -40 +150 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 75. 18×13/15  CP-1200F 9013 715.N1 -40 +150 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 75. 18×13/15  CP-1200F 9013 715.N1 -40 +150 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 75. 18×13/15  CP-1200F 9013 715.N1 -40 +150 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 75. 18×13/15  CP-1200F 9013 715.N1 -40 +150 ± 0.03 1.25 1.1 0.88 0.63 0.30 0.21 0.35 15 5 75. 18×13/15  CP-1200F 9013 715.N1 -40 +150 ±			CP-201F	9 013 702	-20 +200	± 0.03	0.2	0.15	0.1	0.02	-	-	0.1 0.7	8 27	3 4	13 × 15 / 15	
CORIO CD-200F  CD-310F  9 012 713.N1  -30 +150 ±0.03  0.31  0.28  0.22  0.13  0.02  - 0.135  15  3 4  13 ×15/15  3			CD-300F	9 012 703	-25 +150	± 0.03	0.31	0.28	0.20	0.11	-	-	0.35	15	3 4	13 × 15 / 15	
CORIO CD-430F 9012 713.N1 -30 +150 ±0.03 0.31 0.28 0.22 0.13 0.03 - 0.35 15 3 4 13 x 15 / 15	CORIO CD 2005		CP-300F	9 013 703	-25 +200	± 0.03	0.3	0.27	0.19	0.08	-	-	0.1 0.7	8 27	3 4	13 × 15 / 15	
CORIO CD-450F 9012 714.N1 -30 +150 ± 0.03 0.45 0.38 0.28 0.17 0.07 - 0.35 15 3 4 13 x 15 / 15	CONIO CD-200F		CD-310F	9 012 713.N1	-30 +150	± 0.03	0.31	0.28	0.22	0.13	0.03	-	0.35	15	3 4	13 × 15 / 15	
CORIO CD-450F 9 013 714.N1  -30 +200 ± 0.03  0.44  0.37  0.27  0.16  0.06  - 0.1 0.7  8 27  3 4  13 x 15 / 15	le.		CP-310F	9 013 713.N1	-30 +200	± 0.03	0.3	0.27	0.21	0.12	0.02	-	0.1 0.7	8 27	3 4	13 × 15 / 15	
CORIO CD-449F 9012 716.N1 -32 +150 ± 0.03 0.45 0.36 0.28 0.21 0.07 - 0.35 15 20 26 28 x 35 / 20    CP-449F 9013 716.N1 -32 +200 ± 0.03 0.44 0.35 0.27 0.2 0.06 - 0.1 0.7 8 27 20 26 28 x 35 / 20    CD-600F 9012 704 -35 +150 ± 0.03 0.6 0.46 0.29 0.18 0.06 - 0.35 15 5 7.5 22 x 15 / 15    CP-600F 9013 704 -35 +200 ± 0.03 0.6 0.46 0.29 0.18 0.06 - 0.35 15 5 7.5 22 x 15 / 15    CP-601F 9012 705 -35 +150 ± 0.03 0.6 0.46 0.29 0.18 0.06 - 0.35 15 8 10 22 x 15 / 20    CP-601F 9013 705 -35 +200 ± 0.03 0.6 0.44 0.27 0.16 0.04 - 0.1 0.7 8 27 8 10 22 x 15 / 20    CP-1000F 9013 707 -40 +150 ± 0.03 1 0.98 0.75 0.5 0.27 0.13 0.35 15 5 7.5 18 x 13 / 15    CP-1000F 9013 707 -50 +200 ± 0.03 1 0.98 0.75 0.5 0.27 0.13 0.35 15 5 7.5 18 x 13 / 15    CP-800F 9013 715.N1 -40 +150 ± 0.03 0.85 0.75 0.58 0.4 0.25 0.11 0.1 0.7 8 27 5 7.5 18 x 13 / 15    CP-800F 9013 715.N1 -40 +150 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 7.5 18 x 13 / 15    CP-1200F 9013 717.N1 -50 +200 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 7.5 18 x 13 / 15    CP-1200FW 9013 728.N1 -40 +150 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 7.5 18 x 13 / 15    CP-1200FW 9013 728.N1 -40 +150 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 7.5 18 x 13 / 15    CP-1200FW 9013 728.N1 -40 +150 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 7.5 18 x 13 / 15    CP-1200FW 9013 728.N1 -40 +150 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 7.5 18 x 13 / 15    CP-1200FW 9013 728.N1 -40 +150 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 7.5 18 x 13 / 15    CP-1200FW 9013 728.N1 -40 +150 ± 0.03 1.25 1.1 0.85 0.54 0.30 0.05 0.35 15 48 56 35 x 41 / 30    CP-1200FW 9013 728.N1 -40 +100 ± 0.03 1.25 1.1 0.85 0.54 0.30 0.05 0.35 15 48 56 35 x 41 / 30    CP-1200FW 9013 728.N1 -40 +100 ± 0.03 1.25 1.1 0.85 0.54 0.30 0.05 0.35 15 48 56 35 x 41 / 30    CP-1200FW 9013 728.N1 -40 +100 ± 0.03 1.25 1.1 0.85 0.54 0.30 0.			CD-450F	9 012 714.N1	-30 +150	± 0.03	0.45	0.38	0.28	0.17	0.07	-	0.35	15	3 4	13 × 15 / 15	
CORIO CD-449F 9 013 716.N1 -32 +200 ± 0.03 0.44 0.35 0.27 0.2 0.06 - 0.1 0.7 8 27 20 26 28 × 35 / 20			CP-450F	9 013 714.N1	-30 +200	± 0.03	0.44	0.37	0.27	0.16	0.06	-	0.1 0.7	8 27	3 4	13 × 15 / 15	
CD-600F 9 012 704 -35 +150 ± 0.03 0.6 0.46 0.29 0.18 0.06 - 0.35 15 5 7.5 22 × 15 / 15			CD-449F	9 012 716.N1	-32 +150	± 0.03	0.45	0.36	0.28	0.21	0.07	-	0.35	15	20 26	28 × 35 / 20	
CP-600F 9 013 704 -35 +200 ± 0.03 0.6 0.44 0.27 0.16 0.04 - 0.1 0.7 8 27 5 7.5 22 × 15 / 15 CD-601F 9 012 705 -35 +150 ± 0.03 0.6 0.46 0.29 0.18 0.06 - 0.35 15 8 10 22 × 15 / 20 CP-601F 9 013 705 -35 +200 ± 0.03 0.6 0.44 0.27 0.16 0.04 - 0.1 0.7 8 27 8 10 22 × 15 / 20 CP-1000F 9 012 707 -40 +150 ± 0.03 1 0.98 0.75 0.5 0.27 0.13 0.35 15 5 7.5 18 × 13 / 15 CP-1000F 9 013 707 -50 +200 ± 0.03 1 0.96 0.73 0.5 0.25 0.11 0.1 0.7 8 27 5 7.5 18 × 13 / 15 CP-800F 9 013 715.N1 -40 +150 ± 0.03 0.85 0.75 0.58 0.4 0.25 0.11 0.35 15 5 7.5 18 × 13 / 15 CP-1200F 9 013 715.N1 -40 +150 ± 0.03 0.84 0.74 0.57 0.39 0.24 0.1 0.1 0.7 8 27 5 7.5 18 × 13 / 15 CP-1200F 9 013 717.N1 -40 +150 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 7.5 18 × 13 / 15 CP-1200FW 9 012 728.N1 -40 +150 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 7.5 18 × 13 / 15 CP-1200FW 9 013 728.N1 -50 +200 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 7.5 18 × 13 / 15 CP-1200FW 9 013 728.N1 -50 +200 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 7.5 18 × 13 / 15 CP-1200FW 9 012 718.N1 -40 +150 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 7.5 18 × 13 / 15 CP-1200FW 9 012 718.N1 -40 +150 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 7.5 18 × 13 / 15 CP-1200FW 9 012 718.N1 -40 +150 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 7.5 18 × 13 / 15 CP-1200FW 9 012 718.N1 -40 +150 ± 0.03 1.25 1.1 0.85 0.54 0.30 0.05 0.35 15 48 27 5 7.5 18 × 13 / 15 CP-1200FW 9 012 718.N1 -40 +150 ± 0.03 1.25 1.1 0.85 0.54 0.30 0.05 0.35 15 48 27 5 7.5 18 × 13 / 15 CP-1200FW 9 012 718.N1 -40 +150 ± 0.03 1.25 1.1 0.85 0.54 0.30 0.05 0.35 15 48 27 5 7.5 18 × 13 / 15 CP-1200FW 9 012 718.N1 -40 +100 ± 0.03 1.25 1.1 0.85 0.54 0.30 0.05 0.35 15 48 27 5 7.5 18 × 13 / 15 CP-1200FW 9 012 718.N1 -40 +100 ± 0.03 1.25 1.1 0.85 0.54 0.30 0.05 0.35 15 48 27 5 7.5 18 × 13 / 15 CP-1200FW 9 012 718.N1 -40	CORIO CD-450F		CP-449F	9 013 716.N1	-32 +200	± 0.03	0.44	0.35	0.27	0.2	0.06	-	0.1 0.7	8 27	20 26	28 × 35 / 20	
CD-601F 9 012 705 -35 +150 ± 0.03 0.6 0.46 0.29 0.18 0.06 - 0.35 15 8 10 22 × 15 / 20   CP-601F 9 013 705 -35 +200 ± 0.03 0.6 0.44 0.27 0.16 0.04 - 0.1 0.7 8 27 8 10 22 × 15 / 20   CD-1000F 9 012 707 -40 +150 ± 0.03 1 0.98 0.75 0.5 0.27 0.13 0.35 15 5 7.5 18 × 13 / 15   CP-1000F 9 013 707 -50 +200 ± 0.03 1 0.96 0.73 0.5 0.25 0.11 0.1 0.7 8 27 5 7.5 18 × 13 / 15   CP-800F 9 012 715.N1 -40 +150 ± 0.03 0.85 0.75 0.58 0.4 0.25 0.11 0.1 0.7 8 27 5 7.5 18 × 13 / 15   CP-800F 9 013 715.N1 -40 +200 ± 0.03 0.84 0.74 0.57 0.39 0.24 0.1 0.1 0.7 8 27 5 7.5 18 × 13 / 15   CP-1200F 9 012 717.N1 -40 +150 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 7.5 18 × 13 / 15   CP-1200F 9 013 717.N1 -50 +200 ± 0.03 1.24 1.09 0.87 0.62 0.37 0.2 0.1 0.7 8 27 5 7.5 18 × 13 / 15   CP-1200FW 9 013 728.N1 -40 +150 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 7.5 18 × 13 / 15   CP-1200FW 9 013 728.N1 -50 +200 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 7.5 18 × 13 / 15   CP-1200FW 9 013 728.N1 -50 +200 ± 0.03 1.24 1.09 0.87 0.62 0.37 0.2 0.1 0.7 8 27 5 7.5 18 × 13 / 15   CP-1200FW 9 013 728.N1 -50 +200 ± 0.03 1.24 1.09 0.87 0.62 0.37 0.2 0.1 0.7 8 27 5 7.5 18 × 13 / 15   CP-1200FW 9 012 718.N1 -40 +100 ± 0.03 1.25 1.1 0.85 0.54 0.30 0.05 0.35 15 48 56 35 × 41 / 30   CP-1200FW 9 012 718.N1 -40 +100 ± 0.03 1.25 1.1 0.85 0.54 0.30 0.05 0.35 15 48 56 35 × 41 / 30   CP-1200FW 9 012 718.N1 -40 +100 ± 0.03 1.25 1.1 0.85 0.54 0.30 0.05 0.35 15 48 56 35 × 41 / 30   CP-1200FW 9 012 718.N1 -40 +100 ± 0.03 1.25 1.1 0.85 0.54 0.30 0.05 0.35 15 48 56 35 × 41 / 30   CP-1200FW 9 012 718.N1 -40 +100 ± 0.03 1.25 1.1 0.85 0.54 0.30 0.05 0.35 15 48 56 35 × 41 / 30   CP-1200FW 9 012 718.N1 -40 +100 ± 0.03 1.25 1.1 0.85 0.54 0.30 0.05 0.35 15 48 56 35 × 41 / 30   CP-1200FW 9 012 718.N1 -40 +100 ± 0.03 1.25 1.1 0.85 0.54 0.30 0.05 0.35 15 48 56 35 × 41 / 30			CD-600F	9 012 704	-35 +150	± 0.03	0.6	0.46	0.29	0.18	0.06	-	0.35	15	5 7.5	22 × 15 / 15	
CP-601F 9 013 705 -35 +200 ± 0.03 0.6 0.44 0.27 0.16 0.04 - 0.1 0.7 8 27 8 10 22 × 15 / 20 CD-1000F 9 012 707 -40 +150 ± 0.03 1 0.98 0.75 0.5 0.27 0.13 0.35 15 5 7.5 18 × 13 / 15 CP-800F 9 012 715.N1 -40 +150 ± 0.03 0.85 0.75 0.58 0.4 0.25 0.11 0.1 0.7 8 27 5 7.5 18 × 13 / 15 S .	In		CP-600F	9 013 704	-35 +200	± 0.03	0.6	0.44	0.27	0.16	0.04	-	0.1 0.7	8 27	5 7.5	22 × 15 / 15	
CD-1000F 9 012 707 -40 +150 ± 0.03 1 0.98 0.75 0.5 0.27 0.13 0.35 15 5 7.5 18 × 13 / 15	180		CD-601F	9 012 705	-35 +150	± 0.03	0.6	0.46	0.29	0.18	0.06	-	0.35	15	8 10	22 × 15 / 20	
CP-1000F 9 013 707 -50 +200 ± 0.03 1 0.96 0.73 0.5 0.25 0.11 0.1 0.7 8 27 5 7.5 18× 13 / 15  CD-800F 9 012 715.N1 -40 +150 ± 0.03 0.85 0.75 0.58 0.4 0.25 0.11 0.35 15 5 7.5 18× 13 / 15  CP-800F 9 013 715.N1 -40 +200 ± 0.03 0.84 0.74 0.57 0.39 0.24 0.1 0.1 0.7 8 27 5 7.5 18× 13 / 15  CP-1200F 9 012 717.N1 -40 +150 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 7.5 18× 13 / 15  CP-1200F 9 013 717.N1 -50 +200 ± 0.03 1.24 1.09 0.87 0.62 0.37 0.2 0.1 0.7 8 27 5 7.5 18× 13 / 15  CP-1200FW 9 013 728.N1 -40 +150 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 7.5 18× 13 / 15  CP-1200FW 9 013 728.N1 -50 +200 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 7.5 18× 13 / 15  CP-1200FW 9 013 728.N1 -50 +200 ± 0.03 1.24 1.09 0.87 0.62 0.37 0.2 0.1 0.7 8 27 5 7.5 18× 13 / 15  CD-1200FW 9 012 718.N1 -40 +100 ± 0.03 1.25 1.1 0.85 0.54 0.30 0.05 0.35 15 48 56 35× 41 / 30			CP-601F	9 013 705	-35 +200	± 0.03	0.6	0.44	0.27	0.16	0.04	-	0.1 0.7	8 27	8 10	22 × 15 / 20	
CD-800F 9 012 715.N1 -40 +150 ± 0.03 0.85 0.75 0.58 0.4 0.25 0.11 0.35 15 5 7.5 18 × 13 / 15			CD-1000F	9 012 707	-40 +150	± 0.03	1	0.98	0.75	0.5	0.27	0.13	0.35	15	5 7.5	18 × 13 / 15	
CP-800F 9 013 715.N1 -40 +200 ± 0.03 0.84 0.74 0.57 0.39 0.24 0.1 0.1 0.7 8 27 5 7.5 18 × 13 / 15	CORIO CD-449F		CP-1000F	9 013 707	-50 +200	± 0.03	1	0.96	0.73	0.5	0.25	0.11	0.1 0.7	8 27	5 7.5	18× 13 / 15	
CD-1200F 9 012 717.N1 -40 +150 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 7.5 18 × 13 / 15			CD-800F	9 012 715.N1	-40 +150	± 0.03	0.85	0.75	0.58	0.4	0.25	0.11	0.35	15	5 7.5	18 × 13 / 15	
CP-1200F 9 013 717.N1 -50 +200 ± 0.03 1.24 1.09 0.87 0.62 0.37 0.2 0.1 0.7 8 27 5 7.5 18×13/15  CD-1200FW 9 012 728.N1 -40 +150 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 7.5 18×13/15  CP-1200FW 9 013 728.N1 -50 +200 ± 0.03 1.24 1.09 0.87 0.62 0.37 0.2 0.1 0.7 8 27 5 7.5 18×13/15  CD-1201F 9 012 718.N1 -40 +100 ± 0.03 1.25 1.1 0.85 0.54 0.30 0.05 0.35 15 48 56 35×41/30	l e		CP-800F	9 013 715.N1	-40 +200	± 0.03	0.84	0.74	0.57	0.39	0.24	0.1	0.1 0.7	8 27	5 7.5	18 × 13 / 15	
CD-1200FW 9 012 728.N1 -40 +150 ± 0.03 1.25 1.1 0.88 0.63 0.38 0.21 0.35 15 5 7.5 18×13/15  CP-1200FW 9 013 728.N1 -50 +200 ± 0.03 1.24 1.09 0.87 0.62 0.37 0.2 0.1 0.7 8 27 5 7.5 18×13/15  CD-1201F 9 012 718.N1 -40 +100 ± 0.03 1.25 1.1 0.85 0.54 0.30 0.05 0.35 15 48 56 35×41/30			CD-1200F	9 012 717.N1	-40 +150	± 0.03	1.25	1.1	0.88	0.63	0.38	0.21	0.35	15	5 7.5	18 × 13 / 15	
CP-1200FW 9 013 728.N1 -50 +200 ± 0.03 1.24 1.09 0.87 0.62 0.37 0.2 0.1 0.7 8 27 5 7.5 18×13/15  CD-1201F 9 012 718.N1 -40 +100 ± 0.03 1.25 1.1 0.85 0.54 0.30 0.05 0.35 15 48 56 35×41/30			CP-1200F	9 013 717.N1	-50 +200	± 0.03	1.24	1.09	0.87	0.62	0.37	0.2	0.1 0.7	8 27	5 7.5	18 × 13 / 15	
CORIO CD-1200F CD-1200F 9 012 718.N1 -40 +100 ± 0.03 1.25 1.1 0.85 0.54 0.30 0.05 0.35 15 48 56 35 × 41 / 30			CD-1200FW	9 012 728.N1	-40 +150	± 0.03	1.25	1.1	0.88	0.63	0.38	0.21	0.35	15	5 7.5	18 × 13 / 15	
CD-1201F 9 012 718.N1 -40 +100 ± 0.03 1.25 1.1 0.85 0.54 0.30 0.05 0.35 15 48 56 35 × 41 / 30	CORIO CD-1200F		CP-1200FW	9 013 728.N1	-50 +200	± 0.03	1.24	1.09	0.87	0.62	0.37	0.2	0.1 0.7	8 27	5 7.5	18 × 13 / 15	
CP-1201F 9 013 718.N1 -40 +100 ± 0.03 1.25 1.1 0.85 0.54 0.30 0.05 0.1 0.7 8 27 48 56 35 × 41 / 30	COMO CD 12001		CD-1201F	9 012 718.N1	-40 +100	± 0.03	1.25	1.1	0.85	0.54	0.30	0.05	0.35	15	48 56	35 × 41 / 30	
			CP-1201F	9 013 718.N1	-40 +100	± 0.03	1.25	1.1	0.85	0.54	0.30	0.05	0.1 0.7	8 27	48 56	35 × 41 / 30	

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- Units with natural refrigerant are marked with the following symbol: Solution Refrigerated circulators with the letter "W" in their name are water-cooled, while all other refrigerated circulators are air-cooled



Dimensions W x D x H (cm)	t (kg)	Classified in accordance with DIN 12876-1	ort	RS232 interface		Availa	ble mains vol	tages / heatin	g capacity (	(kW)		
Dimen W x D	Weight (kg)	Classif with D	USB port	RS232	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	Model
23 × 39 × 65	26	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	-	CD-200F
23 × 39 × 65	26	III (FL)	yes	yes	-	-	1.6 2	0.8 1	-	-	-	CP-200F
44 × 41 × 44	25	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	-	CD-201F
44 × 41 × 44	24.7	III (FL)	yes	yes	-	-	1.6 2	0.8 1	1	0.8	-	CP-201F
24 × 42 × 66	28	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	-	CD-300F
24 × 42 × 66	28	III (FL)	yes	yes	2	1.6 2	-	0.8 1	1	0.8	-	CP-300F
23 × 40 × 65	25.2	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	-	CD-310F
23 × 40 × 65	25.6	III (FL)	yes	yes	-	-	1.6 2	0.8 1	1	0.8	-	CP-310F
23 × 40 × 65	25.1	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	-	CD-450F
23 × 40 × 65	25.6	III (FL)	yes	yes	-	1.6 2	1.6 2	0.8 1	1	0.8	-	CP-450F
$37 \times 59 \times 69$	39.5	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	-	CD-449F
$37 \times 59 \times 69$	39.5	III (FL)	yes	yes	-	1.6 2	1.6 2	0.8 1	-	-	-	CP-449F
33 × 47 × 69	36	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	-	CD-600F
$33 \times 47 \times 69$	35.7	III (FL)	yes	yes	-	-	1.6 2	-	1	0.8	1.5	CP-600F
$33 \times 47 \times 74$	38.5	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	-	CD-601F
$33 \times 47 \times 74$	38.5	III (FL)	yes	yes	-	-	1.6 2	-	1	0.8	1.5	CP-601F
42 × 49 × 74	51.5	III (FL)	yes	-	2	1.6 2	-	-	1	-	1.5	CD-1000F
42 × 49 × 74	51.5	III (FL)	yes	yes	-	-	1.6 2	-	1	-	1.5	CP-1000F
33 × 47 × 70	42	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	1.5	CD-800F
$33 \times 47 \times 70$	42	III (FL)	yes	yes	-	-	1.6 2	-	1	0.8	1.5	CP-800F
$33 \times 47 \times 70$	42	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	1.5	CD-1200F
$33 \times 47 \times 70$	42	III (FL)	yes	yes	-	-	1.6 2	-	1	0.8	1.5	CP-1200F
33 × 47 × 70	42	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	1.5	CD-1200FW
$33 \times 47 \times 70$	42	III (FL)	yes	yes	-	-	1.6 2	-	1	0.8	1.5	CP-1200FW
45 × 64 × 95	68	III (FL)	yes	-	2	1.6 2	-	-	1	0.8	1.5	CD-1201F
$45 \times 64 \times 95$	68	III (FL)	yes	yes	-	-	1.6 2	-	1	0.8	1.5	CP-1201F

Unless specified otherwise, all data relates to operation at nominal voltage/frequency and an ambient temperature of +20°C. Cooling capacity measured according to DIN 12876-2. For information on the refrigerants used, visit: www.julabo.com.



## Heating and refrigerated circulators

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. Whether used in basic research, material testing, or technical systems, DYNEO heating and refrigerated circulators offer functional solutions for every requirement and budget.

The modern instruments are designed for easy and time-saving operation and provide quick access to all relevant functions via a central rotary knob. With a wide selection of accessories, all DYNEO devices are modular and can be adapted individually to the customer's application.



#### **Product features of DYNEO**

- Working temperature range of -50 °C ... +200 °C depending on model
- Models for internal and external applications
- Heating capacity of 2 kW
- 3.5" color display with high brightness, easy to see from a distance
- Level indicator for bath medium on display
- Integrated programmer for automatically running temperature time profiles
- ATC3 (Absolute Temperature Calibration, 3-point) and PID3 Control with interference compensation and adjustable parameters for high-precision temperature control
- Powerful, infinitely adjustable pressure pump (external pump connections M16x1)
- Flow rate 8 ... 27 l/min, pressure: 0.1 ... 0.7 bar
- External Pt100 sensor connection for highly precise measurement and control directly in the external application.
- Connectivity: Integrated USB port, digital RS232 or analog interface available as option



#### **Applications**

Temperature control for samples in a circulator bath, or temperature control for external applications such as measuring cells, refractometers, polarimeters, photometers, viscometers, fermenters, electrophoresis chambers, chromatography columns, rotary evaporators, rheometers, and more.





#### Turn. Press. Done.

Easy control over all parameters via central rotary knob.



#### Powerful. Adjustable.

Powerful, infinitely adjustable pressure pump for temperature control of external applications, even over long distances.



#### **Temperature. Under control.**

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



## DYNEO

## Heating and refrigerated circulators

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. Whether used in basic research, material testing, or technical systems, DYNEO heating and refrigerated circulators offer functional solutions for every requirement and budget.

The modern instruments are designed for easy and time-saving operation and provide quick access to all relevant functions via a central rotary knob. With a wide selection of accessories, all DYNEO devices are modular and can be adapted individually to the customer's application.

#### **Optional interfaces**

All DYNEO circulators can be equipped, upon customer request, with an additional digital or analog interface for integration into larger process systems.





## **DYNEO .A**- Analog interface

- Simply add an ".A" at the end of the order number
- E.g: 9021701.A

#### DYNEO.D

- Digital interface
- Simply add a ".D" at the end of the order number
- E.g: 9021701.D



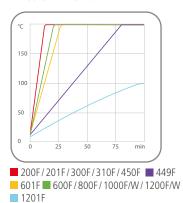


#### For higher requirements.

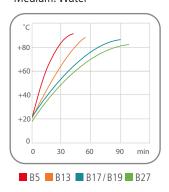
PID Temperature Control with drift compensation and adjustable parameters, improved temperature stability for external applications, temperature stability ±0.01°C internal, < ±0.1°C external.



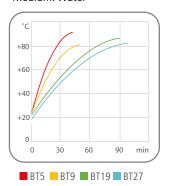
## **Heat-up time** Medium: Thermal



## **Heat-up time** Medium: Water

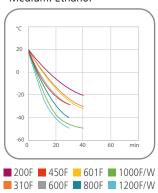


## **Heat-up time** Medium: Water



#### **Cool-down time**

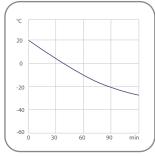
Medium: Ethanol



#### Cool-down time

Medium: Ethanol

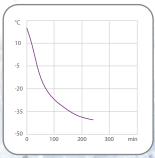
**449**F



A Action

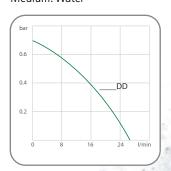
#### Cool-down time

Medium: Ethanol



#### **Pump capacity**

Medium: Water





## DYNEO

	Model	Order no.	Working temperature range (°C)	Iemperature stability (°C	20	Coo 0	ling ca -10	pacity	(°C)	-40	Pressure (bar)	Flow rate (//min)	Bath volume (I)	Usable bath opening W x D / BT (cm)
Heating immersi		9 021 000	+20 +200	± 0.01	-	-	-	-	-	-	0.1 0.7	8 27	-	-
Heating circulators	DD-BC4	9 021 504	+20 +200	± 0.01	-	-	-	-	-	-	0.1 0.7	8 27	3 4.5	13 × 15 / 15
	DD-BC6	9 021 506	+20 +200	± 0.01	-	-	-	-	-	-	0.1 0.7	8 27	6 7.5	13 × 15 / 20
	DD-BC12	9 021 512	+20 +200	± 0.01	-	-	-	-	-	-	0.1 0.7	8 27	8.5 12	22 × 15 / 20
	DD-BC26	9 021 526	+20 +200	± 0.01	-	-	-	-	-	-	0.1 0.7	8 27	19 26	26 × 35 / 20
D. C														
Refrigerated circulators	DD-200F	9 021 701.N1	-20 +200	± 0.01	0.2	0.15	0.1	0.02	-	-	0.1 0.7	8 27	3 4	13 × 15 / 15
	DD-201F	9 021 702	-20 +200	± 0.01	0.2	0.15	0.1	0.02	-	-	0.1 0.7	8 27	3 4	13 × 15 / 15
	DD-300F	9 021 703	-25 +200	± 0.01	0.3	0.27	0.19	0.08	-	-	0.1 0.7	8 27	3 4	13 × 15 / 15
(	DD-310F	9 021 713.N1	-30 +200	± 0.01	0.3	0.27	0.21	0.12	0.02	-	0.1 0.7	8 27	3 4	13 × 15 / 15
	DD-450F	9 021 714.N1	-30 +200	± 0.01	0.44	0.37	0.27	0.16	0.06	-	0.1 0.7	8 27	3 4	13 × 15 / 15
	DD-449F	9 021 714.N1	-32 +200	± 0.01	0.44	0.35	0.27	0.2	0.06	-	0.1 0.7	8 27	20 26	28 × 35 / 20
	DD-600F	9 021 704	-35 +200	± 0.01	0.6	0.44	0.27	0.16	0.04	-	0.1 0.7	8 27	5 7.5	22 × 15 / 15
	DD-601F	9 021 705	-35 +200	± 0.01	0.6	0.44	0.27	0.16	0.04	-	0.1 0.7	8 27	8 10	22 × 15 / 20
	DD-800F	9 021 715.N1	-40 +200	± 0.01	0.84	0.74	0.57	0.39	0.24	0.1	0.1 0.7	8 27	5 7.5	18 × 13 / 15
	DD-1000F	9 021 707	-50 +200	± 0.01	1	0.96	0.73	0.51	0.25	0.11	0.1 0.7	8 27	5 7.5	18 × 13 / 15
,	DD-1200F	9 021 717.N1	-50 +200	± 0.01	1.24	1.09	0.87	0.62	0.37	0.2	0.1 0.7	8 27	5 7.5	18 × 13 / 15
	DD-1200FW	9 021 728.N1	-50 +200	± 0.01	1.24	1.09	0.87	0.62	0.37	0.2	0.1 0.7	8 27	5 7.5	18 × 13 / 15
(	DD-1201F	9 021 718.N1	-40 +100	± 0.01	1.25	1.1	0.85	0.54	0.30	0.05	0.1 0.7	8 27	48 56	35 × 41 / 30

- Units with natural refrigerant are marked with the following symbol: Salar - Refrigerated circulators with the letter "W" in their name are water-cooled, while all other refrigerated circulators are air-cooled







Dimensions W x D x H (cm)	Weight (kg)	Classified in accordance with DIN 12876-1	Pt100 connection	USB port	RS232 interface	Analog interface	230 V	Availal 208-230 V	ole mains vol 208-230 V	tages / heatin 100-115 V	g capacity (	kW)	200 V	Model
Din W	We	Cla	<b>F</b>	NSE	RSZ	Ang	50 Hz	60 Hz	50/60 Hz	50/60 Hz	60 Hz	50/60 Hz	50/60 Hz	Mo
13.2 × 16 × 35.5	2.5	III (FL)	yes	yes	optional	optional	-	-	1.6 2	0.8 1	-	-	1.5	DD
23 × 41 × 42	8.5	III (FL)	yes	yes	optional	optional	-	-	1.6 2	0.8 1	-	-	1.5	DD-BC4
24 × 44 × 47	9.7	III (FL)	yes	yes	optional	optional	-	-	1.6 2	0.8 1	-	-	1.5	DD-BC6
33 × 49 × 47	11.9	III (FL)	yes	yes	optional	optional	-	-	1.6 2	0.8 1	-	-	1.5	DD-BC12
39 × 62 × 48	18.7	III (FL)	yes	yes	optional	optional	-	-	1.6 2	0.8 1	-	-	1.5	DD-BC26
23 × 39 × 65	25.7	III (FL)	yes	yes	optional	optional	-	-	1.6 2	-	1	0.8	-	DD-200F
44 × 41 × 44	24.7	III (FL)	yes	yes	optional	optional	-	-	1.6 2	-	1	0.8	-	DD-201F
24 × 42 × 66	27.7	III (FL)	yes	yes	optional	optional	2	2	-	-	1	0.8	-	DD-300F
23 × 40 × 65	27.4	III (FL)	yes	yes	optional	optional	-	-	1.6 2	-	1	0.8	1.5	DD-310F
23 × 40 × 65	27.4	III (FL)	yes	yes	optional	optional	-	-	1.6 2	-	1	0.8	1.5	DD-450F
37 × 59 × 69	39.5	III (FL)	yes	yes	optional	optional	-	-	1.6 2	0.8 1	-	-	1.5	DD-449F
33 × 47 × 69	35.7	III (FL)	yes	yes	optional	optional	-	-	1.6 2	-	1	0.8	1.5	DD-600F
33 × 47 × 74	38.2	III (FL)	yes	yes	optional	optional	-	-	1.6 2	-	1	0.8	1.5	DD-601F
33 × 47 × 70	42	III (FL)	yes	yes	optional	optional	-	-	1.6 2	0.8 1	-	-	1.5	DD-800F
42 × 49 ×74	51.2	III (FL)	yes	yes	optional	optional	-	-	1.6 2	-	1	-	1.5	DD-1000F
33 × 47 × 70	42	III (FL)	yes	yes	optional	optional	-	-	1.6 2	0.8 1	-	-	1.5	DD-1200F
33 × 47 × 70	42	III (FL)	yes	yes	optional	optional	-	-	1.6 2	0.8 1	-	-	1.5	DD-1200FW
45 × 64 × 95	68	III (FL)	yes	yes	optional	optional	-	-	1.6 2	0.8 1	-	-	1.5	DD-1201F

Unless specified otherwise, all data relates to operation at nominal voltage/frequency and an ambient temperature of +20°C. Cooling capacity measured according to DIN 12876-2. For information on the refrigerants used, visit: www.julabo.com.





## MAGIO\*

## Heating and refrigerated circulators

The MAGIO series of heating and refrigerated circulators stands for high-end devices in the highest performance class, offering a broad working temperature range of -90  $^{\circ}$ C to +300  $^{\circ}$ C. These units include extra powerful pressure/suction pumps, thus meeting the highest temperature control requirements of demanding external applications.

The high resolution touch display guarantees simple, intuitive operation and optimal visibility of all relevant functions. With a wide selection of accessories, all MAGIO devices are modular and can be adapted individually to the customer's application.



#### **Product features of MAGIO**

- Working temperature range of -90 °C ... +300 °C depending on model
- Ideal for demanding external applications
- Heating capacity of up to 3 kW
- Large, high-resolution TFT touch display with multilingual user interface
- Integrated programmer for automatically running temperature time profiles
- ATC10 (Absolute Temperature Calibration, 10-point) and Intelligent Cascade Control (ICC) for automatic, self-optimizing adjustment of PID control parameters for high-precision temperature control
- Highest quality: All parts that come into contact with medium made entirely of stainless steel
- Extremely powerful, infinitely adjustable pressure/suction pump (external pump connections M16x1)
- Flow rate 16 ... 31 l/min, supply pressure 0.24 ... 0.92 bar, suction 0.03 ... 0.4 bar
- External Pt100 sensor connection for highly precise measurement and control directly in the external application.
- Connectivity: USB port, RS232/RS485, Ethernet, and Stakei connection are permanently integrated, analog interface and OPC UA available as accessories



#### **Applications**

Temperature control for external applications such as measuring cells, refractometers, polarimeters, photometers, viscometers, fermenters, electrophoresis chambers, chromatography columns, rotary evaporators, rheometers, and more.





## Everything made of stainless steel.

The highest level of quality and material compatibility. All parts that come into contact with the medium are made entirely of stainless steel.



#### Many interfaces.

Simple remote control, data management and integration into process structures. USB, RS232/RS485, Ethernet, and Stakei connection are permanently integrated.



#### Perfect control.

A high resolution TFT touch display means that the operator always has an eye on all the values and functions. The intuitive menu structure makes easy control possible.



#### Most powerful pump.

The integrated pressure/suction pump is the most powerful in its class as well as continuously adjustable, making it ideal for external temperature control applications.



## MAGIO\*

## **Heating and refrigerated circulators**

The MAGIO series of heating and refrigerated circulators stands for high-end devices in the highest performance class, offering a broad working temperature range of -90 °C to +300 °C. These units include extra powerful pressure/suction pumps, thus meeting the highest temperature control requirements of demanding external applications.

The high resolution touch display guarantees simple, intuitive operation and optimal visibility of all relevant functions. With a wide selection of accessories, all MAGIO devices are modular and can be adapted individually to the customer's application.

Julebo 20.00

MAGIO bridge mounted circulators combine high temperature control performance with maximum flexibility. The adjustable bridge means that these circulators can be used with any bath tank with a bath volume of up to 100 liters and a bath width of 33 to 68 cm. These models are suitable for internal and external temperature control applications, and include an integrated cooling coil for work below or close to the ambient temperature.

#### **MAGIO MS-Z**

- Immersion depth: 150 mm

- Heating capacity: 2 kW

- Class III according to DIN 12876-1

#### **MAGIO MX-Z**

- Immersion depth: 200 mm

- Heating capacity: 3 kW

- Class III according to DIN 12876-1



#### Maximum safety.

Rated Class III according to DIN12876-1, meaning it can be operated safely even with flammable fluids. Automatic shut-off in case of high temperature or low liquid level.



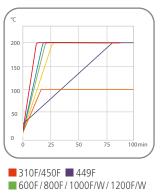
#### Easy connection.

Inclined pump connections (M16×1) for easier connection of applications. Each unit includes 2 barbed fittings for tubing with an inside width of 8/12 mm.



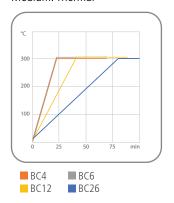
#### Heat-up time

Medium: Thermal



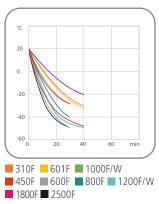
■ 601F ■ 1800F/2500F ■ 1000FF

## **Heat-up time** Medium: Thermal



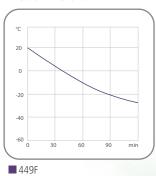
#### **Cool-down time**

Medium: Ethanol



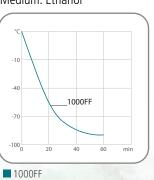
#### **Cool-down time**

Medium: Ethanol



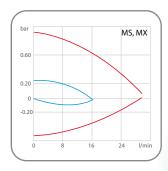
#### Cool-down time

Medium: Ethanol



#### **Pump capacity**

Medium: Water





# MAGIO

					(0,0)									
				oera- E)	stability								Pump	
		Model	Order no.	Working tempera- ture range (°C)	Temperature stability (°C)	20	Coo 0	oling ca	pacity -20	(°C) -30	-40	Pressure (bar)	Supply pressure (I/min)	Suction pressure (bar)
Bridge mounted		MS-Z	9 032 201	+20 +300	± 0.01	-	-	-	-	-	-	0.24 0.92	16 31	0.03 0.4
circulators		MX-Z	9 033 201	+20 +300	± 0.01	-	-	-	-	-	-	0.24 0.92	16 31	0.03 0.4
Heating circulate	ors	MS-BC4	9 032 504	+20 +300	± 0.01	-	-	-	-	-	-	0.24 0.92	16 31	0.03 0.4
		MX-BC6	9 033 506	+20 +300	± 0.01	-	-	-	-	-	-	0.24 0.92	16 31	0.03 0.4
		MX-BC12	9 033 512	+20 +300	± 0.01	-	-	-	-	-	-	0.24 0.92	16 31	0.03 0.4
		MX-BC26	9 033 526	+20 +300	± 0.01	-	-	-	-	-	-	0.24 0.92	16 31	0.03 0.4
Refrigerated circulators		MS-310F	9 032 713.N1	-30 +200	± 0.01	0.26	0.21	0.17	0.10	0.01	-	0.24 0.92	16 31	0.03 0.4
		MS-450F	9 032 714.N1	-30 +200	± 0.01	0.4	0.33	0.24	0.12	0.01	-	0.24 0.92	16 31	0.03 0.4
		MS-449F	9 032 716.N1	-30 +200	± 0.01	0.4	0.31	0.24	0.19	0.05	-	0.24 0.92	16 31	0.03 0.4
		MS-600F	9 032 704	-35 +200	± 0.01	0.6	0.44	0.27	0.16	0.04	-	0.24 0.92	16 31	0.03 0.4
		MS-601F	9 032 705	-35 +200	± 0.01	0.6	0.44	0.27	0.16	0.04	-	0.24 0.92	16 31	0.03 0.4
		MS-800F	9 032 715.N1	-40 +200	± 0.01	0.8	0.7	0.58	0.35	0.2	0.06	0.24 0.92	16 31	0.03 0.4
		MS-1000F	9 032 707	-50 +200	± 0.01	1	0.96	0.7	0.51	0.25	0.11	0.24 0.92	16 31	0.03 0.4
		MS-1200F	9 032 717.N1	-50 +200	± 0.01	1.2	1.05	0.8	0.58	0.33	0.16	0.24 0.92	16 31	0.03 0.4
		MS-1200FW	9 032 728.N1	-50 +200	± 0.01	1.2	1.05	0.8	0.58	0.33	0.16	0.24 0.92	16 31	0.03 0.4
		MX-1800F	9 033 751.N1	-50 +200	± 0.01	1.8	1.5	1.1	0.7	0.4	0.23	0.24 0.92	16 31	0.03 0.4
		MX-2500F	9 033 752.N1	-50 +200	± 0.01	2.5	1.8	1.3	0.85	0.5	0.3	0.24 0.92	16 31	0.03 0.4
Ultra-low Refrigerated Circu														
		MS-1000FF	9 032 757.N1	-90 +100	± 0.02	1.1	1	0.95	0.9	0.9	0.85	16 31	0.24 0.92	0.03 0.4

- Units with natural refrigerant are marked with the following symbol: - Refrigerated circulators with the letter "W" in their name are water-cooled, while all other refrigerated circulators are air-cooled







Bath volume (l)	Usable bath opening W x D / BT (cm)	Dimensions W x D x H (cm)	Pt100 connection	USB port	RS232 interface	Ethernet interface	Stakei interface	Analog interface	Weight (kg)	Classified in accordance with DIN 12876-1	Available ma 200-230 V 50/60 Hz	ains voltages 100-115 V 50/60 Hz	/ heating cap 115 V 60 Hz	pacity (kW) 100 V 50/60 Hz	Model
-	-	34 × 19 × 36	yes	yes	yes	yes	yes	Accessory	7.2	III (FL)	1.6 2	-	1	0.8	MS-Z
-	-	34 × 19 × 41	yes	yes	yes	yes	yes	Accessory	7.6	III (FL)	2.3 3	-	-	-	MX-Z
3 4.5	13 × 15 / 15	23 × 41 × 42	yes	yes	yes	yes	yes	Accessory	11.1	III (FL)	1.6 2	-	1	0.8	MS-BC4
6 7.5	13 × 15 / 20	24 × 44 × 47	yes	yes	yes	yes	yes	Accessory	12.8	III (FL)	2.3 3	-	-	-	MX-BC6
8.5 12	22 × 15 / 20	33 × 49 × 47	yes	yes	yes	yes	yes	Accessory	14.6	III (FL)	2.3 3	-	-	-	MX-BC12
19 26	26 × 35 / 20	39 × 62 × 48	yes	yes	yes	yes	yes	Accessory	21.4	III (FL)	2.3 3	-	-	-	MX-BC26
3 4	13 × 15 / 15	$23 \times 40 \times 65$	yes	yes	yes	yes	yes	Accessory	29	III (FL)	1.6 2	-	1	0.8	MS-310F
3 4	13 × 15 / 15	$23 \times 40 \times 65$	yes	yes	yes	yes	yes	Accessory	29	III (FL)	1.6 2	-	1	0.8	MS-450F
18 26	28 × 35 / 20	$37 \times 59 \times 69$	yes	yes	yes	yes	yes	Accessory	42	III (FL)	1.6 2	-	1	0.8	MS-449F
5 7.5	22 × 15 / 15	$33 \times 47 \times 69$	yes	yes	yes	yes	yes	Accessory	38.3	III (FL)	1.6 2	-	1	0.8	MS-600F
8 10	22 × 15 / 20	$33 \times 47 \times 74$	yes	yes	yes	yes	yes	Accessory	41.5	III (FL)	1.6 2	-	1	0.8	MS-601F
5 7.5	18 × 13 / 15	$33 \times 47 \times 70$	yes	yes	yes	yes	yes	Accessory	44	III (FL)	1.6 2	-	1	0.8	MS-800F
5 7.5	18 × 13 / 15	$42 \times 49 \times 74$	yes	yes	yes	yes	yes	Accessory	54.1	III (FL)	1.6 2	-	1	-	MS-1000F
5 7.5	18 × 13 / 15	$33 \times 47 \times 70$	yes	yes	yes	yes	yes	Accessory	42	III (FL)	1.6 2	-	1	0.8	MS-1200F
5 7.5	18 × 13 / 15	$33 \times 47 \times 70$	yes	yes	yes	yes	yes	Accessory	42	III (FL)	1.6 2	-	1	0.8	MS-1200FW
6.5 11	18 × 13 / 20	$40\times50\times86$	yes	yes	yes	yes	yes	Accessory	61	III (FL)	2.3 3	-	-	-	MX-1800F
6.5 11	18 × 13 / 20	$40 \times 50 \times 86$	yes	yes	yes	yes	yes	Accessory	61	III (FL)	2.3 3	-	-	-	MX-2500F
7.5 10	13 × 15 / 15	55 × 60 × 94	ves	yes	yes	ves	ves	Accessory	108	III (FL)	Available ma	V	208-2 60	30 V	MS-1000FF
7.3 10	.5 ~ 157 75	23 / 00 / 34	,	,	, 03	, 03	,	ccc330/y		(/					5 100011

Unless specified otherwise, all data relates to operation at nominal voltage/frequency and an ambient temperature of +20°C. Cooling capacity measured according to DIN 12876-2. For information on the refrigerants used, visit: www.julabo.com.





# Extensive range of accessories plus tailored services – for the success of your project

The top priority of JULABO is always to provide our customers with the perfect temperature at the desired time and place. Reliable and reproducible.

For this, first-class technology, as well as excellent service, are essential. With our comprehensive range of services and numerous accessories, we work with you to design the perfect solution for your requirements and ensure the long-term operation of your devices. Trust in our unique wealth of experience and proven expertise right from the start. Together, we get the most out of your project.



#### Our range of accessories:

#### Adapters and valves

- Adapters and connectors
- Elbow fittings
- Barbed fittings
- Shut-off valves
- Distributors
- Collar nuts
- Software, lab automation & device management
- Electronic plug connectors
- External Pt100 sensor
- Sensors
- Castor platforms and clamps

#### • Tubing and insulation

- CR tubing
- Viton tubing
- Silicone tubing
- PTFE tubing
- Metal tubing
- Tubing insulation
- Tube clamps
- Bath fluids and water bath protective media
- Bath covers, bath inserts, and bath tanks
- Booster heaters and booster pumps
- Flow measurement & flow control







#### Our services:

- Consulting & project planning
- On-site service
  - Installation & initial operation
  - Leak test
- Maintenance & preventative maintenance contracts
- Remote diagnosis & digital support
- Repairs & spare parts delivery
- Quality assurance and functional testing
  - IQ/OQ documentation
- Calibration and manufacturer certificates
- Service training
- 1 PLUS warranty



For information on all JULABO services, visit: www.JULABO.com/en/service



## JULABO - The right place for high-quality, reliable, and powerful temperature control solutions

JULABO is one of the world's leading manufacturers of temperature control instruments for research, industry and science. For over five decades our premium products have always provided our customers with the exact temperature at the desired time.

Our highly qualified engineers and technicians apply their experience and know-how to constantly improve existing products and develop new, pioneering technologies of the future. Their goal is to always offer our customers the best possible solution. In line with our corporate vision >Superior Temperature Technology for a better Life<.



#### Maximum quality.

Durable, high-quality products thanks to JULABO's proven "Made in Germany" quality.



#### Worldwide presence.

Our 11 subsidiaries and over 100 sales and service partners around the world guarantee fast, expert support for all JULABO products.



#### Green technology.

Our products are deliberately engineered with environmentallyfriendly materials and technologies.



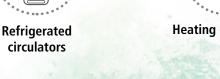
#### 100% checked.

Every JULABO product made must first pass the quality inspection before leaving our manufacturing facilities.

## **Product portfolio**



circulators





Water baths & shaking water baths



**Heating circulators** 



**Products for special** applications



**Highly dynamic** temperature control systems



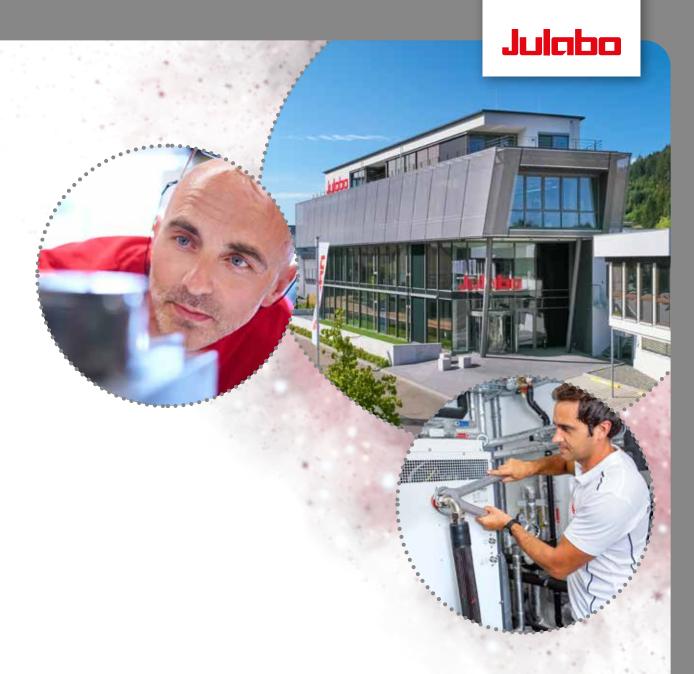
**Accessories** 



Recirculating coolers



**Services** 



## **Customized special solutions**

#### Didn't find the right product? No problem!

Not all applications can be temperature controlled with a standard solution. Existing systems may need to be upgraded and expanded. Our Business Unit Solutions has its own in-house development team of engineers and designers and specializes in optimizing or modifying existing equipment in order to meet individual customer requirements.

Our many years of experience and our flexibility provide the perfect basis for meeting exceptional requirements. Together, in an in-depth exchange of ideas, our specialists develop and implement special, tailor-made solutions according to your needs and expectations. We look forward to making the impossible possible!



For more information on our special solutions, visit: www.julabo.com/en/customizedsolutions.



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