

DYNEO DD-1000F Refrigerated - Heating Circulator

DYNEO DD heating circulators for internal and external applications are equipped with closed bath tanks. The tanks are well insulated and include a coil for counter-cooling. An integrated drain tap makes emptying the tank safe and clean. The multilingual 3.5-inch color display and unique rotary knob provide for straightforward and intuitive operation.

Optional analog and digital interface

DYNEO thermostats can optionally be equipped with analogue and digital interfaces. To request the options, order number must be extended with .d for the digital and .a for the analog interface (9XXX XXXX.A / 9XXX XXX.D)



Address of the state of the sta

Your advantages

- USB connection
- · Removable ventilation grid
- · Space-saving cooling coil design yields more usable space in the bath tank
- For internal and external applications
- Powerful and infinitely adjustable pressure pump
- Flow rate 22 I/min, pressure 0.6 bar
- Easy switching between internal and external circulation
- · Large color TFT display, multilingual interface
- Central rotary knob (controller) simplifies operation
- Integrated programmer
- Integrated external Pt100 connection
- RS232 interface or analog interfaces (optional)
- · Powerful cooling machines
- · Optimized cooling coil design saves space in the bath tank
- · Bath cover included with delivery
- Integrated drain makes emptying liquid easy and safe.

Technical data

Available voltage	versions	Bath	
Order No.	9 021 707	Bath tank	Stainless steel
Available voltage vers	sions:	Bath cover	integrated
9 021 707.02	115V/60Hz (Nema N5-20 Plug)	Usable bath opening cm (W x L / D)	18 x 13 / 15
9 021 707.04	230V/50-60Hz (UK Plug Type BS1363A)		
9 021 707.05	230V/50-60Hz (CH Plug Type SEV 1011)		
9 021 707.33	230V/50-60Hz (Schuko Plug - CEE 7/4 Plug Type F)		
9 021 707.33.chn	230V/50-60Hz (CN Plug)		

Cooling		Other	
Cooling of compressor	1-stage Air	Classification	Classification III (FL)
		Pump function	Pressure Pump
		Pump type	Immersion Pump
Electronics		Dimensions and volumes	
External pt100 sensor connection	integrated	Weight kg	51.2
Integrated programmer	8x60 steps	Barbed fittings inner diameter	8/12 mm
Temperature control	PID2	Dimensions cm (W \times L \times H)	42 x 49 x 70
Absolute temperature calibration	3 Point Calibration	Filling volume I	5 7.5
Temperature display	3.5" TFT Display	Pump connections	M16x1 male



Temperature setting	Shaft Encoder
Electronic Timer hr:min	99 59
Temperature values	
Setting the resolution of the temperature	0.01

Performance values

115V/60Hz (Nema N5-20 Plug)

115V	//60H	lz						
Heatir	ng capa	acity k	W				1	
Coolir	ng capa	acity (E	thano	l)				
°C	20	10	0	-10	-20	-30	-40	
kW	1	1	0.96	0.73	0.51	0.25	0.11	
Viscos	sity ma	x. cST				!	50	
Refrig	erant					ı	R449A	
Filling	volum	e g					190	
Globa	l Warm	ing Po	tentia	for R4	149A	•	1397	
Carbo	n dioxi	de equ	ıivalen	t t		(0.265	
Pump	capac	ity flov	v rate l	/min		8	3 27	
Pump	capac	ity flov	v press	sure ba	ar	(0.1 0.7	

230V/50-60Hz (UK Plug Type BS1363A)

200V/50Hz		200V	/60H	z					
Heating capacity kW	1.5	Heatin	g capa	acity k	W				1.5
Cooling capacity (Ethanol)		Coolin	g capa	acity (E	thano	l)			
°C 20 10 0 -10 -20 -3	0 -40	°C	20	10	0	-10	-20	-30	-40
kW 1 1 0.96 0.73 0.51 0.2	25 0.11	kW	1	1	0.96	0.73	0.51	0.25	0.11
Viscosity max. cST	50	Viscos	ity ma	ıx. cST					50
Refrigerant	R449A	Refrige	erant					-	R449A
Filling volume g	190	Filling	volum	e g					190
Global Warming Potential for R449A	1397	Global	Warm	ing Po	otentia	for R4	149A		1397
Carbon dioxide equivalent t	0.265	Carboi	n dioxi	de equ	uivalen	t t		(0.265
Pump capacity flow rate I/min	8 27	Pump	capac	ity flo	w rate l	/min		:	8 27
Pump capacity flow pressure bar	0.1 0.7	Pump	capac	ity flo	v pres	sure ba	ar	(0.1 0.7
230V/50Hz		230V	/60H	lz					
Heating capacity kW	2	Heatin	g capa	acity k	W			:	2
Cooling capacity (Ethanol)		Coolin	g capa	acity (E	thano	l)			
°C 20 10 0 -10 -20 -3	0 -40	°C	20	10	0	-10	-20	-30	-40
kW 1 1 0.96 0.73 0.51 0.2	25 0.11	kW	1	1	0.96	0.73	0.51	0.25	0.11
Viscosity max. cST	50	Viscos	ity ma	ıx. cST					50
Refrigerant	R449A	Refrige	erant					I	R449A
Filling volume g	190	Filling volume g 190						190	
Global Warming Potential for R449A	1397	Global	Warm	ing Po	otentia	for R4	149A		1397



Carbon dioxide equivalent t	0.265	Carbon dioxide equivalent t	0.265
Pump capacity flow rate I/min	8 27	Pump capacity flow rate I/min	8 27
Pump capacity flow pressure bar	0.1 0.7	Pump capacity flow pressure bar	0.1 0.7

230V/50-60Hz (CH Plug Type SEV 1011)

200V	//50H	Z						200V	/60H	Z					
Heatir	ng capa	acity k	W				1.5	Heatin	g capa	acity k	W				1.5
Coolin	ng capa	city (E	Ethano	l)				Cooling capacity (Ethanol)							
°C	20	10	0	-10	-20	-30	-40	°C	20	10	0	-10	-20	-30	-40
kW	1	1	0.96	0.73	0.51	0.25	0.11	kW	1	1	0.96	0.73	0.51	0.25	0.11
Viscos	sity ma	x. cST	-				50	Viscos	ity ma	x. cST				į	50
Refrig	erant						R449A	Refrige	erant					ı	R449A
Filling	volum	e g					190	Filling	volum	e g				•	190
Globa	l Warm	ing Po	otentia	l for R4	149A		1397	Global	Warm	ing Po	otentia	l for R4	149A		1397
Carbo	n dioxi	de eqı	uivalen	t t			0.265	Carbo	n dioxi	de eqı	uivalen	t t		(0.265
Pump	capac	ity flo	w rate l	/min			8 27	Pump	сарас	ity flov	v rate l	/min		8	8 27
Pump	capac	ity flo	w pres	sure ba	ır		0.1 0.7	Pump	capac	ity flo	v pres	sure ba	ar	(0.1 0.7
230V	//50H	Z						230V	/60H	Z					
	//50H ng capa		W			:	2	230V Heatin			W			2	2
Heatir		acity k		l)			2		g capa	acity k		1)		2	2
Heatir	ng capa	acity k		l) -10	-20	-30	2 -40	Heatin	g capa	acity k		l) -10	-20	-30	-40
Heatir	ng capa	acity k acity (E	Ethano	-10	-20 0.51	-30		Heatin	g capa g capa	acity k acity (E	thano	-10	-20 0.51		
Heatin Coolin °C kW	ng capa ng capa 20	acity k acity (I 10 1	Ethano 0 0.96	-10		-30 0.27	-40	Heatin Coolin °C	g capa g capa 20 1	acity k acity (E 10 1	Ethano 0 0.96	-10		-30 0.25	-40
Heatin Coolin °C kW	ng capa ng capa 20 1 sity ma	acity k acity (I 10 1	Ethano 0 0.96	-10		-30 0.27	-40 0.11	Heatin Coolin °C kW	g capa g capa 20 1 sity ma	acity k acity (E 10 1	Ethano 0 0.96	-10		-30 0.25	-40 0.11
Heatin Coolin °C kW Viscos Refrig	ng capa ng capa 20 1 sity ma	acity k acity (f 10 1 ax. cST	Ethano 0 0.96	-10		-30 0.27	-40 0.11	Heatin Coolin °C kW	g capa g capa 20 1 sity ma	acity k acity (E 10 1 x. cST	Ethano 0 0.96	-10		-30 0.25	-40 0.11
Heatir Coolin °C kW Viscos Refrig	ng capa ng capa 20 1 sity ma	acity k acity (E 10 1 xx. cST	0 0.96	-10 0.73	0.51	-30 0.27	-40 0.11 50 R449A	Heatin Coolin °C kW Viscos Refrigo	g capa g capa 20 1 sity ma erant	acity k acity (E 10 1 xx. cST	0 0.96	-10 0.73	0.51	-30 0.25	-40 0.11 50 R449A
Heatin Coolin °C kW Viscos Refrig Filling	ng capa g capa 20 1 sity ma erant volum	acity k acity (I 10 1 xx. cST e g	Ethano 0 0.96	-10 0.73	0.51	-30 0.27	-40 0.11 50 R449A 190	Heatin Coolin °C kW Viscos Refrige	g capa g capa 20 1 sity ma erant volum Warm	acity k acity (E 10 1 xx. cST e g	Ethano 0 0.96	-10 0.73	0.51	-30 0.25	-40 0.11 50 R449A
Heatin Coolin °C kW Viscos Refrig Filling Global Carbo	ng capa ng capa 20 1 sity ma erant volum	ecity k acity (E 10 1 ax. cST e g de equ	O 0.96 otentia	-10 0.73	0.51	-30 0.27	-40 0.11 50 R449A 190	Heatin Coolin °C kW Viscos Refrige Filling	g capa g capa 20 1 sity ma erant volum Warm n dioxi	ecity k acity (E 10 1 x. cST e g ing Po	0 0.96 otentia	-10 0.73	0.51	-30 0.25	-40 0.11 50 R449A 190

230V/50-60Hz (Schuko Plug - CEE 7/4 Plug Type F)

200V	//50H	lz						200V	7/60H	Z					
Heatir	ng capa	acity k	W				1.5	Heating capacity kW 1.5							1.5
Cooling capacity (Ethanol)								Coolin	g capa	city (E	thano	l)			
°C	20	10	0	-10	-20	-30	-40	°C	20	10	0	-10	-20	-30	-40
kW	1	1	0.96	0.73	0.51	0.25	0.11	kW	1	1	0.96	0.73	0.51	0.25	0.11
Viscos	sity ma	x. cST	-			;	50	Viscos	ity ma	x. cST				!	50
Refrig	erant					ı	R449A	Refrige	erant					ı	R449A
Filling	volum	e g					190	Filling	volum	e g					190
Globa	l Warm	ing Po	otential	l for R4	149A	•	1397	Global	Warm	ing Po	tentia	for R4	149A		1397
Carbo	n dioxi	de equ	uivalen	t t		(0.265	Carbo	n dioxi	de equ	ıivalen	t t		(0.265
Pump	capac	ity flov	w rate l	/min		8	8 27	Pump	capaci	ty flov	v rate l	/min		:	8 27
Pump	capac	ity flov	w press	sure ba	ar	(0.1 0.7	Pump	capaci	ty flov	v press	sure ba	ar	(0.1 0.7
230V	//50H	lz						230V/60Hz							



Heatir	ng capa	acity k	W			2	2	Heatin	g capa	acity k	W			2	2	
Cooling capacity (Ethanol)								Cooling capacity (Ethanol)								
°C	20	10	0	-10	-20	-30	-40	°C	20	10	0	-10	-20	-30	-40	
kW	1	1	0.96	0.73	0.51	0.25	0.11	kW	1	1	0.96	0.73	0.51	0.25	0.11	
Viscos	sity ma	ıx. cST	-			!	50	Viscos	sity ma	x. cST				,	50	
Refrig	erant					ı	R449A	Refrige	erant					ı	R449A	
Filling	volum	e g					190	Filling	volum	e g				•	190	
Globa	l Warm	ing Po	otentia	l for R	449A	•	1397	Global	Warm	ning Po	tentia	l for R4	149A	•	1397	
Carbo	n dioxi	de eqı	uivalen	t t		(0.265	Carbo	n dioxi	de equ	ıivalen	t t		(0.265	
Pump	capac	ity flo	w rate l	/min		8	8 27	Pump	capac	ity flov	v rate l	/min		8	8 27	
Pump	capac	ity flo	w press	sure ba	ar	(0.1 0.7	Pump	capac	ity flov	v press	sure ba	ar	(0.1 0.7	

230V/50-60Hz (CN Plug)

200V	//50H	Z						200V	/60F	lz					
Heatir	ıg capa	city k	W			•	1.5	Heatin	g cap	acity k	W			•	1.5
Coolin	g capa	city (E	thano	l)				Cooling capacity (Ethanol)							
°C	20	10	0	-10	-20	-30	-40	°C	20	10	0	-10	-20	-30	-40
kW	1	1	0.96	0.73	0.51	0.25	0.11	kW	1	1	0.96	0.73	0.51	0.25	0.11
Viscos	sity ma	x. cST	-			!	50	Viscos	ity ma	ax. cST	-			į	50
Refrig	erant					ı	R449A	Refrige	erant					ı	R449A
Filling	volum	e g					190	Filling	volum	ie g				•	190
Globa	Warm	ing Po	otentia	for R4	149A		1397	Global	Warm	ning Po	otentia	I for R4	149A		1397
Carbo	n dioxi	de equ	uivalen	t t		(0.265	Carbo	n dioxi	ide equ	uivalen	t t		(0.265
Pump	capaci	ity flov	w rate l	/min		8	8 27	Pump	capac	ity flov	w rate	l/min		8	8 27
Pump	capaci	ity flov	w press	sure ba	ar	(0.1 0.7	Pump	capac	ity flo	w pres	sure ba	ar	(0.1 0.7
230V	//50H	Z						230V	/60H	lz					
	//50H ig capa		W			2	2	230V Heatin			W			2	2
Heatir		city k		1)		2	2		g cap	acity k		I)		2	2
Heatir	ıg capa	city k		l) -10	-20	-30	-40	Heatin	g cap	acity k		l) -10	-20	-30	-40
Heatin	g capa	city k	Ethano 0			-30	-40	Heatin	g capa g capa	acity k acity (I	Ethano 0		-20 0.51	-30	-40
Heatin Coolin °C kW	ig capa g capa 20	ncity k ncity (E 10 1	O 0 0.96	-10		-30 0.25	-40	Heatin Coolin °C	g capa g capa 20 1	acity k acity (E 10 1	Ethano 0 0.96	-10		-30 0.25	-40
Heatin Coolin °C kW	ng capa ng capa 20 1 sity ma	ncity k ncity (E 10 1	O 0 0.96	-10		-30 0.25	-40 0.11	Heatin Coolin °C kW	g capa g capa 20 1 sity ma	acity k acity (E 10 1	Ethano 0 0.96	-10		-30 0.25	-40 0.11
Heatin Cooling °C kW Viscos Refrig	ng capa ng capa 20 1 sity ma	acity k acity (E 10 1 x. cST	O 0 0.96	-10		-30 0.25	-40 0.11	Heatin Coolin °C kW	g capa g capa 20 1 sity ma	acity k acity (E 10 1	Ethano 0 0.96	-10		-30 0.25	-40 0.11
Heatin Coolin °C kW Viscos Refrig	ng capa g capa 20 1 sity ma	acity k acity (E 10 1 x. cST	0 0.96	-10 0.73	0.51	-30 0.25	-40 0.11 50 R449A	Heatin Coolin °C kW Viscos Refrige	g capa g capa 20 1 sity ma erant volum	acity k acity (I 10 1 ax. cST	0 0 0.96	-10 0.73	0.51	-30 0.25	-40 0.11 50 R449A
Heatin Coolin °C kW Viscos Refrig Filling	ng capa g capa 20 1 sity ma erant volum	acity k acity (E 10 1 x. cST e g ing Po	0 0.96	-10 0.73	0.51	-30 0.25	-40 0.11 50 R449A	Heatin Coolin °C kW Viscos Refrige Filling	g capa g capa 20 1 sity ma erant volum Warm	acity k acity (E 10 1 ax. cST ae g ning Po	Ethano 0 0.96	-10 0.73	0.51	-30 0.25	-40 0.11 50 R449A
Heatin Coolin °C kW Viscos Refrig Filling Global Carbo	g capa g capa 20 1 sity ma erant volume	acity k acity (E 10 1 x. cST e g ing Pode equ	0 0.96 otential	-10 0.73	0.51	-30 0.25	-40 0.11 50 R449A 190	Heatin Coolin °C kW Viscos Refrigo Filling	g capa g capa 20 1 sity ma erant volum Warm	acity k acity (E 10 1 ax. cST ax cST aie g aing Po	0 0.96 otentia	-10 0.73	0.51	-30 0.25	-40 0.11 50 R449A 190

Benefits



Space saving. Free up space.

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.



Solid.

Minimized energy loss through high-quality insulation.





Tidy.

The special drain tap for easy draining of bath fluids without tools.



Condensation protection.

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



100% Checked.

100% testing. 100% quality. Each JULABO Circulator undergoes thorough quality testing before leaving the factory.



Green technology.

Development consistently applied environmentally friendly materials and technologies.



JULABO. Quality.

Highest standards of quality for a long product life



Quick start.

Individual JULABO consultation and comprehensive manuals at your disposal.



Satisfied customers.

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



Services 24/7.

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



ATC3. Calibration.

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



RS232.

Connection using the optional RS232 interface.



USB.

Remote control made easy using the integrated USB interface.



Handle with ease.

Makes day-to-day work easy. Comfortably move your JULABO Circulator around by using the ergonomic handles (front and rear).



Highly precise

PID Temperature control with drift compensation and adjustable control parameters, temperature stability ±0.01...±0.02 °C



Wide range.

Refrigerated and heating circulator in various combinations, circulator in various sizes.

Maximum flexibility through a large selection of accessories.



Turn. Push. Go.

Easy operation of all parameters using the central controller.



Analog I/O.

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



Process stability.

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



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.





Programmer. Integrated.

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



Powerful. Adjustable.

Strong pressure pump, continuously adjustable.



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 heattransfer liquid.



Process. Under control.

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



Stable. Mobile.

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



Connection. Easy.

Inclined pump connections (M16×1) facilitate the connection of applications. Each unit includes 2 barbed fittings of 8/12 mm diameter each.



100 % Cooling capacity

'Active Cooling Control' for cooling available throughout the entire working temperature range, fast cool-down even at higher temperatures



Highest measuring accuracy

'Absolute Temperature Calibration' for manual compensation of a temperature difference, 3-point calibration