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Julabo

Product data sheet

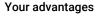
DYNEO DD-1000F Refrigerated - Heating Circulator

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)





- USB connection
- · Removable ventilation grid
- · Space-saving cooling coil design provides more usable space in the bath tank
- For internal and external applications
- Powerful and infinitely adjustable pressure pump
- Flow rate 27 l/min, pressure 0.7 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

Cooling

Available voltage versions

Order No.	9 021 707
Available voltage vers	ions:
9 021 707.02	115V/60Hz (Nema N5-20 Plug)
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)

Bath	
Bath tank	Stainless steel
Bath cover	integrated
Usable bath opening in. (W x L / D) $$	7.1 x 5.1 / 5.9
Bath cover	integrated

v				
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 lbs	112.9	
Integrated programmer	8x60 steps	Barbed fittings inner diameter	8/12 mm	
Temperature control	PID2	Dimensions in. ($W \times L \times H$)	16.5 x 19.3 x 27.6	
Absolute temperature calibration	3 Point Calibration	Filling volume I	5 7.5	
Temperature displayTemperature display	3.5" TFT Display	Pump connections	M16x1 male	

Other

- . I

Temperature settingTemperature setting	Shaft Encoder
Electronic Timer hr:min	99 59
Temperature values	
Setting the resolution of the temperature display °C	0.01
Working temperature range °C	-50 200
Temperature stability °C	±0.01
Ambient temperature °C	5 40

Performance values

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

115V	115V/60Hz											
Heating capacity kW 1												
Cooling capacity (Ethanol)												
°C	20	10	0	-10	-20	-30	-40					
kW	1	1	0.96	0.73	0.51	0.25	0.11					
Viscos	sity ma	IX. cST	-			ļ	50					
Refrig	erant					I	R449A					
Filling	volum	e g					190					
Globa	l Warm	ning Po	otentia	l for R4	149A		1397					
Carbo	Carbon dioxide equivalent t 0.265											
Pump	Pump capacity flow rate I/min 8 27											
Pump	сарас	ity flov	w press	sure ps	si		1.5 10.2					

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

200V/50Hz							200V/60Hz								
Heatin	ig capa	acity k	W				1.5	Heating capacity kW 1.5						1.5	
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	x. cST				ţ	50	Viscos	sity ma	x. cST				:	50
Refrig	erant					F	R449A	Refrige	erant					I	R449A
Filling	volum	e g				-	190	Filling	volum	e g					190
Global	Warm	ing Po	otentia	for R4	149A	-	1397	Global Warming Potential for R449A 1397							1397
Carbo	n dioxi	de equ	uivalen	tt		(0.265	Carbon dioxide equivalent t 0.265							0.265
Pump	capac	ity flov	v rate l	/min		8	8 27	Pump capacity flow rate l/min 8 27						8 27	
Pump	сарас	ity flov	v press	sure ps	si		1.5 10.2	Pump capacity flow pressure psi 1.5 10.2						1.5 10.2	
230V	/50H	z						230V/60Hz							
Heatin	ig capa	acity k	W			2	2	Heatin	g capa	acity k'	W			:	2
Coolin	g capa	acity (E	thano	l)				Coolin	g capa	icity (E	thano)			
°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						0.11	
Viscos	sity ma	x. cST				ţ	50	Viscosity max. cST 50							



Product data sheet - DYNEO DD-1000F

		_	
Refrigerant	R449A	Refrigerant	R449A
Filling volume g	190	Filling volume g	L=190 L=- 2 L=-2 L=-2
Global Warming Potential for R449A	1397	Global Warming Potential for R449A	1397
Carbon dioxide equivalent t	0.265	Carbon dioxide equivalent t	0.265
Pump capacity flow rate l/min	8 27	Pump capacity flow rate l/min	8 27
Pump capacity flow pressure psi	1.5 10.2	Pump capacity flow pressure psi	1.5 10.2

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

200V/50	200V/50Hz						200V/60Hz							
Heating ca	pacity l	W				1.5	Heating capacity kW 1.5							
Cooling cap	pacity (Ethano	I)				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
Viscosity m	nax. cS	Г			1	50	Viscos	ity ma	x. cST				Ę	50
Refrigerant					I	R449A	Refrige	erant					F	R449A
Filling volu	me g					190	Filling	volum	e g				1	190
Global War	ming P	otentia	l for R4	49A		1397	Global	Warm	ing Po	otentia	for R4	49A	1	1397
Carbon dio	xide eq	uivalen	tt			0.265	Carbor	n dioxi	de equ	uivalen	tt		().265
Pump capa	acity flo	w rate l	/min		;	8 27	Pump	capac	ity flow	v rate l	/min		8	3 27
Pump capa	acity flo	w press	sure ps	si		1.5 10.2	Pump capacity flow pressure psi 1.5 10.2							
230V/50	Hz						230V/60Hz							
Heating ca	pacity l	W			:	2	Heating capacity kW 2							
···· 5 ····· 5						Cooling capacity (Ethanol)								
Cooling ca	pacity (Ethano	I)				Coolin	3						
Cooling cap °C 20		Ethano 0	l) -10	-20	-30	-40	°C	20	10	0	-10	-20	-30	-40
				-20 0.51	-30 0.27	-40 0.11			10 1		-10	-20 0.51	-30 0.25	-40 0.11
°C 20	10 1	0 0.96	-10		0.27		°C	20 1	1	0 0.96	-10		0.25	
°C 20 kW 1	10 1 nax. cS	0 0.96	-10		0.27	0.11	°C kW	20 1 iity ma	1	0 0.96	-10		0.25 t	0.11
°C 20 kW 1 Viscosity m	10 1 nax. cS	0 0.96	-10		0.27	0.11	°C kW Viscos	20 1 ity ma erant	1 x. cST	0 0.96	-10		0.25 E	0.11
°C 20 kW 1 Viscosity m Refrigerant	10 1 nax. cS me g	0 0.96	-10 0.73	0.51	0.27	0.11 50 R449A	°C kW Viscos Refrige	20 1 iity ma erant volum	1 x. cST e g	0.96	-10 0.73	0.51	0.25 E F	0.11 50 R449A
°C 20 kW 1 Viscosity m Refrigerant Filling volum	10 1 nax. cS me g ming P	0.96 Constantiation	-10 0.73	0.51	0.27	0.11 50 R449A 190	°C kW Viscos Refrige Filling	20 1 ity ma erant volum Warm	1 x. cST e g ing Pc	0 0.96	-10 0.73 for R4	0.51	0.25 E F 1	0.11 50 R449A 190
°C 20 kW 1 Viscosity m Refrigerant Filling volue Global War	10 1 nax. cS me g ming P xide eq	0.96 T otential uivalen	-10 0.73	0.51	0.27	0.11 50 R449A 190 1397	°C kW Viscos Refrige Filling Global	20 1 erant volum Warm	1 x. cST e g ing Pc de equ	0 0.96 otential	-10 0.73 for R4	0.51	0.25 F 1 1	0.11 50 R449A 190 1397

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

200V/50Hz							200V/60Hz									
Heating capacity kW 1.5							Heating capacity kW 1.5									
Cooling capacity (Ethanol)						Coolin	ig capa	city (E	thano	I)						
°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
Visco	sity ma	ix. cST				ļ	50		Viscosity max. cST 50						50	
Refrig	erant					I	R449A		Refrig	erant					l	R449A
Filling	volum	e g					190		Filling volume g 190						190	
Globa	l Warm	ning Po	otentia	l for R4	149A		1397		Global Warming Potential for R449A 1397						1397	
Carbon dioxide equivalent t 0.265							Carbon dioxide equivalent t 0.265					0.265				
Pump	capac	ity flov	v rate l	/min		8	8 27		Pump capacity flow rate l/min 8 27					8 27		

Pump	Pump capacity flow pressure psi 1.5 10.2											
230V/50Hz												
Heating capacity kW 2												
Cooli	Cooling capacity (Ethanol)											
°C	20	10	0	-10	-20	-30	-40					
kW	1	1	0.96	0.73	0.51	0.25	0.11					
Visco	sity ma	ax. cST				į	50					
Refrig	jerant					F	R449A					
Filling	ı volum	e g				-	190					
Globa	l Warm	ning Po	otentia	l for R4	149A	-	1397					
Carbon dioxide equivalent t 0.265												
Pump capacity flow rate I/min 8 27												
Pump	сарас	ity flow	v press	sure ps	si		1.5 10.2					

Juicho 230V/60Hz Heating capacity kW 2 Cooling capacity (Ethanol) °C 20 10 0 -10 -20 -30 -40 kW 1 1 0.96 0.73 0.51 0.25 0.11 Viscosity max. cST 50 Refrigerant R449A Filling volume g 190 Global Warming Potential for R449A 1397 0.265 Carbon dioxide equivalent t 8 ... 27 Pump capacity flow rate I/min 1.5 ... 10.2 Pump capacity flow pressure psi

Pump capacity flow pressure psi

230V/50-60Hz (CN Plug)

200V	//50H	z					200V/50Hz												
Heatir	Heating capacity kW 1.5																		
Cooling capacity (Ethanol)																			
°C	20	10	0	-10	-20	-30	-40												
kW	1	1	0.96	0.73	0.51	0.25	0.11												
Viscos	sity ma	ix. cST				!	50												
Refrig	erant					I	R449A												
Filling	volum	e g					190												
Global	l Warm	ning Po	tentia	for R4	149A		1397												
Carbo	n dioxi	de equ	iivalen	tt		(0.265												
Pump capacity flow rate l/min 8 27																			
Pump capacity flow pressure psi 1.5 10.2																			
230V	//50H	lz																	

Heatir	Heating capacity kW 2												
Cooling capacity (Ethanol)													
°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				ļ	50						
Refrig	erant					I	R449A						
Filling	volum	e g					190						
Global	Warm	ing Po	tentia	l for R4	149A		1397						
Carbon dioxide equivalent t 0.265													
Pump capacity flow rate l/min 8 27													
Pump	Pump capacity flow pressure psi 1.5 10.2												

200V/60Hz							
Heating capacity kW							1.5
Cooling capacity (Ethanol)							
°C	20	10	0	-10	-20	-30	-40
kW	1	1	0.96	0.73	0.51	0.25	0.11
Viscosity max. cST 50							
Refrigerant R449A							
Filling volume g 190							
Global Warming Potential for R449A 1397							
Carbon dioxide equivalent t 0.265							
Pump capacity flow rate l/min 8 27							
Pump capacity flow pressure psi							1.5 10.2
230V/60Hz							
Heating capacity kW 2							2
Cooling capacity (Ethanol)							
°C	20	10	0	-10	-20	-30	-40
kW	1	1	0.96	0.73	0.51	0.25	0.11
Viscosity max. cST						Ę	50
Refrigerant						F	R449A
Filling volume g 1							190
Global Warming Potential for R449A 1397							
Carbon dioxide equivalent t							0.265
Pump capacity flow rate I/min 8 27							
Pump capacity flow pressure psi 1.5 10.2							

All 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.



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



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



JULABO. Quality. Highest standards of quality for a long product life.



Satisfied customers.

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



Handle with ease.

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



Wide range.

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



Brilliance. In color.

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



Information. Everything clear. Information in plain text on a large color screen.



Multi-lingual. Operation in multiple languages.



Solid. insulation.





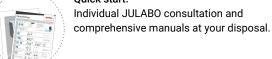
Condensation protection. Superb design solution. Integrated ventilation directs air over the bath lid and minimizes condensation.



Green technology. Development consistently applied environmentally friendly materials and technologies.



Ouick start.





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



Highly precise

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



Turn. Push. Go. Easy operation of all parameters using the central controller.



USB. Remote control made easy using the integrated USB interface.



RS232. Standard connection using the serial RS232 interface.



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



5







Process stability. Early warning - visual and acoustic - of critical

states increases process stability.



Powerful. Adjustable. Strong pressure pump, continuously adjustable.



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



Highest measuring accuracy

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

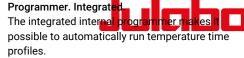


Fill level. Monitored. Fill level indicator on the display for heattransfer liquid.



Stable. Mobile.







ATC3. Calibration. 'Absolute Temperature Calibration' for compensating a physically caused temperature difference, 3-point calibration.



100 % Cooling capacity 'Active Cooling Control' for cooling available throughout the entire working temperature range, fast cool-down even at higher temperatures



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



Process. Under control. Full control of the dynamic, access to all important control parameters for individual process optimization.