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

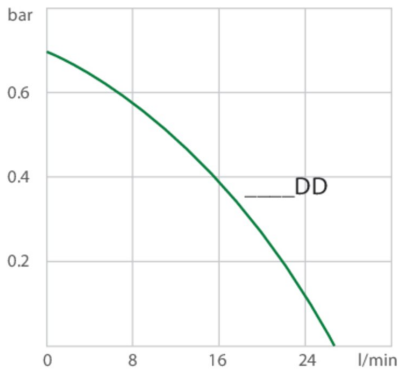
Optional analog and digital interface

DYNEO circulators can optionally be equipped with analogue or 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)

Product features

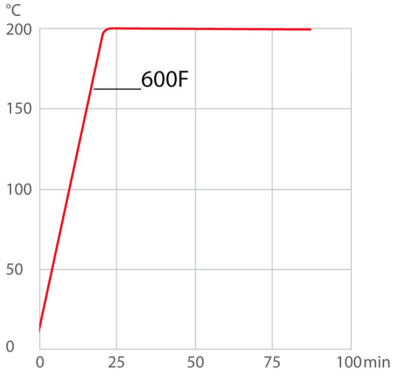
- Optimized cooling coil design saves space in the bath tank
- powerful and infinitely adjustable pressure pump
- Flow rate 27 l/min, pressure 0.7 bar
- easy switching between internal and external circulation
- large color TFT display, multilingual interface
- central rotary knob (controller) simplifies operation
- Integrated programmer
- Integrated external Pt100 connection
- USB connection
- RS232 interface or analog interfaces (optional)
- Integrated drain makes emptying liquid easy and safe.
- Bath cover included with delivery
- Removable ventilation grid
- Powerful cooling machines
- For internal and external applications
- Integrated pump connection M16×1
- For internal and external applications

Pump capacity



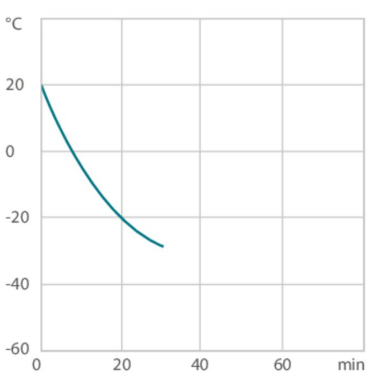
Medium: Water

Heat-up time



Medium: Thermal

Cool-down time



Medium: Ethanol

Performance values

115V/60Hz (Nema N5-15 Plug)	
Heating capacity kW	1
Viscosity max. cSt	50
Pump capacity flow pressure l/min	8 ... 27
Pump capacity pressure psi	1.5 ... 10.2
Power consumption A	12

	9021704.02				
Cooling capacity (Ethanol)					
°C	20	0	-10	-20	-30
kW [1]	0.6	0.44	0.27	0.16	0.04

Refrigerant stage 1	
Refrigerant	R449A
Filling weight g	150
Global Warming Potential for R449A	1397
Carbon dioxide equivalent t	0.20955

[1] Performance specifications measured in accordance with DIN 12876. Cooling capacities up to 20 °C measured with ethanol; over 20 °C with thermal oil unless otherwise specified. Performance specifications apply at an ambient temperature of 20 °C. Performance values may differ with other bath fluids.

200V/50Hz (Nema N5-15 Plug)	
Heating capacity kW	1.5
Viscosity max. cSt	50
Pump capacity flow pressure l/min	8 ... 27
Pump capacity pressure psi	1.5 ... 10.2
Power consumption A	12

	9021704.33.chn				
Cooling capacity 1 (Ethanol)					
°C	20	0	-10	-20	-30
kW [2]	0.6	0.44	0.27	0.16	0.04

Refrigerant stage 1	
Refrigerant	R449A
Filling weight g	150
Global Warming Potential for R449A	1397
Carbon dioxide equivalent t	0.20955

[2] Performance specifications measured in accordance with DIN 12876. Cooling capacities up to 20 °C measured with ethanol; over 20 °C with thermal oil unless otherwise specified. Performance specifications apply at an ambient temperature of 20 °C. Performance values may differ with other bath fluids.

200V/60Hz (Nema N5-15 Plug)	
Heating capacity kW	1.5
Viscosity max. cSt	50
Pump capacity flow pressure l/min	8 ... 27
Pump capacity pressure psi	1.5 ... 10.2
Power consumption A	12

9021704.33.chn					
Cooling capacity 2 (Ethanol)					
°C	20	0	-10	-20	-30
kW [3]	0.6	0.44	0.27	0.16	0.04

Refrigerant stage 1	
Refrigerant	R449A
Filling weight g	150
Global Warming Potential for R449A	1397
Carbon dioxide equivalent t	0.20955

[3] Performance specifications measured in accordance with DIN 12876. Cooling capacities up to 20 °C measured with ethanol; over 20 °C with thermal oil unless otherwise specified. Performance specifications apply at an ambient temperature of 20 °C. Performance values may differ with other bath fluids.

230V/60Hz (Nema N5-15 Plug)	
Heating capacity kW	2
Viscosity max. cSt	50
Pump capacity flow pressure l/min	8 ... 27
Pump capacity pressure psi	1.5 ... 10.2
Power consumption A	14

9021704.33.chn					
Cooling capacity 3 (Ethanol)					
°C	20	0	-10	-20	-30
kW [4]	0.6	0.44	0.27	0.16	0.04

Refrigerant stage 1	
Refrigerant	R449A
Filling weight g	150
Global Warming Potential for R449A	1397
Carbon dioxide equivalent t	0.20955

[4] Performance specifications measured in accordance with DIN 12876. Cooling capacities up to 20 °C measured with ethanol; over 20 °C with thermal oil unless otherwise specified. Performance specifications apply at an ambient temperature of 20 °C. Performance values may differ with other bath fluids.

200V/50Hz (Schuko Plug - CEE 7/4 Plug Type F)	
Heating capacity kW	1.5
Viscosity max. cSt	50
Pump capacity flow pressure l/min	8 ... 27
Pump capacity pressure psi	1.5 ... 10.2
Power consumption A	12

	9021704.33				
Cooling capacity 1 (Ethanol)					
°C	20	0	-10	-20	-30
kW [5]	0.6	0.44	0.27	0.16	0.04

Refrigerant stage 1	
Refrigerant	R449A
Filling weight g	150
Global Warming Potential for R449A	1397
Carbon dioxide equivalent t	0.20955

[5] Performance specifications measured in accordance with DIN 12876. Cooling capacities up to 20 °C measured with ethanol; over 20 °C with thermal oil unless otherwise specified. Performance specifications apply at an ambient temperature of 20 °C. Performance values may differ with other bath fluids.

200V/60Hz (Schuko Plug - CEE 7/4 Plug Type F)

Heating capacity kW	1.5
Viscosity max. cSt	50
Pump capacity flow pressure l/min	8 ... 27
Pump capacity pressure psi	1.5 ... 10.2
Power consumption A	12

	9021704.33				
Cooling capacity 2 (Ethanol)					
°C	20	0	-10	-20	-30
kW [6]	0.6	0.44	0.27	0.16	0.04

Refrigerant stage 1	
Refrigerant	R449A
Filling weight g	150
Global Warming Potential for R449A	1397
Carbon dioxide equivalent t	0.20955

[6] Performance specifications measured in accordance with DIN 12876. Cooling capacities up to 20 °C measured with ethanol; over 20 °C with thermal oil unless otherwise specified. Performance specifications apply at an ambient temperature of 20 °C. Performance values may differ with other bath fluids.

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

Heating capacity kW	2
Viscosity max. cSt	50
Pump capacity flow pressure l/min	8 ... 27
Pump capacity pressure psi	1.5 ... 10.2
Power consumption A	14

9021704.33					
Cooling capacity 3 (Ethanol)					
°C	20	0	-10	-20	-30
kW [7]	0.6	0.44	0.27	0.16	0.04

Refrigerant stage 1	
Refrigerant	R449A
Filling weight g	150
Global Warming Potential for R449A	1397
Carbon dioxide equivalent t	0.20955

[7] Performance specifications measured in accordance with DIN 12876. Cooling capacities up to 20 °C measured with ethanol; over 20 °C with thermal oil unless otherwise specified. Performance specifications apply at an ambient temperature of 20 °C. Performance values may differ with other bath fluids.

230V/60Hz (Schuko Plug - CEE 7/4 Plug Type F)	
Heating capacity kW	2
Viscosity max. cSt	50
Pump capacity flow pressure l/min	8 ... 27
Pump capacity pressure psi	1.5 ... 10.2
Power consumption A	14

9021704.33					
Cooling capacity 4 (Ethanol)					
°C	20	0	-10	-20	-30
kW [8]	0.6	0.44	0.27	0.16	0.04

Refrigerant stage 1	
Refrigerant	R449A
Filling weight g	150
Global Warming Potential for R449A	1397
Carbon dioxide equivalent t	0.20955

[8] Performance specifications measured in accordance with DIN 12876. Cooling capacities up to 20 °C measured with ethanol; over 20 °C with thermal oil unless otherwise specified. Performance specifications apply at an ambient temperature of 20 °C. Performance values may differ with other bath fluids.

Technical data

Available voltage versions	
9021704	
Available voltage versions:	
9021704.01	100V/50-60Hz (Nema N5-15 Plug) (R452A)
9021704.02	115V/60Hz (Nema N5-15 Plug) (R449A)
9021704.33	200-230V/50-60Hz (Schuko Plug - CEE 7/4 Plug Type F) (R449A)
9021704.04	200-230V/50-60Hz (UK Plug Type BS1363A) (R449A)

Cooling	
Cooling of compressor	1-stage Air

9021704.05	200-230V/50-60Hz (CH Plug Type SEV 1011) (R449A)
9021704.33.chn	200-230V/50-60Hz (Nema N5-15 Plug) (R449A)

Bath

Bath tank	Stainless steel
Bath cover	integrated
Usable bath opening in. (W x L / D)	8.7 x 5.9 / 5.9

Other

Classification	Classification III (FL)
IP Code	IP 21
Pump function	Pressure Pump
Pump type	Immersion Pump
User Interface Language	Chinese, English, French, German, Italian, Japanese, Korean, Portuguese, Russian, Spanish

Electronics

Interfaces	Alarm output optional, REG/EPROG optional, RS232 optional, Standby-Input optional, USB
External pt100 sensor connection	integrated
Integrated programmer	8x60 steps
Temperature control	PID3
Absolute temperature calibration	3 Point Calibration
Temperature display	3.5" TFT Display
Temperature setting	Shaft Encoder
Electronic Timer h:min	00:00 ... 99:59

Dimensions and volumes

Weight lbs	78.7
Barbed fittings inner diameter mm	8/12 mm
Total dimensions in. (W × L × H)	13 x 18.5 x 27.2
Filling volume l	5 ... 7.5
Pump connections	M16x1 male

Temperature values

Setting the resolution of the temperature display °C	0.01
Working temperature range °C	-35 ... +200
Temperature stability °C	±0.01
Ambient temperature °C	+5 ... +40
Temperature display resolution °C	0.01

Included in delivery

2 Barbed fittings for tubing 8 and 12 mm ID. (Pump connections M16x1 male)

All Benefits

Handle with ease.
Makes day-to-day work easy. Comfortably move your CORIO 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 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.

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

Powerful. Adjustable.
Strong pressure pump, continuously adjustable.

RS232.
Standard connection using the serial RS232 interface.

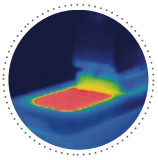
Temperature. Under control.
External Pt100 sensor connection for precise measurement and control directly in the external application.

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

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

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

More bath.
Designed for more comfort. Thanks to the recessed cooling coil, the internal bath provides more space.



Solid.
Minimized energy loss through high-quality insulation.

Multi-lingual.
Operation in multiple languages.

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

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

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

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

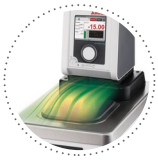
Process. Under control.
Full control of the dynamic, access to all important control parameters for individual process optimization.

Stable. Mobile.

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

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.



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.

Quick start.
Individual JULABO consultation and comprehensive manuals at your disposal.

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

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.

Quick support
If an error occurs, the integrated Black-Box function permits fast diagnosis by the JULABO service team