

MAGIO MS-600F Refrigeration / heating circulator

As with all circulators from the MAGIO range, the refrigerated circulators stand out thanks to their premium quality, high performance and intuitive operation. The devices offer extra strong pressure and suction pumps, thus fulfilling the highest demands for temperature control of external applications. Whether in basic research, material testing or technical systems – the MAGIO refrigerated circulators offer high-tech solutions for high customer requirements. High resolution TFT touch display

The modern TFT touch display gives you all the important information at a glance. Three large, predefined main screens clearly display data and graphics with various application priorities. Menu navigation is self-explanatory, arranged by relevance to daily operations and easy to operate with the touch of a finger. The in-built help function provides detailed support in case of additional questions.



Your advantages

• Combined RS232/RS485 interface for serial data transmission according to the EIA-485 industry standard (2-wire bus technology), upgradeable with Profibus DP

Technical data

			Death					
Available voltage			Bath					
Order No.	9 032 704		Bath tank	Stainless steel				
Available voltage vers	ions:		Bath cover	integrated				
9 032 704.01	100V/50-60Hz (Ne	ma N5-15 Plug)	Usable bath opening cm (W x L / D) 22 x 15 / 1					
9 032 704.02	115V/60Hz (Nema	N5-15 Plug)						
9 032 704.05	200-230V/50-60Hz 1011)	c (CH Plug Type SEV						
9 032 704.04	200-230V/50-60Hz BS1363A)	z (UK Plug Type						
9 032 704.33	200-230V/50-60Hz 7/4 Plug Type F)	z (Schuko Plug - CEE						
9 032 704.33.chn	200-230V/50-60Hz	c (CN Plug)						
Cooling			Other					
Cooling of compresso	or	1-stage Air	Classification	Classification III (FL				
			IP Code	IP 20				
			Pump function	Pressure Suction Pump				
			Pump type	Immersion Pump				
Electronics			Dimensions and volumes					
External pt100 sensor	connection	integrated	Weight kg	38.3				
Integrated programme	er	8x60 steps	Dimensions cm (W × L × H)	33 x 47 x 69				
Temperature control		ICC	Filling volume l	5 7.5				
Absolute temperature	calibration	3 Point Calibration	Pump connections	M16x1 male				
Temperature display		7" TFT Touchscreen						
Temperature setting		Touchscreen						
Electronic Timer hr:mi	in	00:00 00:00						



Setting the resolution of the temperature display °C	0.01
Working temperature range °C	-35 +200.0
Temperature stability °C	+/-0.01
Ambient temperature °C	+10.0 +40.0
Temperature display resolution °C	0.01

Performance values

100V/50-60Hz (Nema N5-15 Plug)

100V	/50H	z						100V/60Hz							
Heatir	ig capa	acity k	W			(0.8	Heating capacity kW					(0.8	
Coolin	g capa	acity (E	Ethano	I)				Cooling capacity (Ethanol)							
°C	200	20	10	0	-10	-20	-30	°C	200	20	10	0	-10	-20	-30
kW	0.6	0.6	0.52	0.44	0.27	0.16	0.04	kW	0.6	0.6	0.52	0.44	0.27	0.16	0.04
Viscos	sity ma	x. cST	-			į	50	Viscosity max. cST					ļ	50	
Refrig	erant					F	R452A	Refrigerant					I	R452A	
Filling	volum	e g				-	150	Filling volume g					150		
Global	Warm	ing Po	otentia	l for R4	152A	2	2140	Global Warming Potential for R452A					:	2140	
Carbo	n dioxi	de equ	uivalen	tt		(0.321	Carbon dioxide equivalent t						(0.321
Pump	capac	ity flov	w rate l	/min		-	16 31	Pump capacity flow rate I/min						16 31	
Pump	capac	ity flov	w press	sure ba	ar	(0.24 0.92	Pump capacity flow pressure bar 0.24 0.92					0.24 0.92		
Maxim	num su	iction	bar			-	0.030.4	Maxim	num su	uction	bar			-	0.030.4

115V/60Hz (Nema N5-15 Plug)

115V/60Hz

Heatir	ng capa	acity k	N				1	
Coolin	ig capa	acity (E	thano	I)				
°C	200	20	10	0	-10	-20	-30	
kW	0.6	0.6	0.52	0.44	0.27	0.16	0.04	
Viscos	sity ma	x. cST				Į	50	
Refrig	erant					I	R449A	
Filling	volum	e g					150	
Globa	Warm	ing Po	tentia	l for R4	149A		1397	
Carbo	n dioxi	de equ	iivalen	tt		(0.21	
Pump	capac	ity flov	v rate	/min			16 31	
Pump	capac	ity flov	v pres	sure ba	ar	(0.24 0.92	
Maxim	num su	iction I	bar			-	0.030.4	

200-230V/50-60Hz (CH Plug Type SEV 1011)

200V/50Hz		200V/60Hz	
Heating capacity kW	1.6	Heating capacity kW	1.6

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Cooling) capa	icity (E	thano)				Coolin	g capa	city (E	thanol)				
°C	200	20	10	0	-10	-20	-30	°C	200	20	10	0	-10	-20	-30	
kW	0.6	0.6	0.52	0.44	0.27	0.16	0.04	kW	0.6	0.6	0.52	0.44	0.27	0.16	0.04	
Viscosi	ty ma	x. cST				Ę	50	Viscosity max. cST						ļ	50	
Refrige	rant					F	R449A	Refrigerant R4						R449A		
Filling volume g 150		150	Filling volume g 150						150							
Global Warming Potential for R449A 1397		Global	Warm	ing Po	otential	for R4	149A		1397							
Carbon	dioxi	de equ	uivalen	tt		(0.21	Carbo	n dioxi	de equ	uivalen	tt		(0.21	
Pump c	apaci	ity flov	v rate l	/min		1	16 31	Pump	capac	ty flov	v rate l	/min			16 31	
Pump c	apaci	ity flov	v press	sure ba	ar	(0.24 0.92	Pump	capac	ty flov	v press	sure ba	ar	(0.24 0.92	
Maxim	um su	ction	bar			-	0.030.4								-0.030.4	
230V/	′50H	Z						230V	7/60H	z						
Heating	j capa	acity k	W			2	2	Heatin	ig capa	city k	W			:	2	
Cooling	ј сара	icity (E	thano	l)				Cooling capacity (Ethanol)								
°C	200	20	10	0	-10	-20	-30	°C	200	20	10	0	-10	-20	-30	
kW	0.6	0.6	0.52	0.44	0.27	0.16	0.04	kW	0.6	0.6	0.52	0.44	0.27	0.16	0.04	
Viscosi	ty ma	x. cST				Ę	50	Viscos	sity ma	x. cST				:	50	
Refrige	rant					F	R449A	Refrig	erant					I	R449A	
Filling v	olum	e g				1	150	Filling volume g 150						150		
Global	Warm	ing Po	otential	l for R4	149A	1	1397	Global	Warm	ing Po	otential	for R4	149A		1397	
Carbon	dioxi	de equ	uivalen	tt		(0.21	Carbo	n dioxi	de equ	uivalen	tt		(0.21	
Pump c	apaci	ity flov	v rate l	/min		1	16 31	Pump	capac	ity flow	v rate l	/min			16 31	
Pump c	apaci	itv flov	v press	sure ba	ar	().24 0.92	Pump capacity flow pressure bar 0.24 0.92					0.24 0.92			
i unip c								Maximum suction bar -0.030.4								

200-230V/50-60Hz (UK Plug Type BS1363A)

200V	/50H	z						2
Heatin	ig capa	acity k	W			-	1.6	H
Coolin	g capa	icity						C
°C	200	20	10	0	-10	-20	-30	۰
kW	0.6	0.6	0.52	0.44	0.27	0.16	0.04	k
Viscos	sity ma	x. cST				į	50	V
Refrig	erant					F	R449A	F
Filling	volum	e g				-	150	F
Global	Warm	ing Po	otentia	l for R4	149A	-	1397	Ģ
Carbo	n dioxi	de equ	iivalen	tt		().21	C
Pump	capac	ity flov	v rate l	/min		-	16 31	F
Pump	capac	ity flov	v press	sure ba	ar	().24 0.92	F
Maxim	num su	iction	bar			-	0.030.4	Ν
230V	7/50H	z						2
Heatin	ig capa	acity k	W			2	2	H
Coolin	g capa	icity (E	thano	I)				C
°C	200	20	10	0	-10	-20	-30	۰
kW	0.6	0.6	0.52	0.44	0.27	0.16	0.04	k
Viscos	sity ma	x. cST				ŧ	50	V

200V	/60H	z					
Heatin	g capa	city k\	N			-	1.6
Coolin	g capa	city (E	thanol)			
°C	200	20	10	0	-10	-20	-30
kW	0.6	0.6	0.52	0.44	0.27	0.17	0.04
Viscos	ity ma	x. cST				ţ	50
Refrige	erant					F	R449A
Filling	volume	e g				-	150
Global	Warm	ing Po	tential	for R4	49A	-	1397
Carbor	n dioxio	de equ	ivalen	tt		().21
Pump	capaci	ty flov	v rate l	/min			16 31
Pump	capaci	ty flov	v press	sure ba	ar	(0.24 0.92
Maxim	ium su	ction l	oar			-	0.030.4
230V	/60H	z					
Heatin	g capa	city k\	N			2	2
Coolin	g capa	city (E	thanol	l)			
°C	200	20	10	0	-10	-20	-30
kW	0.6	0.6	0.52	0.44	0.27	0.16	0.04
Viscos	ity ma	x. cST				į	50

Product data sheet - MAGIO MS-600F

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Refrigerant	R449A	Refrigerant	R449A
Filling volume g	150	Filling volume g	150
Global Warming Potential for R449A	1397	Global Warming Potential for R449A	1397
Carbon dioxide equivalent t	0.21	Carbon dioxide equivalent t	0.21
Pump capacity flow rate I/min	16 31	Pump capacity flow rate l/min	16 31
Pump capacity flow pressure bar	0.24 0.92	Pump capacity flow pressure bar	0.24 0.92
Maximum suction bar	-0.030.4	Maximum suction bar	-0.030.4

200-230V/50-60Hz (Schuko Plug - CEE 7/4 Plug Type F)

200V/50Hz				200V/60Hz											
						_									
	ng capa					-	1.6	Heatin	• •					-	1.6
Coolin	g capa	icity (E	thano)				Coolin	g capa	city (E	thanol)			
°C	200	20	10	0	-10	-20	-30	°C	200	20	10	0	-10	-20	-30
kW	0.6	0.6	0.52	0.44	0.27	0.16	0.04	kW	0.6	0.6	0.52	0.44	0.27	0.16	0.04
Viscos	sity ma	x. cST				Į	50	Viscos	ity ma	x. cST				ţ	50
Refrige	erant					ſ	R449A	Refrige	erant					I	R449A
Filling	volum	e g				-	150	Filling	volum	e g					150
Global	Warm	ing Po	tential	for R4	49A	-	1397	Global	Warm	ing Po	tential	for R4	49A		1397
Carbo	n dioxi	de equ	ivalen	tt		(0.21	Carbo	n dioxi	de equ	ivalent	tt		(0.21
Pump	capac	ity flov	v rate l	/min		-	16 31	Pump	capac	ity flov	v rate l	/min			16 31
Pump	capac	ity flov	v press	sure ba	ır	(0.24 0.92	Pump	capac	ty flov	v press	ure ba	ır	(0.24 0.92
Maxim	าum su	ction	bar			-	0.030.04	Maximum suction bar -0.030.4					0.030.4		
230V	//50H	z						230V	/60H	z					
Heatin	ng capa	acity k	N			2	2	Heating capacity kW				2	2		
Coolin	g capa	ncity (E	thano	i)				Cooling capacity (Ethanol))			
) (-													
°C	200	20	10	0	-10	-20	-30	°C	200	20	10	0	-10	-20	-30
°C kW	200 0.6			0 0.44				°C kW	200 0.6	20 0.6		0 0.44			
	0.6	20 0.6	0.52	-		0.16			0.6	0.6	0.52	-		0.16	
kW	0.6 sity ma	20 0.6	0.52	-		0.16	0.04	kW	0.6 ity ma	0.6	0.52	-		0.16	0.04
kW Viscos Refrige	0.6 sity ma	20 0.6 x. cST	0.52	-		0.16 {	0.04	kW Viscos	0.6 ity ma erant	0.6 x. cST	0.52	-		0.16 !	0.04
kW Viscos Refrige	0.6 sity ma erant volum	20 0.6 x. cST e g	0.52	0.44	0.27	0.16 (0.04 50 R449A	kW Viscos Refrige	0.6 ity ma erant volum	0.6 x. cST e g	0.52	0.44	0.27	0.16 !	0.04 50 R449A
kW Viscos Refrige Filling	0.6 sity ma erant volum I Warm	20 0.6 x. cST e g ing Pc	0.52	0.44 I for R4	0.27	0.16 (0.04 50 R449A 150	kW Viscos Refrige Filling	0.6 ity ma erant volum Warm	0.6 x. cST e g ing Pc	0.52	0.44 for R4	0.27	0.16	0.04 50 R449A 150
kW Viscos Refrige Filling Global	0.6 sity ma erant volum I Warm n dioxid	20 0.6 x. cST e g ing Pc de equ	0.52 Itential	0.44 I for R4 t t	0.27	0.16 F	0.04 50 R449A 150 1397	kW Viscos Refrige Filling Global	0.6 ity ma erant volum Warm n dioxi	0.6 x. cST e g ing Pc de equ	0.52 otential	0.44 for R4	0.27	0.16	0.04 50 R449A 150 1397
kW Viscos Refrige Filling Global Carbon Pump	0.6 sity ma erant volum I Warm n dioxi capaci	20 0.6 x. cST e g ing Pc de equ ity flov	0.52 otential livalen v rate l	0.44 I for R4 t t	0.27 149A	0.16 F	0.04 50 R449A 150 1397 0.21	kW Viscos Refrige Filling Global Carboi	0.6 ity ma erant volum Warm n dioxi capac	0.6 x. cST e g ing Pc de equ ity flov	0.52 otential livalent v rate l	0.44 for R4 t t /min	0.27 449A	0.16	0.04 50 R449A 150 1397 0.21

200-230V/50-60Hz (CN Plug)

200	//50H	z						
Heatir	ng capa	acity k	W				1.6	
Coolin	ig capa	icity (E	thano	l)				
°C	200	20	10	0	-10	-20	-30	
kW	0.6	0.6	0.52	0.44	0.27	0.16	0.04	
Viscos	sity ma	x. cST				ţ	50	
Refrigerant R449A								
Filling	volum	e g					150	

200V	//60H	z							
Heatin	ng capa	acity k'	W			-	1.6		
Cooling capacity (Ethanol)									
°C	200	20	10	0	-10	-20	-30		
kW	0.6	0.6	0.52	0.44	0.27	0.16	0.04		
Viscos	sity ma	x. cST				į	50		
Refrigerant R449A									
Filling	volum	e g					150		



Global Warming Potential for R449A 1397								Global Warming Potential for R449A							1397
Carbon dioxide equivalent t 0.21								Carbon dioxide equivalent t							0.21
Pump capacity flow rate l/min 16 31								Pump capacity flow rate l/min							16 31
Pump capacity flow pressure bar 0.24 0.92								Pump capacity flow pressure bar							0.24 0.92
Maximum suction bar -0.030.4								Maximum suction bar							-0.030.4
230V/50Hz								230V/60Hz							
Heating capacity kW 2								Heating capacity kW							2
Cooling capacity (Ethanol)								Cooling capacity (Ethanol)							
°C	200	20	10	0	-10	-20	-30	°C	200	20	10	0	-10	-20	-30
kW	0.6	0.6	0.52	0.44	0.27	0.16	0.04	kW	0.6	0.6	0.52	0.44	0.27	0.16	0.04
Viscosity max. cST 50							Viscosity max. cST							50	
Refrigerant R449A								Refrigerant							R449A
Filling volume g 150								Filling volume g							150
Global Warming Potential for R449A 1397								Global Warming Potential for R449A							1397
Carbon dioxide equivalent t 0.21								Carbon dioxide equivalent t							0.21
Pump capacity flow rate I/min 16 31								Pump capacity flow rate I/min							16 31
Pump capacity flow pressure bar 0.24 0.92								Pump capacity flow pressure bar							0.24 0.92
Maximum suction bar -0.030.4									Maximum suction bar						-0.030.4

All Benefits



100% Checked.

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



Intelligent temperature control. Intelligent cascade control - automatic and self-optimizing adaptation of the PID control



Quick start.

°C.

Individual JULABO consultation and comprehensive manuals at your disposal.

parameters with external stability of +/- 0.05



Services 24/7.

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



Connection. Easy.

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



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



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.

Many interfaces.

Straight-forward remote control, data management, and integration into process structures. USB, Ethernet, RS232, SD card, and alarm off are permanently integrated. Further interfaces available as accessories.

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.



Condensation protection.

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



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



Stable. Mobile.

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



Maximum safety.

Classification III according to DIN12876-1 enables safe operation, even with flammable fluids. Automatic switch-off in the event of high temperature or low liquid level.



Touch display. Perfect operation.

With the touch display, the user always has an overview of all values and functions. The intuitive and multilingual menu structure enables perfect control.



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



Energy-saving. The high-quality insulation of all relevant components saves energy.



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

Wide range.

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

TCF Pr Fu to

Process. Under control.

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



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.



Everything made of stainless steel. Quality and material compatibility at the highest level. All parts in contact with the medium are entirely made of stainless steel.



Most powerful pump.

The integrated pressure/suction pump with performance values of 0.9 bar and -0.5 bar is the most powerful in its class and continuously adjustable.



Multi-lingual. Operation in multiple languages.



Programmer. Integrated.

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