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ROTANTA 46 RSC ROBOTIC
Robotic Centrifuge
cooled

The ROTANTA 46 RSC ROBOTIC is a refrigerated centrifuge with PC control and rotor positioning. It is ideal wherever sample processing can be automated. Especially in genetic and pharmaceutical research, it significantly contributes to rationalisation of routine tasks. As well, in pharmaceutical research more and more agents are being tested on cells to keep animal testing to a minimum – necessitating the use of centrifuges.

The ROTANTA 46 RSC ROBOTIC integrates perfectly into automated laboratories. Highly qualified laboratory personnel no longer have to carry out monotonous tasks. Moreover, analyses bearing a high risk of infection can be carried out automatically.

The centrifuge reaches a speed of 6,200 min⁻¹, or a maximum of 6,446 RCF with a capacity of 4 x 250 ml, 24 microtitre plates (MTP), 4 deep well plates (DWP) or comparable systems. Its robust, sturdy design guarantees trouble-free, 24-hour operation.

DESIGN

- Metal housing
- Metal lid
- Stainless steel centrifuging chamber
- Casing finished in scratch- and impact-resistant coating



LOCATION

- Ambient temperature between + 5 °C and + 35 °C
- Relative humidity max. 80 % up to + 31 °C, linearly decreasing to 50 % at + 40 °C

REFRIGERATION

- Infinitely variable setting from – 20 °C to + 40 °C
- Cooling agent: R 404A

SAFETY

- Lid locking
- Hatch locking
- Emergency lid lock release
- Motor overheating protection
- Chamber overheating protection
- Imbalance switch-off
- Excess temperature protection of brake resistors
- Dual indication when the rotor is stationary
- Additional control of data transfer
- Subject to regular inspection
- Device protection class I

TECHNOLOGY

- Frequency drive
- Maintenance required only according to BGR 261 regulation
- 89 programmable memories
- Noise generation at 62 dB (A)
- Kinetic energy of 50,000 Nm



Keypad of the ROTANTA 46 RSC ROBOTIC (S control panel)

OPERATION AND CONTROL

All centrifuge functions can be remote-controlled via optical data transmission. A 9-pole RS 232 cable, an opto data box and a light conducting cable are supplied with the centrifuge. The controlling PC requires a free RS 232 interface.

The driving motor positions the rotors and securely holds them in the 2 or 4 designated programmable carrier positions under the hatch. After completion of the centrifuging cycle, the drive automatically turns them to rotor position No. 1.

Status information like standstill, acceleration, centrifuging cycle, lid, rotor position, etc. can be accessed.

ROBOTIC

- Remote control of all functions
- If necessary, commands can also be entered manually on the centrifuge's control panel.
- Sophisticated microprocessor technology
- Recallable status information
- Programmable carrier position
- Positioning accuracy < 0.6 mm



ROTANTA 46 RSC ROBOTIC
Cat. No. 4817

LOADING AND UNLOADING

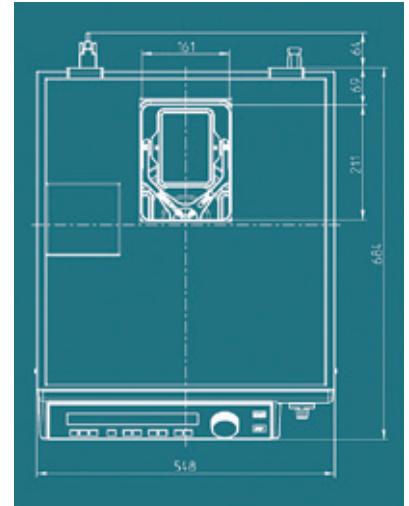
A sliding hatch in the lid opens before and after every centrifuging cycle and allows loading and unloading of the rotor with a robotic arm.

Fully automatic loading and unloading relieves laboratory personnel of routine work while saving valuable time.



By means of the dimensioned drawings, the location of the centrifuge can be defined precisely before delivery.

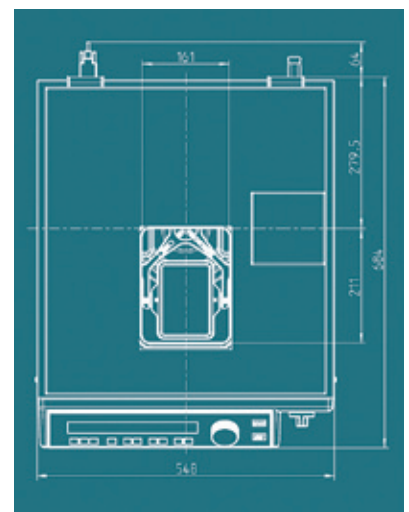
Two lid versions are available as standard equipment, depending on whether robotic access is at the front or the back of the lid.



A hatch of 161 x 211 mm opens in the rear section of the lid.

The robotic arm has rear access.

Cat. Nos. 4817/4817-01



A hatch of 161 x 211 mm opens in the front section of the lid.

The robotic arm has front access.

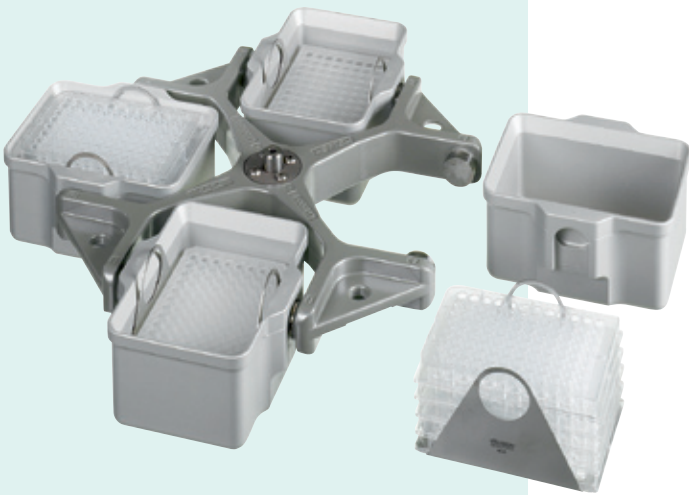
Cat. Nos. 4817-10/4817-11

ROTORS AND ACCESSORIES

ROTANTA 46 RSC ROBOTIC centrifuges can be integrated in any workstation. In addition to standard accessories, we also manufacture special carriers and inserts tailored to your requirements.

Just talk to us about your special needs!

Swing-out rotor, 4-place



illustrated with carriers 5628-R
 $n = 4,600 \text{ min}^{-1}$, max. RCF 4,258



illustrated with carriers 5625
 $n = 4,600 \text{ min}^{-1}$, max. RCF 4,637

Cat. No. (without carriers) 5624

Swing-out rotor, 2-place



illustrated with carriers 4623-R
 $n = 6,200 \text{ min}^{-1}$, max. RCF 6,446

Cat. No. (without carriers) 4620

Swing-out rotor, 4-place




















illustrated with carriers 4428-R
 $n = 4,500 \text{ min}^{-1}$, max. RCF 3,849



illustrated with carriers 4426
 $n = 4,500 \text{ min}^{-1}$, max. RCF 4,618

Cat. No. (without carriers) 4444

Quick overview of rotors and standard accessories


 <p>Swing-out rotor, 4-place illustrated with carriers 5628-R Cat. No. 5624 (without carriers)</p>	 <p>$n = 4,600 \text{ min}^{-1}$ max. RCF 4,258 Cat. No. 5628-R</p>	 <p>1.5 / 2.0 ml</p>	 <p>3-250 ml</p>	 <p>1.1-10 ml</p>
 <p>Swing-out rotor, 4-place illustrated with carriers 5625 Cat. No. 5624 (without carriers)</p>	 <p>$n = 4,600 \text{ min}^{-1}$ max. RCF 4,637 Cat. No. 5625</p>	 <p>1.5 / 2.0 ml</p>	 <p>3-250 ml</p>	 <p>1.1-10 ml</p>
 <p>Swing-out rotor, 2-place illustrated with carriers 4623-R Cat. No. 4620 (without carriers)</p>	 <p>$n = 6,200 \text{ min}^{-1}$ max. RCF 6,446 Cat. No. 4623-R</p>			
 <p>Swing-out rotor, 4-place illustrated with carriers 4428-R Cat. No. 4444 (without carriers)</p>	 <p>$n = 4,500 \text{ min}^{-1}$ max. RCF 3,849 Cat. No. 4428-R</p>			
 <p>Swing-out rotor, 4-place illustrated with carriers 4412-R Cat. No. 4444 (without carriers)</p>	 <p>$n = 4,500 \text{ min}^{-1}$ max. RCF 4,460 Cat. No. 4412-R</p>	 <p>1.5 / 2.0 ml</p>	 <p>3-250 ml</p>	 <p>1.1-10 ml</p>
 <p>Swing-out rotor, 4-place illustrated with carriers 4426 Cat. No. 4444 (without carriers)</p>	 <p>$n = 4,500 \text{ min}^{-1}$ max. RCF 4,618 Cat. No. 4426</p>			

ACCESSORIES

 15-50 ml	 30 / 50 ml		 250 ml		 MTP Microtitre Plate	 CP Culture Plate	 DWP Deep Well Plate	 MS Micronic System	 QP Filter Plate	 Microtest Plate (Terasaki)	 PCR Plate 96-well	 PCR Strips
 15-50 ml	 12-50 ml	 10-94 ml										
					 MTP Microtitre Plate	 CP Culture Plate	 DWP Deep Well Plate	 MS Micronic System	 QP Filter Plate	 Microtest Plate (Terasaki)	 PCR Plate 96-well	 PCR Strips
					 MTP Microtitre Plate	 CP Culture Plate	 DWP Deep Well Plate	 MS Micronic System	 QP Filter Plate	 Microtest Plate (Terasaki)	 PCR Plate 96-well	 PCR Strips
 15-50 ml	 12-50 ml		 250 ml									
				 20x70x118 mm Hitachi								

Details and additional tubes on request.

ROTANTA 46 RSC ROBOTIC

TECHNOLOGY	ROTANTA 46 RSC ROBOTIC			
Floorstanding centrifuge, without rotor	cooled			
	rear hatch	front hatch	rear hatch	front hatch
Power supply *)	230–240 V 1 ~		110–120 V 1 ~	
Frequency	50–60 Hz		50–60 Hz	
Consumption	max. 2,000 VA			
Emission	EN 55011 group 1, class B, EN 61000-3-3		FCC class A	
Immunity	EN 61000-6-2			
 Max. capacity **)	4 x 250 ml			
Max. RPM (speed **)	6,200 min ⁻¹			
Max. RCF **)	6,446			
Permissible density	1.2 kg / dm ³			
Dimensions (HxWxD)	684 x 548 x 684 mm			
Weight	156 kg			
Temperature control, infinitely variable	from -20 °C to +40 °C			
Cat. No.	4817	4817-10	4817-01	4817-11

*) Other voltages on request.

**) Basically, the ROTANTA 46 RSC ROBOTIC accepts a max. capacity of 4 x 750 ml and generates a max. RCF of 10,062. Since these values are reached with accessories not well suited for robotic applications, the values indicated in the table only refer to the accessories in this brochure.



Hettich centrifuges comply with all relevant EU standards in effect and conform to the European level of quality and safety for medical devices. Evidence is provided by national and international test marks such as IEC 61010 or the CE conformity. The ISO 9001:2000 and ISO 13485:2003 certificates accredited to the company bear witness to the extreme care and responsibility Hettich puts into the manufacturing of centrifuges and their accessories.

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