

## **AUTOMATED CENTRIFUGES**

Innovative solutions  
for automated  
centrifugation



## MORE THAN 25 YEARS EXPERIENCE IN AUTOMATION

When it comes to automation in centrifugation, Hettich, as the world market leader, is the right partner for you. With over 120 years of history and more than 25 years of expertise in automation, Hettich offers innovative and reliable solutions. Today, the robotic centrifuges are among the “hidden champions” and are an integral part of diagnostic lines and other automation systems in the screening sector from virtually all well-known suppliers. The product portfolio of the world market leader’s automation line comprises four devices that cover all capacities and application areas, from microtiter plates (SBS format) to blood tubes and microliter tubes.



## HETTICH – YOUR INTEGRATION PARTNER

### 4 good reasons to choose Hettich

- 1 Experience**  
 We know centrifugation – since 1904 Hettich designs, engineers and manufactures centrifuges. We are pioneers in the field of automation and have over 25 years of experience in this segment. From compact MIKRO Robotic to ROTANTA Robotic, Hettich offers a complete range of solutions for your application. Our expert team is available to support all steps of integration.
- 2 Quality**  
 Hettich products are characterized by the highest quality and state-of-the-art technology. All centrifuges are developed in close cooperation with users from medicine, chemistry, research and industry and are continuously adapted to the latest requirements. Hettich fulfills all applicable EC directives. Every work step is subject to strict controls and documentation. The company is ISO 9001, ISO 13485 and ISO 14001 certified. Hettich products are manufactured with care and responsibility, giving them a worldwide reputation for safety and reliability.
- 3 Safety**  
 A high level of integrated design solutions ensures maximum safety in the laboratory. In the future, we will continue to measure ourselves against the highest quality standards in development and production and continue to comply with the most current global standards and certificates.
- 4 Seamless integration**  
 Hettich manufactures a complete centrifuge product line ranging from compact tabletop models to high-capacity floorstanding centrifuges, including models for clinical, research, and specialty applications.

### Integration made easy

As experts in automated centrifugation and with a wide product portfolio, the most common robotic systems can fulfill your integration requirements.

Top-loading	Front-loading
<b>Compatibility</b> - Linear robot - Delta robot	<b>Compatibility</b> - Scara robot - Cobots
<b>Solution</b> - MIKRO 220 Robotic - ROTINA 380 Robotic - ROTANTA 460 Robotic - SBS 300 Robotic	<b>Solution</b> - SBS 300 Robotic

## MIKRO 220 ROBOTIC



### Fast and compact

The MIKRO 220 Robotic is an air-cooled, robotically operated microlitre centrifuge with PC activation. It centrifuges tubes up to 2.0 ml (e.g. microlitre tubes or HPLC tubes) quickly and safely. This qualifies it for sample preparation in research laboratories of the life sciences as well as for daily routine tasks in medical diagnostics or industrial quality control.



Wherever processes can be automated, MIKRO 220 Robotic centrifuges will optimize the workflow. Samples are centrifuged automatically while the laboratory personnel are able to concentrate on other tasks. As loading and unloading is carried out by means of a robot arm, the samples are made available for further processing right after centrifugation.

### Features

- max RPM: 13,000 min<sup>-1</sup>
- max. RCF: 18,327
- max. capacity: 24 x 1.5/2.0 ml
- Compact industry design
- Loading and unloading hatch in the lid
- Hatch opening time < 5 seconds
- IVDR-conform according to regulation (EU) 2017/746
- Fast + Slow positioning mode
- Positioning time of 3 seconds
- Positioning accuracy 3 encoder steps (out of a total of 4096)
- 9 individual acceleration and deceleration stages

### Rotors

Swing-out rotor 24-place		
max. RPM   max. RCF	13,000 min <sup>-1</sup>   18,327	13,000 min <sup>-1</sup>   18,327
max. capacity	24 x 2.0 ml	24 x 2.0 ml
run-up   run-down, braked in sec	27   27	27   27
angle	90°	45°
<b>Cat. No.</b>	<b>2394</b>	<b>2334</b>

### Technical data

	MIKRO 220 ROBOTIC non-refrigerated
automated opening	front
voltage *)	200-240 V 1~
frequency	50 – 60 Hz
consumption	460 VA
max. capacity	24 x 1.5 / 2.0 ml
max. RPM	13,000 min <sup>-1</sup>
max. RCF	18,327
Permissible density of the centrifuged material	1.2 kg/dm <sup>3</sup>
dimensions (WxDxH)	490 x 380 x 345 mm
weight	approx. 27 kg
<b>Cat. No.</b>	<b>2350</b>

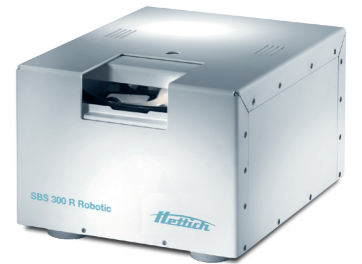
\*) Other voltages on request.

## SBS 300 | 300 R ROBOTIC



### Essential and modular

The SBS 300 ROBOTIC is a front-loading centrifuge, developed and optimized for microplates in high-throughput screening. It can be loaded frontally via the xy-axes, as well as via the z-axis and is particularly suitable for collaborative robotic systems. The compact design opens up a wide range of applications in automation. The robust construction, ensures increased safety and durability – especially in high throughput and continual use environments.



### Features

- Max. RPM: 6,300 min<sup>-1</sup>
- Max. RCF: 4,615
- Max. capacity: 2 microtiter plates (max. 128x86x46 mm)
- Loading & unloading hatch for front or top loading
- Hatch opening time < 6 seconds
- Fast + Slow positioning mode
- Positioning time of 5 seconds
- Positioning accuracy +/- 0,5° tolerance
- Imbalance tolerance 50 g
- Max. noise level 68 dB(A)
- Internal air cooling

### Rotor



Swing-out rotor 2-place	
max. RPM   max. RCF <sup>2)</sup>	6,300 min <sup>-1</sup>   4,615
max. capacity	2 microtiter plates
run-up   run-down, braked in sec	63   29
angle   temperature in °C <sup>1)</sup>	90°   4 °C
<b>Cat. No. rotor</b>	<b>8322-R</b>
<b>Cat. No. bucket</b>	<b>8330-R/2</b>

### Technical data

	SBS 300 ROBOTIC non-refrigerated
voltage *)	200-240 V 1~
frequency	50-60 Hz
consumption	1,800 VA
max. capacity	2 microtiter plates (max. 128 x 86 x 46 mm)
max. RPM	6,300 min <sup>-1</sup>
max. RCF	4,615
Permissible density of the centrifuged material	1.2 kg/dm <sup>3</sup>
dimensions (WxDxH)	412x508x313 mm
weight	approx. 80 kg
<b>Cat. No.</b>	<b>8300</b>

\*) Other voltages on request.

## ROTINA 380 | R | RC ROBOTIC



### Flexible and versatile

Our ROTINA 380 Robotic models are available as air-cooled or refrigerated benchtop centrifuges and as cooled underbench units. They centrifuge microtitre plates and blood collection tubes fast and reliably.

With the robotically operated ROTINA 380 Robotic and 380 R Robotic, automation has now also found its way onto the laboratory bench. The ROTINA 380 RC Robotic is ideally suited for setting up an automated workstation for routine clinical diagnostics. It can carry out special tasks, such as the centrifugation of STAT samples. The routine workflow does not have to be interrupted when emergency samples are delivered. This relieves the load, particularly at peak times when large numbers of samples have to be processed within the shortest possible time. In the research sector, the ROTINA 380 Robotic models also make a valuable contribution.



### Features

- Max. RPM: 5,100 min<sup>-1</sup>
- Max. RCF: 4,696
- max. capacity: 48 x 10 ml or 6 microtiter plates
- Loading and unloading hatch in the lid
- Hatch opening time < 6 seconds
- IVDR-conform according to regulation (EU) 2017/746
- Fast + Slow positioning mode
- Positioning time of 5 seconds
- Positioning accuracy 3 encoder steps (out of a total of 4096)
- Additional light barriers in the hatch area (optional)

### Rotors

Swing-out rotor 4-place   2-place		
max. RPM   max. RCF	5,000 min <sup>-1</sup>   4,696	5,100 min <sup>-1</sup>   4,362
max. capacity	16 x 50 ml	6 plates
run-up   run-down, braked in sec	42   40	49   42
angle   temperature in °C <sup>1)</sup>	90°   0	90°   0
<b>Cat. No. rotor</b>	<b>3724-R</b>	<b>3722-R</b>
<b>Cat. No. bucket</b>	<b>3725-R/4</b>	<b>3730-R/2</b>

### Technical data

	ROTINA 380 ROBOTIC non-refrigerated	ROTINA 380 R ROBOTIC refrigerated	ROTINA 380 RC ROBOTIC refrigerated
voltage *)	200-240 V 1~	200-240 V 1~	200-240 V 1~
frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
consumption	750 VA	1,500 VA	1,500 VA
max. capacity	16 x 50 ml	16 x 50 ml	16 x 50 ml
max. RPM	5,000 min <sup>-1</sup>	5,100 min <sup>-1</sup>	5,100 min <sup>-1</sup>
max. RCF	4,696	4,696	4,696
Permissible density of the centrifuged material	1.2 kg/dm <sup>3</sup>	1.2 kg/dm <sup>3</sup>	1.2 kg/dm <sup>3</sup>
dimensions (WxDxH)	470x579x477 mm	680x579x477 mm	470x579x622 mm
weight	approx. 81 kg	approx. 113 kg	approx. 120 kg
<b>Cat. No.</b>	<b>3700</b>	<b>3702</b>	<b>3704</b>

\*) Other voltages on request.

## ROTANTA 460 ROBOTIC



### Proven and powerful

Our ROTANTA 460 Robotic model is a cooled, floorstanding centrifuge. Robotic centrifuges from the ROTANTA range have been an integral part of numerous laboratory automation systems for several decades.

Today automated sample preparation is indispensable in medical diagnostics. Robotically operated ROTANTA models have long been successfully deployed in biotechnology research laboratories and in the pharmaceutical industry, for example for high throughput screening. In pharmaceutical research, active ingredients are more and more frequently tested on cells in order to minimise experiments with animals. This too makes the use of automated centrifuges increasingly necessary.



### Features

- Max. RPM: 6,200 min<sup>-1</sup>
- Max. RCF: 6,446
- Max. capacity: 24x50 ml or 12 microtiter plates
- Loading and unloading hatch in the lid
- Hatch opening time < 6 seconds
- IVDR-conform according to regulation (EU) 2017/746
- Fast + Slow positioning mode
- Positioning time of 5 seconds
- Positioning accuracy 3 encoder steps (out of a total of 4096)
- Additional light barriers in the hatch area (optional)

### Rotors

Swing-out rotor 4-place   2-place		
max. RPM   max. RCF	4,500 min <sup>-1</sup>   4,392	6,200 min <sup>-1</sup>   6,446
max. capacity	24 x 50 ml	12 plates
run-up   run-down, braked in sec	69   68	52   38
angle   temperature in °C <sup>1)</sup>	90°   6 °C	90°   9 °C
<b>Cat. No. rotor</b>	<b>4444</b>	<b>5622</b>
<b>Cat. No. bucket</b>	<b>4486-R/4</b>	<b>5636-R/2</b>
	<b>4490-R/4</b>	

### Technical data

	ROTANTA 460 ROBOTIC refrigerated	ROTANTA 460 ROBOTIC refrigerated
automated opening	front in lid	back in the lid
voltage *)	200-240 V 1~	200-240 V 1~
frequency	50 - 60 Hz	50 - 60 Hz
consumption	1,800 VA	1,800 VA
max. capacity	24 x 50 ml	24 x 50 ml
max. RPM	6,200 min <sup>-1</sup>	6,200 min <sup>-1</sup>
max. RCF	6,446	6,446
Permissible density of the centrifuged material	1.2 kg/dm <sup>3</sup>	1.2 kg/dm <sup>3</sup>
dimensions (WxDxH)	554x697x654 mm	554x697x654 mm
weight	approx. 154 kg	approx. 154 kg
<b>Cat. No.</b>	<b>5680-10-RS232</b>	<b>5680-RS232</b>

\*) Other voltages on request.

## YOUR DIRECT CONTACT TO US

Shaping the future together – our robotics team is your direct link to a successful automation project. Find out how we turn your visions into innovative robotic solutions. Contact us now by e-mail:

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### PRODUCT VIDEO

Watch our automated centrifuge product video on Youtube.  
[www.youtube.com/hettichlabtechnology](http://www.youtube.com/hettichlabtechnology)

