

TOP  
SPIN



**Centrifuges Product Catalogue**

# LABOMODERNE

***Hettich***

ZENTRIFUGEN

**LABOMODERNE**

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# Company

*Andr. Hettich*  
*Metallwaren- und Werkzeug-Fabrik.*  
\* Tübingen \*



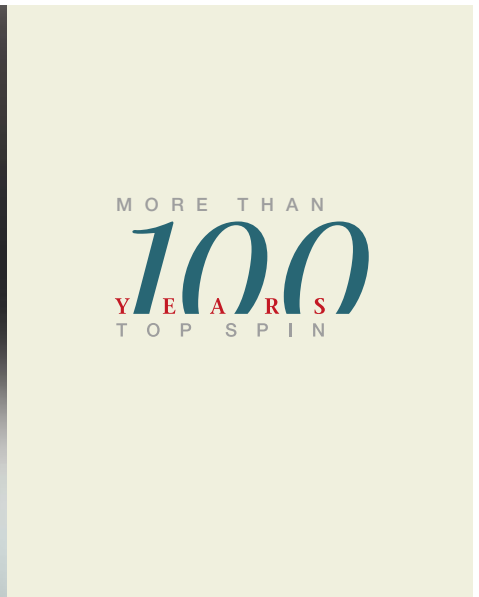
## Yesterday, today and tomorrow

The Andreas Hettich company's success story began in 1904 with the manufacturing of medical instruments. Under challenging conditions, with a well developed sense of market need and a bold spirit, Andreas Hettich set the company on course.

The first centrifuges were developed and received with breakthrough success. The company then dedicated its efforts exclusively to the manufacturing and development of centrifuges finely tuned to user needs.

Patented accessories  
for centrifuging directly  
on slides

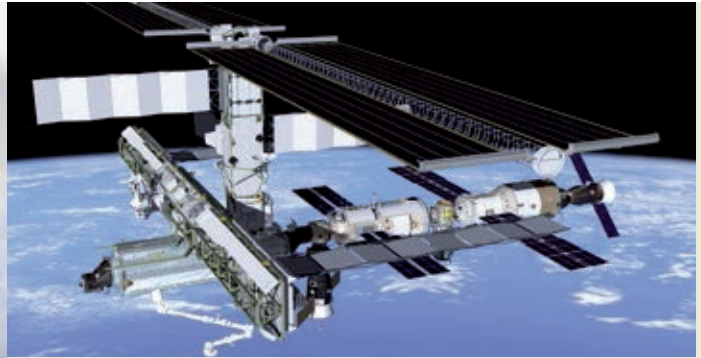




Over a span of close to 50 years, between 1956 and 2005, Günter Eberle led the company's development. With his entrepreneurial vision, he was able to bridge technological advancement and user needs – again and again. The more than 200 patents received speak for themselves.

Today, the company is one of the leading manufacturers of laboratory centrifuges worldwide.

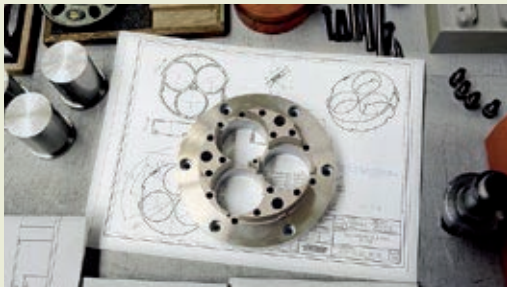
With pioneering and innovative business management and consistent quality assurance, Horst and Klaus-Günter Eberle look after consolidation and continuous expansion of their market position.



### Finely tuned precision and customer-oriented innovation

Hettich centrifuges are known for their reliable functionality, and for their fast and easy operation. At Hettich, all departments are involved in new product development from day one onwards. The open exchange of ideas and suggestions not only supports team spirit, it is also very productive. It promotes high-level motivation and commitment on the part of the whole team. Motivation that is clearly reflected in trend-setting product quality.

Impressive examples of this include the presentation of the first microprocessor-controlled centrifuges at AICHEM 1976, and the development of the first robot-operated centrifuges with PC-control and rotor positioning in the nineties. A Hettich centrifuge is even employed in the International Space Station ISS.







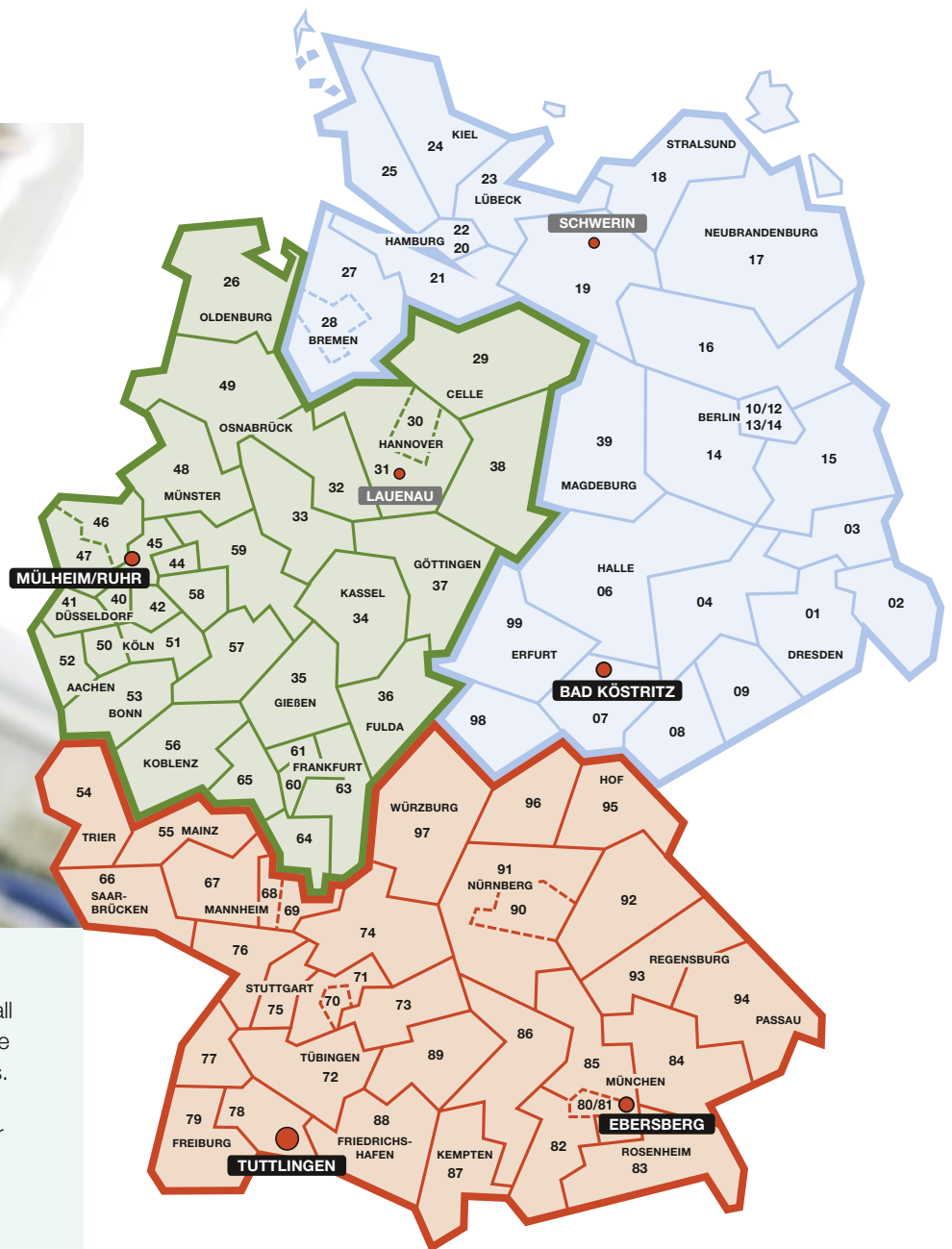
### **Responsive, attentive and dynamic**

Real customer benefits are always in the foreground of product development. Individual customer needs which are not directly covered by the current product range are addressed with customised solutions.

A 26-person sales and support team across Germany ensures service, maintenance, and specialised consulting and advice on location. Via its subsidiaries abroad, Andreas Hettich GmbH & Co.KG distributes its products in several European countries, the USA, and the Asia-Pacific region. Centrifuges from Hettich, however, are used all over the world. In many countries and on all continents, the company works closely with authorised distributors to ensure the highest quality of local service and support.



# Service



A customer service network covers all of Germany, divided into three service territories, each with 2 service offices. Our product specialists can be reached either directly or through our head office in Tuttlingen. We do our best to guarantee 24-hour service in Germany on working days.

You can access technical support by calling **+49 (0)7461 705 - 1185** or **+49 (0)7461 705 - 1109**.

The service department can also be reached directly by e-mail at **service@hettichlab.com**

You will find information on Hettich partners in your country at **www.hettichlab.com**

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Fax: +49 (0)80 92 / 69 63 52

**■ Service office**

45478 Mülheim/Ruhr  
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Fax: +49 (0)2 08 / 40 38 38

**■ Service office**

31867 Lauenau  
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Fax: +49 (0)50 43/ 57 89

**■ Service office**

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Fax: +49 (0)3 66 05 / 2 04 24

**■ Service office**

19053 Schwerin  
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Fax: +49 (0)3 85 / 5 21 96 71

# Certificates and registrations

Hettich products are distinguished by the highest quality and the most modern technology. Centrifuges and accessories are developed in collaboration with users from the fields of medicine, chemistry, research and industry, and they are always adapted to the latest requirements, in a continuous process.

Hettich centrifuges comply with all relevant EU standards in effect. All stages from design to end-product are continuously subjected to the strictest controls. Evidence is provided by national and international test marks such as IEC 61010 or the CE conformity. The ISO 9001, ISO 13485 and ISO 14001 certificates accredited to the company bear witness to the extreme care and responsibility Hettich puts into the manufacturing of centrifuges and their accessories. This is why Hettich centrifuges are known for safety and reliability all over the world.



Marks of conformity for the use of Hettich centrifuges in the US and Canada, on request.



## QUALITY & SAFETY

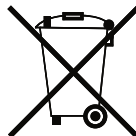
IvD stands for In-vitro Diagnostics. Hettich centrifuges conform to IvD standards, i.e. they comply with the European IvD guideline's requirements (98/79/EC) and guarantee a standardised level of quality and safety. Please see §15 "Data Storage" of our General Terms and Conditions regarding the traceability of Hettich products.



Under Rule 3 in the Classification section of Annex IX to the EU Directive 93/42/EEC, centrifuges used for the manufacture of blood products for transfusion purposes require approval as Class IIa medical products. Hettich holds this approval for the ROTO SILENTA 630 RS, ROTIXA 50 S / RS and ROTANTA 460 line of centrifuges, as shown by declaration of conformity No. 3654DE414090721 in accordance with Annex V to Directive 93/42/EEC.



General lab equipment



## NON-POLLUTING WASTE DISPOSAL

Since 1.1.2006, Hettich has been registered in Germany under **WEEE Reg. No. DE 92954423** with the Elektro-Altgeraete Register<sup>1)</sup> - Foundation for the implementation of the 2002/96/EC directive (ElektroG<sup>2)</sup>), regarding the disposal of electrical and electronic equipment in the EU. With the symbol of the crossed-out bin, it is made clear that centrifuges may not be disposed of with household waste. The disposal regulations in the individual EU countries can vary. Please ask your supplier, if necessary. In this context, we refer to § 14 "Acceptance of returns / obligation to dispose of the goods" of the General Terms and Conditions.

<sup>1)</sup> Register of old electronic equipment  
<sup>2)</sup> Electrical and Electronic Equipment Act

# Features of the centrifuges

|                              | metal housing | plastic housing | metal lid | plastic lid | viewing port in the lid | lid locking and holding | one-hand lid lock | twist lock | powered lid-locking | lid dropping protection | emergency lid lock release |
|------------------------------|---------------|-----------------|-----------|-------------|-------------------------|-------------------------|-------------------|------------|---------------------|-------------------------|----------------------------|
| <b>EBA 20</b>                |               | ●               |           | ●           | ●                       | ●                       | ●                 |            |                     |                         | ●                          |
| <b>EBA 20 S</b>              |               | ●               |           | ●           | ●                       | ●                       | ●                 |            |                     |                         | ●                          |
| <b>EBA 270</b>               |               | ●               | ●         |             | ●                       | ●                       | ●                 |            |                     |                         | ●                          |
| <b>EBA 21</b>                | ●             |                 | ●         |             | ●                       | ●                       |                   | ●          |                     | ●                       | ●                          |
| <b>HAEMATOKRIT 210</b>       | ●             |                 | ●         |             | ●                       | ●                       |                   | ●          |                     | ●                       | ●                          |
| <b>MIKRO 120</b>             |               | ●               |           | ●           | ●                       | ●                       | ●                 |            |                     |                         | ●                          |
| <b>MIKRO 200</b>             | ●             |                 | ●         |             | ●                       | ●                       | ●                 |            | ●                   | ●                       | ●                          |
| <b>MIKRO 200 R</b>           | ●             |                 | ●         |             | ●                       | ●                       | ●                 |            | ●                   | ●                       | ●                          |
| <b>MIKRO 220</b>             | ●             |                 | ●         |             | ●                       | ●                       | ●                 |            | ●                   | ●                       | ●                          |
| <b>MIKRO 220 R</b>           | ●             |                 | ●         |             | ●                       | ●                       | ●                 |            | ●                   | ●                       | ●                          |
| <b>ROTOFIX 32 A</b>          | ●             |                 | ●         |             | ●                       | ●                       | ●                 |            |                     | ●                       | ●                          |
| <b>UNIVERSAL 320</b>         | ●             |                 | ●         |             | ●                       | ●                       | ●                 |            | ●                   | ●                       | ●                          |
| <b>UNIVERSAL 320 R</b>       | ●             |                 | ●         |             | ●                       | ●                       | ●                 |            | ●                   | ●                       | ●                          |
| <b>ROTINA 380</b>            | ●             |                 | ●         |             | ●                       | ●                       | ●                 |            | ●                   | ●                       | ●                          |
| <b>ROTINA 380 R</b>          | ●             |                 | ●         |             | ●                       | ●                       | ●                 |            | ●                   | ●                       | ●                          |
| <b>ROTINA 420</b>            | ●             |                 | ●         |             | ●                       | ●                       | ●                 |            | ●                   | ●                       | ●                          |
| <b>ROTINA 420 R</b>          | ●             |                 | ●         |             | ●                       | ●                       | ●                 |            | ●                   | ●                       | ●                          |
| <b>ROTANTA 460/460 R</b>     | ●             |                 | ●         |             | ●                       | ●                       | ●                 |            | ●                   | ●                       | ●                          |
| <b>ROTANTA 460 RC/460 RF</b> | ●             |                 | ●         |             | ●                       | ●                       | ●                 |            | ●                   | ●                       | ●                          |
| <b>ROTANTA 460 Robotic</b>   | ●             |                 | ●         |             | ●                       | ●                       |                   | ●          | ●                   | ●                       | ●                          |
| <b>ROTIXA 50 S</b>           | ●             |                 | ●         |             | ●                       | ●                       | ●                 |            | ●                   | ●                       | ●                          |
| <b>ROTIXA 50 RS</b>          | ●             |                 | ●         |             | ●                       | ●                       | ●                 |            | ●                   | ●                       | ●                          |
| <b>ROTO SILENTA 630 RS</b>   | ●             |                 | ●         |             | ●                       | ●                       | ●                 |            | ●                   | ●                       | ●                          |
| <b>ROTO LAVIT</b>            | ●             |                 | ●         |             | ●                       | ●                       | ●                 |            |                     | ●                       | ●                          |
| <b>ROTOFIX 46</b>            | ●             |                 | ●         |             | ●                       | ●                       |                   | ●          |                     | ●                       | ●                          |
| <b>ROTOFIX 46 H</b>          | ●             |                 | ●         |             | ●                       | ●                       |                   | ●          |                     | ●                       | ●                          |



|  | stainless steel chamber | air cooling | cooling (-20 °C to +40 °C) | heating          | automatic rotor recognition | brushless drive | control panel | error display | imbalance detection | data report system (option) | automated | also available in 115 V / 60 Hz |                              |
|--|-------------------------|-------------|----------------------------|------------------|-----------------------------|-----------------|---------------|---------------|---------------------|-----------------------------|-----------|---------------------------------|------------------------------|
|  |                         | ●           |                            |                  |                             |                 | E             | ●             |                     |                             |           | ●                               | <b>EBA 20</b>                |
|  |                         | ●           |                            |                  |                             | ●               | E             | ●             | ●                   |                             |           | ●                               | <b>EBA 20 S</b>              |
|  | ●                       | ●           |                            |                  |                             | ●               | E             | ●             | ●                   |                             |           | ●                               | <b>EBA 270</b>               |
|  | ●                       | ●           |                            |                  | ●                           | ●               | N             | ●             | ●                   |                             |           | ●                               | <b>EBA 21</b>                |
|  | ●                       | ●           |                            |                  |                             | ●               | E             | ●             | ●                   |                             |           | ●                               | <b>HAEMATOKRIT 210</b>       |
|  |                         | ●           |                            |                  |                             | ●               | E             | ●             | ●                   |                             |           | ●                               | <b>MIKRO 120</b>             |
|  | ●                       | ●           |                            |                  |                             | ●               | N plus        | ●             | ●                   |                             |           | ●                               | <b>MIKRO 200</b>             |
|  | ●                       |             | ● <sup>#)</sup>            |                  |                             | ●               | N plus        | ●             | ●                   |                             |           | ●                               | <b>MIKRO 200 R</b>           |
|  | ●                       | ●           |                            |                  | ●                           | ●               | N plus        | ●             | ●                   |                             |           | ●                               | <b>MIKRO 220</b>             |
|  | ●                       |             | ●                          |                  | ●                           | ●               | N plus        | ●             | ●                   |                             |           | ●                               | <b>MIKRO 220 R</b>           |
|  | ●                       | ●           |                            |                  | ●                           | ●               | E             | ●             | ●                   |                             |           | ●                               | <b>ROTOFIX 32 A</b>          |
|  | ●                       | ●           |                            |                  | ●                           | ●               | N plus        | ●             | ●                   |                             |           | ●                               | <b>UNIVERSAL 320</b>         |
|  | ●                       |             | ●                          |                  | ●                           | ●               | N plus        | ●             | ●                   |                             |           | ●                               | <b>UNIVERSAL 320 R</b>       |
|  | ●                       | ●           |                            |                  | ●                           | ●               | C             | ●             | ●                   |                             |           | ●                               | <b>ROTINA 380</b>            |
|  | ●                       |             | ●                          |                  | ●                           | ●               | C             | ●             | ●                   |                             |           | ●                               | <b>ROTINA 380 R</b>          |
|  | ●                       | ●           |                            |                  | ●                           | ●               | C             | ●             | ●                   |                             |           | ●                               | <b>ROTINA 420</b>            |
|  | ●                       |             | ●                          |                  | ●                           | ●               | C             | ●             | ●                   |                             |           | ●                               | <b>ROTINA 420 R</b>          |
|  | ●                       | ●           | ● <sup>460 R</sup>         |                  | ●                           | ●               | C             | ●             | ●                   |                             |           | ●                               | <b>ROTANTA 460/460 R</b>     |
|  | ●                       |             | ●                          |                  | ●                           | ●               | C             | ●             | ●                   |                             |           | ●                               | <b>ROTANTA 460 RC/460 RF</b> |
|  | ●                       |             | ●                          |                  | ●                           | ●               | C             | ●             | ●                   |                             | ●         | ●                               | <b>ROTANTA 460 Robotic</b>   |
|  | ●                       | ●           |                            |                  | ●                           | ●               | S             | ●             | ●                   | ●                           |           |                                 | <b>ROTIXA 50 S</b>           |
|  | ●                       |             | ●                          |                  | ●                           | ●               | S             | ●             | ●                   | ●                           |           |                                 | <b>ROTIXA 50 RS</b>          |
|  | ●                       |             | ●                          |                  | ●                           | ●               | S             | ●             | ●                   | ●                           |           |                                 | <b>ROTO SILENTA 630 RS</b>   |
|  |                         | ●           |                            |                  |                             | ●               | W             | ●             | ●                   |                             |           | ●                               | <b>ROTOLAVIT</b>             |
|  | ●                       | ●           |                            |                  | ●                           | ●               | N plus        | ●             | ●                   |                             |           | ●                               | <b>ROTOFIX 46</b>            |
|  | ●                       |             |                            | ● <sup>**)</sup> | ●                           | ●               | N plus        | ●             | ●                   |                             |           | ●                               | <b>ROTOFIX 46 H</b>          |

#) Adjustable temperature range MIKRO 200 R: -10 °C to +40 °C

\*\* ) Heating up to +90 °C

# Model variants for special requirements

The following variants of the refrigerated models UNIVERSAL 320 R, ROTINA 380 R, ROTINA 420 R, ROTANTA 460 R, ROTIXA 50 RS and ROTO SILENTA 630 RS are available:

- **Variants with connection for nitrogen (N<sub>2</sub>) flushing:**

For centrifugation of reactive substances or substances which are unstable in aerial oxygen. If required, customers should install an oxygen concentration monitor.

- **Heating/cooling variants (H/C):**

For applications demanding temperatures above 40 °C, such as mineral oil testing according to ASTM, material endurance tests, etc.

The heating/cooling variants of the UNIVERSAL 320 R feature no cooling unit and no built-in heater.

An external refrigerated/heating circulator must be provided by the customer. Depending on the circulator performance, the centrifuge is able to heat/refrigerate in a range from 0 °C to +90 °C.

The floorstanding ROTO SILENTA 630 RS and ROTIXA 50 RS centrifuges are also available as variants with internal cooling unit or for connection to external cooling units, and as GMP versions.

| Model                      | Variant  | Power supply* | Frequency | Cat. No. |
|----------------------------|--|---------------|-----------|----------|
| <b>UNIVERSAL 320 R</b>     | N <sub>2</sub> flushing                                | 200–240 V     | 50 Hz     | 1406-20  |
|                            |  | 240 V         | 60 Hz     |          |
| <b>UNIVERSAL 320 R</b>     | N <sub>2</sub> flushing                                | 115–127 V     | 60 Hz     | 1406-21  |
| <b>UNIVERSAL 320 R</b>     | H/C to +90 °C  | 200–240 V     | 50–60 Hz  | 1406-50  |
| <b>UNIVERSAL 320 R</b>     | H/C to +90 °C  | 100–127 V     | 50–60 Hz  | 1406-51  |
| <b>UNIVERSAL 320 R</b>     | H/C to +90 °C plus N <sub>2</sub> flushing             | 200–240 V     | 50–60 Hz  | 1406-70  |
| <b>UNIVERSAL 320 R</b>     | H/C to +90 °C plus N <sub>2</sub> flushing             | 100–127 V     | 50–60 Hz  | 1406-71  |
| <b>ROTINA 380 R</b>        | H/C to +90 °C  | 200–240 V     | 50–60 Hz  | 1706-50  |
| <b>ROTINA 420 R</b>        | N <sub>2</sub> flushing                                | 200–240 V     | 50 Hz     | 4706-20  |
| <b>ROTINA 420 R</b>        | H/C to +90 °C  | 200–240 V     | 50 Hz     | 4706-50  |
| <b>ROTANTA 460 R</b>       | N <sub>2</sub> flushing                                | 200–240 V     | 50 Hz     | 5660-20  |
| <b>ROTANTA 460 R</b>       | H/C to +90 °C  | 200–240 V     | 50 Hz     | 5660-50  |
| <b>ROTANTA 460 R</b>       | H/C to +90 °C  | 100–127 V     | 60 Hz     | 5660-51  |
|                            |  | 100 V         | 50 Hz     |          |
| <b>ROTANTA 460 R</b>       | H/C to +90 °C plus N <sub>2</sub> flushing             | 200–240 V     | 50 Hz     | 5660-70  |
| <b>ROTANTA 460 RC</b>      | H/C to +90 °C  | 200–240 V     | 50 Hz     | 5670-50  |
| <b>ROTANTA 460 RF</b>      | H/C to +90 °C  | 200–240 V     | 50 Hz     | 5675-50  |
| <b>ROTIXA 50 RS</b>        | N <sub>2</sub> flushing                                | 220–240 V     | 50–60 Hz  | 4910-20  |
| <b>ROTIXA 50 RS</b>        | H/C to +60 °C  | 220–240 V     | 50–60 Hz  | 4910-50  |
| <b>ROTIXA 50 RS</b>        | GMP, external cooling unit                             | 208–240 V     | 50–60 Hz  | 4910-90  |
| <b>ROTIXA 50 RS</b>        | GMP, internal cooling unit with water-cooled condenser | 220–240 V     | 50–60 Hz  | 4910-96  |
| <b>ROTO SILENTA 630 RS</b> | N <sub>2</sub> flushing                                | 400 V 3~ +N   | 50–60 Hz  | 5005-20  |
| <b>ROTO SILENTA 630 RS</b> | H/C to +90 °C  | 400 V 3~ +N   | 50–60 Hz  | 5005-50  |
| <b>ROTO SILENTA 630 RS</b> | brine cooling  | 400 V 3~ +N   | 50–60 Hz  | 5005-60  |
| <b>ROTO SILENTA 630 RS</b> | GMP, internal cooling unit with water-cooled condenser | 400 V 3~ +N   | 50–60 Hz  | 5005-80  |
| <b>ROTO SILENTA 630 RS</b> | GMP, external cooling unit                             | 400 V 3~ +N   | 50–60 Hz  | 5005-90  |

\*) Other voltages on request.

# Centrifugation

Centrifuges generate centrifugal forces which are many times stronger than the pull of the earth's gravity. They separate suspended particles in liquids, or separate liquids of differing densities from each other. By centrifugation, sedimentation occurs much more rapidly than by the natural force of gravity.

A range of different rotors are available for the various applications. In laboratory centrifuges the principal rotors used are

- angle rotors and
- swing-out rotors.

Both rotor types have their specific advantages.



## THE ANGLE ROTOR

Fixed-angle rotors are used primarily in the higher speed range. Their relatively low drag means high speeds are attained. The oblique angling of the tubes shortens the overall distance the particles have to travel, thereby additionally speeding up the sedimentation process.



## THE SWING-OUT ROTOR

During centrifugation, the tubes are swung horizontal. In the process, the sediment is deposited in the middle of the tube bottom, phase limits are formed horizontally. If higher capacities are required in the mid speed range, swing-out rotors are used. The wide variety of accessories is a further feature of these rotors.

## CALCULATING CENTRIFUGAL FORCE

The performance of a centrifuge is often specified as the maximum rotor speed. However, the speed provides only an approximation of the force actually acting on the centrifuged material and causing the mixtures to be separated. This force is termed the relative centrifugal force (RCF). The non-unit-specific numerical value indicates the multiple by which the centrifugal force exceeds the acceleration due to gravity 'g'. The formula for calculating RCF is:


















































































$$RCF = (n/1000)^2 \times r \times 11,18$$

n = revolutions per minute (RPM)  
r = radius in cm

This means that a doubling of the radius results in a doubling of the RCF; a doubling of the speed results in a quadrupling of the RCF. Centrifuge performance should therefore always be compared by way of the RCF value instead of rpm.



# Which tubes are suitable to which centrifuges?

|                                |  |   |   |   |   |   |  |   |  |
|--------------------------------|--|---|---|---|---|---|--|---|--|
| <b>HANDZENTRIFUGE</b>          | <br>max. 15 ml    | <br>15 ml        |   |   |   |   |  |   |  |
| <b>EBA 20 / EBA 20 S</b>       | <br>max. 15 ml    | <br>15 ml        |   |   |   |   |  |   |  |
| <b>EBA 270</b>                 | <br>max. 15 ml    |   |   |   |   |   |  |   |  |
| <b>EBA 21</b>                  | <br>max. 50 ml    | <br>max. 50 ml   |   | <br>max. 50 ml   |   |   |  |    |  |
| <b>HAEMATOKRIT 210</b>         |  |   |   |   |   |   |  |   |  |
| <b>MIKRO 120</b>               |  |   |   |   |   |   |  |    |  |
| <b>MIKRO 200 / 200 R</b>       |  |   |   |   |   |   |  |    |   |
| <b>MIKRO 220 / 220 R</b>       | <br>max. 50 ml    | <br>max. 50 ml   |   | <br>max. 50 ml   |   |   |  |    |  |
| <b>ROTOFIX 32 A</b>            | <br>max. 100 ml | <br>max. 50 ml | <br>max. 50 ml | <br>max. 85 ml |   |   |  |  |  |
| <b>UNIVERSAL 320 / 320 R</b>   | <br>max. 100 ml | <br>max. 50 ml | <br>max. 50 ml | <br>max. 85 ml |   |   |  |  |  |
| <b>ROTINA 380 / 380 R</b>      | <br>max. 250 ml | <br>max. 50 ml | <br>max. 50 ml | <br>max. 94 ml | <br>max. 290 ml   |   | <br>max. 225 ml |  |  |
| <b>ROTINA 420 / 420 R</b>      | <br>max. 250 ml | <br>max. 50 ml | <br>max. 50 ml | <br>max. 94 ml | <br>max. 600 ml   |   | <br>max. 225 ml |  |  |
| <b>ROTANTA 460 / 460 R</b>     | <br>max. 250 ml | <br>max. 50 ml | <br>max. 50 ml | <br>max. 94 ml | <br>max. 750 ml   |   | <br>max. 500 ml |  |  |
| <b>ROTANTA 460 RC / 460 RF</b> | <br>max. 250 ml | <br>max. 50 ml | <br>max. 50 ml | <br>max. 94 ml | <br>max. 250 ml   |   |  |  |  |
| <b>ROTANTA 460 Robotic</b>     | <br>max. 250 ml | <br>max. 50 ml | <br>max. 50 ml | <br>max. 94 ml | <br>max. 1,000 ml |   | <br>max. 500 ml |  |  |
| <b>ROTIXA 50 S / 50 RS</b>     | <br>max. 250 ml | <br>max. 50 ml | <br>max. 50 ml | <br>max. 94 ml | <br>max. 1,000 ml |   | <br>max. 500 ml |  |  |
| <b>ROTO SILENTA 630 RS</b>     | <br>max. 100 ml | <br>max. 50 ml | <br>max. 50 ml | <br>10 ml      | <br>max. 1,000 ml | <br>2,000 ml | <br>max. 500 ml |   |  |
| <b>ROTOLAVIT</b>               | <br>5 ml        |   |   |   |   |   |  |   |  |
| <b>ROTOFIX 46 / 46 H</b>       | <br>max. 250 ml | <br>max. 50 ml | <br>max. 50 ml | <br>10 ml      | <br>max. 290 ml   |   |  |   |  |



# Control panels

The state-of-the-art control panels from Hettich are easy to operate and specifically tailored to users' needs. Entry of the parameters is fast, precise and convenient by way of an adjuster knob and / or selector keys on a foil keypad. The intuitive display shows the actual values in digital format while the centrifuge is running.



EBA 20, EBA 20 S, EBA 270, MIKRO 120 and HAEMATOKRIT 210



ROTOFIX 32 A

## THE E CONTROL PANEL

The E(economy) control panel is fitted in the EBA 20, EBA 20 S, EBA 270, MIKRO 120, HAEMATOKRIT 210 and ROTOFIX 32 A models. The required centrifugation parameters can be entered quickly and easily on the user-friendly keypad:

### DISPLAY

**RPM** Speed indication. Entry in increments of 100.  
**t** Time indication. Entry in minutes, max. 99 min.

### KEYPAD

- ▲ Increases the relevant value.
- ▼ Decreases the relevant value.
- ▲▲▲ For short centrifugation steps.
- IMPULS Opens the lid (EBA 20, EBA 20 S, EBA 270 and MIKRO 120 only).
- START Starts centrifugation.
- STOP Stops centrifugation manually.
- RCF Switches from RPM to RCF display (ROTOFIX 32 A only).



## THE N CONTROL PANEL

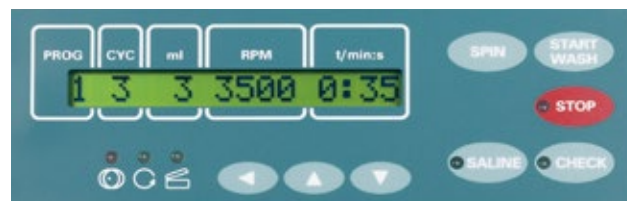
The EBA 21 centrifuge model features the N(ormal) control panel. The N control panel has more functions than the E control panel.

### DISPLAY

- PROG** Program number. Three programmable memories are available.
- >RCF<** Relative centrifugal force.
- RPM** Speed indication. Entry in increments of 10.
- t/min** Centrifugation time (max. 99 min : 59 sec).

### KEYPAD

- ◀ Guides the user through the menu options.
- ▲ Increases the relevant value.
- ▼ Decreases the relevant value.
- IMPULS For short centrifugation steps.
- START Starts centrifugation.
- STOP Stops centrifugation manually.
- PROG Stores the program.
- RCF Switches from RPM to RCF display. Entry of the RCF in increments of 10. Entry of the centrifuging radius in mm.
- ⤿ Entry of the run-up time in ramps 1–9
- ⤿ Entry of the run-down time in ramps 1–9
- An LED lights up:
  - ◉ in the event of imbalance,
  - ◉ as long as the rotor is rotating,
  - ◉ when the lid can be opened on completion of the program.



## THE N PLUS CONTROL PANEL

The MIKRO 200 / 200 R, MIKRO 220 / 220 R, UNIVERSAL 320 / 320 R and ROTOFIX 46 / 46 H models are quick and easy to operate using this variant of the N control panel. The parameters are selected with the SELECT key. An adjuster knob is used to set the values, and the settings are stored by pressing the Start/Impulse key.

### DISPLAY



**P** Program number. Four (MIKRO 200 / 200 R) or 10 (MIKRO 220 / 220 R, UNIVERSAL 320 / 320 R, ROTOFIX 46 / 46 H) programmable memories are available.

**T/°C** Temperature of refrigerated and heatable centrifuges. The temperature of the refrigerated models is infinitely variable between -20 °C and +40 °C (MIKRO 220 R, UNIVERSAL 320 R) or between -10 °C and +40 °C (MIKRO 200 R). Model ROTOFIX 46 H can be heated up to +90 °C.


**RCF** Relative centrifugal force.


**RPM** Speed indication. Entry in increments of 10.

**t/min** Centrifugation time (max. 99 min : 59 sec).

 Entry of the acceleration ramp 1–9  
 Entry of the braking ramp 1–9

### KEYPAD

 Pre-cools the rotor chamber (MIKRO 200 R, MIKRO 220 R and UNIVERSAL 320 R) to the required temperature.

 Heats the rotor chamber of the ROTOFIX 46 H to the required temperature.

**RCF** Switches from RPM to RCF display. Entry of the RCF in increments of 10. Input of rotor radius in mm in RCF mode.

**SELECT** Guides the user through the menu options.

**START IMPULS** Starts centrifugation. For short centrifugation steps.

**STOP OPEN** Stops centrifugation manually. Opens the lid at standstill.

## THE W CONTROL PANEL

The W control panel is used to program the special functions of the cell washer ROTOLAVIT.

### DISPLAY

**PROG** Program number. Five programmable memories are available.

**CYC** Washing cycles. A maximum of nine washing cycles can be entered.

**ml** Volume of saline solution per tube (max. 5 ml).

**RPM** Speed indication. Entry in increments of 10.

**t/min:s** Centrifugation time (max. 9 min : 59 sec).

### KEYPAD

 Guides the user through the menu options.

 Increases the relevant value.

 Decreases the relevant value.

**START WASH** Starts washing, the production of a suspension or the cleaning program, adopts the selected parameters.


**SPIN** Starts additional centrifugations, e.g. Coombs centrifugation.


**STOP** Stops centrifugation or washing manually.


**SALINE** · Activates the fill volume calibrator.  
· Charges the system with washing liquid during the cleaning program.

**CHECK** Stops the process at any desired point to enable visual inspection of the particular process.

An LED lights up:

 · in the event of imbalance,

 · as long as the rotor is rotating,

 · when the lid can be opened on completion of the program.







## THE C CONTROL PANEL

The advanced C control panel significantly facilitates the daily laboratory routine. Parameter selection is done via the use of symbol keys. Values are set with the control knob, and recorded by pressing the START key. The temperature in the refrigerated ROTINA 380 R, ROTINA 420 R, ROTANTA 460 R and ROTANTA 460 Robotic centrifuges can be set in either Celsius (°C) or Fahrenheit (°F) degrees.

### DISPLAY AND PARAMETER INPUT

|  |   |
|--|---|
| <b>PROG</b>  | Entry and recall of the program number.<br>98 programs can be stored.   |
| <b>T/°C</b>  | Entry of the temperature from -20 °C to +40 °C or -4 °F to +104 °F in increments of 1 with refrigerated models.   |
|  | Entry of the run-up time in ramps 1-9 or in min : sec.<br>Entry of the run-down time in ramps R 1-9 and B 1-9 or in min : sec. Also unbraked run-down or a brake force cut-off speed can be selected. |
| <b>RCF</b>   | Entry of the relative centrifugal force in increments of 1.<br>Entry of the centrifuging radius (RAD) in mm.  |
| <b>RPM</b>   | Entry of the speed in increments of 10.   |
| <b>TIME</b>  | Entry of the centrifugation time (max. 99 h : 59 min : 59 sec) or continuous operation.   |

### KEYPAD

|  |   |
|--|---|
| <b>START</b>   | Starts centrifugation.<br>Starts short centrifugation.<br>Stores entries and changes. |
|  | Starts pre-cooling program <b>PREC</b> .  |
| <b>STOP</b>  | Stops centrifugation manually.  |
| <b>OPEN</b>  | Opens the lid at standstill.  |

Centrifuges with C control panel permit the centrifugation time to be switched from „at start“ (commencing upon start) to „at speed“ (start when the set speed has been reached).

### OPTIONS

**PROGRAM INTERLOCKING:** to combine several centrifugation runs.






## THE S CONTROL PANEL

This special-class control panel is standard with the ROTIXA 50 S / 50 RS and ROTO SILENTA 630 RS floorstanding centrifuges.

### DISPLAY

|                           |  |
|---------------------------|--|
| <b>PROG-Nr</b>            | Program number.<br>89 programmable memories are available. |
| <b>T/°C</b>               | Temperature of refrigerated centrifuges.                   |
| <b>PROFIL</b>             | Run-up and run-down profile.                               |
| <b>n/min<sup>-1</sup></b> | Speed indication.  |
| <b>t/min:sec</b>          | Centrifugation time (max. 999 min : 59 sec).               |

### KEYPAD

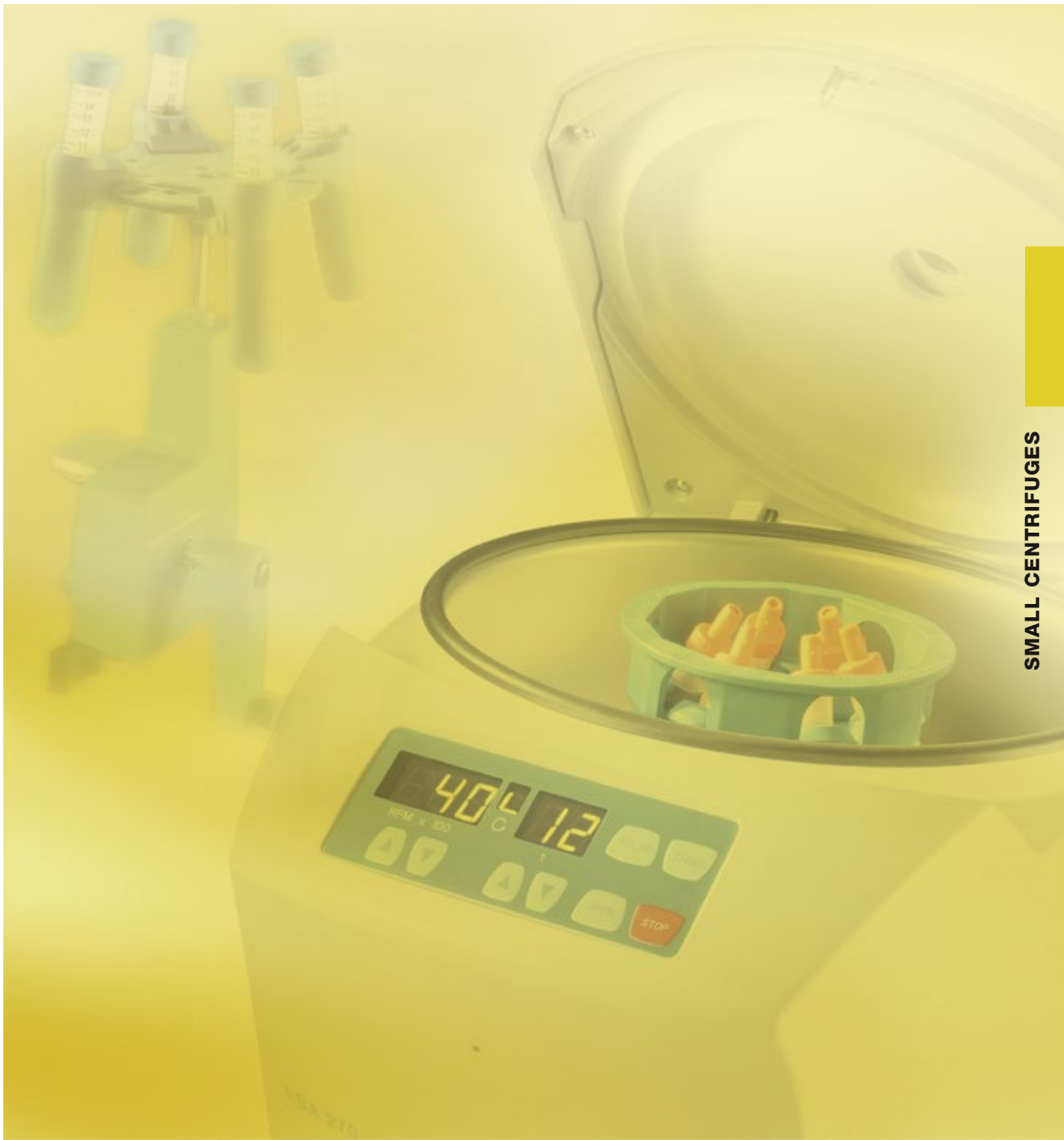
|   |   |
|---|---|
| <b>STO</b>  | Stores the program.   |
| <b>RCL</b>  | Calls up the selected program.  |
| <b>PROG</b>   | Selects the program menu.   |
|  | Entry of the temperature from -20 °C to +40 °C in increments of 1 °C with refrigerated centrifuges.<br>Entry of the rotor radius in mm in RCF mode. |
| <b>RCF</b>  | Switches from RPM to RCF display.<br>Entry of the RCF in increments of 1.   |
|  | Entry of the run-up time in ramps 1-9 or in min:sec.  |
|  | Entry of the run-down time in ramps R 1-9 and B 1-9 or in min : sec. Also unbraked run-down or a brake force cut-off speed can be selected.         |
| <b>J RCF</b>  | The integral over the RCF indicates the overall RCF acting on the centrifuged material during the running time so far.                              |
| <b>n</b>  | Entry of the speed in increments of 10.   |
| <b>t</b>  | Entry of the centrifugation time (max. 999 min : 59 sec) or continuous operation.   |
| <b>START</b>  | Starts centrifugation.  |
| <b>STOP</b>   | Stops centrifugation manually.  |

### OPTIONS

**PROGRAM INTERLOCKING:** to combine several centrifugation runs.

**DATA REPORT SYSTEM:** For detailed information on this subject, please refer to the HettInfo section on pages 154-155.

# Small Centrifuges



SMALL CENTRIFUGES

HANDZENTRIFUGE

EBA 20 / EBA 20 S

EBA 270

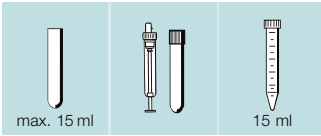
EBA 21

**LABOMODERNE**

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Tél. 01 42 50 50 50

# HANDZENTRIFUGE



The manually operated centrifuge is maintenance-free and independent of an external power supply

This convenient centrifuge can be easily clamped to a bench or table, and operated without electricity. Its self-lubricating gear makes it virtually maintenance-free.

It can be operated with two different rotors.

With rotor No. **1014**, conical 15 ml tubes (Cat. No. 0515, non-graduated or No. 0516, graduated) can be accelerated to 1,298 RCF.

Rotor No. **1025** also accommodates a variety of other commercial tubes (also with round bottom) up to 15 ml. The tubes may have a max. length of 125 mm and a max. diameter of 17 mm.



## Rotor, 4-place

↘ 90°

max. capacity 4 x 15 ml (conical only)  
max. RPM (speed) 3,000 min<sup>-1</sup>  
max. RCF 1,298

**Cat. No. 1014**

## Rotor, 4-place

↘ 50°

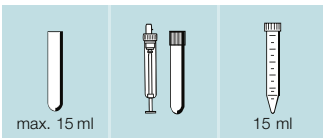
max. capacity 4 x 15 ml  
max. RPM (speed) 3,000 min<sup>-1</sup>  
max. RCF 1,077

**Cat. No. 1025**

## HANDZENTRIFUGE

|   |                    |
|---|--------------------|
| <b>Manual centrifuge, without rotor</b> |                    |
| Dimensions (HxWxD)                      | 285 x 140 x 175 mm |
| Weight                                  | approx. 0.9 kg     |
| <b>Cat. No.</b>                         | <b>1011</b>        |

# EBA 20 / EBA 20 S



## Small and practical centrifuges for small sample volumes

The EBA 20 and EBA 20 S are fitted as standard with an angle rotor for 8 tubes up to a volume of 15 ml. The EBA 20 attains a max. RCF of 3,461 and is the ideal choice for a medical practice. The more powerful EBA 20 S generates a max. RCF of 6,153 and is suitable for emergency laboratories where every minute counts. Its higher speeds reduce centrifugation time such that plasma with a low platelet content is available for analysis after just a few minutes.




EBA 20

### TECHNOLOGY

#### EBA 20

#### EBA 20 S

| Small centrifuge, with rotor  |  | EBA 20  |                | EBA 20 S                  |                |
|---|--|---|----------------|---------------------------|----------------|
| Power supply <sup>*)</sup>  |  | 208–240 V 1 ~   | 100–127 V 1 ~  | 200–240 V 1 ~             | 100–127 V 1 ~  |
| Frequency   |  | 50–60 Hz  |                |                           |                |
| Consumption   |  | 65 VA   | 70 VA          | 130 VA                    | 180 VA         |
| Emission, Immunity  |  | EN / IEC 61326-1, class B                                     | FCC class B    | EN / IEC 61326-1, class B | FCC class B    |
|  Max. capacity |  | 8 x 15 ml   |                |                           |                |
| Max. RPM  |  | 6,000 min <sup>-1</sup>                                       |                | 8,000 min <sup>-1</sup>   |                |
| Max. RCF  |  | 3,461   |                | 6,153                     |                |
| Running time  |  | 1 – 99 min , ∞ continuous run, short cycle mode (impulse key) |                |                           |                |
| Dimensions (HxWxD)  |  | 216 x 231 x 292 mm  |                |                           |                |
| Weight  |  | approx. 4 kg  |                | approx. 6 kg              |                |
| <b>Cat. No.</b>   |  | <b>2002</b>   | <b>2002-01</b> | <b>2080</b>               | <b>2080-01</b> |

<sup>\*)</sup> Other voltages on request.



## Angle rotor EBA 20/ EBA 20 S, 8-place, for commercial tubes up to 15 ml:



8x15 ml tubes



4x15 ml tubes with screw cap




4x8 ml blood collection tubes




8x9-10 ml blood collection tubes

∠ 33°

n = 6,000 min<sup>-1</sup> / 8,000 min<sup>-1</sup>  
max. RCF 3,461 / 6,153

| capacity in ml   | 4           | 5                        | 6                        | 15                       | 1.1-1.4                             | 2.6-3.4 | 2.7-3          | 4.5-5   | 4.9   | 7.5-8.5 | 9-10  | 10     |
|--|-------------|--------------------------|--------------------------|--------------------------|-------------------------------------|---------|----------------|---------|-------|---------|-------|--------|
| Ø x L in mm  | 10x88       | 12x75                    | 12x82                    | 17x100                   | 8x66                                | 13x65   | 11x66          | 11x92   | 13x90 | 15x92   | 16x92 | 15x102 |
| <b>Cat. No.</b>  | -           | <b>0553<sup>2)</sup></b> | <b>0501<sup>2)</sup></b> | <b>0518<sup>2)</sup></b> | <b>blood collection/urine tubes</b> |         |                |         |       |         |       |        |
| <br>rotor incl. |             |                          |                          |                          |                                     |         |                |         |       |         |       |        |
|  |             |                          | <sup>14)</sup>           |                          |                                     |         | <sup>14)</sup> |         |       |         |       |        |
| <b>Cat. No.</b>  | <b>6305</b> | <b>1054-A</b>            | -                        |                          | <b>1054-A</b>                       |         |                | -       |       |         |       |        |
| boring Ø x L in mm   | 11.5x67.5   | 13.5x60                  | 17.7x88                  |                          | 13.5x60                             |         |                | 17.7x88 |       |         |       |        |
| tubes per rotor  | 8           |                          |                          |                          |                                     |         |                |         |       |         |       |        |
| max. RCF <sup>2)</sup> EBA 20  | 2,817       | 2,697                    | 3,461                    |                          | 2,697                               |         |                | 3,461   |       |         |       |        |
| max. RCF <sup>2)</sup> EBA 20 S  | 5,009       | 4,794                    | 6,153                    |                          | 4,794                               |         |                | 6,153   |       |         |       |        |
| radius in mm   | 70          | 67                       | 86                       |                          | 67                                  |         |                | 86      |       |         |       |        |
| run-up in sec  | 26/23       |                          |                          |                          |                                     |         |                |         |       |         |       |        |
| run-down in sec, braked  | 37/40       |                          |                          |                          |                                     |         |                |         |       |         |       |        |

| capacity in ml   | 1.6-5                               | 4-7         | 8              | 8.5-10 | 15          |
|--|-------------------------------------|-------------|----------------|--------|-------------|
| Ø x L in mm  | 13x75                               | 13x100      | 16x125         | 16x100 | 17x120      |
| <b>Cat. No.</b>  | <b>blood collection/urine tubes</b> |             |                |        | <b>0509</b> |
| <br>rotor incl. |                                     |             |                |        |             |
|  |                                     |             | <sup>14)</sup> |        |             |
| <b>Cat. No.</b>  | <b>1054-A</b>                       | <b>1058</b> | -              |        |             |
| boring Ø x L in mm   | 13.5x60                             | 13.5x79     | 17.7x88        |        |             |
| tubes per rotor  | 8                                   | 8           | 4              | 8      | 4           |
| max. RCF <sup>2)</sup> EBA 20  | 2,697                               | 3,461       |                |        |             |
| max. RCF <sup>2)</sup> EBA 20 S  | 4,794                               | 6,153       |                |        |             |
| radius in mm   | 67                                  | 86          |                |        |             |
| run-up in sec  | 26/23                               |             |                |        |             |
| run-down in sec, braked  | 37/40                               |             |                |        |             |

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.

<sup>14)</sup> For the EBA 20 only! Model EBA 20 S is supplied as standard with an adapter for these tubes.

**More for the lab**

We have applied our many years of experience in the field of lab technology to other quality products. For example:



**Hettich**

FREEZER

## FREEZER

# Ultra-low temperature chest and upright models

Constant: Safe and secure storage in an optimal environment



**Secure, energy-saving, flexible:**

You require safe, secure storage for your valuable samples. Tissue specimens, DNA, RNA, protein preparations and similar substances need to be stored in such a way as to ensure they are well preserved. With a constant temperature of **up to - 86 °C**, Hettich freezers offer the optimal environment for your sensitive samples.



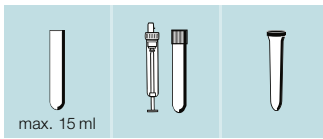
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# EBA 270



## Optimal sample preparation starts in the medical practice


The EBA 270 is a small centrifuge with a swing-out rotor especially designed for use in medical practices. It accepts common blood or urine tubes up to a volume of 15 ml and accelerates them to a maximum speed of 4,000 min<sup>-1</sup>. This corresponds to a RCF of 2,254.

It delivers optimal separation results and a horizontal layer of the separating gel that is identical to that achieved with a large centrifuge. Samples are therefore optimally prepared for analysis.



## TECHNOLOGY

### EBA 270

| Small centrifuge, with rotor  |  |
|---|--|
| Power supply <sup>*)</sup>  | 200–240 V 1 ~      100–127 V 1 ~                             |
| Frequency   | 50–60 Hz   |
| Consumption   | 130 VA      125 VA   |
| Emission, Immunity  | EN / IEC 61326-1, class B      FCC class B                   |
|  Max. capacity | 6 x 15 ml  |
| Max. RPM (speed)  | 4,000 min <sup>-1</sup>                                      |
| Max. RCF  | 2,254  |
| Running time  | 1 – 99 min, ∞ continuous run, short cycle mode (impulse key) |
| Dimensions (HxWxD)  | 239x326x389 mm   |
| Weight  | approx. 14 kg  |
| <b>Cat. No.</b>   | <b>2300      2300-01</b>                                     |

<sup>\*)</sup> Other voltages on request.

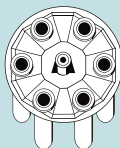




























**Swing-out rotor, 6-place (incl.)**



↗ 90°

illustrated with blood collection tubes

n = 4,000 min<sup>-1</sup>  
max. RCF 2,254

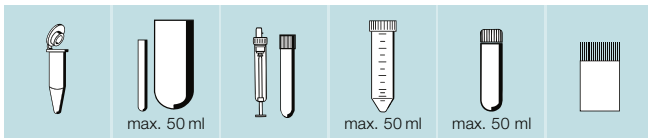
| capacity in ml  | 4   | 5   | 6   | 15  | 1.1-1.4   | 2.6-3.4   | 2.7-3   | 4-5.5   | 4.5-5   | 4.9   | 7.5-8.5   | 9-10  | 10  | 1.6-5   | 4-7   | 4-7   | 8.5-10  | 12  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø x L in mm   | 10x88   | 12x75   | 12x82   | 17x100  | 8x66  | 13x65   | 11x66   | 15x75   | 11x92   | 13x90   | 15x92   | 16x92   | 15x102  | 13x75   | 13x100  | 16x75   | 16x100  | 17x102  |
| Cat. No.  | -   | 0553 <sup>2)</sup>  | 0501 <sup>2)</sup>  | 0518 <sup>2)</sup>  | blood collection/urine tubes  |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <br>rotor and carriers incl. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   |  |  |  |  |  |  |   |   |   |   |   |  |  |  |  |   |   |   |
| Cat. No.  | <b>2331</b>   | <b>2333</b>   | <b>2331</b>   | <b>2333</b>   | <b>2331</b>   |   |   |   |   |   | <b>2333</b>   | <b>2331</b>   | <b>2333</b>   | <b>2331</b>   |   |   |   |   |
| boring Ø x L in mm  | 17.5x80   | 17.5x55   | 17.5x80   | 17.5x55   | 17.5x80   |   |   |   |   |   | 17.5x55   | 17.5x80   | 17.5x55   | 17.5x80   |   |   |   |   |
| tubes per rotor   | 6   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| max. RCF <sup>2)</sup>  | 2,254   | 1,807   | 2,254   | 1,807   | 2,254   |   |   |   |   |   | 1,807   | 2,254   | 1,807   | 2,254   |   |   |   |   |
| radius in mm  | 126   | 101   | 126   | 101   | 126   |   |   |   |   |   | 101   | 126   | 101   | 126   |   |   |   |   |
| run-up in sec   | 10  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| run-down in sec   | 21  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

EBA 270

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.



# EBA 21



## Maximum performance in microlitre centrifugation coupled with reliability for routine laboratory tasks

The EBA 21 is powerful and versatile not only in microlitre centrifugation. Equipped with a variable, maintenance-free frequency drive, this centrifuge generates a max. RCF of 25,718 at a speed of 18,000 min<sup>-1</sup>.


With its wide range of rotors, the EBA 21 can easily meet all demands placed on a small, high-performance centrifuge.



EBA 21

## TECHNOLOGY

### EBA 21

| Small centrifuge, without rotor   |  |   |                |
|---|--|---|----------------|
| Power supply*)  |  | 220–240 V 1 ~   | 110–127 V 1 ~  |
| Frequency   |  | 50–60 Hz  |                |
| Consumption   |  | 500 VA  | 550 VA         |
| Emission, Immunity  |  | EN / IEC 61326-1, class B   | FCC class B    |
|  Max. capacity |  | 6x50 ml   |                |
| Max. RPM (speed)  |  | 18,000 min <sup>-1</sup>  |                |
| Max. RCF  |  | 25,718  |                |
| Running time  |  | 1 sec – 99 min : 59 sec, ∞ continuous run, short cycle mode (impulse key) |                |
| Dimensions (HxWxD)  |  | 247x275x330 mm  |                |
| Weight  |  | approx. 11 kg   |                |
| <b>Cat. No.</b>   |  | <b>1004</b>   | <b>1004-01</b> |

\*) Other voltages on request.

**Angle rotor, 6-place**
**Angle rotor, 12-place**

 $\angle 35^\circ$ 


 n = 6,000 min<sup>-1</sup>  
 max. RCF 4,025


**Cat. No. 1116**

 $\angle 35^\circ$ 

 n = 6,000 min<sup>-1</sup>  
 max. RCF 4,146

**Cat. No. 1416**

|   |                           |                           |                           |                           |                                       |        |         |          |             |             |             |             |
|---|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------------------|--------|---------|----------|-------------|-------------|-------------|-------------|
| capacity in ml  | 7                         | 15                        | 25                        | 50                        | 9-10                                  | 10     | 1.6-5   | 4-7      | 15          | 50          | 30          | 50          |
| Ø x L in mm   | 12x100                    | 17x100                    | 24x100                    | 34x100                    | 16x92                                 | 15x102 | 13 x 75 | 13 x 100 | 17x120      | 29x115      | 26x95       | 29x107      |
| <b>Cat. No.</b>   | <b>0578</b> <sup>2)</sup> | <b>0518</b> <sup>2)</sup> | <b>0519</b> <sup>2)</sup> | <b>0521</b> <sup>2)</sup> | <b>blood collection / urine tubes</b> |        |         |          | <b>0509</b> | <b>0513</b> | <b>0545</b> | <b>0546</b> |
| <br><b>rotor</b><br>Cat. No. <b>1116</b> |                           |                           |                           |                           |                                       |        |         |          |             |             |             |             |
|   |                           |                           |                           |                           |                                       |        |         |          |             |             |             |             |
| <b>Cat. No.</b>   | <b>1632</b>               | <b>1635</b>               | <b>1633</b>               | -                         | <b>1635</b>                           |        |         |          | <b>1631</b> | <b>1641</b> | <b>1633</b> | <b>1634</b> |
| boring Ø x L in mm  | 13x92                     | 17.5x95                   | 26x88                     | 35x96                     | 17.5x95                               |        |         |          | 17x98       | 30x98       | 26x88       | 29x95       |
| tubes per rotor   | 18                        | 6                         |                           |                           | 6                                     |        |         |          | 6           | 3           | 6           |             |
| max. RCF <sup>2)</sup>  | 3,944                     | 3,783                     | 3,703                     | 4,025                     | 3,783                                 |        | 2,978   | 3,783    | 3,824       | 3,824       | 3,703       | 3,904       |
| radius in mm  | 98                        | 94                        | 92                        | 100                       | 94                                    |        | 74      | 94       | 95          | 95          | 92          | 97          |
| run-up in sec   | 23                        |                           |                           |                           |                                       |        |         |          |             |             |             |             |
| run-down in sec, braked   | 27                        |                           |                           |                           |                                       |        |         |          |             |             |             |             |

|   |                           |                           |                                     |         |       |         |       |         |       |        |               |             |             |        |        |
|---|---------------------------|---------------------------|-------------------------------------|---------|-------|---------|-------|---------|-------|--------|---------------|-------------|-------------|--------|--------|
| capacity in ml  | 5                         | 15                        | 1.1-1.4                             | 2.6-3.4 | 2.7-3 | 4.5-5   | 4.9   | 7.5-8.5 | 9-10  | 10     | 1.6-5         | 4-7         | 8           | 8.5-10 | 15     |
| Ø x L in mm   | 12x75                     | 17x100                    | 8x66                                | 13x65   | 11x66 | 11x92   | 13x90 | 15x92   | 16x92 | 15x102 | 13x75         | 13x100      | 16x125      | 16x100 | 17x120 |
| <b>Cat. No.</b>   | <b>0553</b> <sup>2)</sup> | <b>0518</b> <sup>2)</sup> | <b>blood collection/urine tubes</b> |         |       |         |       |         |       |        |               |             | <b>0509</b> |        |        |
| <br><b>rotor</b><br>Cat. No. <b>1416</b> |                           |                           |                                     |         |       |         |       |         |       |        |               |             |             |        |        |
|   |                           |                           |                                     |         |       |         |       |         |       |        |               |             |             |        |        |
| <b>Cat. No.</b>   | <b>1054-A</b>             | -                         | <b>1054-A</b>                       |         |       | -       |       |         |       |        | <b>1054-A</b> | <b>1058</b> | -           |        |        |
| boring Ø x L in mm  | 13.5x60                   | 17.7x88                   | 13.5x60                             |         |       | 17.7x88 |       |         |       |        | 13.5x60       | 13.5x79     | 17.7x88     |        |        |
| tubes per rotor   | 12                        | 12                        | 12                                  |         |       | 12      |       |         |       |        | 12            | 12          | 6           | 12     | 6      |
| max. RCF <sup>2)</sup>  | 3,300                     | 4,146                     | 3,300                               |         |       | 4,146   |       |         |       |        | 3,300         | 4,146       |             |        |        |
| radius in mm  | 82                        | 103                       | 82                                  |         |       | 103     |       |         |       |        | 82            | 103         |             |        |        |
| run-up in sec   | 18                        |                           |                                     |         |       |         |       |         |       |        |               |             |             |        |        |
| run-down in sec, braked   | 23                        |                           |                                     |         |       |         |       |         |       |        |               |             |             |        |        |

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote<sup>2)</sup> is 4,000.

### Angle rotor, 12-place

### Angle rotor, 24-place

### Angle rotor, 30-place



↘ 45°

n = 18,000 min<sup>-1</sup>  
max. RCF 25,718

**Cat. No. 1022-A**



↘ 40°

n = 15,000 min<sup>-1</sup>  
max. RCF 21,382

**Cat. No. 1024-A**

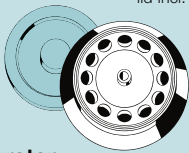










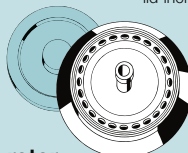









↘ 45°

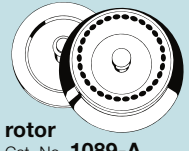








n = 14,000 min<sup>-1</sup>  
max. RCF 21,255

**Cat. No. 1089-A**

with bio-containment<sup>5)</sup>

| capacity in ml   | 0.2   | 0.4   | 0.5   | 0.8   | 1.5   | 2.0   |
|--|---|---|---|---|---|---|
| Ø x L in mm  | 6x18  | 6x45  | 8x30  | 8x45  | 11x38   |   |
| <b>Cat. No.</b>  | -   |   |   |   | <b>2078</b>   | <b>0536</b>   |
| <br><b>rotor</b><br>Cat. No. <b>1022-A</b> |  |  |  |  |  |  |
|  |  |  |   |   |   |   |
| <b>Cat. No.</b>  | <b>2024</b>   | <b>2023</b>   | <b>2031<sup>7)</sup></b>  | -   |   |   |
| boring Ø x L in mm   | 6x40  |   | 8x40  |   | 10.2x19 11.2x39.5   |   |
| tubes per rotor  | 12  |   |   |   |   |   |
| max. RCF <sup>2)</sup>   | 25,718  |   |   |   |   |   |
| radius in mm   | 71  |   |   |   |   |   |
| run-up in sec  | 16  |   |   |   |   |   |
| run-down in sec, braked  | 19  |   |   |   |   |   |

| capacity in ml   | 0.2   | 0.4   | 0.5   | 0.8   | 1.5   | 2.0   |
|--|---|---|---|---|---|---|
| Ø x L in mm  | 6x18  | 6x45  | 8x30  | 8x45  | 11x38   |   |
| <b>Cat. No.</b>  | -   |   |   |   | <b>2078</b>   | <b>0536</b>   |
| <br><b>rotor</b><br>Cat. No. <b>1024-A</b> |  |  |  |  |  |  |
|  |  |  |  |   |   |   |
| <b>Cat. No.</b>  | <b>2024</b>   | <b>2023</b>   | <b>2031<sup>7)</sup></b>  | -   |   |   |
| boring Ø x L in mm   | 6x40  |   | 8x40  |   | 10.2x19 11.2x41.1   |   |
| tubes per rotor  | 24  |   |   |   |   |   |
| max. RCF <sup>2)</sup>   | 21,382  |   |   |   |   |   |
| radius in mm   | 85  |   |   |   |   |   |
| run-up in sec  | 30  |   |   |   |   |   |
| run-down in sec, braked  | 31  |   |   |   |   |   |

| capacity in ml   | 0.2   | 0.4   | 0.5   | 0.8   | 1.5   | 2.0   |
|--|---|---|---|---|---|---|
| Ø x L in mm  | 6x18  | 6x45  | 8x30  | 8x45  | 11x38   |   |
| <b>Cat. No.</b>  | -   |   |   |   | <b>2078</b>   | <b>0536</b>   |
| <br><b>rotor</b><br>Cat. No. <b>1089-A</b> |  |  |  |  |  |  |
|  |  |  |   |   |   |   |
| <b>Cat. No.</b>  | <b>2024</b>   | <b>2023</b>   | <b>2031<sup>7)</sup></b>  | -   |   |   |
| boring Ø x L in mm   | 6x40  |   | 8x40  |   | 10.2x19 11.2x40.9   |   |
| tubes per rotor  | 30  |   |   |   |   |   |
| max. RCF <sup>2)</sup>   | 21,255  |   |   |   |   |   |
| radius in mm   | 97  |   |   |   |   |   |
| run-up in sec  | 40  |   |   |   |   |   |
| run-down in sec, braked  | 40  |   |   |   |   |   |

#### Optional for rotor 1024-A



lid **Cat. No. 2425**  
with bio-containment<sup>5)</sup>,  
autoclavable



lid **Cat. No. 2423**  
with bio-containment<sup>5)</sup>,  
autoclavable,  
phenol-resistant

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.

**Angle rotor, 12-place**



∠ 35°

n = 5,000 min<sup>-1</sup>  
max. RCF 2,879

**Cat. No. 1118**

**Swing-out rotor, 8-place**



∠ 55°  
(with carrier 1127)  
∠ 60°  
(with carrier 1122)

n = 5,000 min<sup>-1</sup>  
max. RCF 2,991

**Cat. No. (without carriers) 1114**





**Swing-out rotor, 6-place**











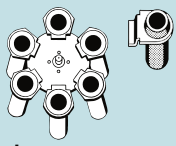














∠ 40°

n = 5,000 min<sup>-1</sup>  
max. RCF 2,711

**Cat. No. (without carriers) 1115**

|   |   |   |   |
|---|---|---|---|
| capacity in ml  | 5   | 6   | 7   |
| Ø x L in mm   | 12x75   | 12 x 82   | 12x100  |
| <b>Cat. No.</b>   | <b>0553<sup>2)</sup></b>  | <b>0501<sup>2)</sup></b>  | <b>0578<sup>2)</sup></b>  |
| <br><b>rotor</b><br>Cat. No. <b>1118</b> |  |  |  |
| <b>Cat. No.</b>   | -   |   |   |
| boring Ø x L in mm  | 12x66   |   |   |
| tubes per rotor   | 12  |   |   |
| max. RCF <sup>2)</sup>  | 2,879   |   |   |
| radius in mm  | 103   |   |   |
| run-up in sec   | 10  |   |   |
| run-down in sec, braked   | 13  |   |   |

|   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| capacity in ml  | 5   | 10  | 2.6-3.4   | 2.7-3   | 4-5.5   | 1.6-5   | 4-7   |
| Ø x L in mm   | 12x75   | 17x70   | 13x65   | 11x66   | 15x75   | 13x75   | 16x75   |
| <b>Cat. No.</b>   | <b>0553<sup>2)</sup></b>  | <b>2079</b>   | <b>blood collection tubes</b>   |   |   |   |   |
| <br><b>rotor</b><br>Cat. No. <b>1114</b> |  |  |  |  |  |  |  |
| <b>Cat. No.</b>   | <b>1127</b>   | <b>1122</b>   | <b>1127</b>   | <b>1122</b>   | <b>1127</b>   | <b>1122</b>   | <b>1122</b>   |
| boring Ø x L in mm  | 13.2x53   | 17.5x53   | 13.2x53   | 17.5x53   | 13.2x53   | 17.5x53   | 17.5x53   |
| tubes per rotor   | 8   |   |   |   |   |   |   |
| max. RCF <sup>2)</sup>  | 2,963   | 2,991   | 2,963   | 2,991   | 2,963   | 2,991   | 2,991   |
| radius in mm  | 106   | 107   | 106   | 107   | 106   | 107   | 107   |
| run-up in sec   | 9   |   |   |   |   |   |   |
| run-down in sec, braked   | 14  |   |   |   |   |   |   |

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| capacity in ml  | 5   | 6   | 10  | 15  | 1.1-1.4   | 2.6-3.4   | 2.7-3   | 4-5.5   | 4.9   | 7.5-8.5   | 9-10  | 1.6-5   | 4-7   | 8.5-10  |
| Ø x L in mm   | 12x75   | 12 x 82   | 17x70   | 17x100  | 8x66  | 13x65   | 11x66   | 15x75   | 13x90   | 15x92   | 16x92   | 13x75   | 16x75   | 16x100  |
| <b>Cat. No.</b>   | <b>0553<sup>2)</sup></b>  | <b>0501<sup>2)</sup></b>  | <b>2079</b>   | <b>0518<sup>2)</sup></b>  | <b>blood collection /urine tubes</b>  |   |   |   |   |   |   |   |   |   |
| <br><b>rotor</b><br>Cat. No. <b>1115</b> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Cat. No.</b>   | <b>1054-A</b>   | <b>2x0716</b>   | -   | <b>1054-A</b>   | -   |   |   |   |   |   | <b>1054-A</b>   | <b>0716</b>   | -   |   |
| boring Ø x L in mm  | 13.5x60   | 17.5x79   |   | 13.5x60   |   |   | 17.5x79   |   |   |   | 13.5x60   | 17.5x79   |   |   |
| tubes per rotor   | 6   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| max. RCF <sup>2)</sup>  | 2,068   | 2,376   | 2,711   | 2,068   |   |   | 2,711   |   |   |   | 2,068   | 2,543   | 2,711   |   |
| radius in mm  | 74  | 85  | 97  | 74  |   |   | 97  |   |   |   | 74  | 91  | 97  |   |
| run-up in sec   | 8   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| run-down in sec, braked   | 12  |   |   |   |   |   |   |   |   |   |   |   |   |   |

<sup>5)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

<sup>7)</sup> For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters 2031.



### Swing-out rotor, 8-place

### Swing-out rotor, 12-place

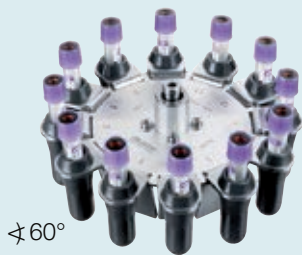
### Hematocrit rotor, 24-place



↗ 90°

n = 5,000 min<sup>-1</sup>  
max. RCF 2,879

**Cat. No.** (without carriers) **1120**



↗ 60°










n = 5,000 min<sup>-1</sup>  
max. RCF 2,963






**Cat. No.** (without carriers) **1126**

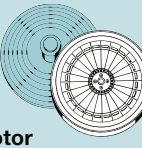



n = 15,000 min<sup>-1</sup>  
max. RCF 21,382

**Cat. No.** **1450**

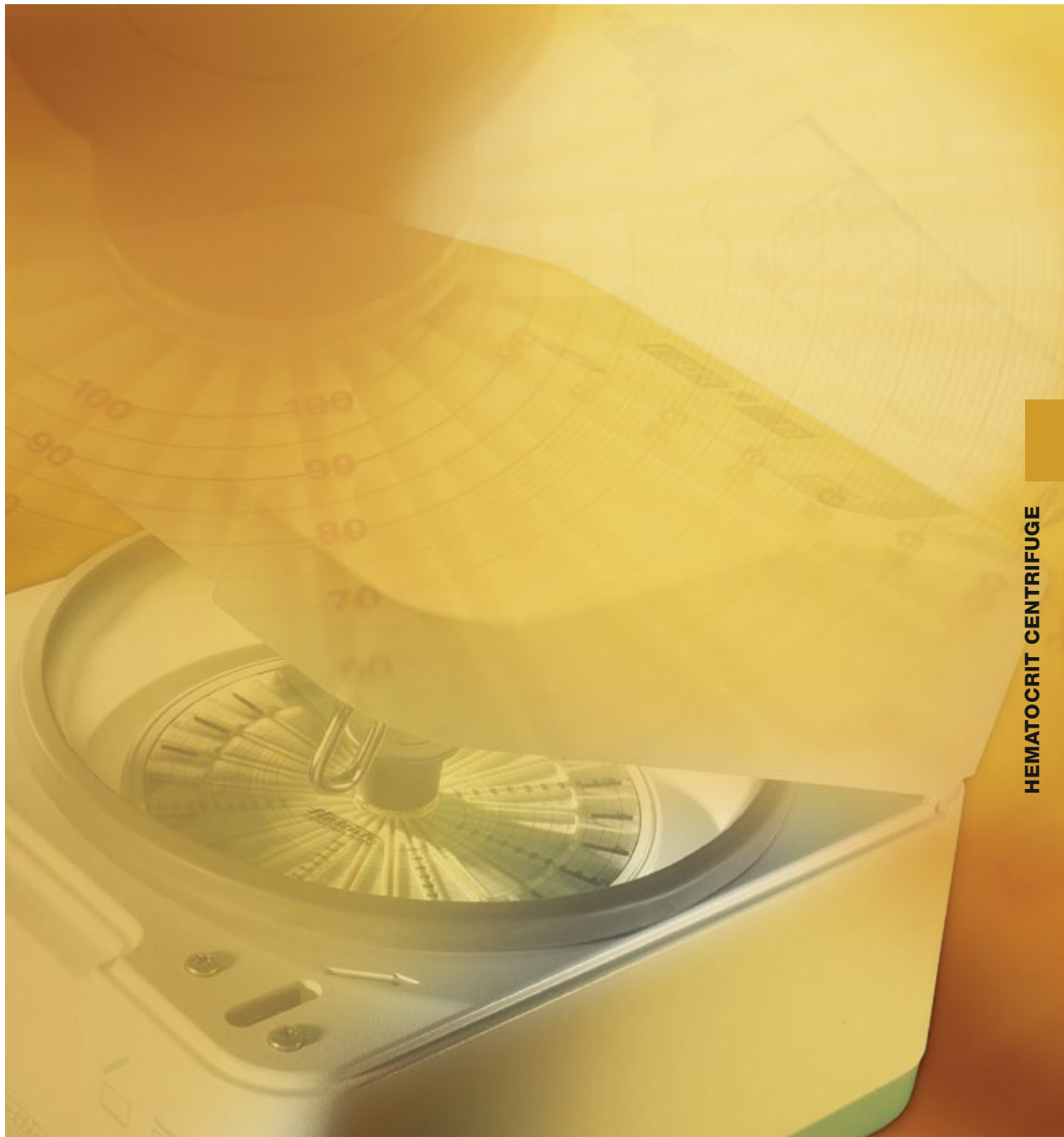
| capacity in ml  | 5   | 6   | 10  | 2.6–3.4   | 2.7–3   | 4–5.5   | 1.6–5   | 4–7   |
|---|---|---|---|---|---|---|---|---|
| Ø x L in mm   | 12x75   | 12x82   | 17x70   | 13x65   | 11x66   | 15x75   | 13x75   | 16x75   |
| <b>Cat. No.</b>   | <b>0553<sup>2)</sup></b>  | <b>0501<sup>2)</sup></b>  | <b>2079</b>   | <b>blood collection tubes</b>   |   |   |   |   |
| <br><b>rotor</b><br>Cat. No. <b>1120</b> |  |  |  |  |  |  |  |  |
| <b>Cat. No.</b>   | <b>1131</b>   | <b>1132</b>   | <b>1131</b>   | <b>1132</b>   | <b>1131</b>   | <b>1132</b>   | <b>1131</b>   | <b>1132</b>   |
| boring Ø x L in mm  | 13x53   | 17.5x53   | 13x53   | 17.5x53   | 13x53   | 17.5x53   | 13x53   | 17.5x53   |
| tubes per rotor   | 8   |   |   |   |   |   |   |   |
| max. RCF <sup>2)</sup>  | 2,879   |   |   |   |   |   |   |   |
| radius in mm  | 103   |   |   |   |   |   |   |   |
| run-up in sec   | 8   |   |   |   |   |   |   |   |
| run-down in sec, braked   | 12  |   |   |   |   |   |   |   |

| capacity in ml  | 5   | 2.6–3.4   | 2.7–3   | 1.6–5   |
|---|---|---|---|---|
| Ø x L in mm   | 12x75   | 13x65   | 11x66   | 13x75   |
| <b>Cat. No.</b>   | <b>0553<sup>2)</sup></b>  | <b>blood collection tubes</b>   |   |   |
| <br><b>rotor</b><br>Cat. No. <b>1126</b> |  |  |  |  |
| <b>Cat. No.</b>   | <b>1127</b>   |   |   |   |
| boring Ø x L in mm  | 13.2x53   |   |   |   |
| tubes per rotor   | 12  |   |   |   |
| max. RCF <sup>2)</sup>  | 2,963   |   |   |   |
| radius in mm  | 106   |   |   |   |
| run-up in sec   | 10  |   |   |   |
| run-down in sec, braked   | 15  |   |   |   |

| standard capillaries, heparinised   | basic   | self-sealing and mylar-coated |
|---|---|-------------------------------|
| <b>Cat. No.</b>   | <b>2074</b>   | <b>1071</b>                   |
| lid as evaluation disk incl.<br><br><b>rotor</b><br>Cat. No. <b>1450</b> |  |                               |
| <b>Cat. No.</b>   | <b>2077</b>   | <b>-</b>                      |
| boring Ø x L in mm  | -   |                               |
| capillaries per rotor   | 24  |                               |
| max. RCF <sup>2)</sup>  | 21,382  |                               |
| radius in mm  | 85  |                               |
| run-up in sec   | 8   |                               |
| run-down in sec, braked   | 12  |                               |

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.

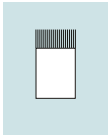
# Hematocrit Centrifuge



HEMATOCRIT CENTRIFUGE

HAEMATOKRIT 210

# HAEMATOKRIT 210



## With this centrifuge, safety is top priority

Hematocrit determination with standard capillaries is carried out with 24-place rotor No. 2076. Each capillary is secured within its own chamber and supported by a holding tray. This holding tray serves to contain glass shards and any leakage should a tube break. It is easy to clean and disposable in the case of glass breakage. The rotor 2076's lid is cover and evaluation disk in one. Capillaries, to be used for quantitative buffy coat analysis are centrifuged in 20-place rotor No. 2056 prior to further analysis.




HAEMATOKRIT 210

## TECHNOLOGY

## HAEMATOKRIT 210

### Hematocrit centrifuge, without rotor

|                            |                           |               |
|----------------------------|---------------------------|---------------|
| Power supply <sup>*)</sup> | 208–240 V 1 ~             | 100–127 V 1 ~ |
| Frequency                  | 50–60 Hz                  |               |
| Consumption                | 250 VA                    | 220 VA        |
| Emission, Immunity         | EN / IEC 61326-1, class B | FCC class B   |

|   |  |                          |
|---|--|--------------------------|
|  | Max. capacity  | 20 / 24 capillaries      |
|   | Max. RPM (speed)   | 13,000 min <sup>-1</sup> |
|   | Max. RCF   | 16,060                   |
| Running time  | 1 – 99 min, ∞ continuous run, short cycle mode (impulse key) |                          |

|                    |                |
|--------------------|----------------|
| Dimensions (HxWxD) | 247x275x330 mm |
| Weight             | approx. 10 kg  |

|          |      |         |
|----------|------|---------|
| Cat. No. | 2104 | 2104-01 |
|----------|------|---------|

<sup>\*)</sup> Other voltages on request.

**Hematocrit rotor, 24-place**

**Disk rotor, 20-place, for buffy coat analysis**




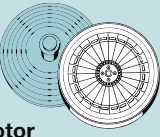
n = 13,000 min<sup>-1</sup>  
max. RCF 16,060


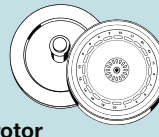
**Cat. No. 2076**



n = 13,000 min<sup>-1</sup>  
max. RCF 16,060

**Cat. No. 2056<sup>12)</sup>**

| standard capillaries, heparinised   | basic   | self-sealing and mylar-coated |
|---|---|-------------------------------|
| <b>Cat. No.</b>   | <b>2074</b>   | <b>1071</b>                   |
| lid as evaluation disk incl.  |  |                               |
| <br><b>rotor</b><br>Cat. No. <b>2076</b> | sealing putty   |                               |
| <b>Cat. No.</b>   | <b>2077</b>   | <b>-</b>                      |
| boring Ø x L in mm  | -   |                               |
| capillaries per rotor   | 24  |                               |
| max. RCF  | 16,060  |                               |
| radius in mm  | 85  |                               |
| run-up in sec   | 9   |                               |
| run-down in sec, braked   | 16  |                               |

| capillaries   | for quantitative buffy coat analysis   |
|---|--|
| <b>Cat. No.</b>   | <b>-</b>   |
| lid incl.   |  |
| <br><b>rotor</b><br>Cat. No. <b>2056<sup>12)</sup></b> |  |
| <b>Cat. No.</b>   | <b>-</b>   |
| boring Ø x L in mm  | -  |
| capillaries per rotor   | 20   |
| max. RCF  | 16,060   |
| radius in mm  | 85   |
| run-up in sec   | 9  |
| run-down in sec, braked   | 16   |



The holding trays in rotor 2076 are easy to clean and disposable in the case of glass breakage.

**Cat. No. E1400** (24 trays)

<sup>12)</sup> not suited for standard capillaries

## More for the lab

Rolling cabinets for Hettich centrifuges free up space on the laboratory bench and give you greater flexibility.



## Rolling Cabinets

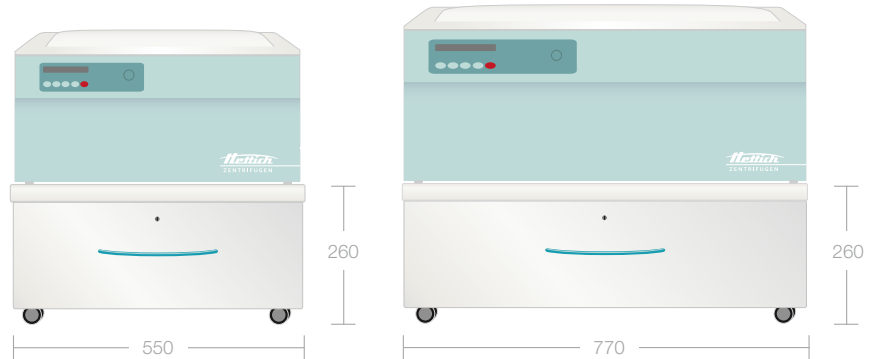
All rolling cabinets are of sturdy design and feature castors and two locks. Any vibrations of the centrifuge are safely compensated for.

Rolling cabinets with Cat. No. 4612-K and 4613-K are suited for the models:

- ROTOFIX 32 A
- UNIVERSAL 320/320 R
- ROTINA 380/380 R
- ROTINA 420
- ROTANTA 460
- ROTOFIX 46/46 H

Rolling cabinets with Cat. No. 4614-K and 4615-A are suited for the models:

- ROTINA 420 R
- ROTANTA 460 R



Low and narrow,  
with one drawer.  
Depth 650 mm

**Cat. No. 4612-K**

Low and wide,  
with one drawer.  
Depth 650 mm

**Cat. No. 4614-K**



High and narrow,  
with two drawers.  
Depth 650 mm

**Cat. No. 4613-K**

High and wide,  
with two drawers.  
Depth 650 mm

**Cat. No. 4615-A**



# Microlitre Centrifuges



MICROLITRE CENTRIFUGES

MIKRO 120

MIKRO 200/200 R

MIKRO 220/220 R

**LABOMODERNE**

[www.labomoderne.com](http://www.labomoderne.com) - [info@labomoderne.com](mailto:info@labomoderne.com)

Tél. 01 42 50 50 50

# MIKRO 120




## High-performance centrifuge with a small footprint.

The MIKRO 120 separates microlitre samples quickly and reliably thanks to its 24-place rotor and its lid which is aerosol-proof, autoclavable and phenol-resistant.



## TECHNOLOGY

## MIKRO 120

| TECHNOLOGY  |  | MIKRO 120       |  |
|---|--|-----------------|--|
| <b>Microlitre centrifuge, without rotor</b>   |  |                 |  |
| Power supply <sup>*)</sup>  | 208 – 240 V 1 ~  | 100 – 127 V 1 ~ |  |
| Frequency   | 50 – 60 Hz   |                 |  |
| Consumption   | 230 VA   |                 |  |
| Emission, Immunity  | EN / IEC 61326-1, class B                                    | FCC class B     |  |
|  Max. capacity | 24 x 1.5/2.0 ml  |                 |  |
| Max. RPM (speed)  | 14,000 min <sup>-1</sup>                                     |                 |  |
| Max. RCF  | 18,626   |                 |  |
| Running time  | 1 – 99 min, ∞ continuous run, short cycle mode (impulse key) |                 |  |
| Dimensions (HxWxD)  | 199 x 231 x 292 mm   |                 |  |
| Weight  | approx. 7 kg   |                 |  |
| <b>Cat. No.</b>   | <b>1204</b>  | <b>1204-01</b>  |  |

<sup>\*)</sup> Other voltages on request.

**Angle rotor, 24-place**



↗ 40°

n = 14,000 min<sup>-1</sup>  
max. RCF 18,626

with bio-containment<sup>5)</sup>,  
autoclavable, phenol-resistant

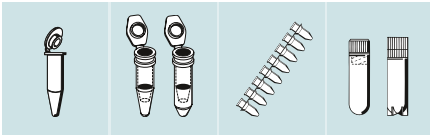
**Cat. No. 1242**

| capacity in ml                                  | 0.2         | 0.4         | 0.5    | 0.8                      | 1.5         | 2.0         |
|---|-------------|-------------|--------|--------------------------|-------------|-------------|
| Ø x L in mm                                     | 6 x 18      | 6 x 45      | 8 x 30 | 8 x 45                   | 11 x 38     | 11 x 38     |
| <b>Cat. No.</b>                                 | -           | -           | -      | -                        | <b>2078</b> | <b>0536</b> |
| lid with bio-containment <sup>5)</sup><br>incl. |             |             |        |                          |             |             |
| <b>rotor</b><br>Cat. No. <b>1242</b>            |             |             |        |                          |             |             |
| <b>Cat. No.</b>                                 | <b>2024</b> | <b>2023</b> |        | <b>2031<sup>7)</sup></b> | -           |             |
| boring Ø x L in mm                              | 6 x 40      | 8 x 40      |        | 10.2 x 19                | 11.2 x 41.1 |             |
| tubes per rotor                                 | 24          |             |        |                          |             |             |
| max. RCF  | 18,626      |             |        |                          |             |             |
| radius in mm                                    | 85          |             |        |                          |             |             |
| run-up in sec                                   | 21          |             |        |                          |             |             |
| run-down in sec, braked                         | 24          |             |        |                          |             |             |

<sup>5)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

<sup>7)</sup> For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters 2031.

# MIKRO 200/200 R




These microlitre centrifuges rank among the fastest in their class

Not only are they fast, the MIKRO 200 R also refrigerates quickly: down to +4 °C in 10 to 15 minutes with the Fast Cool function. Highly reliable refrigeration ensures that even thermo-sensitive samples are centrifuged gently.



MIKRO 200

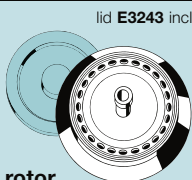



## TECHNOLOGY





|   | MIKRO 200   |                 | MIKRO 200 R               |                 |
|---|---|-----------------|---------------------------|-----------------|
|   | classic   |                 | cooled                    |                 |
| Microlitre centrifuge, without rotor  |   |                 |                           |                 |
| Power supply <sup>*)</sup>  | 200 – 240 V 1 ~   | 100 – 127 V 1 ~ | 200 – 240 V 1 ~           | 100 – 127 V 1 ~ |
| Frequency   | 50 – 60 Hz  |                 | 50 Hz                     | 50 – 60 Hz      |
| Consumption   | 240 VA  | 270 VA          | 450 VA                    | 630 VA          |
| Emission, Immunity  | EN / IEC 61326-1, class B   | FCC class B     | EN / IEC 61326-1, class B | FCC class B     |
|  Max. capacity | 30 x 1.5 / 2.0 ml   |                 |                           |                 |
| Max. RPM (speed)  | 15,000 min <sup>-1</sup>  |                 |                           |                 |
| Max. RCF  | 21,382  |                 |                           |                 |
| Running time  | 1 sec – 99 min : 59 sec, ∞ continuous run, short cycle mode (impulse key) |                 |                           |                 |
| Dimensions (HxWxD)  | 260 x 275 x 344 mm  |                 | 260 x 281 x 553 mm        |                 |
| Weight  | approx. 11.5 kg   |                 | approx. 28 kg             |                 |
| <b>Refrigeration</b>  |   |                 |                           |                 |
| Temperature control, infinitely variable  | -   |                 | from -10 to +40 °C        |                 |
| Cat. No.  | 2400  | 2400-01         | 2405                      | 2405-01         |

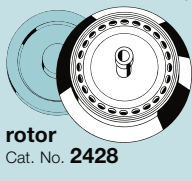




<sup>\*)</sup> Other voltages on request.

| Angle rotor, 24-place   | Angle rotor, 24-place   | Angle rotor, 30-place   |
|---|---|---|
|  |  |  |
| ∠40°  | ∠45°  | ∠52,5° (inner row)<br>∠40° (outer row)  |
| n = 15,000 min <sup>-1</sup><br>max. RCF 21,382                                   | n = 15,000 min <sup>-1</sup><br>max. RCF 21,382                                   | n = 15,000 min <sup>-1</sup><br>max. RCF 20,627                                     |
| <b>Cat. No. 2424-B</b>  | <b>Cat. No. 2428</b>  | <b>Cat. No. 2427-A</b>  |

with bio-containment<sup>5)</sup>,  
autoclavable,  
phenol-resistant

| capacity in ml                         | 0.2   | 0.4    | 0.5   | 0.8    | 1.5   | 2.0         |
|--|---|--------|---|--------|---|-------------|
| ∅ x L in mm                            | 6 x 18  | 6 x 45 | 8 x 30  | 8 x 45 | 11 x 38   |             |
| <b>Cat. No.</b>                        | -   | -      | -   | -      | <b>2078</b>   | <b>0536</b> |
| lid E3243 incl.                        |   |        |   |        |   |             |
| <b>rotor</b><br>Cat. No. <b>2424-B</b> |  |        |  |        |  |             |
| <b>Cat. No.</b>                        | <b>2024</b>   |        | <b>2023</b>   |        | <b>2031<sup>7)</sup></b>  |             |
| boring ∅ x L in mm                     | 6 x 40  |        | 8 x 40  |        | 10.2 x 19   11.2 x 42.6   |             |
| tubes per rotor                        | 24  |        |   |        |   |             |
| max. RCF                               | 21,382  |        |   |        |   |             |
| radius in mm                           | 85  |        |   |        |   |             |
| run-up in sec                          | 20  |        |   |        |   |             |
| run-down in sec, braked                | 28  |        |   |        |   |             |
| temperature in °C <sup>1)</sup>        | + 4   |        |   |        |   |             |

| capacity in ml                         | 0.2   | 0.4  | 0.5   | 0.8  | 1.5   | 2.0         |
|--|---|------|---|------|---|-------------|
| ∅ x L in mm                            | 6x18  | 6x45 | 8x30  | 8x45 | 11x38   |             |
| <b>Cat. No.</b>                        | -   |      |   |      | <b>2078</b>   | <b>0536</b> |
| lid E3243 incl.                        |   |      |   |      |   |             |
| <b>rotor</b><br>Cat. No. <b>2427-A</b> |  |      |  |      |  |             |
| <b>Cat. No.</b>                        | <b>2024</b>   |      | <b>2023</b>   |      | <b>2031<sup>7)</sup></b>  |             |
| boring ∅ x L in mm                     | 6x40  |      | 8x40  |      | 10.2x19   11.2x41.3   |             |
| tubes per rotor                        | 30  |      |   |      |   |             |
| max. RCF                               | 20,627  |      |   |      |   |             |
| radius in mm                           | 82  |      |   |      |   |             |
| run-up in sec                          | 22  |      |   |      |   |             |
| run-down in sec, braked                | 30  |      |   |      |   |             |
| temperature in °C <sup>1)</sup>        | + 4   |      |   |      |   |             |

| capacity in ml                               | 0.2   | 0.4    | 0.5   | 0.8    | 1.5   | 2.0         | 1.5  | 2.0 |
|--|---|--------|---|--------|---|-------------|--|-----|
| ∅ x L in mm                                  | 6 x 18  | 6 x 45 | 8 x 30  | 8 x 45 | 11 x 38   |             | 11 x 38  |     |
| <b>Cat. No.</b>                              | -   | -      | -   | -      | <b>2078</b>   | <b>0536</b> | <b>micro spin columns</b>  |     |
| lid with bio-containment <sup>5)</sup> incl. |   |        |   |        |   |             |  |     |
| <b>rotor</b><br>Cat. No. <b>2428</b>         |  |        |  |        |  |             |  |     |
| <b>Cat. No.</b>                              | <b>2024</b>   |        | <b>2023</b>   |        | <b>2031<sup>7)</sup></b>  |             | <b>2031<sup>7)</sup></b>   |     |
| boring ∅ x L in mm                           | 6 x 40  |        | 8 x 40  |        | 10.2 x 19   11.2 x 42.6   |             | 10.2 x 19   11.2 x 42.6  |     |
| tubes per rotor                              | 24  |        |   |        |   |             |  |     |
| max. RCF                                     | 21,382  |        |   |        |   |             |  |     |
| radius in mm                                 | 85  |        |   |        |   |             |  |     |
| run-up in sec                                | 20  |        |   |        |   |             |  |     |
| run-down in sec, braked                      | 28  |        |   |        |   |             |  |     |
| temperature in °C <sup>1)</sup>              | + 4   |        |   |        |   |             |  |     |

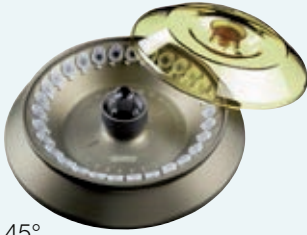
1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.  
5) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.  
7) For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters 2031.



**Angle rotor, 30-place**

**Angle rotor, 20-place, for cryo tubes**

**Angle rotor, 4-place, for PCR strips**



↘45°

n = 15,000 min<sup>-1</sup>  
max. RCF 20,376

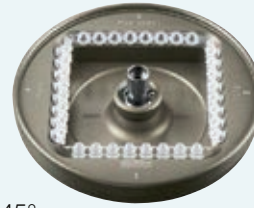
**Cat. No. 2430-B**



↘40°

n = 15,000 min<sup>-1</sup>  
max. RCF 21,130

**Cat. No. 2426-B**



↘45°

n = 15,000 min<sup>-1</sup>  
max. RCF 14,338

**Cat. No. 2418-A**

|  |            |
|--|------------|
| capacity in ml                         | 0.5        |
| Ø x L in mm                            | 8 x 30     |
| <b>Cat. No.</b>                        | -          |
| lid E3243 incl.                        |            |
| <b>rotor</b><br>Cat. No. <b>2430-B</b> |            |
| <b>Cat. No.</b>                        | -          |
| boring Ø x L in mm                     | 8.1 x 30.3 |
| tubes per rotor                        | 30         |
| max. RCF                               | 20,376     |
| radius in mm                           | 81         |
| run-up in sec                          | 19         |
| run-down in sec, braked                | 28         |
| temperature in °C <sup>1)</sup>        | +4         |

|  |                   |
|--|-------------------|
| capacity in ml                         | 1.8               |
| Ø x L in mm                            | -                 |
| <b>Cat. No.</b>                        | <b>cryo tubes</b> |
| lid E3243 incl.                        |                   |
| <b>rotor</b><br>Cat. No. <b>2426-B</b> |                   |
| <b>Cat. No.</b>                        | -                 |
| boring Ø x L in mm                     | 12.5 x 36         |
| tubes per rotor                        | 20                |
| max. RCF                               | 21,130            |
| radius in mm                           | 84                |
| run-up in sec                          | 19                |
| run-down in sec, braked                | 28                |
| temperature in °C <sup>1)</sup>        | +4                |

|                                 |            |                   |
|---------------------------------|------------|-------------------|
| capacity in ml                  | 0.2        | 0.2               |
| Ø x L in mm                     | 6 x 18     | -                 |
| <b>Cat. No.</b>                 | -          | <b>PCR strips</b> |
| rotor<br>Cat. No. <b>2418-A</b> |            |                   |
| <b>Cat. No.</b>                 | -          |                   |
| boring Ø x L in mm              | 6.5 x 15.5 |                   |
| tubes per rotor                 | 32         | 4 x 8             |
| max. RCF                        | 14,338     |                   |
| radius in mm                    | 57         |                   |
| run-up in sec                   | 19         |                   |
| run-down in sec, braked         | 28         |                   |
| temperature in °C <sup>1)</sup> | +4         |                   |

Optional for rotor 2424-B, 2426-B, 2427-A and 2430-B



lid **Cat. No. 2425**  
with bio-containment<sup>5)</sup>,  
autoclavable



lid **Cat. No. 2423**  
with bio-containment<sup>5)</sup>,  
autoclavable,  
phenol-resistant

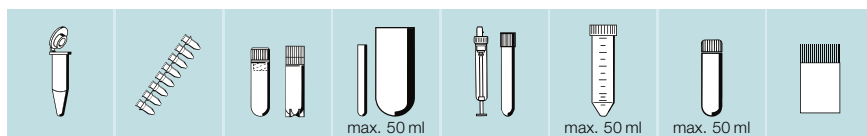
Optional for rotor 2418-A



lid **Cat. No. E3243**

<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.  
<sup>5)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

# MIKRO 220/220 R



## Powerful microlitre specialists

MIKRO 220 and 220 R are powerful, compact benchtop centrifuges for processing microlitre tubes of 0.2 ml to 2.0 ml. The refrigerated MIKRO 220 R also accepts standard tubes up to a volume of 50 ml. Thanks to its performance, capacity and efficient cooling, the MIKRO 220 R is ideally suited for DNA and RNA extraction.



## TECHNOLOGY

| TECHNOLOGY                               | MIKRO 220   |                 | MIKRO 220 R                |                 |
|--|---|-----------------|----------------------------|-----------------|
|  | classic   |                 | cooled                     |                 |
| Microlitre centrifuge, without rotor     |   |                 |                            |                 |
| Power supply*)                           | 200 – 240 V 1 ~   | 100 – 127 V 1 ~ | 200 – 240 V 1 ~            | 100 – 127 V 1 ~ |
| Frequency                                | 50 – 60 Hz  |                 | 50 Hz                      | 60 Hz           |
| Consumption                              | 510 VA  |                 | 850 VA                     | 950 VA          |
| Emission, Immunity                       | EN / IEC 61326-1, class B   | FCC class B     | EN / IEC 61326-1, class B  | FCC class B     |
| Max. capacity                            | 60x 1.5 / 2.0 ml  |                 |                            |                 |
| Max. capacity                            | 48x 1.5 / 2.0 ml  |                 | 48x 1.5 / 2.0 ml, 6x 50 ml |                 |
| Max. RPM (speed)                         | 18,000 min <sup>-1</sup>  |                 |                            |                 |
| Max. RCF                                 | 31,514  |                 |                            |                 |
| Running time                             | 1 sec – 99 min : 59 sec, ∞ continuous run, short cycle mode (impulse key) |                 |                            |                 |
| Dimensions (HxWxD)                       | 313 x 330 x 420 mm  |                 | 313 x 330 x 650 mm         |                 |
| Weight                                   | approx. 21 kg   |                 | approx. 42 kg              |                 |
| <b>Refrigeration</b>                     |   |                 |                            |                 |
| Temperature control, infinitely variable | -   |                 | from -20 to +40 °C         |                 |
| Cat. No.                                 | <b>2200</b>   | <b>2200-01</b>  | <b>2205</b>                | <b>2205-01</b>  |

\*) Other voltages on request.

### Angle rotor, 12-place



↘45°

n = 18,000 min<sup>-1</sup>  
max. RCF 25,718

**Cat. No. 2218-A**

### Angle rotor, 24-place



↘45°

n = 18,000 min<sup>-1</sup>  
max. RCF 31,514

**Cat. No. 1195-A**

with bio-containment<sup>5)</sup>

### Angle rotor, 30-place



↘45°

n = 14,000 min<sup>-1</sup>  
max. RCF 21,255

**Cat. No. 1189-A**

with bio-containment<sup>5)</sup>

| capacity in ml                         | 0.2         | 0.4         | 0.5                      | 0.8     | 1.5         | 2.0         |
|--|-------------|-------------|--------------------------|---------|-------------|-------------|
| Ø x L in mm                            | 6x18        | 6x45        | 8x30                     | 8x45    | 11x38       |             |
| <b>Cat. No.</b>                        | -           |             |                          |         | <b>2078</b> | <b>0536</b> |
| lid incl.                              |             |             |                          |         |             |             |
| <b>rotor</b><br>Cat. No. <b>2218-A</b> |             |             |                          |         |             |             |
| <b>Cat. No.</b>                        | <b>2024</b> | <b>2023</b> | <b>2031<sup>7)</sup></b> | -       |             |             |
| boring Ø x L in mm                     | 6x40        | 8x40        | 10.2x19                  | 11.2x41 |             |             |
| tubes per rotor                        | 12          |             |                          |         |             |             |
| max. RCF                               | 25,718      |             |                          |         |             |             |
| radius in mm                           | 71          |             |                          |         |             |             |
| run-up in sec                          | 11          |             |                          |         |             |             |
| run-down in sec, braked                | 10          |             |                          |         |             |             |
| temperature in °C <sup>1)</sup>        | -5          |             |                          |         |             |             |

| capacity in ml                               | 0.2         | 0.4         | 0.5                      | 0.8       | 1.5         | 2.0         |
|--|-------------|-------------|--------------------------|-----------|-------------|-------------|
| Ø x L in mm                                  | 6x18        | 6x45        | 8x30                     | 8x45      | 11x38       |             |
| <b>Cat. No.</b>                              | -           |             |                          |           | <b>2078</b> | <b>0536</b> |
| lid with bio-containment <sup>5)</sup> incl. |             |             |                          |           |             |             |
| <b>rotor</b><br>Cat. No. <b>1195-A</b>       |             |             |                          |           |             |             |
| <b>Cat. No.</b>                              | <b>2024</b> | <b>2023</b> | <b>2031<sup>7)</sup></b> | -         |             |             |
| boring Ø x L in mm                           | 6x40        | 8x40        | 10.2x19                  | 11.2x40.8 |             |             |
| tubes per rotor                              | 24          |             |                          |           |             |             |
| max. RCF                                     | 31,514      |             |                          |           |             |             |
| radius in mm                                 | 87          |             |                          |           |             |             |
| run-up in sec                                | 26          |             |                          |           |             |             |
| run-down in sec, braked                      | 23          |             |                          |           |             |             |
| temperature in °C <sup>1)</sup>              | +3          |             |                          |           |             |             |

| capacity in ml                               | 0.2         | 0.4         | 0.5                      | 0.8       | 1.5         | 2.0         |
|--|-------------|-------------|--------------------------|-----------|-------------|-------------|
| Ø x L in mm                                  | 6x18        | 6x45        | 8x30                     | 8x45      | 11x38       |             |
| <b>Cat. No.</b>                              | -           |             |                          |           | <b>2078</b> | <b>0536</b> |
| lid with bio-containment <sup>5)</sup> incl. |             |             |                          |           |             |             |
| <b>rotor</b><br>Cat. No. <b>1189-A</b>       |             |             |                          |           |             |             |
| <b>Cat. No.</b>                              | <b>2024</b> | <b>2023</b> | <b>2031<sup>7)</sup></b> | -         |             |             |
| boring Ø x L in mm                           | 6x40        | 8x40        | 10.2x19                  | 11.2x40.9 |             |             |
| tubes per rotor                              | 30          |             |                          |           |             |             |
| max. RCF                                     | 21,255      |             |                          |           |             |             |
| radius in mm                                 | 97          |             |                          |           |             |             |
| run-up in sec                                | 20          |             |                          |           |             |             |
| run-down in sec, braked                      | 22          |             |                          |           |             |             |
| temperature in °C <sup>1)</sup>              | +3          |             |                          |           |             |             |

<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.

<sup>5)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

<sup>7)</sup> For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters 2031. The capacity of rotor 1158-L is reduced to 40 tubes when these adapters will be used.

**Angle rotor, 48-place, 2-row**

**Angle rotor, 20-place, for cryo tubes**

**Swing-out rotor, 24-place**



±45°

n = 14,000 min<sup>-1</sup> with bio-containment<sup>5)</sup>  
max. RCF outer 21,255/inner 18,845

**Cat. No. 1158-L**



±40°

n = 14,000 min<sup>-1</sup>  
max. RCF 18,407

**Cat. No. 2219-A**



±90°

n = 13,000 min<sup>-1</sup> with bio-containment<sup>5)</sup>  
max. RCF 18,516

**Cat. No. 1154-L**

| capacity in ml                               | 0.2             | 0.4         | 0.5                       | 0.8         | 1.5         | 2.0 |
|--|-----------------|-------------|---------------------------|-------------|-------------|-----|
| Ø x L in mm                                  | 6x18            | 6x45        | 8x30                      | 8x45        | 11x38       |     |
| <b>Cat. No.</b>                              | -               |             |                           | <b>2078</b> | <b>0536</b> |     |
| lid with bio-containment <sup>5)</sup> incl. |                 |             |                           |             |             |     |
| <b>rotor</b><br>Cat. No. <b>1158-L</b>       |                 |             |                           |             |             |     |
| <b>Cat. No.</b>                              | <b>2024</b>     | <b>2023</b> | <b>2031</b> <sup>7)</sup> | -           |             |     |
| boring Ø x L in mm                           | 6x40            |             | 8x40                      |             | 10.2x19     |     |
| tubes per rotor                              | 48              |             |                           |             |             |     |
| max. RCF outer/inner                         | 21,255 / 18,845 |             |                           |             |             |     |
| radius in mm outer/inner                     | 97 / 86         |             |                           |             |             |     |
| run-up in sec                                | 21              |             |                           |             |             |     |
| run-down in sec, braked                      | 22              |             |                           |             |             |     |
| temperature in °C <sup>1)</sup>              | -4              |             |                           |             |             |     |

| capacity in ml                         | 0.2         | 0.4         | 0.5                       | 0.8         | 1.5         | 2.0 |
|--|-------------|-------------|---------------------------|-------------|-------------|-----|
| Ø x L in mm                            | 6x18        | 6x45        | 8x30                      | 8x45        | 11x38       |     |
| <b>Cat. No.</b>                        | -           |             |                           | <b>2078</b> | <b>0536</b> |     |
| lid 2425 <sup>5)</sup> incl.           |             |             |                           |             |             |     |
| <b>rotor</b><br>Cat. No. <b>1154-L</b> |             |             |                           |             |             |     |
| <b>Cat. No.</b>                        | <b>2024</b> | <b>2023</b> | <b>2031</b> <sup>7)</sup> | -           |             |     |
| boring Ø x L in mm                     | 6x40        |             | 8x40                      |             | 10.2x19     |     |
| tubes per rotor                        | 24          |             |                           |             |             |     |
| max. RCF                               | 18,516      |             |                           |             |             |     |
| radius in mm                           | 98          |             |                           |             |             |     |
| run-up in sec                          | 25          |             |                           |             |             |     |
| run-down in sec, braked                | 26          |             |                           |             |             |     |
| temperature in °C <sup>1)</sup>        | +1          |             |                           |             |             |     |

**Optional for rotor 2219-A**



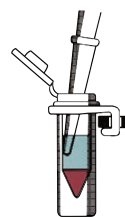
lid **Cat. No. 2425**  
with bio-containment<sup>5)</sup>, autoclavable

**Optional for rotor 2219-A and 1154-L**



lid **Cat. No. 2423**  
with bio-containment<sup>5)</sup>, autoclavable, phenol-resistant

| capacity in ml                         | 1.8               |
|--|-------------------|
| Ø x L in mm                            | -                 |
| <b>Cat. No.</b>                        | <b>cryo tubes</b> |
| lid <b>E3243</b> incl.                 |                   |
| <b>rotor</b><br>Cat. No. <b>2219-A</b> |                   |
| <b>Cat. No.</b>                        | -                 |
| boring Ø x L in mm                     | 12.5 x 36         |
| tubes per rotor                        | 20                |
| max. RCF                               | 18,407            |
| radius in mm                           | 84                |
| run-up in sec                          | 21                |
| run-down in sec, braked                | 21                |
| temperature in °C <sup>1)</sup>        | -9                |



Centrifugation in the swing-out rotor makes the pellet collect exactly in the tip of the tubes. This facilitates analysis and further processing.

### Drum rotor, 6-place



n = 13,000 min<sup>-1</sup>  
max. RCF 14,171

**Cat. No. 1161**

### Angle rotor, 6-place, for PCR strips



↘ 45°

n = 14,000 min<sup>-1</sup>  
max. RCF 18,845

lid (optional)  
Cat. No. **1162**

**Cat. No. (without lid) 1160**

### Hematocrit rotor, 24-place



n = 15,000 min<sup>-1</sup>  
max. RCF 21,382

**Cat. No. 1023**

| capacity in ml                       | 0.2         | 0.4    | 0.5         | 0.8         | 1.5         | 2.0 |
|--------------------------------------|-------------|--------|-------------|-------------|-------------|-----|
| Ø x L in mm                          | 6 x 18      | 6 x 45 | 8 x 30      | 8 x 45      | 11 x 38     |     |
| <b>Cat. No.</b>                      | -           |        |             | <b>2078</b> | <b>0536</b> |     |
| lid incl.                            |             |        |             |             |             |     |
| <b>rotor</b><br>Cat. No. <b>1161</b> |             |        |             |             |             |     |
| <b>Cat. No.</b>                      | <b>1378</b> |        | <b>1379</b> |             | <b>1377</b> |     |
| boring Ø x L in mm                   | 6 x 40      |        | 8.4 x 43    |             | 10.8 x 37   |     |
| tubes per rotor                      | 192         |        | 126         |             | 60          |     |
| max. RCF                             | 14,171      |        |             |             |             |     |
| radius in mm                         | 75          |        |             |             |             |     |
| run-up in sec                        | 17          |        |             |             |             |     |
| run-down in sec, braked              | 18          |        |             |             |             |     |
| temperature in °C <sup>1)</sup>      | -3          |        |             |             |             |     |

| capacity in ml                           | 0.2        | 0.2               |
|--|------------|-------------------|
| Ø x L in mm                              | 6 x 18     | -                 |
| <b>Cat. No.</b>                          | -          | <b>PCR strips</b> |
| <br><b>rotor</b><br>Cat. No. <b>1160</b> |            |                   |
| <b>Cat. No.</b>                          | -          |                   |
| boring Ø x L in mm                       | 6.5 x 15.5 |                   |
| tubes per rotor                          | 48         | 6 x 8             |
| max. RCF                                 | 18,845     |                   |
| radius in mm                             | 86         |                   |
| run-up in sec                            | 20         |                   |
| run-down in sec, braked                  | 22         |                   |
| temperature in °C <sup>1)</sup>          | -4         |                   |

| standard capillaries, heparinised        | basic         | self-sealing and mylar-coated |
|--|---------------|-------------------------------|
| <b>Cat. No.</b>                          | <b>2074</b>   | <b>1071</b>                   |
| lid as evaluation disk incl.             |               |                               |
| <br><b>rotor</b><br>Cat. No. <b>1023</b> | sealing putty |                               |
| <b>Cat. No.</b>                          | <b>2077</b>   | -                             |
| boring Ø x L in mm                       | -             |                               |
| capillaries per rotor                    | 24            |                               |
| max. RCF                                 | 21,382        |                               |
| radius in mm                             | 85            |                               |
| run-up in sec                            | 11            |                               |
| run-down in sec, braked                  | 12            |                               |
| temperature in °C <sup>1)</sup>          | -11           |                               |

Whether hematocrit determination or the preparation of samples for bilirubin analysis, the MIKRO 220/220 R centrifuges perform strongly.

As a special feature, the hematocrit rotor is segmented into 24 chambers, each chamber containing one capillary only. In case a capillary breaks or leaks, fragments and leaked blood stay in the chamber and will not affect other capillaries. The lid of the rotor is evaluation disk and cover in one. Its advantage: The hematocrit value can be determined fast and conveniently right after centrifugation.





















<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.  
<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.
























|  | Angle rotor, 6-place  | Angle rotor, 12-place   |
|--|---|---|
| <b>Accessories for MIKRO 220 R only:</b><br><br>The following rotors can only be operated in the refrigerated MIKRO 220 R. |  |  |
|  | ↘ 35°   | ↘ 35°   |
|  | n = 6,000 min <sup>-1</sup><br>max. RCF 4,025                                     | n = 6,000 min <sup>-1</sup><br>max. RCF 4,146                                       |
|  | <b>Cat. No. 1016</b>  | <b>Cat. No. 1015</b>  |







By also accepting rotors for tubes up to 50 ml, the refrigerated MIKRO 220 R enables an extended range of applications.


















With the robust angle rotors even large volumes can be centrifuged at high speeds.

| capacity in ml  | 7   | 15  | 25  | 50  | 9-10   | 10  | 15  | 50  | 30  | 50  |
|---|---|---|---|---|--|---|---|---|---|---|
| Ø x L in mm   | 12x100  | 17x100  | 24x100  | 34x100  | 16x92  | 15x102  | 17x120  | 29x115  | 26x95   | 29x107  |
| <b>Cat. No.</b>   | <b>0578<sup>2)</sup></b>  | <b>0518<sup>2)</sup></b>  | <b>0519<sup>2)</sup></b>  | <b>0521<sup>2)</sup></b>  | blood collection/urine tubes   |   | <b>0509</b>   | <b>0513</b>   | <b>0545</b>   | <b>0546</b>   |
| <br><b>rotor</b><br>Cat. No. <b>1016</b> |  |  |  |  |   |  |  |  |  |  |
|   |  |  |  |   |  |  |  |  |  |  |
| <b>Cat. No.</b>   | <b>1632</b>   | <b>1635</b>   | <b>1633</b>   | -   | <b>1635</b>  |   | <b>1631</b>   | <b>1641</b>   | <b>1633</b>   | <b>1634</b>   |
| boring Ø x L in mm  | 13x92   | 17.5x95   | 26x88   | 35x96   | 17.5x95  |   | 17x98   | 30x98   | 26x88   | 29x95   |
| tubes per rotor   | 18  | 6   |   |   | 6  |   | 6   | 3   | 6   |   |
| max. RCF <sup>2)</sup>  | 3,944   | 3,783   | 3,703   | 4,025   | 3,783  |   | 3,824   | 3,824   | 3,703   | 3,904   |
| radius in mm  | 98  | 94  | 92  | 100   | 94   |   | 95  | 95  | 92  | 97  |
| run-up in sec   | 14  |   |   |   |  |   |   |   |   |   |
| run-down in sec, braked   | 17  |   |   |   |  |   |   |   |   |   |
| temperature in °C <sup>1)</sup>   | -20   |   |   |   |  |   |   |   |   |   |

| capacity in ml  | 5   | 15  | 1.1-1.4   | 2.6-3.4   | 2.7-3   | 4.5-5   | 4.9   | 7.5-8.5   | 9-10  | 10  | 1.6-5   | 4-7   | 8.5-10  | 15  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø x L in mm   | 12x75   | 17x100  | 8x66  | 13x65   | 11x66   | 11x92   | 13x90   | 15x92   | 16x92   | 15x102  | 13x75   | 13x100  | 16x100  | 17x120  |
| <b>Cat. No.</b>   | <b>0553<sup>2)</sup></b>  | <b>0518<sup>2)</sup></b>  | blood collection/urine tubes  |   |   |   |   |   |   |   |   |   | <b>0509</b>   |   |
| <br><b>rotor</b><br>Cat. No. <b>1015</b> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   |  |   |  |   |   |   |   |   |   |   |   |  |  |   |
| <b>Cat. No.</b>   | <b>1054-A</b>   | -   | <b>1054-A</b>   |   |   |   |   |   |   |   | <b>1054-A</b>   | <b>1058</b>   | -   | -   |
| boring Ø x L in mm  | 13.5x60   | 17.7x88   | 13.5x60   |   |   |   |   | 17.7x88   |   |   | 13.5x60   | 13.5x79   | 17.7x88   | 17.7x88   |
| tubes per rotor   | 12  | 12  | 12  |   |   |   |   | 12  |   |   | 12  | 12  | 12  | 6   |
| max. RCF <sup>2)</sup>  | 3,300   | 4,146   | 3,300   |   |   |   |   | 4,146   |   |   | 3,300   | 4,146   |   |   |
| radius in mm  | 82  | 103   | 82  |   |   |   |   | 103   |   |   | 82  | 103   |   |   |
| run-up in sec   | 14  |   |   |   |   |   |   |   |   |   |   |   |   |   |
| run-down in sec, braked   | 16  |   |   |   |   |   |   |   |   |   |   |   |   |   |
| temperature in °C <sup>1)</sup>   | -20   |   |   |   |   |   |   |   |   |   |   |   |   |   |

|   | Swing-out rotor, 12-place   | Swing-out rotor, 8-place   |
|---|---|--|
| <p><b>Accessories for MIKRO 220 R only:</b></p> <p>The following rotors can only be operated in the refrigerated MIKRO 220 R.</p> |  |  |
|   | $\sphericalangle 60^\circ$<br>n = 5,000 min <sup>-1</sup><br>max. RCF 2,963       | $\sphericalangle 90^\circ$<br>n = 5,000 min <sup>-1</sup><br>max. RCF 2,879        |
|   | <b>Cat. No. (without carriers) 2226</b>   | <b>Cat. No. (without carriers) 1020</b>  |

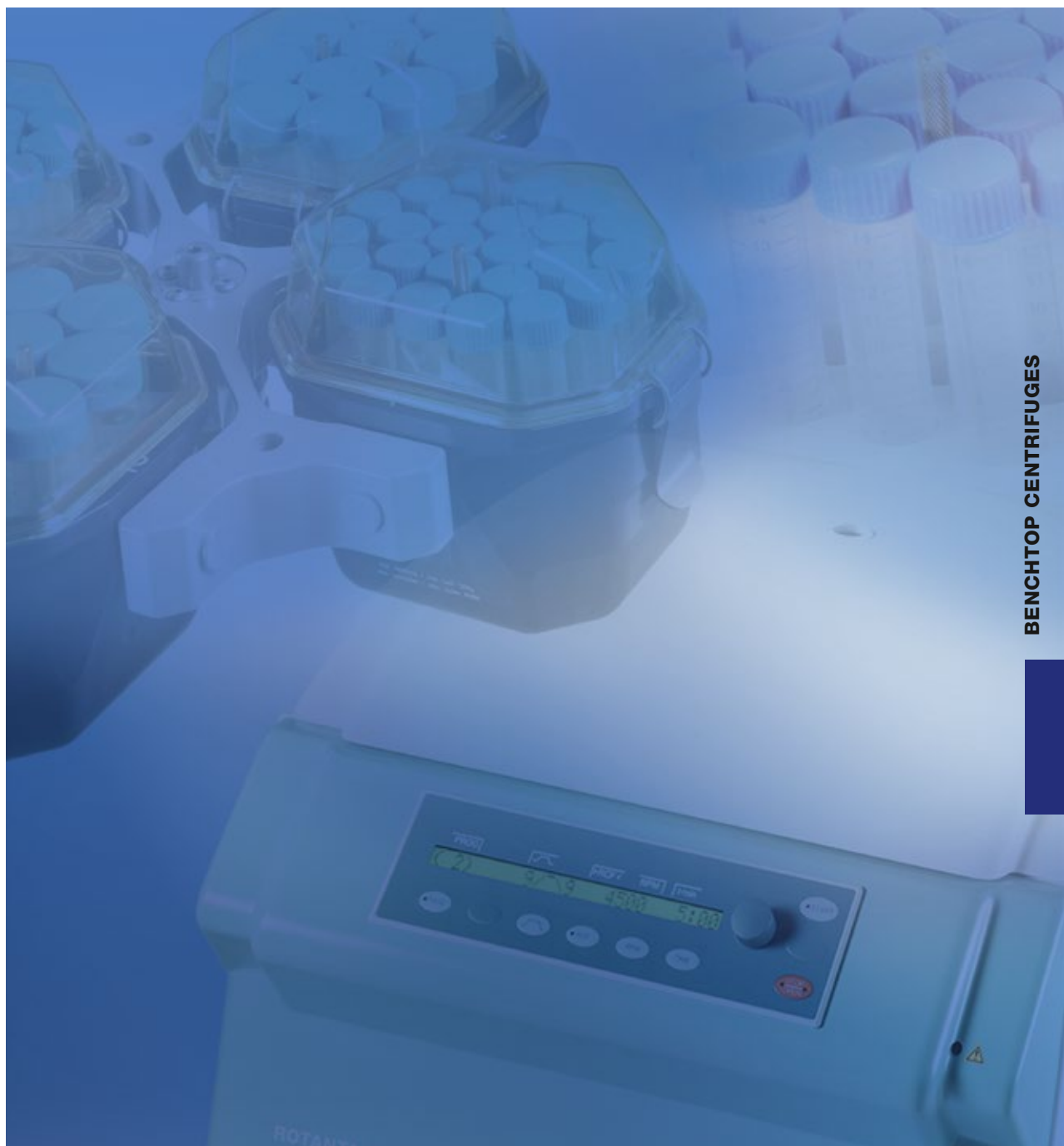
|   |   |   |   |   |
|---|---|---|---|---|
| capacity in ml  | 5   | 2.6–3.4   | 2.7–3   | 1.6–5   |
| Ø x L in mm   | 12x75   | 13x65   | 11x66   | 13x75   |
| <b>Cat. No.</b>   | <b>0553<sup>2)</sup> blood collection tubes</b>                                   |   |   |   |
| <br><b>rotor</b><br>Cat. No. <b>2226</b> |  |  |  |  |
|   |  |   |   |   |
| <b>Cat. No.</b>   | <b>1127</b>   |   |   |   |
| boring Ø x L in mm  | 13.2x53   |   |   |   |
| tubes per rotor   | 12  |   |   |   |
| max. RCF <sup>2)</sup>  | 2,963   |   |   |   |
| radius in mm  | 106   |   |   |   |
| run-up in sec   | 10  |   |   |   |
| run-down in sec, braked   | 10  |   |   |   |
| temperature in °C <sup>1)</sup>   | -20   |   |   |   |

|   |   |   |   |   |   |   |  |   |
|---|---|---|---|---|---|---|--|---|
| capacity in ml  | 5   | 6   | 10  | 2.6–3.4   | 2.7–3   | 4–5.5   | 1.6–5  | 4–7   |
| Ø x L in mm   | 12x75   | 12x82   | 17x70   | 13x65   | 11x66   | 15x75   | 13x75  | 16x75   |
| <b>Cat. No.</b>   | <b>0553<sup>2)</sup></b>  | <b>0501<sup>2)</sup></b>  | <b>2079</b>   | <b>blood collection tubes</b>   |   |   |  |   |
| <br><b>rotor</b><br>Cat. No. <b>1020</b> |  |  |  |  |  |  |   |    |
|   |  |  |  |  |  |  |  |  |
| <b>Cat. No.</b>   | <b>1131</b>   | <b>1132</b>   | <b>1131</b>   | <b>1132</b>   | <b>1131</b>   | <b>1132</b>   | <b>1131</b>  | <b>1132</b>   |
| boring Ø x L in mm  | 13x53   | 17.5x53   | 13x53   | 17.5x53   | 13x53   | 17.5x53   | 13x53  | 17.5x53   |
| tubes per rotor   | 8   |   |   |   |   |   |  |   |
| max. RCF <sup>2)</sup>  | 2,879   |   |   |   |   |   |  |   |
| radius in mm  | 103   |   |   |   |   |   |  |   |
| run-up in sec   | 10  |   |   |   |   |   |  |   |
| run-down in sec, braked   | 10  |   |   |   |   |   |  |   |
| temperature in °C <sup>1)</sup>   | -20   |   |   |   |   |   |  |   |

<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.

# Benchtop Centrifuges



BENCHTOP CENTRIFUGES

**ROTOFIX 32 A**

**UNIVERSAL 320/320 R**

**ROTINA 380/380 R**

**ROTINA 420/420 R**

**ROTANTA 460/460 R**

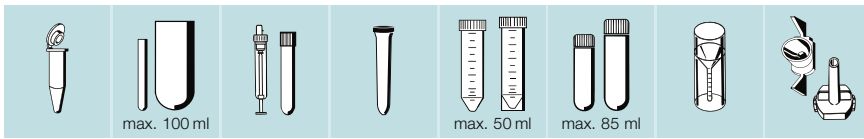
**ROTANTA 460 RC/460 RF**

**LABOMODERNE**

[www.labomoderne.com](http://www.labomoderne.com) - [info@labomoderne.com](mailto:info@labomoderne.com)

Tél. 01 42 50 50 50

# ROTOFIX 32 A





**Rugged, versatile and indispensable for routine laboratory tasks in doctors' practices and small hospitals**

Not only is the ROTOFIX 32 A ideally equipped for tasks in clinical chemistry, it can also play a vital role in cytology. This versatile centrifuge can handle a lot more than medical applications. With its wide variety of accessories, the ROTOFIX 32 A can be also used for the preparation of samples in industrial and research laboratories. Tubes that are suitable for chrome bath testing are also available.

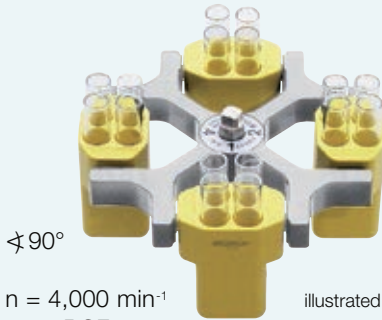


## TECHNOLOGY

## ROTOFIX 32 A

| Benchtop centrifuge, without rotor   |  |
|--|--|
| Power supply*)   | 208 – 240 V 1 ~      100 – 127 V 1 ~                         |
| Frequency  | 50 – 60 Hz   |
| Consumption  | 300 VA   |
| Emission, Immunity   | EN / IEC 61326-1, class B      FCC class B                   |
|  Max. capacity    | 4 x 100 ml / 32 x 15 ml                                      |
|  Max. RPM (speed) | 6,000 min <sup>-1</sup>                                      |
| Max. RCF   | 4,226  |
| Running time   | 1 – 99 min, ∞ continuous run, short cycle mode (impulse key) |
| Dimensions (HxWxD)   | 257 x 366 x 430 mm   |
| Weight   | approx. 23 kg  |
| <b>Cat. No.</b>  | <b>1206</b> <b>1206-01</b>                                   |

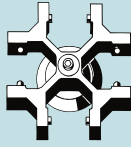














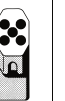
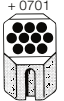
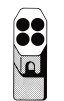
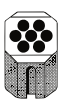
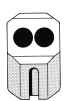
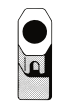

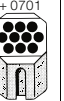
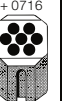
\*) Other voltages on request.

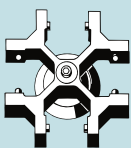








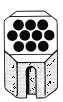

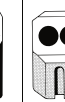
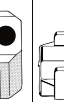


**Swing-out rotor, 4-place**

 $\pm 90^\circ$ 

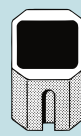










 n = 4,000 min<sup>-1</sup>  
 max. RCF 2,665

illustrated with carriers 1369

**Cat. No.** (without carriers) **1624**

| capacity in ml  | 5   | 6   | 7   | 9   | 15  | 20  | 25  | 45  | 50  | 1.1–1.4   | 2.6–3.4   |   |             |
|---|---|---|---|---|---|---|---|---|---|---|---|---|-------------|
| Ø x L in mm   | 12 x 75   | 12 x 82   | 12 x 100  | 14 x 100  | 17 x 100  | 21 x 100  | 24 x 100  | 31 x 100  | 34 x 100  | 8 x 66  | 13 x 65   |   |             |
| <b>Cat. No.</b>   | <b>0553<sup>2)</sup></b>  | <b>0501<sup>2)</sup></b>  | <b>0578<sup>2)</sup></b>  | <b>0500<sup>2)</sup></b>  | <b>0518<sup>2)</sup></b>  | -   | <b>0519<sup>2)</sup></b>  | -   | <b>0521<sup>2)</sup></b>  | <b>blood/urine tubes</b>  |   |   |             |
| <br><b>rotor</b><br>Cat. No. <b>1624</b> |  |  |  |  |  |  |  |  |  |  |  |   |             |
|   |  |  |  |  |  |  |    |  |  |  |  |  |             |
| <b>Cat. No.</b>   | <b>1369-91</b>  | <b>1372</b>   | <b>1369-92</b>  | <b>1370</b>   | <b>1741</b>   | <b>1369</b>   | <b>1742</b>   | <b>1346</b>   | <b>1745</b>   | <b>1345</b>   | <b>1746</b>   | <b>1741</b>   | <b>1742</b> |
| boring Ø x L in mm  | 11.5 x 64.4   | 13.5 x 65   | 11.5 x 71.5   | 14.6 x 74   | 14.6 x 78   | 17.6 x 74   | 17.6 x 78   | 21.5 x 74   | 26 x 78   | 32 x 74   | 35 x 78   | 14.6 x 78   | 17.6 x 78   |
| tubes per rotor   | 16  | 68  | 16  | 20  | 40  | 16  | 28  | 8   | 4   | 40  | 28  | 40  | 28          |
| max. RCF <sup>2)</sup>  | 2,057   | 2,164   | 2,308   | 2,415   | 2,308   | 2,451   | 2,361   | 2,451   | 2,361   | 2,451   | 2,415   | 2,415   | 2,325       |
| radius in mm  | 115   | 121   | 129   | 135   | 129   | 137   | 132   | 137   | 132   | 137   | 135   | 130   | 130         |
| run-up in sec   | 22  |   |   |   |   |   |   |   |   |   |   |   |             |
| run-down in sec, braked   | 25  |   |   |   |   |   |   |   |   |   |   |   |             |

| capacity in ml  | 4–5.5   | 4.9   | 1.6–5   | 4–7   | 8.5–10  | 30  | suspensions for cyto accessories  |
|---|---|---|---|---|---|---|---|
| Ø x L in mm   | 15 x 75   | 13 x 90   | 13 x 75   | 16 x 75   | 16 x 100  | 26 x 95   |   |
| <b>Cat. No.</b>   | <b>blood collection/urine tubes</b>   |   |   |   |   | <b>0545</b>   | <b>cyto chambers<sup>23)</sup></b>  |
| <br><b>rotor</b><br>Cat. No. <b>1624</b> |  |  |  |  |  |  |  |
|   |  |  |  |  |  |  |  |
| <b>Cat. No.</b>   | <b>1742</b>   | <b>1741</b>   | <b>1742</b>   | <b>1369</b>   | <b>1745</b>   | <b>1660</b>   | <b>1680</b>   |
| boring Ø x L in mm  | 17.6 x 78   | 14.6 x 78   | 17.6 x 78   | 17.6 x 74   | 26 x 78   | -   | -   |
| tubes per rotor   | 28  | 40  | 28  | 16  | 8   | 4   | 4   |
| max. RCF <sup>2)</sup>  | 2,325   | 2,451   | 2,325   | 2,308   | 2,451   | 1,646   | 1,467   |
| radius in mm  | 130   | 137   | 130   | 129   | 137   | 92  | 82  |
| run-up in sec   | 22  |   |   |   |   |   |   |
| run-down in sec, braked   | 25  |   |   |   |   |   |   |

| capacity in ml   | 1.5   | 2.0   | 1   | 3   | 4   |
|--|---|---|---|---|---|
| Ø x L in mm  | 11 x 38   |   | 6 x 45  | 10 x 60   | 12 x 60   |
| <b>Cat. No.</b>  | <b>2078</b>   | <b>0536</b>   | <b>Rhesus</b>   | -   | -   |
| <br><b>carrier</b><br>Cat. No. <b>1366</b> |  |  |  |  |  |
|  |  |  |  |  |  |
| <b>Cat. No.</b>  | <b>5277</b>   | <b>1357</b>   | <b>1327</b>   | <b>1326</b>   |   |
| boring Ø x L in mm   | 11.5 x 38   | 6.5 x 23  | 10.5 x 23   | 12.5 x 44   |   |
| tubes per rotor  | 36  | 120   | 48  |   |   |
| max. RCF <sup>2)</sup>   | 1,968   | 1,950   | 1,932   |   |   |
| radius in mm   | 110   | 109   | 108   |   |   |
| run-up in sec  | 22  |   |   |   |   |
| run-down in sec, braked  | 25  |   |   |   |   |

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.  
<sup>23)</sup> Please ask for our detailed cyto brochure.





illustrated with carriers 1481 and lids 1492  
with bio-containment<sup>5)</sup>

**Swing-out rotor Cat. No. (without carriers) 1624**

| capacity in ml  | 1.5         | 2.0         | 1             | 3           | 5/6/7  | 9           | 15                       | 25                       | 50                       | 94                       | 100         | 1.1–1.4                  | 2.7–5                    | 2.6–4.9    | 4–8.5      |            |
|---|-------------|-------------|---------------|-------------|--|-------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------|--------------------------|--------------------------|------------|------------|------------|
| Ø x L in mm   | 11 x 38     |             | 6 x 45        | 10 x 60     | 12 x 75/82/100   |             | 14 x 100                 | 17 x 100                 | 24 x 100                 | 34 x 100                 | 38 x 102    | 44 x 100                 | 8 x 66                   | 11 x 66/92 | 13 x 65/90 | 15 x 75/92 |
| <b>Cat. No.</b>   | <b>2078</b> | <b>0536</b> | <b>Rhesus</b> | -           | <b>0553<sup>2)</sup>/0501<sup>2)</sup>/0578<sup>2)</sup></b> |             | <b>0500<sup>2)</sup></b> | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>0549</b> | <b>0526<sup>2)</sup></b> | <b>blood/urine tubes</b> |            |            |            |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 1492 |             |             |               |             |  |             |                          |                          |                          |                          |             |                          |                          |            |            |            |
| <b>carrier</b><br>Cat. No. 1481                         |             |             |               |             |  |             |                          |                          |                          |                          |             |                          |                          |            |            |            |
| <b>Cat. No.</b>   | <b>1351</b> | <b>1339</b> | <b>1343</b>   | <b>1383</b> | <b>1329</b>  | <b>1330</b> | <b>1331</b>              | <b>1396</b>              | <b>0761</b>              | <b>1457</b>              | <b>1383</b> | <b>1459</b>              |                          |            |            |            |
| boring Ø x L in mm                                      | 11.2 x 38   |             | 6.5 x 34      | 10.5 x 43   | 13.4 x 48  |             | 17.6 x 91                | 25.2 x 87                | 35.2 x 87                | 38.5 x 92                | 45.9 x 98   | 9 x 47                   | 13.4 x 48                |            | 15.6 x 47  |            |
| tubes per rotor   | 20          |             | 108           | 36          | 20   |             | 16                       | 4                        |                          |                          |             | 28                       | 20                       |            | 16         |            |
| max. RCF <sup>2)</sup>                                  | 2,451       |             | 2,594         | 2,630       | 2,558  |             | 2,540                    | 2,433                    | 2,415                    | 2,612                    | 2,558       | 2,576                    | 2,558                    |            | 2,576      |            |
| radius in mm  | 137         |             | 145           | 147         | 143  |             | 142                      | 136                      | 135                      | 146                      | 143         | 144                      | 143                      |            | 144        |            |
| run-up in sec   | 22          |             |               |             |  |             |                          |                          |                          |                          |             |                          |                          |            |            |            |
| run-down in sec, braked                                 | 25          |             |               |             |  |             |                          |                          |                          |                          |             |                          |                          |            |            |            |

| capacity in ml  | 9–10                                | 10                       | 1.6–7       | 4–10        | 15          | 50          | 12          | 25          | 30          | 50          | 10          | 30          | 50          | 85          | 30                       |
|---|-------------------------------------|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------------|
| Ø x L in mm   | 16 x 92                             | 15 x 102                 | 13 x 75/100 | 16 x 75/100 | 17 x 120    | 29 x 115    | 17 x 100    | 25 x 90     | 25 x 110    | 29 x 115    | 16 x 80     | 26 x 95     | 29 x 107    | 38 x 106    | 44 x 105                 |
| <b>Cat. No.</b>   | <b>blood collection/urine tubes</b> |                          |             |             | <b>0509</b> | <b>0513</b> | -           | -           | -           | -           | -           | <b>0545</b> | <b>0546</b> | <b>0547</b> | <b>0534<sup>6)</sup></b> |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 1492 |                                     |                          |             |             |             |             |             |             |             |             |             |             |             |             |                          |
| <b>carrier</b><br>Cat. No. 1481                         |                                     |                          |             |             |             |             |             |             |             |             |             |             |             |             |                          |
| <b>Cat. No.</b>   | <b>1329</b>                         | <b>1329<sup>4)</sup></b> | <b>1383</b> | <b>1348</b> | <b>1347</b> | <b>1384</b> | <b>6311</b> | <b>1363</b> | <b>1365</b> | <b>6318</b> | <b>1348</b> | <b>4417</b> | <b>4416</b> | <b>1396</b> | <b>0765</b>              |
| boring Ø x L in mm                                      | 17.6 x 91                           |                          | 13.4 x 48   | 16.5 x 56   | 17 x 90     | 30 x 90     | 17 x 80     | 26 x 72     | 26 x 80     | 29.5 x 80   | 16.5 x 56   | 26 x 83     | 29 x 93     | 38.5 x 92   | 45.9 x 98                |
| tubes per rotor   | 16                                  |                          | 20          | 16          | 4           |             |             |             | 16          |             |             | 4           |             |             |                          |
| max. RCF <sup>2)</sup>                                  | 2,540                               | 2,665                    | 2,558       | 2,522       | 2,665       |             | 2,343       | 2,665       |             | 2,522       | 2,451       | 2,630       | 2,612       | 2,540       |                          |
| radius in mm  | 142                                 | 149                      | 143         | 141         | 149         |             | 131         | 149         |             | 141         | 137         | 147         | 146         | 142         |                          |
| run-up in sec   | 22                                  |                          |             |             |             |             |             |             |             |             |             |             |             |             |                          |
| run-down in sec, braked                                 | 25                                  |                          |             |             |             |             |             |             |             |             |             |             |             |             |                          |

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.  
<sup>4)</sup> Please remove the inserts.

**Swing-out rotor, 4-place**



↗ 90°

n = 4,000 min<sup>-1</sup>  
max. RCF 2,630

illustrated with carriers 1490 and lids 1492  
with bio-containment<sup>5)</sup>

**Cat. No.** (without carriers) **1324**

|   |             |             |               |             |       |                          |                          |                          |                          |                          |                          |                          |             |                          |
|---|-------------|-------------|---------------|-------------|-------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------|--------------------------|
| capacity in ml  | 1.5         | 2.0         | 1             | 3           | 4     | 5                        | 6                        | 7                        | 9                        | 15                       | 25                       | 50                       | 94          | 100                      |
| Ø x L in mm   | 11x38       |             | 6x45          | 10x60       | 10x88 | 12x75                    | 12x82                    | 12x100                   | 14x100                   | 17x100                   | 24x100                   | 34x100                   | 38x102      | 44x100                   |
| <b>Cat. No.</b>   | <b>2078</b> | <b>0536</b> | <b>Rhesus</b> | -           | -     | <b>0553<sup>2)</sup></b> | <b>0501<sup>2)</sup></b> | <b>0578<sup>2)</sup></b> | <b>0500<sup>2)</sup></b> | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>0549</b> | <b>0526<sup>2)</sup></b> |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 1492 |             |             |               |             |       |                          |                          |                          |                          |                          |                          |                          |             |                          |
| <b>carrier</b><br>Cat. No. 1490                         |             |             |               |             |       |                          |                          |                          |                          |                          |                          |                          |             |                          |
| <b>Cat. No.</b>   | <b>1351</b> | <b>1339</b> | <b>1343</b>   | <b>1383</b> |       |                          |                          | <b>1329</b>              |                          | <b>1330</b>              | <b>1331</b>              | <b>1396</b>              | <b>0761</b> |                          |
| boring Ø x L in mm                                      | 11.2x38     |             | 6.5x34        | 10.5x43     |       | 13.4x48                  |                          |                          | 17.6x91                  |                          | 25.2x87                  | 35.2x87                  | 38.5x92     | 45.9x100.5               |
| tubes per rotor   | 20          |             | 108           | 36          |       | 20                       |                          |                          | 16                       |                          | 4                        |                          |             |                          |
| max. RCF <sup>2)</sup>                                  | 2,415       |             | 2,558         | 2,594       |       | 2,522                    |                          |                          | 2,504                    |                          | 2,397                    | 2,379                    | 2,576       | 2,522                    |
| radius in mm  | 135         |             | 143           | 145         |       | 141                      |                          |                          | 140                      |                          | 134                      | 133                      | 144         | 141                      |
| run-up in sec   | 27          |             |               |             |       |                          |                          |                          |                          |                          |                          |                          |             |                          |
| run-down in sec, braked                                 | 30          |             |               |             |       |                          |                          |                          |                          |                          |                          |                          |             |                          |

|   |                                     |             |             |             |       |                          |             |             |             |             |             |             |             |
|---|-------------------------------------|-------------|-------------|-------------|-------|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| capacity in ml  | 1.1-1.4                             | 2.6-3.4     | 4.9         | 2.7-3       | 4.5-5 | 4-5.5                    | 7.5-8.5     | 9-10        | 10          | 1.6-5       | 4-7         | 4-7         | 8.5-10      |
| Ø x L in mm   | 8x66                                | 13x65       | 13x90       | 11x66       | 11x92 | 15x75                    | 15x92       | 16x92       | 15x102      | 13x75       | 13x100      | 16x75       | 16x100      |
| <b>Cat. No.</b>   | <b>blood collection/urine tubes</b> |             |             |             |       |                          |             |             |             |             |             |             |             |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 1492 |                                     |             |             |             |       |                          |             |             |             |             |             |             |             |
| <b>carrier</b><br>Cat. No. 1490                         |                                     |             |             |             |       |                          |             |             |             |             |             |             |             |
| <b>Cat. No.</b>   | <b>1457</b>                         | <b>1383</b> | <b>1459</b> | <b>1329</b> |       | <b>1329<sup>4)</sup></b> | <b>1383</b> | <b>1348</b> | <b>1383</b> | <b>1348</b> | <b>1383</b> | <b>1348</b> | <b>1383</b> |
| boring Ø x L in mm                                      | 9x47                                |             | 13.4x48     |             |       | 15.6x47                  |             | 17.6x91     |             | 13.4x48     |             | 16.5x56     |             |
| tubes per rotor   | 28                                  |             | 20          |             |       | 16                       |             |             | 20          |             | 16          |             |             |
| max. RCF <sup>2)</sup>                                  | 2,540                               |             | 2,522       |             |       | 2,540                    |             | 2,504       | 2,630       | 2,522       |             | 2,486       |             |
| radius in mm  | 142                                 |             | 141         |             |       | 142                      |             | 140         | 147         | 141         |             | 139         |             |
| run-up in sec   | 27                                  |             |             |             |       |                          |             |             |             |             |             |             |             |
| run-down in sec, braked                                 | 30                                  |             |             |             |       |                          |             |             |             |             |             |             |             |

<sup>5)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.




























<sup>6)</sup> A rubber stopper for closing the tube is available under Cat. No. 0535.



























The tube may not be centrifuged with the stopper. The stopper only serves to close the tube for agitating or mixing.



illustrated with carriers 1398

### Swing-out rotor 1324

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|
| capacity in ml   | 15  | 30  | 50  | 12  | 25  | 30  | 50  | 10  | 30  | 50  | 85  | 30  |   |
| Ø x L in mm  | 17 x 120  | 25 x 110  | 29 x 115  | 17 x 100  | 25 x 90   | 25 x 110  | 29 x 115  | 16 x 80   | 26 x 95   | 29 x 107  | 38 x 106  | 44 x 105  |   |
| <b>Cat. No.</b>  | <b>0509</b>   | -   | <b>0513</b>   | -   | -   | -   | -   | -   | <b>0545</b>   | <b>0546</b>   | <b>0547</b>   | <b>0534<sup>6)</sup></b>  |   |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 1492<br> |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>carrier</b><br>Cat. No. 1490  |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Cat. No.</b>  | <b>1347</b>   | <b>1356</b>   | <b>1365</b>   | <b>1384</b>   | <b>6311</b>   | <b>1363</b>   | <b>1365</b>   | <b>6318</b>   | <b>1348</b>   | <b>4417</b>   | <b>4416</b>   | <b>1396</b>   | <b>0765</b>   |
| boring Ø x L in mm   | 17 x 90   | 17 x 107  | 26 x 80   | 30 x 90   | 17 x 80   | 26 x 72   | 26 x 80   | 29.5 x 80   | 16.5 x 56   | 26 x 83   | 29 x 93   | 38.5 x 92   | 45.9 x 100.5  |
| tubes per rotor  | 4   | 12  | 4   |   |   |   | 16  |   |   | 4   |   |   |   |
| max. RCF <sup>2)</sup>   | 2,630   | 2,630   |   | 2,308   | 2,630   |   | 2,486   | 2,415   | 2,594   | 2,576   | 2,504   |   |   |
| radius in mm   | 147   | 147   |   | 129   | 147   |   | 139   | 135   | 145   | 144   | 140   |   |   |
| run-up in sec  | 27  |   |   |   |   |   |   |   |   |   |   |   |   |
| run-down in sec, braked  | 30  |   |   |   |   |   |   |   |   |   |   |   |   |

|   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |           |
|---|---|---|---|---|--|---|---|---|---|---|---|---|---|---|---|---|-----------|
| capacity in ml  | 5   | 6   | 7   | 9   | 15   | 2.6-3.4   | 2.7-3   | 4-5.5   | 4.5-5   | 4.9   | 9-10  | 10  | 1.6-5   | 4-7   | 4-7   | 12  |           |
| Ø x L in mm   | 12 x 75   | 12 x 82   | 12 x 100  | 14 x 100  | 17 x 100   | 13 x 65   | 11 x 66   | 15 x 75   | 11 x 92   | 13 x 90   | 16 x 92   | 15 x 102  | 13 x 75   | 13 x 100  | 16 x 75   | 17 x 102  |           |
| <b>Cat. No.</b>   | <b>0553<sup>2)</sup></b>  | <b>0501<sup>2)</sup></b>  | <b>0578<sup>2)</sup></b>  | <b>0500<sup>2)</sup></b>  | <b>0518<sup>2)</sup></b>   | <b>blood collection/urine tubes</b>   |   |   |   |   |   |   |   |   |   |   |           |
|  |  |  |  |  |   |    |    |    |    |    |  |  |  |  |  |  |           |
|   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |           |
| <b>Cat. No.</b>   | <b>1486</b>   | <b>1482A</b>  | <b>1486</b>   | <b>1482A</b>  | <b>1486</b>  | <b>1482A</b>  | <b>1486</b>   | <b>1482A</b>  | <b>1486</b>   | <b>1482A</b>  | <b>1486</b>   | <b>1482A</b>  | <b>1486</b>   | <b>1482A</b>  | <b>1487</b>   |   |           |
| boring Ø x L in mm  | 13.4 x 57.5   |   | 17.5 x 81   |   |  | 13.4 x 57.5   |   | 17.5 x 81   |   | 13.4 x 57.5   |   | 17.5 x 81   |   | 13.4 x 57.5   |   | 17.5 x 81   | 17.5 x 74 |
| tubes per rotor   | 20  |   | 16  |   |  | 20  |   | 16  |   | 20  |   | 16  |   | 20  |   | 16  | 12        |
| max. RCF <sup>2)</sup>  | 2,486   |   | 2,522   |   |  | 2,486   |   | 2,272   |   | 2,486   |   | 2,522   |   | 2,486   |   | 2,397   | 2,451     |
| radius in mm  | 139   |   | 141   |   |  | 139   |   | 127   |   | 139   |   | 141   |   | 139   |   | 134   | 137       |
| run-up in sec   | 27  |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |           |
| run-down in sec, braked   | 30  |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |           |

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.

<sup>3)</sup> When using these tubes, bucket 1490 cannot be closed with lid 1492.

<sup>4)</sup> Please remove the inserts.

**Swing-out rotor, 6-place**

**Swing-out rotor, 8-place**



±90°

n = 4,000 min<sup>-1</sup>  
max. RCF 2,701












±90°





n = 4,000 min<sup>-1</sup>  
max. RCF 2,415



























**Swing-out rotor 1324**

**Cat. No. (with carriers) 1619**

**Cat. No. (without carriers) 1611**

|   |   |   |   |   |
|---|---|---|---|---|
| capacity in ml  | 15  | 50  | 12  | 50  |
| Ø x L in mm   | 17x120  | 29x115  | 17x100  | 29x115  |
| <b>Cat. No.</b>   | <b>0509</b>   | <b>0513</b>   | -   | -   |
| <br><b>carrier</b><br>Cat. No. <b>1398</b> |  |  |  |  |
|   |  |  |  |  |
| <b>Cat. No.</b>   | <b>1483A</b>  | <b>1484</b>   | <b>1482A</b>  | <b>1484<sup>4)</sup></b>  |
| boring Ø x L in mm  | 17x100  | 30x98   | 17.5x81   | 30x98   |
| tubes per rotor   | 16  | 4   | 16  | 4   |
| max. RCF <sup>2)</sup>  | 2,612   | 2,576   | 2,522   | 2,576   |
| radius in mm  | 146   | 144   | 141   | 144   |
| run-up in sec   | 27  |   |   |   |
| run-down in sec, braked   | 30  |   |   |   |

|   |   |  |
|---|---|--|
| capacity in ml  | 15  | 50   |
| Ø x L in mm   | 17x120  | 29x115   |
| <b>Cat. No.</b>   | <b>0509</b>   | <b>0513</b>  |
| <br><b>rotor</b><br>Cat. No. <b>1619</b> |  |  |
|   |  |  |
| <b>Cat. No.</b>   | <b>1462-A</b>   | -  |
| boring Ø x L in mm  | 17 x 84   | 30x87.5  |
| tubes per rotor   | 6   |  |
| max. RCF <sup>2)</sup>  | 2,701   |  |
| radius in mm  | 151   |  |
| run-up in sec   | 22  |  |
| run-down in sec, braked   | 25  |  |

|   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |        |
|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|--------|
| capacity in ml  | 5   | 6   | 7   | 10  | 15  | 2.6-3.4   | 2.7-3  | 4-5.5   | 4.5-5   | 7.5-8.5   | 1.6-5   | 4-7   | 4-7   | 8.5-10  |        |
| Ø x L in mm   | 12x75   | 12x82   | 12x100  | 17x70   | 13x100  | 17x100  | 13x65  | 11x66   | 15x75   | 11x92   | 15x92   | 13x75   | 13x100  | 16x75   | 16x100 |
| <b>Cat. No.</b>   | <b>0553<sup>2)</sup></b>  | <b>0501<sup>2)</sup></b>  | <b>0578<sup>2)</sup></b>  | <b>2079</b>   | -   | <b>0518<sup>2)</sup></b>  | <b>blood collection/urine tubes</b>  |   |   |   |   |   |   |   |        |
| <br><b>rotor</b><br>Cat. No. <b>1611</b> |  |  |  |  |  |  |   |   |  |  |  |  |  |  |        |
|   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |        |
| <b>Cat. No.</b>   | <b>1131</b>   | <b>1643</b>   | <b>1132</b>   | <b>1643</b>   | <b>1644</b>   | <b>1131</b>   | <b>1132</b>  | <b>1643</b>   | <b>1644</b>   | <b>1131</b>   | <b>1643</b>   | <b>1132</b>   | <b>1644</b>   |   |        |
| boring Ø x L in mm  | 13 x 53   | 13.2x 81  | 17.5 x 53   | 13.2x 81  | 17.5 x 81   | 13 x 53   | 17.5 x 53  | 13.2 x 81   | 17.5 x 81   | 13 x 53   | 13.2 x 81   | 17.5 x 53   | 17.5 x 81   |   |        |
| tubes per rotor   | 8   |   |   |   |   |   |  |   |   |   |   |   |   |   |        |
| max. RCF <sup>2)</sup>  | 1,914   | 2,415   | 1,914   | 2,415   | 1,914   | 2,415   | 1,914  | 2,415   | 1,914   | 2,415   | 1,914   | 2,415   | 1,914   | 2,415   |        |
| radius in mm  | 107   | 135   | 107   | 135   | 107   | 135   | 107  | 135   | 107   | 135   | 107   | 135   | 107   | 135   |        |
| run-up in sec   | 22  |   |   |   |   |   |  |   |   |   |   |   |   |   |        |
| run-down in sec, braked   | 25  |   |   |   |   |   |  |   |   |   |   |   |   |   |        |

<sup>5)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

<sup>6)</sup> A rubber stopper for closing the tube is available under Cat. No. 0535.

The tube may not be centrifuged with the stopper. The stopper only serves to close the tube for agitating or mixing.

**Swing-out rotor, 8-place**

**Swing-out rotor, 12-place**

**Angle rotor, 8-place**



∠ 45°

n = 4,000 min<sup>-1</sup>  
max. RCF 2,469

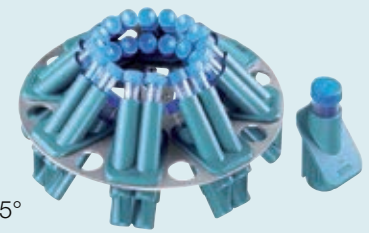
**Cat. No. (with carriers) 1617**



∠ 55° (with carriers 1127)  
∠ 60° (with carriers 1122)  
∠ 80° (with carriers 1621)

n = 4,000 min<sup>-1</sup>  
max. RCF 2,683

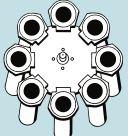



**Cat. No. (without carriers) 1628**





















































∠ 45°

n = 4,000 min<sup>-1</sup>  
max. RCF 2,612

**Cat. No. (without adapters) 1418**

|   |   |   |
|---|---|---|
| capacity in ml  | 15  | 50  |
| ∅ x L in mm   | 17x120  | 29x115  |
| <b>Cat. No.</b>   | <b>0509</b>   | <b>0513</b>   |
| <br><b>rotor</b><br>Cat. No. <b>1617</b> |  |  |
|   |  |   |
| <b>Cat. No.</b>   | <b>1462-A</b>   | -   |
| boring ∅ x L in mm  | 17 x 84   | 30x94.5   |
| tubes per rotor   | 8   |   |
| max. RCF <sup>2)</sup>  | 2,469   |   |
| radius in mm  | 138   |   |
| run-up in sec   | 22  |   |
| run-down in sec, braked   | 25  |   |

|   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|
| capacity in ml  | 5   | 10  | 15  | 2.6-3.4   | 2.7-3   | 4-5.5   | 7.5-8.5   | 1.6-5   | 4-7   | 8.5-10  |
| ∅ x L in mm   | 12x75   | 17x70   | 17x100  | 13x65   | 11x66   | 15x75   | 15x92   | 13x75   | 16x75   | 16x100  |
| <b>Cat. No.</b>   | <b>0553<sup>2)</sup></b>  | <b>2079</b>   | <b>0518<sup>2)</sup></b>  | <b>blood collection/urine tubes</b>   |   |   |   |   |   |   |
| <br><b>rotor</b><br>Cat. No. <b>1628</b> |  |  |  |  |  |  |  |  |  |  |
|   |  |  |  |  |  |  |  |  |  |  |
| <b>Cat. No.</b>   | <b>1127</b>   | <b>1122</b>   | <b>1621</b>   | <b>1127</b>   | <b>1122</b>   | <b>1621</b>   | <b>1127</b>   | <b>1122</b>   | <b>1621</b>   |   |
| boring ∅ x L in mm  | 13.2 x 53   | 17.5 x 53   | 17.5 x 79   | 13.2 x 53   | 17.5 x 53   | 17.5 x 79   | 13.2 x 53   | 17.5 x 53   | 17.5 x 79   |   |
| tubes per rotor   | 12  |   |   |   |   |   |   |   |   |   |
| max. RCF <sup>2)</sup>  | 2,236   | 2,254   | 2,683   | 2,236   | 2,254   | 2,683   | 2,236   | 2,254   | 2,683   |   |
| radius in mm  | 125   | 126   | 150   | 125   | 126   | 150   | 125   | 126   | 150   |   |
| run-up in sec   | 22  |   |   |   |   |   |   |   |   |   |
| run-down in sec, braked   | 25  |   |   |   |   |   |   |   |   |   |

|   |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |             |
|---|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|-------------|
| capacity in ml  | 5   | 15  | 1.1-1.4   | 2.6-3.4   | 2.7-3   | 9-10  | 1.6-5   | 4-7   | 8.5-10   | 12  | 15  | 50  | 12  | 50  | 50  |             |
| ∅ x L in mm   | 12x75   | 17x100  | 8x66  | 13x65   | 11x66   | 16x92   | 13x75   | 13x100  | 16x100   | 17x102  | 17x120  | 29x115  | 17x100  | 29x115  | 29x107  |             |
| <b>Cat. No.</b>   | <b>0553<sup>2)</sup></b>  | <b>0518<sup>2)</sup></b>  | <b>blood collection/urine tubes</b>   |   |   |   |   |   |  |   |   | <b>0509</b>   | <b>0513</b>   | -   | -   | <b>0546</b> |
| <br><b>rotor</b><br>Cat. No. <b>1418</b> |  |  |  |  |  |  |  |  |   |  |  |  |  |  |  |             |
|   |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |             |
| <b>Cat. No.</b>   | <b>1467</b>   | <b>1467</b>   | <b>1467</b>   |   |   | <b>1467</b>   |   |   |  |   |   | <b>1468</b>   | <b>1467</b>   | <b>1468</b>   |   |             |
| boring ∅ x L in mm  | 17.4x91   | 17.4x91   | 17.4x91   |   |   | 17.4x91   |   |   |  |   |   | 30.2x92   | 17.4x91   | 30.2x92   |   |             |
| tubes per rotor   | 32  | 32  | 32  |   |   | 32  |   |   |  |   |   | 8   | 32  | 8   |   |             |
| max. RCF <sup>2)</sup>  | 2,182   | 2,540   | 2,182   |   |   | 2,540   | 2,182   | 2,612   | 2,540  | 2,594   | 2,486   | 2,540   | 2,486   |   |   |             |
| radius in mm  | 122   | 142   | 122   |   |   | 142   | 122   | 146   | 142  | 145   | 139   | 142   | 139   |   |   |             |
| run-up in sec   | 30  |   |   |   |   |   |   |   |  |   |   |   |   |   |   |             |
| run-down in sec, braked   | 31  |   |   |   |   |   |   |   |  |   |   |   |   |   |   |             |

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.



















**Angle rotor, 12-place**











↗ 35°

n = 6,000 min<sup>-1</sup>  
max. RCF 4,146

**Cat. No. 1613**

|   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| capacity in ml  | 4   | 5   | 6   | 15  | 1.1–1.4   | 2.6–3.4   | 2.7–3   | 4.5–5   | 4.9   | 7.5–8.5   | 9–10  | 10  |
| Ø x L in mm   | 10x88   | 12x75   | 12x82   | 17x100  | 8x66  | 13x65   | 11x66   | 11x92   | 13x90   | 15x92   | 16x92   | 15x102  |
| <b>Cat. No.</b>   | -   | <b>0553<sup>2)</sup></b>  | <b>0501<sup>2)</sup></b>  | <b>0518<sup>2)</sup></b>  | <b>blood collection/urine tubes</b>   |   |   |   |   |   |   |   |
| <br><b>rotor</b><br>Cat. No. <b>1613</b> |  |  |  |  |  |  |  |  |  |  |  |  |
|   |  |  |   |   |  |   |   |   |   |   |   |   |
| <b>Cat. No.</b>   | <b>6305</b>   | <b>1054-A</b>   | -   |   | <b>1054-A</b>   |   |   |   |   |   |   | -   |
| boring Ø x L in mm  | 11.5x67.5   | 13.5x60   | 17.7x88   |   | 13.5x60   |   |   |   |   |   |   | 17.7x88   |
| tubes per rotor   | 12  |   |   |   |   |   |   |   |   |   |   |   |
| max. RCF <sup>2)</sup>  | 3,502   | 3,300   | 4,146   |   | 3,300   |   |   |   |   | 4,146   |   |   |
| radius in mm  | 87  | 82  | 103   |   | 82  |   |   |   |   | 103   |   |   |
| run-up in sec   | 13  |   |   |   |   |   |   |   |   |   |   |   |
| run-down in sec, braked   | 15  |   |   |   |   |   |   |   |   |   |   |   |

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| capacity in ml  | 1.6–5   | 4–7   | 8   | 8.5–10  | 15  |
| Ø x L in mm   | 13x75   | 13x100  | 16x125  | 16x100  | 17 x 120  |
| <b>Cat. No.</b>   | <b>blood collection/urine tubes</b>   |   |   |   | <b>0509</b>   |
| <br><b>rotor</b><br>Cat. No. <b>1613</b> |  |  |  |  |  |
|   |  |  |   |   |   |
| <b>Cat. No.</b>   | <b>1054-A</b>   | <b>1058</b>   | -   |   |   |
| boring Ø x L in mm  | 13.5x60   | 13.5x79   | 17.7x88   |   |   |
| tubes per rotor   | 12  | 12  | 6   | 12  | 6   |
| max. RCF <sup>2)</sup>  | 3,300   | 4,146   |   |   |   |
| radius in mm  | 82  | 103   |   |   |   |
| run-up in sec   | 13  |   |   |   |   |
| run-down in sec, braked   | 15  |   |   |   |   |

ROTOFIX 32 A

















## Angle rotor, 6-place

















↘ 35°

n = 6,000 min<sup>-1</sup>  
max. RCF 4,226

**Cat. No. 1620A**

| capacity in ml   | 1.5   | 2.0   | 3   | 15  | 50  | 75  | 94  | 7.5–8.5  | 9–10  | 10  | 8.5–10  |  |
|--|---|---|---|---|---|---|---|--|---|---|---|--|
| Ø x L in mm  | 11 x 38   |   | 10 x 60   | 17 x 100  | 34 x 100  | 35 x 105  | 38 x 102  | 15 x 92  | 16 x 92   | 15 x 102  | 16 x 100  |  |
| <b>Cat. No.</b>  | <b>2078</b>   | <b>0536</b>   | -   | <b>0518<sup>2)</sup></b>  | <b>0521<sup>2)</sup></b>  | <b>0548</b>   | <b>0549</b>   | <b>blood/urine tubes</b>   |   |   |   |  |
| <br><b>rotor</b><br>Cat. No. <b>1620A</b> |  |  |  |  |  |  |  |   |  |  |  |  |
|  |  |   |   |  |  |   |   |  |   |   |   |  |
| <b>Cat. No.</b>  | <b>1449</b>   |   |   | <b>1451</b>   | <b>1463</b>   | -   |   | <b>1451</b>  |   |   |   |  |
| boring Ø x L in mm   | 11.4 x 39   |   |   | 17.5 x 92   | 35 x 89   |   | 38.6 x 90.2   | 17.5 x 92  |   |   |   |  |
| tubes per rotor  | 24  |   |   | 6   | 6   |   | 6   | 6  |   |   |   |  |
| max. RCF <sup>2)</sup>   | 4,105   |   |   | 3,904   | 4,146   |   | 4,226   | 3,904  |   |   |   |  |
| radius in mm   | 102   |   |   | 97  | 103   |   | 105   | 97   |   |   |   |  |
| run-up in sec  | 19  |   |   |   |   |   |   |  |   |   |   |  |
| run-down in sec, braked  | 22  |   |   |   |   |   |   |  |   |   |   |  |

| capacity in ml   | 15  | 50  |   | 10  | 30  | 50  | 85  |
|--|---|---|---|---|---|---|---|
| Ø x L in mm  | 17 x 120  | 29 x 115  |   | 16 x 80   | 26 x 95   | 29 x 107  | 38 x 106  |
| <b>Cat. No.</b>  | <b>0509</b>   | <b>0513</b>   |   | -   | <b>0545</b>   | <b>0546</b>   | <b>0547</b>   |
| <br><b>rotor</b><br>Cat. No. <b>1620A</b> |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |   |
| <b>Cat. No.</b>  | <b>1466</b>   | <b>1454</b>   | <b>1646<sup>3)</sup></b>  | <b>1448</b>   | <b>1447</b>   | <b>1446</b>   | -   |
| boring Ø x L in mm   | 17 x 106  | 29.8 x 97   | -   | 16.5 x 74   | 26 x 85   | 29 x 92   | 38.6 x 90.2   |
| tubes per rotor  | 6   | 3   | 6   | 12  | 6   |   |   |
| max. RCF <sup>2)</sup>   | 3,985   | 3,985   | 3,985   | 3,904   | 3,824   | 4,025   | 4,226   |
| radius in mm   | 99  |   |   | 97  | 95  | 100   | 105   |
| run-up in sec  | 19  |   |   |   |   |   |   |
| run-down in sec, braked  | 22  |   |   |   |   |   |   |

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.

<sup>3)</sup> 6-place adapter set for conical 50 ml tubes with screw cap.

## Cyto rotors

The 4-place rotor **No. 1624** is best suited for laboratories not exclusively involved with cytological examinations. Both tubes and cytological preparations can be centrifuged without requiring a rotor change. Changing the carriers is all that is needed. Rotor **No. 1624** accommodates cyto suspensions **No. 1660** and **No. 1680**.

Rotors **No. 1626** and **No. 1648** were especially designed for use in cytology. They are recommended for laboratories working exclusively in this area.



Rotor, 4-place  
illustrated with suspensions 1680  
for angle chambers

**Cat. No. 1624** (without suspensions)



Cyto rotor, 6-place  
illustrated with suspensions 1680  
for angle chambers

**Cat. No. 1626** (without suspensions)



Cyto rotor, 8-place  
illustrated with suspensions 1680  
for angle chambers

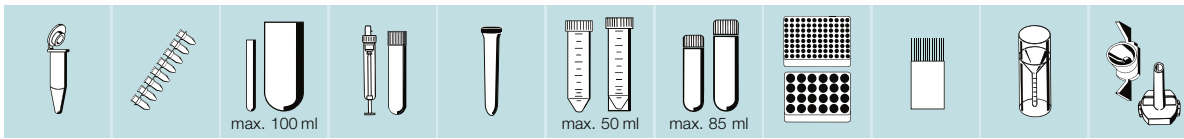
**Cat. No. 1648** (with suspensions)



Cyto rotor, 6-place  
illustrated with suspensions 1660  
for cyto chambers

**Cat. No. 1626** (without suspensions)

# UNIVERSAL 320/320 R



## Our multitalented centrifuges save space and costs

There are many good reasons for calling these centrifuges UNIVERSAL. Their excellent performance and comprehensive range of accessories enable them to carry out virtually any centrifuging task. And, since the UNIVERSAL 320/320 R can be used for both standard and special applications, they are not only cost-effective, they also save valuable space in the laboratory.



UNIVERSAL 320

## TECHNOLOGY

| TECHNOLOGY                               | UNIVERSAL 320   |              | UNIVERSAL 320 R <sup>*)</sup> |             |              |
|--|---|--------------|-------------------------------|-------------|--------------|
|  | classic   |              | cooled                        |             |              |
| Benchtop centrifuge, without rotor       |   |              |                               |             |              |
| Power supply <sup>*)</sup>               | 200–240 V 1~  | 100–127 V 1~ | 200-240 V 1~                  | 240 V 1~    | 115–127 V 1~ |
| Frequency                                | 50–60 Hz  |              | 50 Hz                         | 60 Hz       | 60 Hz        |
| Consumption                              | 400 VA  |              | 800 VA                        |             | 950 VA       |
| Emission, Immunity                       | EN / IEC 61326-1, class B   | FCC class B  | EN / IEC 61326-1, class B     | FCC class B |              |
| /  Max. capacity                         | 4 x 100 ml / 32 x 15 ml   |              |                               |             |              |
| Max. RPM (speed)                         | 15,000 min <sup>-1</sup>  |              |                               |             |              |
| Max. RCF                                 | 21,382  |              |                               |             |              |
| Running time                             | 1 sec – 99 min : 59 sec, ∞ continuous run, short cycle mode (impulse key) |              |                               |             |              |
| Dimensions (HxWxD)                       | 346 x 395 x 520 mm  |              | 346 x 401 x 695 mm            |             |              |
| Weight                                   | approx. 31 kg   |              | approx. 53 kg                 |             |              |
| <b>Refrigeration</b>                     |   |              |                               |             |              |
| Temperature control, infinitely variable | -   |              | from -20 to +40 °C            |             |              |
| Cat. No.                                 | 1401  | 1401-01      | 1406                          | 1406-01     |              |

<sup>\*)</sup> Other voltages on request.

<sup>\*)</sup> For a list of further versions of this model, please refer to page 12.

### Swing-out rotor, 4-place

































↗ 90°

n = 5,000 min<sup>-1</sup>  
max. RCF 4,193

illustrated with carriers 1425

**Cat. No.** (without carriers) **1494**

| capacity in ml  | 1.5   | 2.0   | 1   | 3   | 5   | 6   | 7   | 9   | 15  | 25  | 50  | 100   | suspension for cyto accessories   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø x L in mm   | 11 x 38   |   | 6 x 45  | 10 x 60   | 12 x 75   | 12 x 82   | 12 x 100  | 14 x 100  | 17 x 100  | 24 x 100  | 34 x 100  | 44 x 100  |   |
| <b>Cat. No.</b>   | <b>2078</b>   | <b>0536</b>   | <b>Rhesus</b>   | -   | <b>0553<sup>2)</sup></b>  | <b>0501<sup>2)</sup></b>  | <b>0578<sup>2)</sup></b>  | <b>0500<sup>2)</sup></b>  | <b>0518<sup>2)</sup></b>  | <b>0519<sup>2)</sup></b>  | <b>0521<sup>2)</sup></b>  | <b>0526<sup>2)</sup></b>  | <b>cyto chambers<sup>23)</sup></b>  |
| <br><b>carrier</b><br>Cat. No. <b>1425</b> |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Cat. No.</b>   | <b>1444</b>   | <b>1432</b>   | <b>1433</b>   |   | <b>1434</b>   |   |   | <b>1431</b>   | <b>1435</b>   | <b>1436</b>   | <b>1437</b>   | <b>1452</b>   |   |
| boring Ø x L in mm  | 11.5 x 38   |   | 6.5 x 34  | 10.5 x 40   | 12.7 x 60   |   |   | 17.5 x 84   |   | 25.5 x 84   | 35.5 x 84   | 45.5 x 86   | -   |
| tubes per rotor   | 36  |   | 144   | 56  | 48  |   |   | 28  |   | 8   | 4   | 4   | 4   |
| max. RCF <sup>2)</sup>  | 3,885   |   | 3,969   | 3,913   |   |   |   |   |   |   | 3,801   |   | 2,739   |
| radius in mm  | 139   |   | 142   | 140   |   |   |   |   |   |   | 136   |   | 98  |
| run-up in sec   | 30  |   |   |   |   |   |   |   |   |   |   |   |   |
| run-down in sec, braked   | 32  |   |   |   |   |   |   |   |   |   |   |   |   |
| temperature in °C <sup>1)</sup>   | -10   |   |   |   |   |   |   |   |   |   |   |   |   |

| capacity in ml  | 2.6-3.4   | 2.7-3   | 4-5.5   | 4.5-5   | 4.9   | 7.5-8.5   | 9-10  | 1.6-5   | 4-7   | 4-7   | 8.5-10  | 15  | 50  | 50  |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø x L in mm   | 13 x 65   | 11 x 66   | 15 x 75   | 11 x 92   | 13 x 90   | 15 x 92   | 16 x 92   | 13 x 75   | 13 x 100  | 16 x 75   | 16 x 100  | 17 x 120  | 29 x 115  | 29 x 115  |   |
| <b>Cat. No.</b>   | blood collection/urine tubes  |   |   |   |   |   |   |   |   |   |   | <b>0509</b>   | <b>0513</b>   | -   |   |
| <br><b>carrier</b><br>Cat. No. <b>1425</b> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Cat. No.</b>   | <b>1438</b>   | <b>1441</b>   | <b>1438</b>   | <b>1441</b>   | <b>1439</b>   | <b>1438</b>   | <b>1441</b>   | <b>1442</b>   | <b>1443</b>   | <b>1737</b>   |   |   |   |   |   |
| boring Ø x L in mm  | 13.4 x 50   |   | 16.5 x 50   | 13.4 x 50   |   | 16.5 x 50   | 17 x 45   | 13.4 x 50   |   | 16.5 x 50   |   | 17 x 90   | 30 x 90   | 30 x 90   |   |
| tubes per rotor   | 28  |   |   |   |   | 16  |   | 28  |   |   |   |   | 4   |   |   |
| max. RCF <sup>2)</sup>  | 3,913   |   |   |   |   |   |   | 4,081   |   |   |   |   |   |   |   |
| radius in mm  | 140   |   |   |   |   |   |   | 146   |   |   |   |   |   |   |   |
| run-up in sec   | 30  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| run-down in sec, braked   | 32  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| temperature in °C <sup>1)</sup>   | -10   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.

<sup>23)</sup> Please ask for our detailed cyto brochure.



illustrated with carriers 1427

**Swing-out rotor Cat. No. (without carriers) 1494**

|                                 |                  |             |               |             |                          |                          |                          |                          |                          |                          |                          |                                     |             |             |
|---------------------------------|------------------|-------------|---------------|-------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|-------------|-------------|
| capacity in ml                  | 1.5/2.0          | 1           | 3             | 5           | 6                        | 7                        | 9                        | 15                       | 25                       | 50                       | 1.1–1.4                  | 2.6–3.4                             | 2.7–3       | 4–5.5       |
| Ø x L in mm                     | 11 x 38          | 6 x 45      | 10 x 60       | 12 x 75     | 12 x 82                  | 12 x 100                 | 14 x 100                 | 17 x 100                 | 24 x 100                 | 34 x 100                 | 8 x 66                   | 13 x 65                             | 11 x 66     | 15 x 75     |
| <b>Cat. No.</b>                 | <b>2078/0536</b> | <b>-</b>    | <b>Rhesus</b> | <b>-</b>    | <b>0553<sup>2)</sup></b> | <b>0501<sup>2)</sup></b> | <b>0578<sup>2)</sup></b> | <b>0500<sup>2)</sup></b> | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>blood collection/urine tubes</b> |             |             |
| lid Cat. No. 1421               |                  |             |               |             |                          |                          |                          |                          |                          |                          |                          |                                     |             |             |
| <b>carrier</b><br>Cat. No. 1427 |                  |             |               |             |                          |                          |                          |                          |                          |                          |                          |                                     |             |             |
| <b>Cat. No.</b>                 | <b>5277</b>      | <b>1357</b> | <b>1327</b>   | <b>1732</b> | <b>5229</b>              | <b>5230</b>              | <b>5237</b>              | <b>5231</b>              | <b>5232</b>              | <b>5233</b>              | <b>5278</b>              | <b>1732</b>                         | <b>5229</b> | <b>5279</b> |
| boring Ø x L in mm              | 11.5 x 38        | 6.5 x 23    | 10.5 x 23     | 13.4 x 58   | 12.5 x 44                | 12.4 x 87                | 15 x 73                  | 17.8 x 87                | 25.5 x 87                | 35.5 x 87                | 9 x 41                   | 13.4 x 58                           | 12.5 x 44   | 15.6 x 41   |
| tubes per rotor                 | 36               | 120         | 48            | 32          | 48                       | 48                       | 24                       | 8                        | 4                        | 48                       | 32                       | 48                                  | 20          |             |
| max. RCF <sup>2)</sup>          | 4,109            | 4,081       | 4,053         | 4,025       | 4,053                    | 3,941                    |                          |                          | 4,109                    | 4,025                    | 4,053                    | 4,109                               |             |             |
| radius in mm                    | 147              | 146         | 145           | 144         | 145                      | 141                      |                          |                          | 147                      | 144                      | 145                      | 147                                 |             |             |
| run-up in sec                   | 30               |             |               |             |                          |                          |                          |                          |                          |                          |                          |                                     |             |             |
| run-down in sec, braked         | 32               |             |               |             |                          |                          |                          |                          |                          |                          |                          |                                     |             |             |
| temperature in °C <sup>1)</sup> | -7               |             |               |             |                          |                          |                          |                          |                          |                          |                          |                                     |             |             |

|                                 |                                     |             |             |                          |             |             |             |             |             |             |             |                          |          |
|---------------------------------|-------------------------------------|-------------|-------------|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------------|----------|
| capacity in ml                  | 4.5–5                               | 4.9         | 7.5–8.5     | 9–10                     | 1.6–5       | 4–7         | 8.5–10      | 15          | 50          | 25          | 30          | 50                       |          |
| Ø x L in mm                     | 11 x 92                             | 13 x 90     | 15 x 92     | 16 x 92                  | 13 x 75     | 13 x 100    | 16 x 75     | 16 x 100    | 17 x 120    | 29 x 115    | 25 x 90     | 25 x 110                 | 29 x 115 |
| <b>Cat. No.</b>                 | <b>blood collection/urine tubes</b> |             |             |                          |             |             |             |             | <b>0509</b> | <b>0513</b> | <b>-</b>    | <b>-</b>                 | <b>-</b> |
| lid Cat. No. 1421               |                                     |             |             |                          |             |             |             |             |             |             |             |                          |          |
| <b>carrier</b><br>Cat. No. 1427 |                                     |             |             |                          |             |             |             |             |             |             |             |                          |          |
| <b>Cat. No.</b>                 | <b>5230</b>                         | <b>1732</b> | <b>5279</b> | <b>5271<sup>4)</sup></b> | <b>1732</b> | <b>5271</b> | <b>5231</b> | <b>5275</b> | <b>5276</b> | <b>1731</b> | <b>5272</b> | <b>5233<sup>4)</sup></b> |          |
| boring Ø x L in mm              | 12.4 x 87                           | 13.4 x 58   | 15.6 x 41   | 17 x 66                  | 13.4 x 58   | 17 x 66     | 17.8 x 87   | 17 x 90     | 30 x 90     | 25.5 x 72   | 25.5 x 85   | 35.5 x 87                |          |
| tubes per rotor                 | 48                                  | 32          | 20          | 32                       | 20          | 24          | 4           | 8           | 4           | 4           | 4           |                          |          |
| max. RCF <sup>2)</sup>          | 3,941                               | 4,025       | 4,109       | 3,969                    | 4,025       | 3,969       | 3,941       | 4,165       | 4,053       | 3,969       | 4,025       | 4,053                    |          |
| radius in mm                    | 141                                 | 144         | 147         | 142                      | 144         | 142         | 141         | 149         | 145         | 142         | 144         | 145                      |          |
| run-up in sec                   | 30                                  |             |             |                          |             |             |             |             |             |             |             |                          |          |
| run-down in sec, braked         | 32                                  |             |             |                          |             |             |             |             |             |             |             |                          |          |
| temperature in °C <sup>1)</sup> | -7                                  |             |             |                          |             |             |             |             |             |             |             |                          |          |

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.

2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.

3) When using these tubes, carrier 1427 cannot be closed with lid 1421.





illustrated with carriers 1495 and lids 1492  
with bio-containment<sup>5)</sup>

**Swing-out rotor Cat. No. (without carriers) 1494**

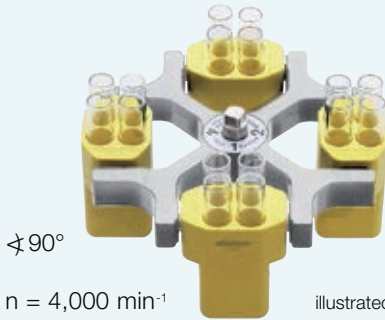
|   |             |             |               |             |  |                          |                          |                          |                          |             |                          |                          |            |            |            |  |
|---|-------------|-------------|---------------|-------------|--|--------------------------|--------------------------|--------------------------|--------------------------|-------------|--------------------------|--------------------------|------------|------------|------------|--|
| capacity in ml  | 1.5         | 2.0         | 1             | 3           | 5/6/7  | 9                        | 15                       | 25                       | 50                       | 94          | 100                      | 1.1–1.4                  | 2.7–5      | 2.6–4.9    | 4–8.5      |  |
| Ø x L in mm   | 11 x 38     |             | 6 x 45        | 10 x 60     | 12 x 75/82/100   | 14 x 100                 | 17 x 100                 | 24 x 100                 | 34 x 100                 | 38 x 102    | 44 x 100                 | 8 x 66                   | 11 x 66/92 | 13 x 65/90 | 15 x 75/92 |  |
| <b>Cat. No.</b>   | <b>2078</b> | <b>0536</b> | <b>Rhesus</b> | <b>-</b>    | <b>0553<sup>2)</sup>/0501<sup>2)</sup>/0578<sup>2)</sup></b> | <b>0500<sup>2)</sup></b> | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>0549</b> | <b>0526<sup>2)</sup></b> | <b>blood/urine tubes</b> |            |            |            |  |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 1492 |             |             |               |             |  |                          |                          |                          |                          |             |                          |                          |            |            |            |  |
| <b>carrier</b><br>Cat. No. 1495                         |             |             |               |             |  |                          |                          |                          |                          |             |                          |                          |            |            |            |  |
| <b>Cat. No.</b>   | <b>1351</b> | <b>1339</b> | <b>1343</b>   | <b>1383</b> | <b>1329</b>  | <b>1330</b>              | <b>1331</b>              | <b>1396</b>              | <b>0761</b>              | <b>1457</b> | <b>1383</b>              | <b>1459</b>              |            |            |            |  |
| boring Ø x L in mm                                      | 11.2 x 38   |             | 6.5 x 34      | 10.5 x 43   | 13.4 x 48  | 17.6 x 91                | 25.2 x 87                | 35.2 x 87                | 38.5 x 92                | 45.9 x 98   | 9 x 47                   | 13.4 x 48                | 15.6 x 47  |            |            |  |
| tubes per rotor   | 20          |             | 108           | 36          | 20   | 16                       | 4                        |                          |                          |             | 28                       | 20                       | 16         |            |            |  |
| max. RCF <sup>2)</sup>                                  | 3,857       |             | 4,081         | 4,137       | 4,025  | 3,997                    | 3,829                    | 3,801                    | 4,109                    | 4,025       | 4,053                    | 4,025                    | 4,053      |            |            |  |
| radius in mm  | 138         |             | 146           | 148         | 144  | 143                      | 137                      | 136                      | 147                      | 144         | 145                      | 144                      | 145        |            |            |  |
| run-up in sec   | 30          |             |               |             |  |                          |                          |                          |                          |             |                          |                          |            |            |            |  |
| run-down in sec, braked                                 | 32          |             |               |             |  |                          |                          |                          |                          |             |                          |                          |            |            |            |  |
| temperature in °C <sup>1)</sup>                         | -10         |             |               |             |  |                          |                          |                          |                          |             |                          |                          |            |            |            |  |

|   |                          |                          |             |             |             |             |             |             |             |             |             |             |             |             |             |                          |
|---|--------------------------|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------------|
| capacity in ml  | 9–10                     | 10                       | 1.6–7       | 4–10        | 15          | 30          | 50          | 12          | 25          | 30          | 50          | 10          | 30          | 50          | 85          | 30                       |
| Ø x L in mm   | 16 x 92                  | 15 x 102                 | 13 x 75/100 | 16 x 75/100 | 17 x 120    | 25 x 110    | 29 x 115    | 17 x 100    | 25 x 90     | 25 x 110    | 29 x 115    | 16 x 80     | 26 x 95     | 29 x 107    | 38 x 106    | 44 x 105                 |
| <b>Cat. No.</b>   | <b>blood/urine tubes</b> |                          |             |             | <b>0509</b> | <b>-</b>    | <b>0513</b> | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>0545</b> | <b>0546</b> | <b>0547</b> | <b>0534<sup>6)</sup></b> |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 1492 |                          |                          |             |             |             |             |             |             |             |             |             |             |             |             |             |                          |
| <b>carrier</b><br>Cat. No. 1495                         |                          |                          |             |             |             |             |             |             |             |             |             |             |             |             |             |                          |
| <b>Cat. No.</b>   | <b>1329</b>              | <b>1329<sup>4)</sup></b> | <b>1383</b> | <b>1348</b> | <b>1347</b> | <b>1365</b> | <b>1384</b> | <b>6311</b> | <b>1363</b> | <b>1365</b> | <b>6318</b> | <b>1348</b> | <b>4417</b> | <b>4416</b> | <b>1396</b> | <b>0765</b>              |
| boring Ø x L in mm                                      | 17.6 x 91                |                          | 13.4 x 48   | 16.5 x 56   | 17 x 90     | 26 x 80     | 30 x 90     | 17 x 80     | 26 x 72     | 26 x 80     | 29.5 x 80   | 16.5 x 56   | 26 x 83     | 29 x 93     | 38.5 x 92   | 45.9 x 98                |
| tubes per rotor   | 16                       |                          | 20          | 16          | 4           |             |             |             | 16          |             |             |             | 4           |             |             |                          |
| max. RCF <sup>2)</sup>                                  | 3,997                    | 4,193                    | 4,025       |             |             | 4,193       |             |             | 3,689       | 4,193       |             | 4,025       | 3,857       | 4,137       | 4,109       | 3,997                    |
| radius in mm  | 143                      | 150                      | 144         |             |             | 150         |             |             | 132         | 150         |             | 144         | 138         | 148         | 147         | 143                      |
| run-up in sec   | 30                       |                          |             |             |             |             |             |             |             |             |             |             |             |             |             |                          |
| run-down in sec, braked                                 | 32                       |                          |             |             |             |             |             |             |             |             |             |             |             |             |             |                          |
| temperature in °C <sup>1)</sup>                         | -10                      |                          |             |             |             |             |             |             |             |             |             |             |             |             |             |                          |

4) Please remove the inserts.  
5) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.  
6) A rubber stopper for closing the tube is available under Cat. No. 0535.  
The tube may not be centrifuged with the stopper. The stopper only serves to close the tube for agitating or mixing.

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## Swing-out rotor, 4-place

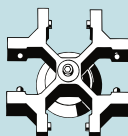




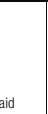










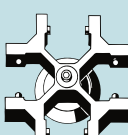



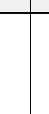


↻ 90°

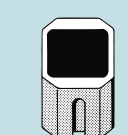




n = 4,000 min<sup>-1</sup>  
max. RCF 2,665

illustrated with carriers 1369

**Cat. No.** (without carriers) **1624**

| capacity in ml  | 5   | 6   | 7   | 9   | 15  | 20  | 25  | 45  | 50  | 1.1–1.4   | 2.6–3.4  | 4–5.5   |   |
|---|---|---|---|---|---|---|---|---|---|---|--|---|---|
| Ø x L in mm   | 12 x 75   | 12 x 82   | 12 x 100  | 14 x 100  | 17 x 100  | 21 x 100  | 24 x 100  | 31 x 100  | 34 x 100  | 8 x 66  | 13 x 65  | 15 x 75   |   |
| <b>Cat. No.</b>   | <b>0553<sup>2)</sup></b>  | <b>0501<sup>2)</sup></b>  | <b>0578<sup>2)</sup></b>  | <b>0500<sup>2)</sup></b>  | <b>0518<sup>2)</sup></b>  | -   | <b>0519<sup>2)</sup></b>  | -   | <b>0521<sup>2)</sup></b>  | <b>blood/urine tubes</b>  |  |   |   |
| <br><b>rotor</b><br>Cat. No. <b>1624</b> |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Cat. No.</b>   | <b>1369-91</b>  | <b>1372</b>   | <b>1369-92</b>  | <b>1370</b>   | <b>1741</b>   | <b>1369</b>   | <b>1742</b>   | <b>1346</b>   | <b>1745</b>   | <b>1345</b>   | <b>1746</b>  | <b>1741</b>   | <b>1742</b>   |
| boring Ø x L in mm  | 11.5 x 64.4   | 13.5 x 65   | 11.5 x 71.5   | 14.6 x 74   | 14.6 x 78   | 17.6 x 74   | 17.6 x 78   | 21.5 x 74   | 26 x 78   | 32 x 74   | 35 x 78  | 14.6 x 78   | 17.6 x 78   |
| tubes per rotor   | 16  | 68  | 16  | 20  | 40  | 16  | 28  | 8   | 4   | 4   | 4  | 40  | 28  |
| max. RCF <sup>2)</sup>  | 2,057   | 2,164   | 2,308   | 2,415   | 2,308   | 2,451   | 2,361   | 2,451   | 2,361   | 2,451   | 2,451  | 2,415   | 2,325   |
| radius in mm  | 115   | 121   | 129   | 135   | 129   | 137   | 132   | 137   | 132   | 137   | 132  | 135   | 130   |
| run-up in sec   | 20  |   |   |   |   |   |   |   |   |   |  |   |   |
| run-down in sec, braked   | 25  |   |   |   |   |   |   |   |   |   |  |   |   |
| temperature in °C <sup>1)</sup>   | -17   |   |   | -15   | -17   | -19   | -17   | -15   | -17   | -15   | -17  | -15   | -19   |

| capacity in ml  | 4.9   | 1.6–5   | 4–7   | 8.5–10  | 30  | suspensions for cyto accessories  |
|---|---|---|---|---|---|---|
| Ø x L in mm   | 13 x 90   | 13 x 75   | 16 x 75   | 16 x 100  | 26 x 95   |   |
| <b>Cat. No.</b>   | <b>blood collection/urine tubes</b>   |   |   |   | <b>0545</b>   | <b>cyto chambers<sup>2)</sup></b>   |
| <br><b>rotor</b><br>Cat. No. <b>1624</b> |  |  |  |  |  |  |
| <b>Cat. No.</b>   | <b>1741</b>   | <b>1742</b>   | <b>1369</b>   | <b>1745</b>   | <b>1660</b>   | <b>1680</b>   |
| boring Ø x L in mm  | 14.6 x 78   | 17.6 x 78   | 17.6 x 74   | 26 x 78   | -   |   |
| tubes per rotor   | 40  | 28  | 16  | 8   | 4   |   |
| max. RCF <sup>2)</sup>  | 2,451   | 2,325   | 2,308   | 2,451   | 1,646   | 1,467   |
| radius in mm  | 137   | 130   | 129   | 137   | 92  | 82  |
| run-up in sec   | 20  |   |   |   |   |   |
| run-down in sec, braked   | 25  |   |   |   |   |   |
| temperature in °C <sup>1)</sup>   | -15   | -19   | -17   | -15   | -16   | -17   |

| capacity in ml   | 1.5   | 2.0   | 1   | 3   | 4       |
|--|---|---|---|---|---------|
| Ø x L in mm  | 11 x 38   |   | 6 x 45  | 10 x 60   | 12 x 60 |
| <b>Cat. No.</b>  | <b>2078</b>   | <b>0536</b>   | <b>Rhesus</b>   | -   | -       |
| <br><b>carrier</b><br>Cat. No. <b>1366</b> |  |  |  |  |         |
| <b>Cat. No.</b>  | <b>5277</b>   | <b>1357</b>   | <b>1327</b>   | <b>1326</b>   |         |
| boring Ø x L in mm   | 11.5 x 38   | 6.5 x 23  | 10.5 x 23   | 12.5 x 44   |         |
| tubes per rotor  | 36  | 120   | 48  |   |         |
| max. RCF <sup>2)</sup>   | 1,968   | 1,950   | 1,932   |   |         |
| radius in mm   | 110   | 109   | 108   |   |         |
| run-up in sec  | 20  |   |   |   |         |
| run-down in sec, braked  | 25  |   |   |   |         |
| temperature in °C <sup>1)</sup>  | -17   |   |   |   |         |

<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.

<sup>4)</sup> Please remove the inserts.



illustrated with carriers 1481 and lids 1492  
with bio-containment<sup>5)</sup>

**Swing-out rotor Cat. No. (without carriers) 1624**

| capacity in ml  | 1.5         | 2.0         | 1             | 3           | 5/6/7  | 9           | 15                       | 25                       | 50                       | 94                       | 100         | 1.1-1.4                  | 2.7-5                    | 2.6-4.9    | 4-8.5      |            |
|---|-------------|-------------|---------------|-------------|--|-------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------|--------------------------|--------------------------|------------|------------|------------|
| Ø x L in mm   | 11 x 38     |             | 6 x 45        | 10 x 60     | 12 x 75/82/100   |             | 14 x 100                 | 17 x 100                 | 24 x 100                 | 34 x 100                 | 38 x 102    | 44 x 100                 | 8 x 66                   | 11 x 66/92 | 13 x 65/90 | 15 x 75/92 |
| <b>Cat. No.</b>   | <b>2078</b> | <b>0536</b> | <b>Rhesus</b> | -           | <b>0553<sup>2)</sup>/0501<sup>2)</sup>/0578<sup>2)</sup></b> |             | <b>0500<sup>2)</sup></b> | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>0549</b> | <b>0526<sup>2)</sup></b> | <b>blood/urine tubes</b> |            |            |            |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 1492 |             |             |               |             |  |             |                          |                          |                          |                          |             |                          |                          |            |            |            |
| <b>carrier</b><br>Cat. No. 1481                         |             |             |               |             |  |             |                          |                          |                          |                          |             |                          |                          |            |            |            |
| <b>Cat. No.</b>   | <b>1351</b> | <b>1339</b> | <b>1343</b>   | <b>1383</b> | <b>1329</b>  | <b>1330</b> | <b>1331</b>              | <b>1396</b>              | <b>0761</b>              | <b>1457</b>              | <b>1383</b> | <b>1459</b>              |                          |            |            |            |
| boring Ø x L in mm                                      | 11.2 x 38   |             | 6.5x34        | 10.5 x 43   | 13.4 x 48  |             | 17.6x91                  | 25.2x87                  | 35.2x87                  | 38.5 x 92                |             | 45.9 x 98                | 9 x 47                   | 13.4 x 48  |            | 15.6 x 47  |
| tubes per rotor   | 20          |             | 108           | 36          | 20   |             | 16                       | 4                        |                          |                          |             | 28                       | 20                       | 16         |            |            |
| max. RCF <sup>2)</sup>                                  | 2,451       |             | 2,594         | 2,630       | 2,558  |             | 2,540                    | 2,433                    | 2,415                    | 2,612                    | 2,558       | 2,576                    | 2,558                    | 2,576      |            | 2,576      |
| radius in mm  | 137         |             | 145           | 147         | 143  |             | 142                      | 136                      | 135                      | 146                      | 143         | 144                      | 143                      | 144        |            | 144        |
| run-up in sec   | 20          |             |               |             |  |             |                          |                          |                          |                          |             |                          |                          |            |            |            |
| run-down in sec, braked                                 | 25          |             |               |             |  |             |                          |                          |                          |                          |             |                          |                          |            |            |            |
| temperature in °C <sup>1)</sup>                         | -15         |             |               |             |  |             |                          |                          |                          |                          |             |                          |                          |            |            |            |

| capacity in ml  | 9-10                                | 10                       | 1.6-7       | 4-10        | 15          | 50          | 12          | 25          | 30          | 50          | 10          | 30          | 50          | 85          | 30                       |           |
|---|-------------------------------------|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------------|-----------|
| Ø x L in mm   | 16 x 92                             | 15 x 102                 | 13 x 75/100 | 16 x 75/100 | 17 x 120    | 29 x 115    | 17 x 100    | 25 x 90     | 25 x 110    | 29 x 115    | 16 x 80     | 26 x 95     | 29 x 107    | 38 x 106    | 44 x 105                 |           |
| <b>Cat. No.</b>   | <b>blood collection/urine tubes</b> |                          |             |             | <b>0509</b> | <b>0513</b> | -           | -           | -           | -           | -           | <b>0545</b> | <b>0546</b> | <b>0547</b> | <b>0534<sup>3)</sup></b> |           |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 1492 |                                     |                          |             |             |             |             |             |             |             |             |             |             |             |             |                          |           |
| <b>carrier</b><br>Cat. No. 1481                         |                                     |                          |             |             |             |             |             |             |             |             |             |             |             |             |                          |           |
| <b>Cat. No.</b>   | <b>1329</b>                         | <b>1329<sup>4)</sup></b> | <b>1383</b> | <b>1348</b> | <b>1347</b> | <b>1384</b> | <b>6311</b> | <b>1363</b> | <b>1365</b> | <b>6318</b> | <b>1348</b> | <b>4417</b> | <b>4416</b> | <b>1396</b> | <b>0765</b>              |           |
| boring Ø x L in mm                                      | 17.6 x 91                           |                          | 13.4x48     | 16.5x56     | 17 x 90     | 30 x 90     | 17 x 80     | 26 x 72     | 26 x 80     | 29.5 x 80   | 16.5 x 56   |             | 26 x 83     | 29 x 93     | 38.5 x 92                | 45.9 x 98 |
| tubes per rotor   | 16                                  |                          | 20          | 16          | 4           |             |             |             | 16          |             | 4           |             |             |             |                          |           |
| max. RCF <sup>2)</sup>                                  | 2,540                               | 2,665                    | 2,558       | 2,522       | 2,665       |             | 2,343       | 2,665       |             | 2,522       | 2,451       | 2,630       | 2,612       | 2,540       |                          |           |
| radius in mm  | 142                                 | 149                      | 143         | 141         | 149         |             | 131         | 149         |             | 141         | 137         | 147         | 146         | 142         |                          |           |
| run-up in sec   | 20                                  |                          |             |             |             |             |             |             |             |             |             |             |             |             |                          |           |
| run-down in sec, braked                                 | 25                                  |                          |             |             |             |             |             |             |             |             |             |             |             |             |                          |           |
| temperature in °C <sup>1)</sup>                         | -15                                 |                          |             |             |             |             |             |             |             |             |             |             |             |             |                          |           |

<sup>5)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

<sup>6)</sup> A rubber stopper for closing the tube is available under Cat. No. 0535.

The tube may not be centrifuged with the stopper. The stopper only serves to close the tube for agitating or mixing.

<sup>23)</sup> Please ask for our detailed cyto brochure.

## Swing-out rotor, 4-place



↗ 90°

n = 4,500 min<sup>-1</sup>  
max. RCF 3,328

illustrated with carriers 1490 and lids 1492  
with bio-containment<sup>5)</sup>

**Cat. No.** (without carriers) **1324**

| capacity in ml  | 1.5         | 2.0         | 1             | 3           | 4           | 5                        | 6                        | 7                        | 9                        | 15                       | 25                       | 50                       | 94          | 100                      |
|---|-------------|-------------|---------------|-------------|-------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------|--------------------------|
| Ø x L in mm   | 11 x 38     |             | 6 x 45        | 10 x 60     | 10 x 88     | 12 x 75                  | 12 x 82                  | 12 x 100                 | 14 x 100                 | 17 x 100                 | 24 x 100                 | 34 x 100                 | 38 x 102    | 44 x 100                 |
| <b>Cat. No.</b>   | <b>2078</b> | <b>0536</b> | <b>Rhesus</b> | -           | -           | <b>0553<sup>2)</sup></b> | <b>0501<sup>2)</sup></b> | <b>0578<sup>2)</sup></b> | <b>0500<sup>2)</sup></b> | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>0549</b> | <b>0526<sup>2)</sup></b> |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 1492 |             |             |               |             |             |                          |                          |                          |                          |                          |                          |                          |             |                          |
| <b>carrier</b><br>Cat. No. 1490                         |             |             |               |             |             |                          |                          |                          |                          |                          |                          |                          |             |                          |
| <b>Cat. No.</b>   | <b>1351</b> | <b>1339</b> | <b>1343</b>   | <b>1343</b> | <b>1343</b> | <b>1383</b>              | <b>1383</b>              | <b>1329</b>              | <b>1329</b>              | <b>1330</b>              | <b>1331</b>              | <b>1396</b>              | <b>1396</b> | <b>0761</b>              |
| boring Ø x L in mm                                      | 11.2 x 38   |             | 6.5 x 34      | 10.5 x 43   |             | 13.4 x 48                |                          | 17.6 x 91                |                          | 25.2 x 87                | 35.2 x 87                | 38.5 x 92                |             | 45.9 x 100.5             |
| tubes per rotor   | 20          |             | 108           | 36          |             | 20                       |                          | 16                       |                          | 4                        |                          |                          |             |                          |
| max. RCF <sup>2)</sup>                                  | 3,056       |             | 3,237         | 3,283       |             | 3,192                    |                          | 3,170                    |                          | 3,034                    | 3,011                    | 3,260                    | 3,192       |                          |
| radius in mm  | 135         |             | 143           | 145         |             | 141                      |                          | 140                      |                          | 134                      | 133                      | 144                      | 141         |                          |
| run-up in sec   | 27          |             |               |             |             |                          |                          |                          |                          |                          |                          |                          |             |                          |
| run-down in sec, braked                                 | 30          |             |               |             |             |                          |                          |                          |                          |                          |                          |                          |             |                          |
| temperature in °C <sup>1)</sup>                         | -6          |             |               |             |             |                          |                          |                          |                          |                          |                          |                          |             |                          |

| capacity in ml  | 1.1-1.4                             | 2.6-3.4     | 4.9         | 2.7-3       | 4.5-5       | 4-5.5       | 7.5-8.5                  | 9-10        | 10          | 1.6-5       | 4-7         | 4-7         | 8.5-10      |
|---|-------------------------------------|-------------|-------------|-------------|-------------|-------------|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Ø x L in mm   | 8 x 66                              | 13 x 65     | 13 x 90     | 11 x 66     | 11 x 92     | 15 x 75     | 15 x 92                  | 16 x 92     | 15 x 102    | 13 x 75     | 13 x 100    | 16 x 75     | 16 x 100    |
| <b>Cat. No.</b>   | <b>blood collection/urine tubes</b> |             |             |             |             |             |                          |             |             |             |             |             |             |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 1492 |                                     |             |             |             |             |             |                          |             |             |             |             |             |             |
| <b>carrier</b><br>Cat. No. 1490                         |                                     |             |             |             |             |             |                          |             |             |             |             |             |             |
| <b>Cat. No.</b>   | <b>1457</b>                         | <b>1383</b> | <b>1383</b> | <b>1459</b> | <b>1459</b> | <b>1329</b> | <b>1329<sup>4)</sup></b> | <b>1383</b> | <b>1383</b> | <b>1348</b> | <b>1348</b> | <b>1348</b> | <b>1348</b> |
| boring Ø x L in mm                                      | 9 x 47                              |             | 13.4 x 48   |             | 15.6 x 47   |             | 17.6 x 91                |             | 13.4 x 48   |             | 16.5 x 56   |             |             |
| tubes per rotor   | 28                                  |             | 20          |             | 16          |             | 16                       |             | 20          |             | 16          |             |             |
| max. RCF <sup>2)</sup>                                  | 3,215                               |             | 3,192       |             | 3,215       |             | 3,170                    | 3,328       | 3,192       |             | 3,147       |             |             |
| radius in mm  | 142                                 |             | 141         |             | 142         |             | 140                      | 147         | 141         |             | 139         |             |             |
| run-up in sec   | 27                                  |             |             |             |             |             |                          |             |             |             |             |             |             |
| run-down in sec, braked                                 | 30                                  |             |             |             |             |             |                          |             |             |             |             |             |             |
| temperature in °C <sup>1)</sup>                         | -6                                  |             |             |             |             |             |                          |             |             |             |             |             |             |

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.

2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.

3) When using these tubes, carrier 1490 cannot be closed with lid 1492.



illustrated with carriers 1398

**Swing-out rotor 1324**

|   |             |             |             |             |             |             |             |             |             |             |             |                          |              |  |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------------|--------------|--|
| capacity in ml  | 15          | 30          | 50          | 12          | 25          | 30          | 50          | 10          | 30          | 50          | 85          | 30                       |              |  |
| Ø x L in mm   | 17 x 120    | 25 x 110    | 29 x 115    | 17 x 100    | 25 x 90     | 25 x 110    | 29 x 115    | 16 x 80     | 26 x 95     | 29 x 107    | 38 x 106    | 44 x 105                 |              |  |
| <b>Cat. No.</b>   | <b>0509</b> | -           | <b>0513</b> | -           | -           | -           | -           | -           | <b>0545</b> | <b>0546</b> | <b>0547</b> | <b>0534<sup>6)</sup></b> |              |  |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 1492 |             |             |             |             |             |             |             |             |             |             |             |                          |              |  |
| <b>carrier</b><br>Cat. No. 1490                         |             |             |             |             |             |             |             |             |             |             |             |                          |              |  |
| <b>Cat. No.</b>   | <b>1347</b> | <b>1356</b> | <b>1365</b> | <b>1384</b> | <b>6311</b> | <b>1363</b> | <b>1365</b> | <b>6318</b> | <b>1348</b> | <b>4417</b> | <b>4416</b> | <b>1396</b>              | <b>0765</b>  |  |
| boring Ø x L in mm                                      | 17 x 90     | 17 x 107    | 26 x 80     | 30 x 90     | 17 x 80     | 26 x 72     | 26 x 80     | 29.5 x 80   | 16.5 x 56   | 26 x 83     | 29 x 93     | 38.5 x 92                | 45.9 x 100.5 |  |
| tubes per rotor   | 4           | 12          | 4           |             |             |             | 16          |             |             |             | 4           |                          |              |  |
| max. RCF <sup>2)</sup>                                  | 3,328       |             | 3,328       |             | 2,920       |             | 3,328       |             | 3,147       | 3,056       | 3,283       | 3,260                    | 3,170        |  |
| radius in mm  | 147         |             | 147         |             | 129         |             | 147         |             | 139         | 135         | 145         | 144                      | 140          |  |
| run-up in sec   | 27          |             |             |             |             |             |             |             |             |             |             |                          |              |  |
| run-down in sec, braked                                 | 30          |             |             |             |             |             |             |             |             |             |             |                          |              |  |
| temperature in °C <sup>1)</sup>                         | - 6         |             |             |             |             |             |             |             |             |             |             |                          |              |  |

|                                 |                          |                          |                          |                          |                          |                                     |             |              |             |              |             |              |             |              |             |           |
|---------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|-----------|
| capacity in ml                  | 5                        | 6                        | 7                        | 9                        | 15                       | 2.6-3.4                             | 2.7-3       | 4-5.5        | 4.5-5       | 4.9          | 9-10        | 10           | 1.6-5       | 4-7          | 4-7         | 12        |
| Ø x L in mm                     | 12 x 75                  | 12 x 82                  | 12 x 100                 | 14 x 100                 | 17 x 100                 | 13 x 65                             | 11 x 66     | 15 x 75      | 11 x 92     | 13 x 90      | 16 x 92     | 15 x 102     | 13 x 75     | 13 x 100     | 16 x 75     | 17 x 102  |
| <b>Cat. No.</b>                 | <b>0553<sup>2)</sup></b> | <b>0501<sup>2)</sup></b> | <b>0578<sup>2)</sup></b> | <b>0500<sup>2)</sup></b> | <b>0518<sup>2)</sup></b> | <b>blood collection/urine tubes</b> |             |              |             |              |             |              |             |              |             |           |
| <b>carrier</b><br>Cat. No. 1398 |                          |                          |                          |                          |                          |                                     |             |              |             |              |             |              |             |              |             |           |
| <b>Cat. No.</b>                 | <b>1486</b>              | <b>1482A</b>             | <b>1486</b>              | <b>1482A</b>             | <b>1486</b>              | <b>1482A</b>                        | <b>1486</b> | <b>1482A</b> | <b>1486</b> | <b>1482A</b> | <b>1486</b> | <b>1482A</b> | <b>1486</b> | <b>1482A</b> | <b>1487</b> |           |
| boring Ø x L in mm              | 13.4 x 57.5              |                          | 17.5 x 81                |                          | 13.4 x 57.5              |                                     | 17.5 x 81   |              | 13.4 x 57.5 |              | 17.5 x 81   |              | 13.4 x 57.5 |              | 17.5 x 81   | 17.5 x 74 |
| tubes per rotor                 | 20                       |                          | 16                       |                          | 20                       |                                     | 16          |              | 20          |              | 16          |              | 20          |              | 16          | 12        |
| max. RCF <sup>2)</sup>          | 3,147                    |                          | 3,192                    |                          | 3,147                    |                                     | 2,875       |              | 3,147       |              | 3,192       |              | 3,147       |              | 3,034       | 3,102     |
| radius in mm                    | 139                      |                          | 141                      |                          | 139                      |                                     | 127         |              | 139         |              | 141         |              | 139         |              | 134         | 137       |
| run-up in sec                   | 27                       |                          |                          |                          |                          |                                     |             |              |             |              |             |              |             |              |             |           |
| run-down in sec, braked         | 30                       |                          |                          |                          |                          |                                     |             |              |             |              |             |              |             |              |             |           |
| temperature in °C <sup>1)</sup> | - 6                      |                          |                          |                          |                          |                                     |             |              |             |              |             |              |             |              |             |           |

4) Please remove the inserts.

5) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

6) A rubber stopper for closing the tube is available under Cat. No. 0535.

The tube may not be centrifuged with the stopper. The stopper only serves to close the tube for agitating or mixing.

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**Swing-out rotor, 6-place**

**Swing-out rotor, 8-place**

**Swing-out rotor, 12-place**



±90°

n = 4,000 min<sup>-1</sup>  
max. RCF 2,701

**Cat. No. (with carriers) 1619**



±45°

n = 5,000 min<sup>-1</sup>  
max. RCF 3,857










**Cat. No. (with carriers) 1617**







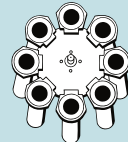



±55°  
(with carriers 1127)  
±60°  
(with carriers 1122)  
±80°  
(with carriers 1621)










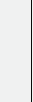











n = 5,000 min<sup>-1</sup>  
max. RCF 4,193

**Cat. No. (without carriers) 1628**

| capacity in ml  | 15  | 50  | 12  | 50  |
|---|---|---|---|---|
| Ø x L in mm   | 17x120  | 29x115  | 17x100  | 29x115  |
| <b>Cat. No.</b>   | <b>0509</b>   | <b>0513</b>   | -   | -   |
|  |  |  |  |  |
| <b>carrier</b><br>Cat. No. <b>1398</b>  |  |  |  |  |
| <b>Cat. No.</b>   | <b>1483A</b>  | <b>1484</b>   | <b>1482A</b>  | <b>1484<sup>4)</sup></b>  |
| boring Ø x L in mm  | 17x100  | 30x98   | 17.5x81   | 30x98   |
| tubes per rotor   | 16  | 4   | 16  | 4   |
| max. RCF <sup>2)</sup>  | 3,305   | 3,260   | 3,192   | 3,260   |
| radius in mm  | 146   | 144   | 141   | 144   |
| run-up in sec   | 27  |   |   |   |
| run-down in sec, braked   | 30  |   |   |   |
| temperature in °C <sup>1)</sup>   | - 6   |   |   |   |

| capacity in ml  | 15   | 50   |
|---|--|--|
| Ø x L in mm   | 17x120   | 29x115   |
| <b>Cat. No.</b>   | <b>0509</b>  | <b>0513</b>  |
|  |   |  |
| <b>rotor</b><br>Cat. No. <b>1619</b>  |  |  |
| <b>Cat. No.</b>   | <b>1462-A</b>  | -  |
| boring Ø x L in mm  | 17 x 84  | 30x 87.5   |
| tubes per rotor   | 6  |  |
| max. RCF <sup>2)</sup>  | 2,701  |  |
| radius in mm  | 151  |  |
| run-up in sec   | 20   |  |
| run-down in sec, braked   | 22   |  |
| temperature in °C <sup>1)</sup>   | - 15   |  |

| capacity in ml  | 15   | 50  |
|---|--|---|
| Ø x L in mm   | 17x120   | 29x115  |
| <b>Cat. No.</b>   | <b>0509</b>  | <b>0513</b>   |
|  |   |  |
| <b>rotor</b><br>Cat. No. <b>1617</b>  |  |   |
| <b>Cat. No.</b>   | <b>1462-A</b>  | -   |
| boring Ø x L in mm  | 17 x 84  | 30x 94.5  |
| tubes per rotor   | 8  |   |
| max. RCF <sup>2)</sup>  | 3,857  |   |
| radius in mm  | 138  |   |
| run-up in sec   | 20   |   |
| run-down in sec, braked   | 19   |   |
| temperature in °C <sup>1)</sup>   | - 10   |   |

| capacity in ml  | 5   | 10  | 15  | 2.6-3.4   | 2.7-3   | 4-5.5   | 7.5-8.5   | 1.6-5   | 4-7   | 8.5-10   |
|---|---|---|---|---|---|---|---|---|---|--|
| Ø x L in mm   | 12 x 75   | 17x70   | 17x100  | 13x65   | 11x66   | 15x75   | 15x92   | 13x75   | 16x75   | 16 x 100   |
| <b>Cat. No.</b>   | <b>0553<sup>2)</sup></b>  | <b>2079</b>   | <b>0518<sup>2)</sup></b>  | <b>blood collection/urine tubes</b>   |   |   |   |   |   |  |
|  |  |  |  |  |  |  |  |  |  |  |
| <b>rotor</b><br>Cat. No. <b>1628</b>  |  |  |  |  |  |  |  |  |  |  |
| <b>Cat. No.</b>   | <b>1127</b>   | <b>1122</b>   | <b>1621</b>   | <b>1127</b>   | <b>1122</b>   | <b>1621</b>   | <b>1127</b>   | <b>1122</b>   | <b>1621</b>   |  |
| boring Ø x L in mm  | 13.2 x 53   | 17.5 x 53   | 17.5 x 79   | 13.2 x 53   | 17.5 x 53   | 17.5 x 79   | 13.2 x 53   | 17.5 x 53   | 17.5 x 79   |  |
| tubes per rotor   | 12  |   |   |   |   |   |   |   |   |  |
| max. RCF <sup>2)</sup>  | 3,494   | 3,522   | 4,193   | 3,494   | 3,522   | 4,193   | 3,494   | 3,522   | 4,193   |  |
| radius in mm  | 125   | 126   | 150   | 125   | 126   | 150   | 125   | 126   | 150   |  |
| run-up in sec   | 16  |   |   |   |   |   |   |   |   |  |
| run-down in sec, braked   | 16  |   |   |   |   |   |   |   |   |  |
| temperature in °C <sup>1)</sup>   | - 15  | - 10  | - 15  | - 15  | - 10  | - 15  | - 15  | - 10  | - 15  |  |

<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.



### Swing-out rotor, 8-place

### Swing-out rotor, 2-place



±90°

n = 4,000 min<sup>-1</sup>  
max. RCF 2,415

**Cat. No.** (without carriers) **1611**



±90°

n = 4,000 min<sup>-1</sup>  
max. RCF 2,218

**Cat. No.** (without carriers) **1460**

| capacity in ml                           | 5                        | 6                        | 7                        | 10          | 15          | 2.6–3.4                  | 2.7–3                               | 4–5.5       | 4.5–5       | 7.5–8.5     | 1.6–5       | 4–7         | 4–7         | 8.5–10      |             |
|--|--------------------------|--------------------------|--------------------------|-------------|-------------|--------------------------|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Ø x L in mm                              | 12 x 75                  | 12 x 82                  | 12 x 100                 | 17 x 70     | 13 x 100    | 17 x 100                 | 13 x 65                             | 11 x 66     | 15 x 75     | 11 x 92     | 15 x 92     | 13 x 75     | 13 x 100    | 16 x 75     | 16 x 100    |
| Cat. No.                                 | <b>0553<sup>2)</sup></b> | <b>0501<sup>2)</sup></b> | <b>0578<sup>2)</sup></b> | <b>2079</b> | -           | <b>0518<sup>2)</sup></b> | <b>blood collection/urine tubes</b> |             |             |             |             |             |             |             |             |
| <br><b>rotor</b><br>Cat. No. <b>1611</b> |                          |                          |                          |             |             |                          |                                     |             |             |             |             |             |             |             |             |
|  |                          |                          |                          |             |             |                          |                                     |             |             |             |             |             |             |             |             |
| Cat. No.                                 | <b>1131</b>              | <b>1643</b>              | <b>1132</b>              | <b>1643</b> | <b>1644</b> | <b>1131</b>              | <b>1132</b>                         | <b>1643</b> | <b>1644</b> | <b>1131</b> | <b>1643</b> | <b>1132</b> | <b>1644</b> | <b>1131</b> | <b>1644</b> |
| boring Ø x L in mm                       | 13 x 53                  | 13.2 x 81                | 17.5 x 53                | 13.2 x 81   | 17.5 x 81   | 13 x 53                  | 17.5 x 53                           | 13.2 x 81   | 17.5 x 81   | 13 x 53     | 13.2 x 81   | 17.5 x 53   | 17.5 x 81   | 13 x 53     | 17.5 x 81   |
| tubes per rotor                          | 8                        |                          |                          |             |             |                          |                                     |             |             |             |             |             |             |             |             |
| max. RCF <sup>2)</sup>                   | 1,914                    | 2,415                    | 1,914                    | 2,415       | 1,914       | 2,415                    | 1,914                               | 2,415       | 1,914       | 2,415       | 1,914       | 2,415       | 1,914       | 2,415       | 2,415       |
| radius in mm                             | 107                      | 135                      | 107                      | 135         | 107         | 135                      | 107                                 | 135         | 107         | 135         | 107         | 135         | 107         | 135         | 135         |
| run-up in sec                            | 20                       |                          |                          |             |             |                          |                                     |             |             |             |             |             |             |             |             |
| run-down in sec, braked                  | 20                       |                          |                          |             |             |                          |                                     |             |             |             |             |             |             |             |             |
| temperature in °C <sup>1)</sup>          | -16                      |                          |                          |             |             |                          |                                     |             |             |             |             |             |             |             |             |

| D x W x H in mm                          | 86 x 128 x 15/17.5 |   | 86 x 128 x 22 | 86 x 128 x 44.5 | 86 x 128 x 46 | 86 x 128 x 83 | 59 x 84 x 11                      | 82 x 124 x 20              | -                 |                      |
|--|--------------------|---|---------------|-----------------|---------------|---------------|-----------------------------------|----------------------------|-------------------|----------------------|
| capacity in ml                           | -                  |   |               |                 |               |               |                                   |                            |                   | 0.2                  |
| Cat. No.                                 | <b>MTP</b>         |   | <b>CP</b>     | <b>DWP</b>      | <b>MS</b>     | <b>QP</b>     | <b>Microtest plate (Terasaki)</b> | <b>PCR plate, 96 wells</b> | <b>PCR strips</b> |                      |
| <br><b>rotor</b><br>Cat. No. <b>1460</b> |                    |   |               |                 |               |               |                                   |                            |                   |                      |
|  | <br><b>1453-A</b>  |   |               |                 |               |               |                                   | <br><b>1453-A + 1485</b>   |                   |                      |
| Cat. No.                                 | <b>1453-A</b>      |   |               |                 |               |               |                                   |                            |                   | <b>1453-A + 1485</b> |
| boring Ø x L in mm                       | -                  |   |               |                 |               |               |                                   |                            |                   | -                    |
| plates/strips per rotor                  | 10                 | 8 | 6             | 2               | 2             | 2             | 4                                 | 2                          | 24 x 8            |                      |
| max. RCF <sup>2)</sup>                   | 2,218              |   |               |                 |               |               |                                   |                            |                   |                      |
| radius in mm                             | 124                |   |               |                 |               |               |                                   |                            |                   |                      |
| run-up in sec                            | 40                 |   |               |                 |               |               |                                   |                            |                   |                      |
| run-down in sec, braked                  | 45                 |   |               |                 |               |               |                                   |                            |                   |                      |
| temperature in °C <sup>1)</sup>          | -6                 |   |               |                 |               |               |                                   |                            |                   |                      |

<sup>4)</sup> Please remove the inserts.

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### Swing-out rotor, 4-place



↻ 90°

n = 4,000 min<sup>-1</sup>  
max. RCF 1,896

**Cat. No.** (without carriers) **1645**

### Angle rotor, 12-place



↻ 45°

n = 15,000 min<sup>-1</sup>  
max. RCF 16,602

**Cat. No.** **1612**

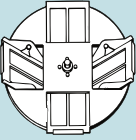



### Angle rotor, 24-place












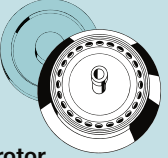








↻ 40°

n = 15,000 min<sup>-1</sup>  
max. RCF 21,382

**Cat. No.** **1420-B**

| D x W x H in mm   | 86 x 128 x 15/17.5  | 86 x 128 x 22   |
|---|---|---|
| <b>Cat. No.</b>   | <b>MTP</b>  | <b>CP</b>   |
|  |  |  |
| <b>rotor</b><br>Cat. No. <b>1645</b>  |  |   |
| <b>Cat. No.</b>   | <b>4345</b>   |   |
| boring Ø x L in mm  | -   |   |
| plates per rotor  | 4   |   |
| max. RCF <sup>2)</sup>  | 1,896   |   |
| radius in mm  | 106   |   |
| run-up in sec   | 20  |   |
| run-down in sec, braked   | 19  |   |
| temperature in °C <sup>1)</sup>   | - 16  |   |

| capacity in ml  | 0.2   | 0.4  | 0.5   | 0.8   | 1.5   | 2.0   |
|---|---|--|---|---|---|---|
| Ø x L in mm   | 6 x 18  | 6 x 45   | 8 x 30  | 8 x 45  | 11 x 38   |   |
| <b>Cat. No.</b>   | -   | -  | -   | -   | <b>2078</b>   | <b>0536</b>   |
|  lid incl. |  |  |  |  |  |  |
| <b>rotor</b><br>Cat. No. <b>1612</b>  |  |  |  |   |   |   |
| <b>Cat. No.</b>   | <b>2024</b>   |  | <b>2023</b>   |   | <b>2031<sup>7)</sup></b>  | -   |
| boring Ø x L in mm  | 6 x 40  |  | 8 x 40  |   | 10.2x19   | 11.4 x 39   |
| tubes per rotor   | 12  |  |   |   |   |   |
| max. RCF <sup>2)</sup>  | 16,602  |  |   |   |   |   |
| radius in mm  | 66  |  |   |   |   |   |
| run-up in sec   | 25  |  |   |   |   |   |
| run-down in sec, braked   | 23  |  |   |   |   |   |
| temperature in °C <sup>1)</sup>   | - 10  |  |   |   |   |   |

| capacity in ml  | 0.2   | 0.4   | 0.5   | 0.8   | 1.5   | 2.0   |
|---|---|---|---|---|---|---|
| Ø x L in mm   | 6 x 18  | 6 x 45  | 8 x 30  | 8 x 45  | 11 x 38   |   |
| <b>Cat. No.</b>   | -   | -   | -   | -   | <b>2078</b>   | <b>0536</b>   |
|  lid incl. |  |  |  |  |  |  |
| <b>rotor</b><br>Cat. No. <b>1420-B</b>  |  |   |  |   |   |   |
| <b>Cat. No.</b>   | <b>2024</b>   |   | <b>2023</b>   |   | <b>2031<sup>7)</sup></b>  | -   |
| boring Ø x L in mm  | 6 x 40  |   | 8 x 40  |   | 10.2x19   | 11.2x42.6   |
| tubes per rotor   | 24  |   |   |   |   |   |
| max. RCF <sup>2)</sup>  | 21,382  |   |   |   |   |   |
| radius in mm  | 85  |   |   |   |   |   |
| run-up in sec   | 25  |   |   |   |   |   |
| run-down in sec, braked   | 24  |   |   |   |   |   |
| temperature in °C <sup>1)</sup>   | - 4   |   |   |   |   |   |

#### Optional for rotor 1420-B:



lid **Cat. No. 2425**  
with bio-containment<sup>5)</sup>,  
autoclavable



lid **Cat. No. 2423**  
with bio-containment<sup>5)</sup>,  
autoclavable, phenol-resistant

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.

2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.

5) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

### Angle rotor, 30-place

### Angle rotor, 8-place



↗ 45°

n = 14,000 min<sup>-1</sup>  
max. RCF 21,255

with bio-containment<sup>5)</sup>

**Cat. No. 1689-A**



↗ 45°

n = 4,500 min<sup>-1</sup>  
max. RCF 3,305

**Cat. No. (without adapters) 1418**

| capacity in ml                                  | 0.2         | 0.4    | 0.5         | 0.8    | 1.5                      | 2.0         |
|---|-------------|--------|-------------|--------|--------------------------|-------------|
| Ø x L in mm                                     | 6 x 18      | 6 x 45 | 8 x 30      | 8 x 45 | 11 x 38                  |             |
| <b>Cat. No.</b>                                 | -           | -      | -           | -      | <b>2078</b>              | <b>0536</b> |
| lid with bio-containment <sup>5)</sup><br>incl. |             |        |             |        |                          |             |
| <b>rotor</b><br>Cat. No. <b>1689-A</b>          |             |        |             |        |                          |             |
| <b>Cat. No.</b>                                 | <b>2024</b> |        | <b>2023</b> |        | <b>2031<sup>7)</sup></b> |             |
| boring Ø x L in mm                              | 6 x 40      |        | 8 x 40      |        | 10.2 x 19 11.2 x 40.9    |             |
| tubes per rotor                                 | 30          |        |             |        |                          |             |
| max. RCF <sup>2)</sup>                          | 21,255      |        |             |        |                          |             |
| radius in mm                                    | 97          |        |             |        |                          |             |
| run-up in sec                                   | 35          |        |             |        |                          |             |
| run-down in sec, braked                         | 31          |        |             |        |                          |             |
| temperature in °C <sup>1)</sup>                 | 0           |        |             |        |                          |             |

| capacity in ml                       | 5                        | 15                       | 1.1-1.4                  | 2.6-3.4 | 2.7-3   |
|--------------------------------------|--------------------------|--------------------------|--------------------------|---------|---------|
| Ø x L in mm                          | 12 x 75                  | 17 x 100                 | 8 x 66                   | 13 x 65 | 11 x 66 |
| <b>Cat. No.</b>                      | <b>0553<sup>2)</sup></b> | <b>0518<sup>2)</sup></b> | <b>blood/urine tubes</b> |         |         |
| <b>rotor</b><br>Cat. No. <b>1418</b> |                          |                          |                          |         |         |
| <b>Cat. No.</b>                      | <b>1467</b>              | <b>1467</b>              | <b>1467</b>              |         |         |
| boring Ø x L in mm                   | 17.4 x 91                | 17.4 x 91                | 17.4 x 91                |         |         |
| tubes per rotor                      | 32                       | 32                       | 32                       |         |         |
| RCF max. <sup>2)</sup>               | 2,762                    | 3,215                    | 2,762                    |         |         |
| radius in mm                         | 122                      | 142                      | 122                      |         |         |
| run-up in sec                        | 30                       |                          |                          |         |         |
| run-down in sec, braked              | 31                       |                          |                          |         |         |
| temperature in °C <sup>1)</sup>      | - 11                     |                          |                          |         |         |

| capacity in ml                       | 9-10                                | 1.6-5       | 4-7         | 8.5-10      | 12          | 15          | 50          | 12          | 50          | 50       |             |
|--------------------------------------|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------|-------------|
| Ø x L in mm                          | 16 x 92                             | 13 x 75     | 13 x 100    | 16 x 100    | 17 x 102    | 17 x 120    | 29 x 115    | 17 x 100    | 29 x 115    | 29 x 107 |             |
| <b>Cat. No.</b>                      | <b>blood collection/urine tubes</b> |             |             |             |             |             | <b>0509</b> | <b>0513</b> | -           | -        | <b>0546</b> |
| <b>rotor</b><br>Cat. No. <b>1418</b> |                                     |             |             |             |             |             |             |             |             |          |             |
| <b>Cat. No.</b>                      | <b>1467</b>                         | <b>1467</b> | <b>1467</b> | <b>1467</b> | <b>1467</b> | <b>1467</b> | <b>1468</b> | <b>1467</b> | <b>1468</b> |          |             |
| boring Ø x L in mm                   | 17.4 x 91                           | 17.4 x 91   | 17.4 x 91   | 17.4 x 91   | 17.4 x 91   | 17.4 x 91   | 30.2 x 92   | 17.4 x 91   | 30.2 x 92   |          |             |
| tubes per rotor                      | 32                                  | 32          | 32          | 32          | 32          | 32          | 8           | 32          | 8           |          |             |
| RCF max. <sup>2)</sup>               | 3,215                               | 2,762       | 3,305       | 3,215       | 3,215       | 3,283       | 3,147       | 3,215       | 3,147       |          |             |
| radius in mm                         | 142                                 | 122         | 146         | 142         | 142         | 145         | 139         | 142         | 139         |          |             |
| run-up in sec                        | 30                                  |             |             |             |             |             |             |             |             |          |             |
| run-down in sec, braked              | 31                                  |             |             |             |             |             |             |             |             |          |             |
| temperature in °C <sup>1)</sup>      | - 11                                |             |             |             |             |             |             |             |             |          |             |

<sup>7)</sup> For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters 2031.

**Angle rotor, 6-place**



↘ 35°

n = 9,000 min<sup>-1</sup>  
max. RCF 9,509

**Cat. No. 1620A**

**Angle rotor, 12-place**



↘ 35°

n = 6,000 min<sup>-1</sup>  
max. RCF 4,146

**Cat. No. 1613**




















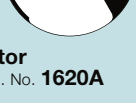


















**Angle rotor, 12-place**









































↘ 35°

n = 12,000 min<sup>-1</sup>  
max. RCF 16,582

**Cat. No. 1615**

|  |   |   |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|
| capacity in ml   | 1.5   | 2.0   | 15  | 50  | 75  | 94  | 7.5-8.5   | 9-10  | 10  | 8.5-10  | 15   | 50  | 10  | 30  | 50  | 85  |   |   |
| Ø x L in mm  | 11 x 38   |   | 17 x 100  | 34 x 100  | 35 x 105  | 38 x 102  | 15 x 92   | 16 x 92   | 15 x 102  | 16 x 100  | 17 x 120   | 29 x 115  | 16 x 80   | 26 x 95   | 29 x 107  | 38 x 106  |   |   |
| <b>Cat. No.</b>  | <b>2078</b>   | <b>0536</b>   | <b>0518<sup>2)</sup></b>  | <b>0521<sup>2)</sup></b>  | <b>0548</b>   | <b>0549</b>   | <b>blood/urine tubes</b>  |   |   |   | <b>0509</b>  | <b>0513</b>   |   | -   | <b>0545</b>   | <b>0546</b>   | <b>0547</b>   |   |
| <br><b>rotor</b><br>Cat. No. <b>1620A</b> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <br><b>rotor</b><br>Cat. No. <b>1620A</b> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Cat. No.</b>  | <b>1449</b>   | <b>1451</b>   | <b>1463</b>   | -   | <b>1451</b>   | <b>1466</b>   | <b>1454</b>   | <b>1646<sup>3)</sup></b>  | <b>1448</b>   | <b>1447</b>   | <b>1446</b>  | -   |   |   |   |   |   |   |
| boring Ø x L in mm   | 11.4 x 39   | 17.5 x 92   | 35 x 89   | 38.6 x 90.2   |   |   | 17.5 x 92   |   | 17 x 106  | 29.8 x 97   | -  | 16.5 x 74   | 26 x 85   | 29 x 92   | 38.6 x 90.2   |   |   |   |
| tubes per rotor  | 24  | 6   | 6   | 6   |   |   | 6   |   | 6   | 3   | 6  | 12  |   | 6   |   |   |   |   |
| max. RCF <sup>2)</sup>   | 9,237   | 8,784   | 9,327   | 9,509   |   |   | 8,784   |   | 8,965   |   |  | 8,784   | 8,603   | 9,056   | 9,509   |   |   |   |
| radius in mm   | 102   | 97  | 103   | 105   |   |   | 97  |   | 99  |   |  | 97  | 95  | 100   | 105   |   |   |   |
| run-up in sec  | 30  |   |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |
| run-down in sec, braked  | 30  |   |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |
| temperature in °C <sup>1)</sup>  | - 11  |   |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |

|   |   |   |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|
| capacity in ml  | 4   | 5   | 6   | 15  | 1.1-1.4   | 2.6-3.4   | 2.7-3   | 4.5-5   | 4.9   | 7.5-10  | 10   | 1.6-5   | 4-7   | 8-10  | 15  |   |   |   |
| Ø x L in mm   | 10 x 88   | 12 x 75   | 12 x 82   | 17 x 100  | 8 x 66  | 13 x 65   | 11 x 66   | 11 x 92   | 13 x 90   | 15/16 x 92  | 15 x 102   | 13 x 75   | 13 x 100  | 16 x 100/125  | 17 x 120  |   |   |   |
| <b>Cat. No.</b>   | -   | <b>0553<sup>2)</sup></b>  | <b>0501<sup>2)</sup></b>  | <b>0518<sup>2)</sup></b>  | <b>blood collection/urine tubes</b>   |   |   |   |   |   |  |   |   |   | <b>0509</b>   |   |   |   |
| <br><b>rotor</b><br>Cat. No. <b>1613</b> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <br><b>rotor</b><br>Cat. No. <b>1613</b> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Cat. No.</b>   | <b>6305</b>   | <b>1054-A</b>   | -   | <b>1054-A</b>   | -   |   |   |   |   |   |  | <b>1054-A</b>   | <b>1058</b>   | -   |   |   |   |   |
| boring Ø x L in mm  | 11.5 x 67.5   | 13.5 x 60   | 17.7 x 88   | 13.5 x 60   | 17.7 x 88   |   |   |   |   |   |  | 13.5 x 60   | 13.5 x 79   | 17.7 x 88   |   |   |   |   |
| tubes per rotor   | 12  |   |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |
| max. RCF <sup>2)</sup>  | 3,502   | 3,300   | 4,146   | 3,300   | 4,146   |   |   |   |   |   |  | 3,300   | 4,146   |   |   |   |   |   |
| radius in mm  | 87  | 82  | 103   | 82  | 103   |   |   |   |   |   |  | 82  | 103   |   |   |   |   |   |
| run-up in sec   | 15  |   |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |
| run-down in sec, braked   | 15  |   |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |
| temperature in °C <sup>1)</sup>   | - 16  |   |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |

<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.

<sup>3)</sup> 6-place adapter set for conical 50 ml tubes with screw cap.

**Hematocrit rotor, 24-place**



n = 15,000 min<sup>-1</sup>  
max. RCF 21,382

**Cat. No. 1650**

**Cyto rotor, 6-place**



n = 4,000 min<sup>-1</sup>  
max. RCF 2,039

**Cat. No. (without suspensions) 1626**

**Cyto rotor, 8-place**

























n = 4,000 min<sup>-1</sup>  
max. RCF 2,218

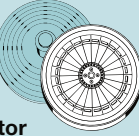

**Cat. No. (with suspensions) 1648**

For detailed information on the comprehensive Hettich cyto system, please turn to the pages 156-158.

illustrated with  
suspensions 1660  
and lids 1661  
for cyto chambers

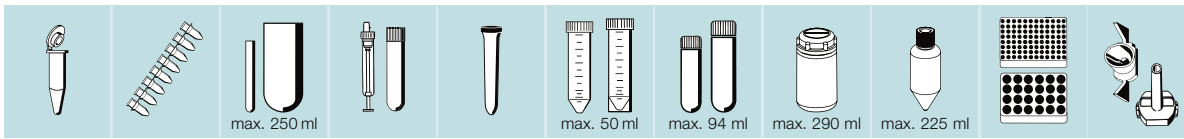
illustrated with  
suspensions 1680  
for angle chambers

| capacity in ml   | 4   | 5   | 6   | 15  | 1.1-1.4   | 2.6-3.4   | 2.7-3   | 4.5-5   | 4.9   | 7.5-10  | 10  | 1.6-5   | 4-7   | 8-10  | 15  |   |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø x L in mm  | 10x88   | 12x75   | 12x82   | 17x100  | 8x66  | 13x65   | 11x66   | 11x92   | 13x90   | 15/16x92  | 15x102  | 13x75   | 13x100  | 16x100/125  | 17x120  |   |   |
| Cat. No.   | -   | 0553 <sup>2)</sup>  | 0501 <sup>2)</sup>  | 0518 <sup>2)</sup>  | blood collection/urine tubes  |   |   |   |   |   |   |   |   |   | 0509  |   |   |
| <br><b>rotor</b><br>Cat. No. 1615 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |
|                                   |  |   |   |  |   |   |   |   |   |   |   |  |  |   |  |   |   |
| Cat. No.   | <b>6305</b>   | <b>1054-A</b>   | -   | -   | <b>1054-A</b>   |   |   | -   |   |   |   | <b>1054-A</b>   | <b>1058</b>   | -   | <b>1647<sup>29)</sup></b>   |   |   |
| boring Ø x L in mm   | 11.5x67.5   | 13.5x60   | 17.7x88   |   | 13.5x60   |   |   | 17.7x88   |   |   |   | 13.5x60   | 13.5x79   | 17.7x88   | 17x104  |   |   |
| tubes per rotor  |   |   |   |   | 12  |   |   |   |   |   |   |   | 12  | 12  | 12  | 6 | 6 |
| max. RCF <sup>2)</sup>   | 14,006  | 13,201  | 16,582  |   | 13,201  |   |   | 16,582  |   |   |   | 13,201  | 16,582  | 16,582  | 15,455  |   |   |
| radius in mm   | 87  | 82  | 103   |   | 82  |   |   | 103   |   |   |   | 82  | 103   | 103   | 96  |   |   |
| run-up in sec  | 40  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| run-down in sec, braked  | 40  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| temperature in °C <sup>1)</sup>  | -2  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

| standard capillaries, heparinised  | basic   | self-sealing and mylar-coated |
|--|---|-------------------------------|
| Cat. No.   | <b>2074</b>   | <b>1071</b>                   |
| <br><b>rotor</b><br>Cat. No. 1650 |  |                               |
|  | sealing putty   |                               |
| Cat. No.   | <b>2077</b>   | -                             |
| boring Ø x L in mm   | -   |                               |
| capillaries per rotor  | 24  |                               |
| max. RCF <sup>2)</sup>   | 21,382  |                               |
| radius in mm   | 85  |                               |
| run-up in sec  | 13  |                               |
| run-down in sec, braked  | 9   |                               |
| temperature in °C <sup>1)</sup>  | -1  |                               |

<sup>29)</sup> Set of 6 carriers. For accommodating conical 15 ml tubes with screw cap, remove 6 opposite carriers from rotor No. 1615 and replace them with adapters No. 1647.

# ROTINA 380/380 R



## High-performance centrifuges deliver separation technology to satisfy the highest standards

Efficiency and safety are key requisites in today's laboratories - whether for research or routine tasks. The ROTINA 380 and 380 R centrifuge models are ideally equipped to take on these challenges. Samples with capacities of up to 4 x 290 ml can be processed with a max. RCF of 4,863. Should higher speeds be required, angle rotors with a max. RCF of 16,504 for 50 ml tubes or 24,400 for microlitre tubes are available.



ROTINA 380

| TECHNOLOGY                               | ROTINA 380   |                 | ROTINA 380 R <sup>*)</sup> |                 |
|--|--|-----------------|----------------------------|-----------------|
|  | classic  |                 | cooled                     |                 |
| Benchtop centrifuge, without rotor       |  |                 |                            |                 |
| Power supply <sup>*)</sup>               | 200 – 240 V 1 ~  | 100 – 127 V 1 ~ | 200 – 240 V 1 ~            | 110 – 127 V 1 ~ |
| Frequency                                | 50 – 60 Hz   |                 | 50 – 60 Hz                 | 60 Hz           |
| Consumption                              | 650 VA   | 700 VA          | 1,300 VA                   | 1,400 VA        |
| Emission, Immunity                       | EN / IEC 61326-1, class B  | FCC class B     | EN / IEC 61326-1, class B  | FCC class B     |
| Max. capacity                            | 4 x 290 ml   |                 |                            |                 |
| Max. RPM (speed)                         | 15,000 min <sup>-1</sup>   |                 |                            |                 |
| Max. RCF                                 | 24,400   |                 |                            |                 |
| Running time                             | 1 sec – 99 h : 59 min : 59 sec, ∞ continuous run, short cycle mode (impulse key) |                 |                            |                 |
| Dimensions (HxWxD)                       | 418 x 457 x 600 mm   |                 | 418 x 457 x 750 mm         |                 |
| Weight                                   | approx. 51 kg  | approx. 58,5 kg | approx. 81 kg              | approx. 88,5 kg |
| <b>Refrigeration</b>                     |  |                 |                            |                 |
| Temperature control, infinitely variable | -  |                 | from - 20 to + 40 °C       |                 |
| Cat. No.                                 | 1701   | 1701-01         | 1706                       | 1706-01         |

<sup>\*)</sup> Other voltages on request.

<sup>>)</sup> For a list of further versions of this model, please refer to page 12.


















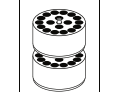

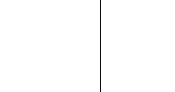
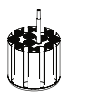
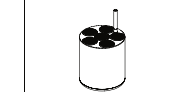


































**Swing-out rotor, 4-place**

 $\pm 90^\circ$ 

 n = 5,000 min<sup>-1</sup>  
 max. RCF 4,863

 illustrated with carriers 1752 and lids 1751  
 with bio-containment<sup>5)</sup>
**Cat. No.** (without carriers) **1754**

| capacity in ml  | 1.5   | 2.0   | 3   | 4   | 5   | 6   | 7   | 9   | 10  | 15  | 20   | 25  | 45  | 50  | 75  |
|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|
| Ø x L in mm   | 11 x 38   |   | 10 x 60   | 12 x 60   | 12 x 75   | 12 x 82   | 12 x 100  | 14 x 100  | 17 x 70   | 17 x 100  | 21 x 100   | 24 x 100  | 31 x 100  | 34 x 100  | 35 x 105  |
| <b>Cat. No.</b>   | <b>2078</b>   | <b>0536</b>   | -   |   | <b>0553<sup>2)</sup></b>  | <b>0501<sup>2)</sup></b>  | <b>0578<sup>2)</sup></b>  | <b>0500<sup>2)</sup></b>  | <b>2079</b>   | <b>0518<sup>2)</sup></b>  | -  | <b>0519<sup>2)</sup></b>  | -   | <b>0521<sup>2)</sup></b>  | <b>0548</b>   |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 1751 |  |  |  |  |  |  |  |  |  |  |   |  |  |  |  |
| carrier<br>Cat. No. 1752                                |  |  |  |   |  |   |   |  |   |   |  |  |   |  |  |
| <b>Cat. No.</b>   | <b>1761</b>   |   | <b>1761</b>   |   | <b>1762-A</b>   |   |   | <b>1763-A</b>   |   |   | <b>1764</b>  | <b>1765</b>   |   | <b>1765</b>   | <b>1765</b>   |
| boring Ø x L in mm                                      | 11.2 x 39.5   |   | 11.2 x 39.5   |   | 12.5 x 56   |   |   | 17.5 x 62   |   |   | 25.5 x 81  |   | 35.5 x 81   |   |   |
| tubes per rotor   | 144   |   | 72  |   | 96  |   |   | 52  |   |   | 24   |   | 12  |   |   |
| max. RCF <sup>2)</sup> upper/lower                      | 3,494 / 4,779   |   | 4,779   |   |   |   |   | 4,668   |   |   |  |   |   |   |   |
| radius in mm upper/lower                                | 125 / 171   |   | 171   |   |   |   |   | 167   |   |   |  |   |   |   |   |
| run-up in sec   |   |   |   |   |   |   |   | 42  |   |   |  |   |   |   |   |
| run-down in sec, braked                                 |   |   |   |   |   |   |   | 27  |   |   |  |   |   |   |   |
| temperature in °C <sup>1)</sup>                         |   |   |   |   |   |   |   | 0   |   |   |  |   |   |   |   |

| capacity in ml  | 94  | 100   | 100   | 250   | 1.1-1.4   | 2.6-3.4   | 2.7-3   | 4-5.5   | 4.5-5   | 4.9   | 7.5-8.5   | 9-10  | 10  | 1.6-5   | 4-7   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø x L in mm   | 38 x 102  | 40 x 115  | 44 x 100  | 65 x 115  | 8 x 66  | 13 x 65   | 11 x 66   | 15 x 75   | 11 x 92   | 13 x 90   | 15 x 92   | 16 x 92   | 15 x 102  | 13 x 75   | 13 x 100  |
| <b>Cat. No.</b>   | <b>0549</b>   | <b>0523<sup>2)</sup></b>  | <b>0526<sup>2)</sup></b>  | <b>0530<sup>2)</sup></b>  | <b>blood collection/urine tubes</b>   |   |   |   |   |   |   |   |   |   |   |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 1751 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| carrier<br>Cat. No. 1752                                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Cat. No.</b>   | <b>1777</b>   | <b>1767</b>   | <b>1766</b>   | <b>1768</b>   | <b>1781</b>   | <b>1783-A</b>   | <b>1762-A</b>   | <b>1763-A</b>   | <b>1762-A</b>   | <b>1783-A</b>   | <b>1763-A</b>   |   | <b>1763-A</b>   | <b>1783-A</b>   |   |
| boring Ø x L in mm                                      | 38.5 x 80   | 41 x 97   | 45 x 87   | 66 x 104.5  | 9 x 49  | 13.5 x 54   | 12.5 x 56   | 17.5 x 62   | 12.5 x 56   | 13.5 x 54   | 17.5 x 62   |   | 17.5 x 62   | 13.5 x 54   |   |
| tubes per rotor   | 8   | 4   | 4   | 4   | 96  | 64  | 96  | 52  | 96  | 64  | 52  |   | 52  | 64  |   |
| max. RCF <sup>2)</sup>                                  | 4,807   | 4,640   | 4,640   |   |   |   |   | 4,668   |   |   |   |   |   |   |   |
| radius in mm  | 172   | 166   | 166   |   |   |   |   | 167   |   |   |   |   |   |   |   |
| run-up in sec   |   |   |   |   |   |   |   | 42  |   |   |   |   |   |   |   |
| run-down in sec, braked                                 |   |   |   |   |   |   |   | 27  |   |   |   |   |   |   |   |
| temperature in °C <sup>1)</sup>                         |   |   |   |   |   |   |   | 0   |   |   |   |   |   |   |   |

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.  
 2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.  
 5) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

ROTINA 380



illustrated with carriers 1752 and lids 1751  
with bio-containment<sup>5)</sup>

**Swing-out rotor Cat. No. (without carriers) 1754**

|   |                               |        |               |               |               |             |             |        |               |             |               |             |             |               |  |
|---|-------------------------------|--------|---------------|---------------|---------------|-------------|-------------|--------|---------------|-------------|---------------|-------------|-------------|---------------|--|
| capacity in ml  | 4-7                           | 8      | 8.5-10        | 15            | 50            | 12          | 25          | 30     | 50            | 50          | 10            | 14          | 30          | 50            |  |
| Ø x L in mm   | 16x75                         | 16x125 | 16x100        | 17x120        | 29x115        | 17x100      | 25x90       | 25x110 | 29x115        | 29x115      | 16x80         | 16.5x106    | 26x95       | 29x107        |  |
| <b>Cat. No.</b>   | <b>blood collection tubes</b> |        |               | <b>0509</b>   | <b>0513</b>   | <b>-</b>    |             |        |               | <b>0513</b> | <b>-</b>      | <b>0545</b> | <b>0546</b> |               |  |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 1751 |                               |        |               |               |               |             |             |        |               |             |               |             |             |               |  |
| carrier<br>Cat. No. 1752                                |                               |        |               |               |               |             |             |        |               |             |               |             |             |               |  |
| <b>Cat. No.</b>   | <b>1763-A</b>                 |        | <b>1763-A</b> | <b>1771-A</b> | <b>1772-A</b> | <b>1773</b> | <b>1779</b> |        | <b>1774-A</b> |             | <b>1763-A</b> |             | <b>1775</b> | <b>1774-A</b> |  |
| boring Ø x L in mm                                      | 17.5x62                       |        | 17.5x62       | 17x84         | 30x84         | 17x78       | 26.5x72     |        | 30x80         |             | 17.5x62       |             | 26.5x70     | 30x80         |  |
| tubes per rotor   | 52                            | 12     | 52            | 36            | 16            | 36          | 20          |        | 16            |             | 52            |             | 24          | 16            |  |
| max. RCF <sup>2)</sup>                                  | 4.668                         |        |               | 4.863         | 4.863         | 4.696       | 4.528       |        | 4.752         |             | 4.668         |             | 4.807       | 4.752         |  |
| radius in mm  | 167                           |        |               | 174           | 174           | 168         | 162         |        | 170           |             | 167           |             | 172         | 170           |  |
| run-up in sec   | 42                            |        |               |               |               |             |             |        |               |             |               |             |             |               |  |
| run-down in sec, braked                                 | 27                            |        |               |               |               |             |             |        |               |             |               |             |             |               |  |
| temperature in °C <sup>1)</sup>                         | 0                             |        |               |               |               |             |             |        |               |             |               |             |             |               |  |

|   |             |                            |                |                 |              |                |                            |                         |  |
|---|-------------|----------------------------|----------------|-----------------|--------------|----------------|----------------------------|-------------------------|--|
| capacity in ml  | 85          | 94                         | 175            | 175             | 200          | 225            | 250                        | 290                     |  |
| Ø x L in mm   | 38x106      | 38x102                     | 61x118         | 62x144          | 60x130       | 61x137         | 61x122                     | 62x137                  |  |
| <b>Cat. No.</b>   | <b>0547</b> | <b>0538</b> <sup>13)</sup> | <b>Falcon®</b> | <b>Nalgene®</b> | <b>Nunc®</b> | <b>Falcon®</b> | <b>5127</b> <sup>28)</sup> | <b>-</b> <sup>28)</sup> |  |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 1751 |             |                            |                |                 |              |                |                            |                         |  |
| carrier<br>Cat. No. 1752                                |             |                            |                |                 |              |                |                            |                         |  |
| <b>Cat. No.</b>   | <b>1777</b> | <b>1782</b>                | <b>1778</b>    | <b>1778</b>     | <b>1782</b>  | <b>1782</b>    | <b>1769</b>                |                         |  |
| boring Ø x L in mm                                      | 38.5x80     | 62x111                     | 62x111         | 62x111          | 62x111       | 62x111         | 62x100                     |                         |  |
| tubes per rotor   | 8           | 4                          |                |                 |              |                |                            |                         |  |
| max. RCF <sup>2)</sup>                                  | 4.807       | 4.863                      |                |                 |              |                |                            |                         |  |
| radius in mm  | 172         | 174                        |                |                 |              |                |                            |                         |  |
| run-up in sec   | 42          |                            |                |                 |              |                |                            |                         |  |
| run-down in sec, braked                                 | 27          |                            |                |                 |              |                |                            |                         |  |
| temperature in °C <sup>1)</sup>                         | 0           |                            |                |                 |              |                |                            |                         |  |

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.  
 2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.  
 3) When using these tubes, carrier 1752 and 5051 cannot be closed with lid 1751 resp. 5053.

**Swing-out rotor, 4-place**



±90°

n = 4,000 min<sup>-1</sup>  
max. RCF 3,095

illustrated with carriers 5051  
and lids 5053

**Cat. No.** (without carriers) **1798**

|                                    |             |                  |             |                          |                           |                          |                           |                          |                          |                          |                          |                          |
|------------------------------------|-------------|------------------|-------------|--------------------------|---------------------------|--------------------------|---------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| capacity in ml                     | 1.5/2.0     |                  | 3           | 5                        | 6                         | 7                        | 9                         | 15                       | 25                       | 50                       | 100                      | 100                      |
| Ø x L in mm                        | 11 x 38     |                  | 10 x 60     | 12 x 75                  | 12 x 82                   | 12 x 100                 | 14 x 100                  | 17 x 100                 | 24 x 100                 | 34 x 100                 | 40 x 115                 | 44 x 100                 |
| <b>Cat. No.</b>                    | -           | <b>2078/0536</b> | -           | <b>0553<sup>2)</sup></b> | <b>0501<sup>2)</sup></b>  | <b>0578<sup>2)</sup></b> | <b>0500<sup>2)</sup></b>  | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>0523<sup>2)</sup></b> | <b>0526<sup>2)</sup></b> |
| lid Cat. No. 5053                  |             |                  |             |                          |                           |                          |                           |                          |                          |                          |                          |                          |
| carrier<br>Cat. No. 5051           |             |                  |             |                          |                           |                          |                           |                          |                          |                          |                          |                          |
| <b>Cat. No.</b>                    | <b>5257</b> | <b>5281</b>      | <b>5267</b> | <b>5227</b>              | <b>5247<sup>18)</sup></b> | <b>5264</b>              | <b>5248<sup>18)</sup></b> | <b>5242</b>              | <b>5243</b>              | <b>5249</b>              | <b>5262</b>              |                          |
| boring Ø x L in mm                 | 12.5 x 42   | 11.5 x 50        | 11 x 44     | 12.5 x 42                | 12.5 x 86                 | 16 x 50                  | 17.5 x 86                 | 26 x 86                  | 36 x 86                  | 42 x 86                  | 45.5 x 86                |                          |
| tubes per rotor                    | 160         | 64               | 80          | 80                       | 80                        | 48                       | 48                        | 20                       | 8                        | 4                        |                          |                          |
| max. RCF <sup>2)</sup> upper/lower | 1,950/2,826 | 2,826            | 2,737       | 2,773                    | 2,755                     | 2,773                    | 2,755                     |                          |                          |                          |                          |                          |
| radius in mm upper/lower           | 109/158     | 158              | 153         | 155                      | 154                       | 155                      | 154                       |                          |                          |                          |                          |                          |
| run-up in sec                      | 24          |                  |             |                          |                           |                          |                           |                          |                          |                          |                          |                          |
| run-down in sec, braked            | 17          |                  |             |                          |                           |                          |                           |                          |                          |                          |                          |                          |
| temperature in °C <sup>1)</sup>    | -8          |                  |             |                          |                           |                          |                           |                          |                          |                          |                          |                          |















|                                 |                                     |             |             |             |             |             |             |             |          |             |             |             |          |
|---------------------------------|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------|-------------|-------------|-------------|----------|
| capacity in ml                  | 1.1-1.4                             | 2.6-3.4     | 2.7-3       | 4-5.5       | 4.5-5       | 4.9         | 7.5-8.5     | 9-10        | 10       | 1.6-5       | 4-7         | 4-7         | 8.5-10   |
| Ø x L in mm                     | 8 x 66                              | 13 x 65     | 11 x 66     | 15 x 75     | 11 x 92     | 13 x 90     | 15 x 92     | 16 x 92     | 15 x 102 | 13 x 75     | 13 x 100    | 16 x 75     | 16 x 100 |
| <b>Cat. No.</b>                 | <b>blood collection/urine tubes</b> |             |             |             |             |             |             |             |          |             |             |             |          |
| lid Cat. No. 5053               |                                     |             |             |             |             |             |             |             |          |             |             |             |          |
| carrier<br>Cat. No. 5051        |                                     |             |             |             |             |             |             |             |          |             |             |             |          |
| <b>Cat. No.</b>                 | <b>5267</b>                         | <b>5268</b> | <b>5227</b> | <b>5264</b> | <b>5227</b> | <b>5268</b> | <b>5264</b> | <b>5258</b> |          | <b>5268</b> | <b>5264</b> | <b>5248</b> |          |
| boring Ø x L in mm              | 11 x 44                             | 13.5 x 52   | 12.5 x 42   | 16 x 50     | 12.5 x 42   | 13.5 x 52   | 16 x 50     | 17.6 x 86   |          | 13.5 x 52   | 16 x 50     | 17.5 x 86   |          |
| tubes per rotor                 | 80                                  | 48          | 80          | 48          | 80          | 48          | 44          | 48          |          |             |             |             |          |
| max. RCF <sup>2)</sup>          | 2,737                               | 2,808       | 2,773       |             | 2,808       | 2,773       | 2,755       | 2,808       |          | 2,773       | 2,755       |             |          |
| radius in mm                    | 153                                 | 157         | 155         |             | 157         | 155         | 154         | 157         |          | 155         | 154         |             |          |
| run-up in sec                   | 24                                  |             |             |             |             |             |             |             |          |             |             |             |          |
| run-down in sec, braked         | 17                                  |             |             |             |             |             |             |             |          |             |             |             |          |
| temperature in °C <sup>1)</sup> | -8                                  |             |             |             |             |             |             |             |          |             |             |             |          |

<sup>5)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.  
<sup>13)</sup> The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 106 mm.  
<sup>18)</sup> With Cat. No. 5247-91 or 5248-91 these adapters can also be ordered with a decanting aid.  
<sup>24)</sup> Carrier must be loaded as illustrated.  
<sup>28)</sup> At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.



illustrated with carriers 5051

**Swing-out rotor Cat. No. (without carriers) 1798**

|                                    |   |   |   |   |   |   |  |
|------------------------------------|---|---|---|---|---|---|--|
| capacity in ml                     | 15  | 30  | 50  | 12  | 30  | 50  | two-tier frame for cyto accessories  |
| Ø x L in mm                        | 17 x 120  | 25 x 110  | 29 x 115  | 17 x 100  | 25 x 110  | 29 x 115  |  |
| <b>Cat. No.</b>                    | <b>0509</b>   | -   | <b>0513</b>   | -   | -   | -   | <b>cyto chambers</b> <sup>23)</sup>  |
| lid Cat. No. 5053                  |  |  |  |  |  |  |  |
| <b>carrier</b><br>Cat. No. 5051    |  |  |  |  |  |  |  |
| <b>Cat. No.</b>                    | <b>6306</b>   | <b>5266</b>   | <b>5259</b>   | <b>6306</b>   | <b>5266</b>   | <b>5243</b>   | <b>5280</b>  |
| boring Ø x L in mm                 | 17 x 90   | 26 x 86   | 30 x 86   | 17 x 90   | 26 x 86   | 36 x 86   | -  |
| tubes per rotor                    | 28  | 20  | 8   | 28  | 20  | 8   | 8  |
| max. RCF <sup>2)</sup> upper/lower | 2,898   | 2,755   | 2,826   | 2,898   | 2,755   | 2,755   | 1,735 / 2,737  |
| radius in mm upper/lower           | 162   | 154   | 158   | 162   | 154   | 154   | 97 / 153   |
| run-up in sec                      | 24  |   |   |   |   |   |  |
| run-down in sec, braked            | 17  |   |   |   |   |   |  |
| temperature in °C <sup>1)</sup>    | -8  |   |   |   |   |   |  |

<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.

<sup>3)</sup> When using these tubes, carrier 5051 resp. 5092 cannot be closed with lid 5053 resp. 5093.



illustrated with carriers 5092 and lids 5093  
with bio-containment<sup>5)</sup>

**Swing-out rotor Cat. No. (without carriers) 1798**

|   |                          |                          |                          |             |                          |                          |                          |                          |                          |                          |
|---|--------------------------|--------------------------|--------------------------|-------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| capacity in ml  | 5                        | 6                        | 7                        | 10          | 15                       | 25                       | 50                       | 100                      | 100                      | 250                      |
| Ø x L in mm   | 12x75                    | 12x82                    | 12x100                   | 17x70       | 17x100                   | 24x100                   | 34x100                   | 44x100                   | 40x115                   | 65x115                   |
| <b>Cat. No.</b>   | <b>0553<sup>2)</sup></b> | <b>0501<sup>2)</sup></b> | <b>0578<sup>2)</sup></b> | <b>2079</b> | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>0526<sup>2)</sup></b> | <b>0523<sup>2)</sup></b> | <b>0530<sup>2)</sup></b> |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 5093 |                          |                          |                          |             |                          |                          |                          |                          |                          |                          |
| <b>carrier</b><br>Cat. No. 5092                         |                          |                          |                          |             |                          |                          |                          |                          |                          |                          |
| <b>Cat. No.</b>   | <b>5128</b>              | <b>5120</b>              | <b>5136</b>              | <b>5122</b> | <b>5124</b>              | <b>5125</b>              | <b>5126</b>              | <b>5126</b>              | <b>5126</b>              | <b>1791</b>              |
| boring Ø x L in mm                                      | 12.8x45                  | 12.8x82                  | 12.8x82                  | 17.5x60.7   | 25.5x82                  | 35.5x85                  | 45.5x85                  | 42x85                    | 42x85                    | 66x103                   |
| tubes per rotor   | 48                       |                          | 32                       |             | 16                       |                          | 4                        |                          | 4                        |                          |
| max. RCF <sup>2)</sup>                                  | 3,005                    |                          | 2,952                    |             | 2,898                    |                          | 2,952                    |                          | 3,095                    |                          |
| radius in mm  | 168                      |                          | 165                      |             | 162                      |                          | 165                      |                          | 173                      |                          |
| run-up in sec   | 24                       |                          |                          |             |                          |                          |                          |                          |                          |                          |
| run-down in sec, braked                                 | 17                       |                          |                          |             |                          |                          |                          |                          |                          |                          |
| temperature in °C <sup>1)</sup>                         | -8                       |                          |                          |             |                          |                          |                          |                          |                          |                          |

|   |                          |             |             |             |             |             |             |             |                           |                        |
|---|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------------------|------------------------|
| capacity in ml  | 15                       | 30          | 50          | 12          | 25          | 30          | 50          | 10          | 250                       | 290                    |
| Ø x L in mm   | 17x120                   | 25x110      | 29x115      | 17x100      | 25x90       | 25x110      | 29x115      | 16x80       | 61x122                    | 62x137                 |
| <b>Cat. No.</b>   | <b>0509</b>              | -           | <b>0513</b> | -           | -           | -           | -           | -           | <b>5127<sup>28)</sup></b> | <b>-<sup>28)</sup></b> |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 5093 |                          |             |             |             |             |             |             |             |                           |                        |
| <b>carrier</b><br>Cat. No. 5092                         |                          |             |             |             |             |             |             |             |                           |                        |
| <b>Cat. No.</b>   | <b>5129<sup>4)</sup></b> | <b>5122</b> | <b>5123</b> | <b>5121</b> | <b>5134</b> | <b>5122</b> | <b>5135</b> | <b>5136</b> | <b>6319</b>               | <b>6319</b>            |
| boring Ø x L in mm                                      | 17x85                    | 25.5x82     | 30x85       | 17.5x82     | 26x73       | 25.5x82     | 30x99       | 17.5x60.7   | 66x103                    | 66x103                 |
| tubes per rotor   | 28                       | 16          | 8           | 28          | 12          | 16          | 8           | 32          | 4                         |                        |
| max. RCF <sup>2)</sup>                                  | 3,095                    | 2,898       | 3,095       | 3,005       | 2,826       | 2,898       | 3,023       | 2,952       | 3,095                     |                        |
| radius in mm  | 173                      | 162         | 173         | 168         | 158         | 162         | 169         | 165         | 173                       |                        |
| run-up in sec   | 24                       |             |             |             |             |             |             |             |                           |                        |
| run-down in sec, braked                                 | 17                       |             |             |             |             |             |             |             |                           |                        |
| temperature in °C <sup>1)</sup>                         | -8                       |             |             |             |             |             |             |             |                           |                        |
























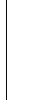
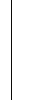
4) Please remove the inserts.  
 5) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.  
 23) Please ask for our detailed cyto brochure.  
 28) At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.



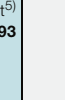
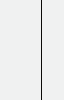



ROTINA 380



illustrated with carriers 5092 and lids 5093  
with bio-containment<sup>5)</sup>

**Swing-out rotor Cat. No. (without carriers) 1798**

|  |   |   |   |   |   |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| capacity in ml   | 1.1–1.4   | 2.6–3.4   | 2.7–3   | 4–5.5   | 4.5–5   | 4.9   | 7.5–8.5   | 9–10  | 10  | 1.6–5   | 4–7   | 4–7   |
| Ø x L in mm  | 8x66  | 13x65   | 11x66   | 15x75   | 11x92   | 13x90   | 15x92   | 16x92   | 15x102  | 13x75   | 16x75   | 16x75   |
| <b>Cat. No.</b>  | <b>blood collection/urine tube</b>  |   |   |   |   |   |   |   |   |   |   |   |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 5093<br> |  |  |  |  |  |  |  |    |  |  |  |  |
| <b>carrier</b><br>Cat. No. 5092  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Cat. No.</b>  | <b>5138</b>   |   | <b>5136</b>   | <b>5120</b>   | <b>5137</b>   | <b>5136</b>   |   |   | <b>5138</b>   | <b>5136</b>   | <b>5121-93</b>  |   |
| boring Ø x L in mm   | 12.8x54.5   |   | 17.5x60.7   | 12.8x82   | 13.5x60.7   | 17.5x60.7   |   |   | 12.8x54.5   | 17.5x60.7   | 17.5x52   |   |
| tubes per rotor  | 48  |   | 32  | 48  | 32  | 32  |   |   | 48  | 32  | 28  |   |
| max. RCF <sup>2)</sup>   | 2,540   |   | 2,952   | 3,005   | 2,952   | 2,952   |   |   | 2,540   | 2,952   | 3,005   |   |
| radius in mm   | 142   |   | 165   | 168   | 165   | 165   |   |   | 142   | 165   | 168   |   |
| run-up in sec  | 24  |   |   |   |   |   |   |   |   |   |   |   |
| run-down in sec, braked  | 17  |   |   |   |   |   |   |   |   |   |   |   |
| temperature in °C <sup>1)</sup>  | -8  |   |   |   |   |   |   |   |   |   |   |   |

|  |   |   |   |
|--|---|---|---|
| capacity in ml   | 4–7   | 8   | 8.5–10  |
| Ø x L in mm  | 13x100  | 16x125  | 16x100  |
| <b>Cat. No.</b>  | <b>blood/urine tubes</b>  |   |   |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 5093<br> |  |  |  |
| <b>carrier</b><br>Cat. No. 5092  |  |  |  |
| <b>Cat. No.</b>  | <b>5120</b>   | <b>5121<sup>4)</sup></b>  | <b>5136</b>   |
| boring Ø x L in mm   | 12.8x82   | 17.5x82   | 17.5x60.7   |
| tubes per rotor  | 48  | 28  | 32  |
| max. RCF <sup>2)</sup>   | 3,005   | 3,059   | 2,952   |
| radius in mm   | 168   | 171   | 165   |
| run-up in sec  | 24  |   |   |
| run-down in sec, braked  | 17  |   |   |
| temperature in °C <sup>1)</sup>  | -8  |   |   |

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.  
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.  
3) When using these tubes, carrier 5092 cannot be closed with lid 5093.



**Swing-out rotor, 6-place**


























±90°

n = 4,000 min<sup>-1</sup>  
max. RCF 2,808

illustrated with carriers 1742

**Cat. No.** (without carriers) **1726**

| capacity in ml  | 5   | 6   | 7   | 9   | 15   | 20  | 25  | 45  | 50  | 8.5 x 10  | 30  |   |
|---|---|---|---|---|--|---|---|---|---|---|---|---|
| Ø x L in mm   | 12 x 75   | 12 x 82   | 12 x 100  | 14 x 100  | 17 x 100   | 21 x 100  | 24 x 100  | 31 x 100  | 34 x 100  | 16 x 100  | 26 x 95   |   |
| Cat. No.  | <b>0553<sup>2)</sup></b>  | <b>0501<sup>2)</sup></b>  | <b>0578<sup>2)</sup></b>  | <b>0500<sup>2)</sup></b>  | <b>0518<sup>2)</sup></b>   | -   | <b>0519<sup>2)</sup></b>  | -   | <b>0521<sup>2)</sup></b>  | blood coll. tube  | <b>0545</b>   |   |
| <br><b>rotor</b><br>Cat. No. <b>1726</b> |                        |  |                        |                        |  |  |  |  |  |  |  |   |
|   | <br>with decanting aid |  | <br>with decanting aid | <br>with decanting aid |   |    |  |  |  |  |  |  |
| Cat. No.  | <b>1369-91</b>  | <b>1372</b>   | <b>1369-92</b>  | <b>1369-92</b>  | <b>1370</b>  | <b>1369</b>   | <b>1346</b>   | <b>1745</b>   | <b>1345</b>   | <b>1746</b>   | <b>1369</b>   | <b>1745</b>   |
| boring Ø x L in mm  | 11.5 x 64.4   | 13.5 x 65   | 11.5 x 71.5   | 11.5 x 71.5   | 14.6 x 74  | 17.6 x 74   | 21.5 x 74   | 26 x 78   | 32 x 74   | 35 x 78   | 17.6 x 74   | 26 x 78   |
| tubes per rotor   | 24  | 102   | 24  | 24  | 30   | 24  | 12  |   | 6   |   | 24  | 12  |
| max. RCF <sup>2)</sup>  | 2,576   | 2,522   | 2,665   | 2,665   |  | 2,719   | 2,808   | 2,719   | 2,808   | 2,665   | 2,808   |   |
| radius in mm  | 144   | 141   | 149   | 149   |  | 152   | 157   | 152   | 157   | 149   | 157   |   |
| run-up in sec   | 19  |   |   |   |  |   |   |   |   |   |   |   |
| run-down in sec, braked   | 18  |   |   |   |  |   |   |   |   |   |   |   |
| temperature in °C <sup>1)</sup>   | -6  |   |   |   |  |   |   |   |   |   |   |   |

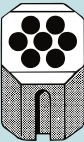














| capacity in ml  | suspensions for cyto accessories  |   |
|---|---|---|
| Ø x L in mm   |   |   |
| Cat. No.  | <b>cyto chambers<sup>23)</sup></b>  |   |
| <br><b>rotor</b><br>Cat. No. <b>1726</b> |  |  |
|   |  |  |
| Cat. No.  | <b>1660</b>   | <b>1680</b>   |
| boring Ø x L in mm  | -   |   |
| tubes per rotor   | 6   |   |
| max. RCF <sup>2)</sup>  | 2,003   | 1,825   |
| radius in mm  | 112   | 102   |
| run-up in sec   | 19  |   |
| run-down in sec, braked   | 18  |   |
| temperature in °C <sup>1)</sup>   | -6  |   |












<sup>4)</sup> Please remove the inserts.  
<sup>5)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.  
<sup>23)</sup> Please ask for our detailed cyto brochure.

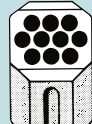









illustrated with carriers 1742

**Cat. No.** (without carriers) **1726**

|   |   |  |   |   |   |   |   |   |   |   |
|---|---|--|---|---|---|---|---|---|---|---|
| capacity in ml  | 15  | 2.6–3.4  | 4–5.5   | 7.5–8.5   | 9–10  | 10  | 1.6–5   | 4–7   | 8.5–10  | 15  |
| Ø x L in mm   | 17 x 100  | 13 x 65  | 15 x 75   | 15 x 92   | 16 x 92   | 15 x 102  | 13 x 75   | 16 x 75   | 16 x 100  | 17 x 120  |
| <b>Cat. No.</b>   | <b>0518<sup>2)</sup></b>  | <b>blood collection/urine tubes</b>  |   |   |   |   |   |   |   | <b>0509</b>   |
| <br><b>carrier</b><br>Cat. No. <b>1742</b> |  |                   |  |  |  |  |                    |                  |  |                    |
|   |   | <br>rubber insert |   |   |   |   | <sup>24)</sup><br> | <br>rubber insert |   | <sup>24)</sup><br> |
| <b>Cat. No.</b>   | -   | <b>0716</b>  |   |   | -   | -   | <b>0716</b>   |   | -   |   |
| boring Ø x L in mm  | 17.6 x 78   |  |   |   |   |   |   |   |   |   |
| tubes per rotor   | 42  | 42   |   | 42  |   | 18  | 42  |   | 42  | 18  |
| max. RCF <sup>2)</sup>  | 2,808   | 2,683  |   | 2,808   |   | 2,683   |   | 2,808   |   |   |
| radius in mm  | 157   | 150  |   | 157   |   | 150   |   | 157   |   |   |
| run-up in sec   | 19  |  |   |   |   |   |   |   |   |   |
| run-down in sec, braked   | 18  |  |   |   |   |   |   |   |   |   |
| temperature in °C <sup>1)</sup>   | -6  |  |   |   |   |   |   |   |   |   |

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| capacity in ml  | 1.5   | 2.0   | 1   | 3   | 4   |
| Ø x L in mm   | 11 x 38   |   | 6 x 45  | 10 x 60   | 12 x 60   |
| <b>Cat. No.</b>   | <b>2078</b>   | <b>0536</b>   | <b>Rhesus</b>   | -   | -   |
| <br><b>carrier</b><br>Cat. No. <b>1366</b> |  |  |  |  |  |
|   |  |  |  |  |  |
| <b>Cat. No.</b>   | <b>5277</b>   | <b>1357</b>   | <b>1327</b>   | <b>1327</b>   | <b>1326</b>   |
| boring Ø x L in mm  | 11.5 x 38   |   | 6.5 x 23  | 10.5 x 23   | 12.5 x 44   |
| tubes per rotor   | 54  |   | 180   | 72  |   |
| max. RCF <sup>2)</sup>  | 2,325   |   | 2,308   | 2,290   |   |
| radius in mm  | 130   |   | 129   | 128   |   |
| run-up in sec   | 19  |   |   |   |   |
| run-down in sec, braked   | 18  |   |   |   |   |
| temperature in °C <sup>1)</sup>   | -6  |   |   |   |   |

|   |  |   |   |   |   |
|---|--|---|---|---|---|
| capacity in ml  | 9  | 1.1–1.4   | 4.5–5   | 4.9   | 4–7   |
| Ø x L in mm   | 14 x 100   | 8 x 66  | 11 x 92   | 13 x 90   | 13 x 100  |
| <b>Cat. No.</b>   | <b>0500<sup>2)</sup></b>   | <b>blood collection tubes</b>   |   |   |   |
| <br><b>carrier</b><br>Cat. No. <b>1741</b> |                   |                    |  |  |  |
|   | <br>rubber insert | <sup>24)</sup><br> |   |   |   |
| <b>Cat. No.</b>   | <b>0701</b>  | -   | -   | -   |   |
| boring Ø x L in mm  | 14.6 x 78  |   |   |   |   |
| tubes per rotor   | 60   | 36  | 60  | 60  |   |
| max. RCF <sup>2)</sup>  | 2,773  |   | 2,808   |   | 2,808   |
| radius in mm  | 155  |   | 157   |   | 157   |
| run-up in sec   | 19   |   |   |   |   |
| run-down in sec, braked   | 18   |   |   |   |   |
| temperature in °C <sup>1)</sup>   | -6   |   |   |   |   |

<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.

<sup>24)</sup> Carrier must be loaded as illustrated.

### Swing-out rotor, 10-place

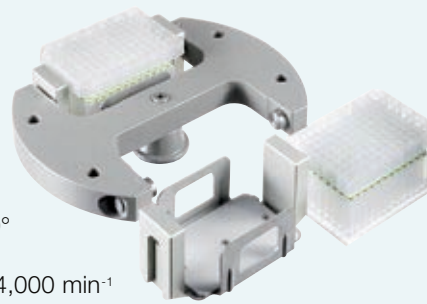
### Swing-out rotor, 2-place



∠45°

n = 4,000 min<sup>-1</sup>  
max. RCF 2,916

**Cat. No. (with carriers) 1717**



∠90°

n = 4,000 min<sup>-1</sup>  
max. RCF 2,397

**Cat. No. (without carriers) 1760**

|  |               |             |
|--|---------------|-------------|
| capacity in ml                               | 15            | 50          |
| Ø x L in mm                                  | 17 x 120      | 29 x 115    |
| <b>Cat. No.</b>                              | <b>0509</b>   | <b>0513</b> |
| <p><b>rotor</b><br/>Cat. No. <b>1717</b></p> |               |             |
|  |               |             |
| <b>Cat. No.</b>                              | <b>1462-A</b> | -           |
| boring Ø x L in mm                           | 17 x 84       | 38.4 x 89   |
| tubes per rotor                              | 10            |             |
| max. RCF <sup>2)</sup>                       | 2,916         |             |
| radius in mm                                 | 163           |             |
| run-up in sec                                | 19            |             |
| run-down in sec, braked                      | 14            |             |
| temperature in °C <sup>1)</sup>              | -9            |             |

|  |                    |   |               |                 |               |               |                                   |                            |                   |
|--|--------------------|---|---------------|-----------------|---------------|---------------|-----------------------------------|----------------------------|-------------------|
| D x W x H in mm                              | 86 x 128 x 15/17.5 |   | 86 x 128 x 22 | 86 x 128 x 44.5 | 86 x 128 x 46 | 86 x 128 x 83 | 59 x 84 x 11                      | 82 x 124 x 20              | -                 |
| <b>Cat. No.</b>                              | <b>MTP</b>         |   | <b>CP</b>     | <b>DWP</b>      | <b>MS</b>     | <b>QP</b>     | <b>Microtest Plate (Terasaki)</b> | <b>PCR Plate, 96 wells</b> | <b>PCR strips</b> |
| <p><b>rotor</b><br/>Cat. No. <b>1760</b></p> |                    |   |               |                 |               |               |                                   |                            |                   |
|  |                    |   |               |                 |               |               |                                   |                            |                   |
| <b>Cat. No.</b>                              | <b>1753-A</b>      |   |               |                 |               |               |                                   | <b>1753-A + 1485</b>       |                   |
| boring Ø x L in mm                           | -                  |   |               |                 |               |               |                                   |                            |                   |
| plates/strips per rotor                      | 10                 | 8 | 6             | 2               | 2             | 2             | 4                                 | 2                          | 24 x 8            |
| max. RCF <sup>2)</sup>                       | 2,397              |   |               |                 |               |               |                                   |                            |                   |
| radius in mm                                 | 134                |   |               |                 |               |               |                                   |                            |                   |
| run-up in sec                                | 30                 |   |               |                 |               |               |                                   |                            |                   |
| run-down in sec, braked                      | 23                 |   |               |                 |               |               |                                   |                            |                   |
| temperature in °C <sup>1)</sup>              | -8                 |   |               |                 |               |               |                                   |                            |                   |

ROTINA 380

## Angle rotor, 6-place







































✂ 45°

**ROTINA 380 R** n = 11,000 min<sup>-1</sup>, max. RCF 16,369

ROTINA 380 n = 10,000 min<sup>-1</sup>, max. RCF 13,528

**Cat. No. 1720**

| capacity in ml   | 1.5   | 2.0   | 15  | 25  | 50  | 75  | 94  | 7.5–8.5   | 9–10  |  |
|--|---|---|---|---|---|---|---|---|---|--|
| Ø x L in mm  | 11 x 38   |   | 17 x 100  | 24 x 100  | 34 x 100  | 35 x 105  | 38 x 102  | 15 x 92   | 16 x 92   |  |
| <b>Cat. No.</b>  | <b>2078</b>   | <b>0536</b>   | <b>0518<sup>2)</sup></b>  | <b>0519<sup>2)</sup></b>  | <b>0521<sup>2)</sup></b>  | <b>0548</b>   | <b>0549</b>   | <b>blood/urine tubes</b>  |   |  |
| <br><b>rotor</b><br>Cat. No. 1720 |  |  |  |  |    |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| <b>Cat. No.</b>  | <b>1449</b>   | <b>1451</b>   | <b>1451</b>   | <b>1447</b>   | <b>1463</b>   | <b>-</b>  | <b>1451</b>   |   |   |  |
| boring Ø x L in mm   | 11.4 x 39   |   | 17.5 x 92   | 26 x 85   | 35 x 89   | 38.4 x 89   | 17.5 x 92   |   |   |  |
| tubes per rotor  | 24  |   | 6   | 6   | 6   | 6   | 6   | 6   |   |  |
| max. RCF <sup>2)</sup> classic/cooled  | 12,969/15,692   |   | 12,745/15,422   | 12,410/15,016   | 13,304/16,098   | 13,528/16,369   | 12,745/15,422   |   |   |  |
| radius in mm   | 116   |   | 114   | 111   | 119   | 121   | 114   |   |   |  |
| run-up in sec classic/cooled   | 39/45   |   |   |   |   |   |   |   |   |  |
| run-down in sec classic/cooled, braked   | 36/44   |   |   |   |   |   |   |   |   |  |
| temperature in °C <sup>1)</sup>  | +1  |   |   |   |   |   |   |   |   |  |

| capacity in ml   | 8.5–10  | 15  | 50  | 10  | 30  | 50  | 85  | 94  |  |
|--|---|---|---|---|---|---|---|---|--|
| Ø x L in mm  | 16 x 100  | 17 x 120  | 29 x 115  | 16 x 80   | 26 x 95   | 29 x 107  | 38 x 106  | 38 x 102  |  |
| <b>Cat. No.</b>  | <b>blood/urine tube</b>   | <b>0509</b>   | <b>0513</b>   | <b>-</b>  | <b>0545</b>   | <b>0546</b>   | <b>0547</b>   | <b>0538<sup>13)</sup></b>   |  |
| <br><b>rotor</b><br>Cat. No. 1720 |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| <b>Cat. No.</b>  | <b>1451</b>   | <b>1466</b>   | <b>1454</b>   | <b>1448</b>   | <b>1447</b>   | <b>1446</b>   | <b>-</b>  |   |  |
| boring Ø x L in mm   | 17.5 x 92   | 17 x 106  | 29.8 x 97   | 16.5 x 74   | 26 x 85   | 29 x 92   | 38.4 x 89   |   |  |
| tubes per rotor  | 6   | 6   | 6   | 12  | 6   | 6   | 6   |   |  |
| max. RCF <sup>2)</sup> classic/cooled  | 12,745/15,422   | 13,081/15,828   | 12,745/15,422   | 12,410/15,016   | 12,410/15,016   | 12,969/15,692   | 13,528/16,369   |   |  |
| radius in mm   | 114   | 117   | 114   | 111   | 111   | 116   | 121   |   |  |
| run-up in sec classic/cooled   | 39/45   |   |   |   |   |   |   |   |  |
| run-down in sec classic/cooled, braked   | 36/44   |   |   |   |   |   |   |   |  |
| temperature in °C <sup>1)</sup>  | +1  |   |   |   |   |   |   |   |  |

<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.

**Angle rotor, 6-place**



45°

with bio-containment<sup>5)</sup>

**ROTINA 380 R** n = 11,000 min<sup>-1</sup>, max. RCF 16,504

ROTINA 380 n = 10,000 min<sup>-1</sup>, max. RCF 13,640

**Cat. No. 1792**

|  |               |             |                          |                          |                          |               |               |                          |             |  |
|--|---------------|-------------|--------------------------|--------------------------|--------------------------|---------------|---------------|--------------------------|-------------|--|
| capacity in ml                               | 1.5           | 2.0         | 15                       | 25                       | 50                       | 75            | 94            | 7.5–8.5                  | 9–10        |  |
| Ø x L in mm                                  | 11 x 38       |             | 17 x 100                 | 24 x 100                 | 34 x 100                 | 35 x 105      | 38 x 102      | 15 x 92                  | 16 x 92     |  |
| <b>Cat. No.</b>                              | <b>2078</b>   | <b>0536</b> | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>0548</b>   | <b>0549</b>   | <b>blood/urine tubes</b> |             |  |
| lid with bio-containment <sup>5)</sup> incl. |               |             |                          |                          |                          |               |               |                          |             |  |
| <b>rotor</b><br>Cat. No. 1792                |               |             |                          |                          |                          |               |               |                          |             |  |
| <b>Cat. No.</b>                              | <b>1449</b>   | <b>1451</b> | <b>1447</b>              | <b>1463</b>              | <b>-</b>                 | <b>1451</b>   | <b>-</b>      | <b>1451</b>              | <b>1451</b> |  |
| boring Ø x L in mm                           | 11.4 x 39     |             | 17.5 x 92                | 26 x 85                  | 35 x 89                  | 38.2 x 89.6   | 38.2 x 89.6   | 17.5 x 92                |             |  |
| tubes per rotor                              | 24            |             | 6                        |                          |                          |               |               |                          |             |  |
| max. RCF <sup>2)</sup> classic/cooled        | 13,081/15,828 |             | 12,857/15,557            | 12,522/15,151            | 13,640/16,504            | 13,640/16,504 | 13,640/16,504 | 12,857/15,557            |             |  |
| radius in mm                                 | 117           |             | 115                      | 112                      | 122                      | 122           | 122           | 115                      |             |  |
| run-up in sec classic/cooled                 | 40/48         |             |                          |                          |                          |               |               |                          |             |  |
| run-down in sec classic/cooled, braked       | 37/44         |             |                          |                          |                          |               |               |                          |             |  |
| temperature in °C <sup>1)</sup>              | +4            |             |                          |                          |                          |               |               |                          |             |  |

|  |                          |             |               |               |               |               |               |               |                           |
|--|--------------------------|-------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------------------|
| capacity in ml                               | 10                       | 8.5–10      | 15            | 50            | 10            | 30            | 50            | 85            | 94                        |
| Ø x L in mm                                  | 15 x 102                 | 16 x 100    | 17 x 120      | 29 x 115      | 16 x 80       | 26 x 95       | 29 x 107      | 38 x 106      | 38 x 102                  |
| <b>Cat. No.</b>                              | <b>blood/urine tubes</b> |             | <b>0509</b>   | <b>0513</b>   | <b>-</b>      | <b>0545</b>   | <b>0546</b>   | <b>0547</b>   | <b>0538<sup>13)</sup></b> |
| lid with bio-containment <sup>5)</sup> incl. |                          |             |               |               |               |               |               |               |                           |
| <b>rotor</b><br>Cat. No. 1792                |                          |             |               |               |               |               |               |               |                           |
| <b>Cat. No.</b>                              | <b>1451</b>              | <b>1466</b> | <b>1454</b>   | <b>1448</b>   | <b>1447</b>   | <b>1446</b>   | <b>1446</b>   | <b>-</b>      | <b>-</b>                  |
| boring Ø x L in mm                           | 17.5 x 92                |             | 17 x 106      | 29.8 x 97     | 16.5 x 74     | 26 x 85       | 29 x 92       | 38.2 x 89.6   |                           |
| tubes per rotor                              | 6                        |             |               |               | 12            | 6             |               |               |                           |
| max. RCF <sup>2)</sup> classic/cooled        | 12,857/15,557            |             | 13,081/15,828 | 13,304/16,098 | 12,857/15,557 | 12,522/15,151 | 13,081/15,828 | 13,640/16,504 |                           |
| radius in mm                                 | 115                      |             | 117           | 119           | 115           | 112           | 117           | 122           |                           |
| run-up in sec classic/cooled                 | 40/48                    |             |               |               |               |               |               |               |                           |
| run-down in sec classic/cooled, braked       | 37/44                    |             |               |               |               |               |               |               |                           |
| temperature in °C <sup>1)</sup>              | +4                       |             |               |               |               |               |               |               |                           |

<sup>5)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

<sup>13)</sup> The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 106 mm.

### Angle rotor, 30-place

### Drum rotor, 6-place



45°

n = 15,000 min<sup>-1</sup>  
max. RCF 24,400

with bio-containment<sup>5)</sup>

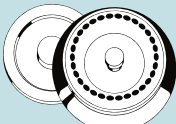








**Cat. No. 1789-A**

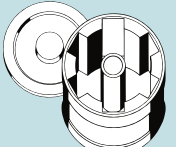











n = 15,000 min<sup>-1</sup>  
max. RCF 18,866

illustrated with  
adapters 1377

**Cat. No. (without adapters) 1711**

| capacity in ml   | 0.2   | 0.4   | 0.5   | 0.8   | 1.5   | 2.0   |
|--|---|---|---|---|---|---|
| Ø x L in mm  | 6x18  | 6x45  | 8x30  | 8x45  | 11x38   |   |
| Cat. No.   | -   |   |   |   | <b>2078</b>   | <b>0536</b>   |
| lid with bio-containment <sup>5)</sup><br>incl.<br><br><b>rotor</b><br>Cat. No. <b>1789-A</b> |  |  |  |  |  |  |
|  |  |  |   |   |   |   |
| Cat. No.   | <b>2024</b>   | <b>2023</b>   | <b>2031</b> <sup>7)</sup>   | -   |   |   |
| boring Ø x L in mm   | 6x40  | 8x40  | 10.2x19   | 11.2x40.9   |   |   |
| tubes per rotor  | 30  |   |   |   |   |   |
| max. RCF <sup>2)</sup>   | 24,400  |   |   |   |   |   |
| radius in mm   | 97  |   |   |   |   |   |
| run-up in sec  | 23  |   |   |   |   |   |
| run-down in sec, braked  | 20  |   |   |   |   |   |
| temperature in °C <sup>1)</sup>  | +4  |   |   |   |   |   |

| capacity in ml   | 0.2   | 0.4   | 0.5   | 0.8   | 1.5   | 2.0   |
|--|---|---|---|---|---|---|
| Ø x L in mm  | 6x18  | 6x45  | 8x30  | 8x45  | 11x38   |   |
| Cat. No.   | -   |   |   |   | <b>2078</b>   | <b>0536</b>   |
| lid incl.<br><br><b>rotor</b><br>Cat. No. <b>1711</b> |  |  |  |  |  |  |
|  |  |  |  |   |   |   |
| Cat. No.   | <b>1378</b>   | <b>1379</b>   | <b>1377</b>   |   |   |   |
| boring Ø x L in mm   | 6x40  | 8.4x43  | 10.8x37   |   |   |   |
| tubes per rotor  | 192   | 126   | 60  |   |   |   |
| max. RCF <sup>2)</sup>   | 18,866  |   |   |   |   |   |
| radius in mm   | 75  |   |   |   |   |   |
| run-up in sec  | 25  |   |   |   |   |   |
| run-down in sec, braked  | 23  |   |   |   |   |   |
| temperature in °C <sup>1)</sup>  | +2  |   |   |   |   |   |

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.

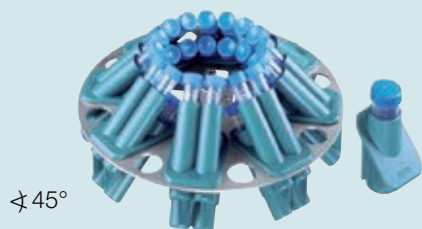
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.

5) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.



**Angle rotor, 8-place**

**Cyto rotor, 8-place**



↗ 45°

n = 4,500 min<sup>-1</sup>  
max. RCF 3,305

**Cat. No.** (without adapters) **1721**



For detailed information on the comprehensive Hettich cyto system please turn to the pages 156 -158.

n = 4,000 min<sup>-1</sup>  
max. RCF 2,415

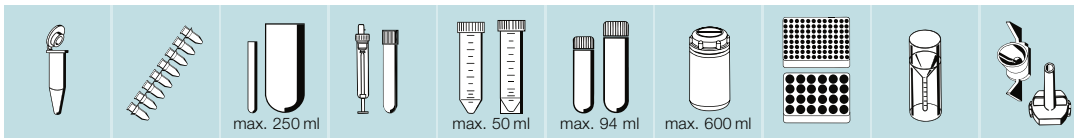
**Cat. No.** (without suspensions) **1748**

|  |                          |                          |                                    |         |       |            |              |        |            |            |              |                |
|--|--------------------------|--------------------------|------------------------------------|---------|-------|------------|--------------|--------|------------|------------|--------------|----------------|
| capacity in ml                           | 5                        | 15                       | 1.1-1.4                            | 2.6-3.4 | 2.7-3 | 9-10       | 1.6-5        | 4-7    | 8.5-10     | 12         | 15           | 50             |
| Ø x L in mm                              | 12x75                    | 17x100                   | 8x66                               | 13x65   | 11x66 | 16x92      | 13x75        | 13x100 | 16x100     | 17x102     | 17x120       | 29 x 115       |
| <b>Cat. No.</b>                          | <b>0553<sup>2)</sup></b> | <b>0518<sup>2)</sup></b> | <b>blood collection/urine tube</b> |         |       |            |              |        |            |            | <b>0509</b>  | <b>0513</b>    |
| <br><b>rotor</b><br>Cat. No. <b>1721</b> |                          |                          |                                    |         |       |            |              |        |            |            |              |                |
|  | + 1054-A<br>             | + 0716<br>               | + 1054-A<br>                       |         |       | + 0716<br> | + 1054-A<br> |        | + 0716<br> | + 0716<br> | + E 2109<br> | + E 2110-A<br> |
| <b>Cat. No.</b>                          | <b>1467</b>              | <b>1467</b>              | <b>1467</b>                        |         |       |            |              |        |            |            | <b>1467</b>  | <b>1468</b>    |
| boring Ø x L in mm                       | 17.4x91                  |                          | 17.4x91                            |         |       |            |              |        |            |            | 17.4x91      | 30.2x92        |
| tubes per rotor                          | 32                       |                          | 32                                 |         |       |            |              |        |            |            | 32           | 8              |
| max. RCF <sup>2)</sup>                   | 2,762                    | 3,215                    | 2,762                              |         |       | 3,215      | 2,762        | 3,305  | 3,215      |            | 3,283        | 3,147          |
| radius in mm                             | 122                      | 142                      | 122                                |         |       | 142        | 122          | 146    | 142        |            | 145          | 139            |
| run-up in sec                            | 17                       |                          |                                    |         |       |            |              |        |            |            |              |                |
| run-down in sec, braked                  | 14                       |                          |                                    |         |       |            |              |        |            |            |              |                |
| temperature in °C <sup>1)</sup>          | - 11                     |                          |                                    |         |       |            |              |        |            |            |              |                |

|  |             |             |             |
|--|-------------|-------------|-------------|
| capacity in ml                           | 12          | 50          | 50          |
| Ø x L in mm                              | 17x100      | 29x115      | 29x107      |
| <b>Cat. No.</b>                          | -           | -           | <b>0546</b> |
| <br><b>rotor</b><br>Cat. No. <b>1721</b> |             |             |             |
|  | + 0716<br>  |             |             |
| <b>Cat. No.</b>                          | <b>1467</b> | <b>1468</b> |             |
| boring Ø x L in mm                       | 17.4x91     | 30.2x92     |             |
| tubes per rotor                          | 32          | 8           |             |
| max. RCF <sup>2)</sup>                   | 3,215       | 3,147       |             |
| radius in mm                             | 142         | 139         |             |
| run-up in sec                            | 17          |             |             |
| run-down in sec, braked                  | 14          |             |             |
| temperature in °C <sup>1)</sup>          | - 11        |             |             |

<sup>7)</sup> For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters 2031.

# ROTINA 420/420 R



## Well equipped for all centrifuging applications

The compact benchtop centrifuges are conceived for high sample throughput as well as for high sample volumes. With a maximum capacity of 4 x 600 ml, 140 blood collection tubes or 16 microtitre plates they are ideal for applications in clinical chemistry, in biotechnology and in life science research facilities.



ROTINA 420

### TECHNOLOGY

|  | ROTINA 420   |                 | ROTINA 420 R              |                             |
|--|--|-----------------|---------------------------|-----------------------------|
| Benchtop centrifuge, without rotor       | classic  |                 | cooled                    |                             |
| Power supply <sup>*)</sup>               | 200 – 240 V 1 ~  | 100 – 127 V 1 ~ | 200 – 240 V 1 ~           | 100 – 127 V 1 ~ / 100 V 1 ~ |
| Frequency                                | 50 – 60 Hz   |                 | 50 Hz                     | 60 Hz / 50 Hz               |
| Consumption                              | 870 VA   | 800 VA          | 1,500 VA                  | 1,750 VA                    |
| Emission, Immunity                       | EN / IEC 61326-1, class B  | FCC class B     | EN / IEC 61326-1, class B | FCC class B                 |
| Max. capacity                            | 4 x 600 ml   |                 |                           |                             |
| Max. RPM (speed)                         | 15,000 min <sup>-1</sup>   |                 |                           |                             |
| Max. RCF                                 | 24,400   |                 |                           |                             |
| Running time                             | 1 sec – 99 h : 59 min : 59 sec, ∞ continuous run, short cycle mode |                 |                           |                             |
| Dimensions (HxWxD)                       | 423 x 506 x 650 mm   |                 | 423 x 713 x 654 mm        |                             |
| Weight                                   | approx. 75 kg  | approx. 84 kg   | approx. 108 kg            | approx. 117 kg              |
| <b>Refrigeration</b>                     |  |                 |                           |                             |
| Temperature control, infinitely variable | -  |                 | from -20 to +40 °C        |                             |
| <b>Cat. No.</b>                          | <b>4701</b>  | <b>4701-01</b>  | <b>4706</b>               | <b>4706-01</b>              |

<sup>\*)</sup> Other voltages on request.  
<sup>>)</sup> For a list of further versions of this model, please refer to page 12.

**Swing-out rotor, 4-place**



↻ 90°

n = 4,800 min<sup>-1</sup>  
max. RCF 4,740

illustrated with carriers 4781 and lids 4751  
with bio-containment<sup>5)</sup>

**Cat. No.** (without carriers) **4784-A**

|   |             |             |             |         |           |                          |                          |                          |             |                          |                          |                          |             |             |                          |                          |                          |          |  |  |
|---|-------------|-------------|-------------|---------|-----------|--------------------------|--------------------------|--------------------------|-------------|--------------------------|--------------------------|--------------------------|-------------|-------------|--------------------------|--------------------------|--------------------------|----------|--|--|
| capacity in ml  | 1.5         | 2.0         | 3           | 4       | 4         | 5                        | 6                        | 7                        | 10          | 15                       | 25                       | 50                       | 75          | 94          | 100                      | 100                      | 250                      |          |  |  |
| Ø x L in mm   | 11 x 38     |             | 10 x 60     | 10 x 88 | 12 x 60   | 12 x 75                  | 12 x 82                  | 12 x 100                 | 17 x 70     | 17 x 100                 | 24 x 100                 | 34 x 100                 | 35 x 105    | 38 x 102    | 40 x 115                 | 44 x 100                 | 65 x 115                 |          |  |  |
| <b>Cat. No.</b>   | <b>2078</b> | <b>0536</b> | -           |         |           | <b>0553<sup>2)</sup></b> | <b>0501<sup>2)</sup></b> | <b>0578<sup>2)</sup></b> | <b>2079</b> | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>0548</b> | <b>0549</b> | <b>0523<sup>2)</sup></b> | <b>0526<sup>2)</sup></b> | <b>0530<sup>2)</sup></b> |          |  |  |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 4751 |             |             |             |         |           |                          |                          |                          |             |                          |                          |                          |             |             |                          |                          |                          |          |  |  |
| <b>carrier</b><br>Cat. No. 4781                         |             |             |             |         |           |                          |                          |                          |             |                          |                          |                          |             |             |                          |                          |                          |          |  |  |
| <b>Cat. No.</b>   | <b>4773</b> | <b>4761</b> | <b>4762</b> |         |           | <b>4763</b>              | <b>4764</b>              | <b>4765</b>              | <b>4766</b> | <b>4767</b>              | <b>4768</b>              |                          |             |             |                          |                          |                          |          |  |  |
| boring Ø x L in mm                                      | 11.2 x 38   |             | 11.2 x 54   |         | 13.4 x 55 |                          |                          | 17.5 x 62                |             | 26.5 x 69                |                          | 36 x 77                  |             | 42 x 76.5   |                          | 46 x 76.5                |                          | 66 x 103 |  |  |
| tubes per rotor   | 96          |             | 140         |         | 104       |                          |                          | 72                       |             | 28                       |                          | 16                       |             | 12          |                          | 8                        |                          | 4        |  |  |
| max. RCF <sup>2)</sup>                                  | 4,585       |             |             |         |           |                          | 4,559                    |                          |             |                          |                          |                          | 4,534       |             |                          |                          |                          |          |  |  |
| radius in mm  | 178         |             |             |         |           |                          | 177                      |                          |             |                          |                          |                          | 176         |             |                          |                          |                          |          |  |  |
| run-up in sec   |             |             |             |         |           |                          |                          |                          | 54          |                          |                          |                          |             |             |                          |                          |                          |          |  |  |
| run-down in sec, braked                                 |             |             |             |         |           |                          |                          |                          | 38          |                          |                          |                          |             |             |                          |                          |                          |          |  |  |
| temperature in °C <sup>1)</sup>                         |             |             |             |         |           |                          |                          |                          | +4          |                          |                          |                          |             |             |                          |                          |                          |          |  |  |

|   |                                       |             |             |             |             |             |             |             |             |             |             |             |             |             |             |  |  |  |  |  |
|---|---------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--|--|--|--|--|
| capacity in ml  | 1.1-1.4                               | 2.6-3.4     | 2.7-3       | 4-5.5       | 4.5-5       | 4.9         | 7.5-8.5     | 9-10        | 1.6-7       | 4-7         | 8           | 8.5-10      | 15          | 50          | 12          |  |  |  |  |  |
| Ø x L in mm   | 8x66                                  | 13x65       | 11x66       | 15x75       | 11x92       | 13x90       | 15x92       | 16x92       | 13x75/100   | 16x75       | 16x125      | 16x100      | 17x120      | 29x115      | 17x100      |  |  |  |  |  |
| <b>Cat. No.</b>   | <b>blood collection / urine tubes</b> |             |             |             |             |             |             |             |             |             |             |             | <b>0509</b> | <b>0513</b> | -           |  |  |  |  |  |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 4751 |                                       |             |             |             |             |             |             |             |             |             |             |             |             |             |             |  |  |  |  |  |
| <b>carrier</b><br>Cat. No. 4781                         |                                       |             |             |             |             |             |             |             |             |             |             |             |             |             |             |  |  |  |  |  |
| <b>Cat. No.</b>   | <b>4761</b>                           | <b>4762</b> | <b>4761</b> | <b>4763</b> | <b>4761</b> | <b>4762</b> | <b>4763</b> | <b>4762</b> | <b>4775</b> | <b>4763</b> | <b>4763</b> | <b>4763</b> | <b>4769</b> | <b>4770</b> | <b>4774</b> |  |  |  |  |  |
| boring Ø x L in mm                                      | 11.2 x 54                             | 13.4 x 55   | 11.2 x 54   | 17.5 x 62   | 11.2 x 54   | 13.4 x 55   | 17.5 x 62   | 13.4 x 55   | 13.7 x 54   | 17.5 x 62   |             |             | 17 x 84     | 30 x 82.5   | 172 x 82.5  |  |  |  |  |  |
| tubes per rotor   | 140                                   | 104         | 140         | 72          | 140         | 104         | 72          | 104         | 84          | 72          | 24          | 72          | 52          | 20          | 60          |  |  |  |  |  |
| max. RCF <sup>2)</sup>                                  | 4,585                                 |             |             |             |             |             |             |             |             |             |             |             | 4,740       |             | 4,688       |  |  |  |  |  |
| radius in mm  | 178                                   |             |             |             |             |             |             |             |             |             |             |             | 184         |             | 182         |  |  |  |  |  |
| run-up in sec   |                                       |             |             |             |             |             |             |             | 54          |             |             |             |             |             |             |  |  |  |  |  |
| run-down in sec, braked                                 |                                       |             |             |             |             |             |             |             | 38          |             |             |             |             |             |             |  |  |  |  |  |
| temperature in °C <sup>1)</sup>                         |                                       |             |             |             |             |             |             |             | +4          |             |             |             |             |             |             |  |  |  |  |  |

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.  
 2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.  
 3) When using these tubes, carrier 4781 cannot be closed with lid 4751.  
 5) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.  
 24) Carrier must be loaded as illustrated. | 33) For blood collection tubes with a cap of diameter greater than 17 mm.

ROTINA 420



illustrated with carriers 4781  
and lids 4751  
with bio-containment<sup>5)</sup>



illustrated with carriers 4782

### Swing-out rotor Cat. No. (without carriers) 4784-A

|   |             |                           |             |             |                           |             |             |                            |               |                              |             |               |                            |                         |                         |                         |                            |
|---|-------------|---------------------------|-------------|-------------|---------------------------|-------------|-------------|----------------------------|---------------|------------------------------|-------------|---------------|----------------------------|-------------------------|-------------------------|-------------------------|----------------------------|
| capacity in ml  | 25          | 30                        | 50          | 10          | 30                        | 50          | 85          | 94                         | 175           | 175                          | 200         | 225           | 250                        | 290                     | 400                     | 400                     | 600                        |
| Ø x L in mm   | 25x90       | 25x110                    | 29x115      | 16x80       | 26x95                     | 29x107      | 38x106      | 38x102                     | 61x118        | 62x144                       | 60x130      | 61x137        | 61x122                     | 62x137                  | 81x136                  | 84x134                  | 93x134                     |
| Cat. No.  | -           |                           |             |             | <b>0545</b>               | <b>0546</b> | <b>0547</b> | <b>0538</b> <sup>13)</sup> | <b>Falcon</b> | <b>Nalgene</b> <sup>5)</sup> | <b>Nunc</b> | <b>Falcon</b> | <b>5127</b> <sup>28)</sup> | <b>-</b> <sup>28)</sup> | <b>-</b> <sup>28)</sup> | <b>-</b> <sup>28)</sup> | <b>0551</b> <sup>28)</sup> |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 4751 |             |                           |             |             |                           |             |             |                            |               |                              |             |               |                            |                         |                         |                         |                            |
| carrier<br>Cat. No. 4781                                |             |                           |             |             |                           |             |             |                            |               |                              |             |               |                            |                         |                         |                         |                            |
| Cat. No.  | <b>4764</b> | <b>4770</b> <sup>4)</sup> | <b>4763</b> | <b>4764</b> | <b>4770</b> <sup>4)</sup> | <b>4766</b> | <b>4776</b> | <b>4777</b>                | <b>4776</b>   | <b>4771</b>                  | <b>4772</b> | <b>-</b>      | <b>-</b>                   | <b>-</b>                | <b>-</b>                | <b>-</b>                | <b>-</b>                   |
| boring Ø x L in mm                                      | 26.5x69     | 30x82.5                   | 17.5x62     | 26.5x69     | 30x82.5                   | 42x76.5     | 61x105      | 61.5x110                   | 61x105        | 62x100                       | 85x100      | 94x99         |                            |                         |                         |                         |                            |
| tubes per rotor   | 28          | 20                        | 72          | 28          | 20                        | 12          | 4           |                            |               |                              | 4           |               |                            |                         |                         |                         |                            |
| max. RCF <sup>2)</sup>                                  | 4,585       | 4,688                     | 4,585       | 4,688       | 4,534                     | 4,740       |             |                            |               | 4,740                        |             |               |                            |                         |                         |                         |                            |
| radius in mm  | 178         | 182                       | 178         | 182         | 176                       | 184         |             |                            |               | 184                          |             |               |                            |                         |                         |                         |                            |
| run-up in sec   |             |                           |             |             |                           |             |             |                            | 54            |                              |             |               | 54                         |                         |                         |                         |                            |
| run-down in sec, braked                                 |             |                           |             |             |                           |             |             |                            | 38            |                              |             |               | 38                         |                         |                         |                         |                            |
| temperature in °C <sup>1)</sup>                         |             |                           |             |             |                           |             |             |                            | +4            |                              |             |               | +4                         |                         |                         |                         |                            |

|                                 |               |                 |               |                 |               |                                   |                            |                   |
|---------------------------------|---------------|-----------------|---------------|-----------------|---------------|-----------------------------------|----------------------------|-------------------|
| D x W x H in mm                 | 86 x 128 x 15 | 86 x 128 x 17.5 | 86 x 128 x 22 | 86 x 128 x 44.5 | 86 x 128 x 46 | 59 x 84 x 11                      | 82 x 124 x 20              | -                 |
| capacity in ml                  | -             |                 |               |                 |               |                                   |                            | 0.2               |
| Cat. No.                        | <b>MTP</b>    |                 | <b>CP</b>     | <b>DWP</b>      | <b>MS</b>     | <b>Microtest plate (Terasaki)</b> | <b>PCR plate, 96-place</b> | <b>PCR strips</b> |
| carrier<br>Cat. No. 4782        |               |                 |               |                 |               |                                   |                            |                   |
| Cat. No.                        | -             |                 |               |                 |               |                                   | <b>1485</b>                |                   |
| boring Ø x L in mm              | -             |                 |               |                 |               |                                   |                            |                   |
| plates/strips per rotor         | 16            | 16              | 12            | 4               | 4             | 8                                 | 4                          | 48 x 8            |
| max. RCF <sup>2)</sup>          | 4,096         |                 |               |                 |               |                                   |                            |                   |
| radius in mm                    | 159           |                 |               |                 |               |                                   |                            |                   |
| run-up in sec                   | 54            |                 |               |                 |               |                                   |                            |                   |
| run-down in sec, braked         | 38            |                 |               |                 |               |                                   |                            |                   |
| temperature in °C <sup>1)</sup> | +4            |                 |               |                 |               |                                   |                            |                   |

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.

2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.

3) When using these tubes, carrier 4781 resp. 5051 cannot be closed with lid 4751 resp. 5053.

4) Please remove the inserts.

**Swing-out rotor, 4-place**

±90°

n = 4,000 min<sup>-1</sup>  
max. RCF 3,095

illustrated with carriers 5051  
and lids 5053



**Cat. No.** (without carriers) **4753**

|                                    |             |             |             |             |                           |                          |                           |                          |                          |                          |                          |                          |                          |                          |
|------------------------------------|-------------|-------------|-------------|-------------|---------------------------|--------------------------|---------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| capacity in ml                     | 1.5         | 2.0         | 1.5         | 2.0         | 3                         | 5                        | 6                         | 7                        | 9                        | 15                       | 25                       | 50                       | 100                      | 100                      |
| Ø x L in mm                        | 11 x 38     |             | 11 x 38     |             | 10 x 60                   | 12 x 75                  | 12 x 82                   | 12 x 100                 | 14 x 100                 | 17 x 100                 | 24 x 100                 | 34 x 100                 | 44 x 100                 | 40 x 115                 |
| <b>Cat. No.</b>                    | -           | -           | <b>2078</b> | <b>0536</b> | -                         | <b>0553<sup>2)</sup></b> | <b>0501<sup>2)</sup></b>  | <b>0578<sup>2)</sup></b> | <b>0500<sup>2)</sup></b> | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>0526<sup>2)</sup></b> | <b>0523<sup>2)</sup></b> |
| lid Cat. No. 5053                  |             |             |             |             |                           |                          |                           |                          |                          |                          |                          |                          |                          |                          |
| carrier Cat. No. 5051              |             |             |             |             |                           |                          |                           |                          |                          |                          |                          |                          |                          |                          |
| <b>Cat. No.</b>                    | <b>5257</b> | <b>5281</b> | <b>5267</b> | <b>5227</b> | <b>5247<sup>18)</sup></b> | <b>5264</b>              | <b>5248<sup>18)</sup></b> | <b>5242</b>              | <b>5243</b>              | <b>5262</b>              | <b>5249</b>              |                          |                          |                          |
| boring Ø x L in mm                 | 12.5 x 42   | 11.5 x 50   | 11 x 44     | 12.5 x 42   | 12.5 x 86                 | 16 x 50                  | 17.5 x 86                 | 26 x 86                  | 36 x 86                  | 45.5 x 86                | 42 x 86                  |                          |                          |                          |
| tubes per rotor                    | 160         | 64          | 80          | 80          | 80                        | 48                       | 48                        | 20                       | 8                        | 4                        |                          |                          |                          |                          |
| max. RCF <sup>2)</sup> upper/lower | 1,950/2,826 | 2,826       | 2,737       | 2,773       | 2,755                     | 2,773                    | 2,755                     |                          |                          |                          |                          |                          |                          |                          |
| radius in mm upper/lower           | 109/158     | 158         | 153         | 155         | 154                       | 155                      | 154                       |                          |                          |                          |                          |                          |                          |                          |
| run-up in sec                      | 18          |             |             |             |                           |                          |                           |                          |                          |                          |                          |                          |                          |                          |
| run-down in sec, braked            | 16          |             |             |             |                           |                          |                           |                          |                          |                          |                          |                          |                          |                          |
| temperature in °C <sup>1)</sup>    | - 1         |             |             |             |                           |                          |                           |                          |                          |                          |                          |                          |                          |                          |

|                                 |                                       |             |             |             |             |             |             |             |             |             |             |             |        |
|---------------------------------|---------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------|
| capacity in ml                  | 1.1-1.4                               | 2.6-3.4     | 2.7-3       | 4-5.5       | 4.5-5       | 4.9         | 7.5-8.5     | 9-10        | 10          | 1.6-5       | 4-7         | 4-7         | 8.5-10 |
| Ø x L in mm                     | 8x66                                  | 13x65       | 11x66       | 15x75       | 11x92       | 13x90       | 15x92       | 16x92       | 15x102      | 13x75       | 16x75       | 13x100      | 16x100 |
| <b>Cat. No.</b>                 | <b>blood collection / urine tubes</b> |             |             |             |             |             |             |             |             |             |             |             |        |
| lid Cat. No. 5053               |                                       |             |             |             |             |             |             |             |             |             |             |             |        |
| carrier Cat. No. 5051           |                                       |             |             |             |             |             |             |             |             |             |             |             |        |
| <b>Cat. No.</b>                 | <b>5267</b>                           | <b>5268</b> | <b>5227</b> | <b>5264</b> | <b>5227</b> | <b>5268</b> | <b>5264</b> | <b>5258</b> | <b>5268</b> | <b>5264</b> | <b>5268</b> | <b>5248</b> |        |
| boring Ø x L in mm              | 11 x 44                               | 13.5 x 52   | 12.5 x 42   | 16 x 50     | 12.5 x 42   | 13.5 x 52   | 16 x 50     | 17.6 x 86   | 13.5 x 52   | 16 x 50     | 13.5 x 52   | 17.5 x 86   |        |
| tubes per rotor                 | 80                                    | 48          | 80          | 48          | 80          | 48          | 48          | 44          | 48          |             |             |             |        |
| max. RCF <sup>2)</sup>          | 2,737                                 | 2,808       | 2,773       | 2,773       | 2,808       | 2,773       | 2,755       | 2,808       | 2,773       | 2,808       | 2,755       |             |        |
| radius in mm                    | 153                                   | 157         | 155         | 155         | 157         | 155         | 154         | 157         | 155         | 157         | 154         |             |        |
| run-up in sec                   | 18                                    |             |             |             |             |             |             |             |             |             |             |             |        |
| run-down in sec, braked         | 16                                    |             |             |             |             |             |             |             |             |             |             |             |        |
| temperature in °C <sup>1)</sup> | - 1                                   |             |             |             |             |             |             |             |             |             |             |             |        |

<sup>5)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

<sup>13)</sup> The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 106 mm.

<sup>18)</sup> With Cat. No. 5247-91 or 5248-91 these adapters can also be ordered with a decanting aid.

<sup>28)</sup> At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.



illustrated with carriers 5051

### Swing-out rotor 4753

| capacity in ml                     | 15          | 50          | 12          | 30          | 50          | two-tier frame for cyto accessories |
|------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------------------------------|
| Ø x L in mm                        | 17x120      | 29x115      | 17x100      | 25x110      | 29x115      |                                     |
| Cat. No.                           | <b>0509</b> | <b>0513</b> | -           |             |             | cyto chambers <sup>2,3)</sup>       |
| lid Cat. No. <b>5053</b>           |             |             |             |             |             |                                     |
| carrier Cat. No. <b>5051</b>       |             |             |             |             |             |                                     |
| Cat. No.                           | <b>6306</b> | <b>5259</b> | <b>6306</b> | <b>5266</b> | <b>5243</b> | <b>5280</b>                         |
| boring Ø x L in mm                 | 17x90       | 30x86       | 17x90       | 26x86       | 36x86       | -                                   |
| tubes per rotor                    | 28          | 8           | 28          | 20          | 8           | 8                                   |
| max. RCF <sup>2)</sup> upper/lower | 2,898       | 2,826       | 2,898       | 2,755       |             | 1,735 / 2,737                       |
| radius in mm upper/lower           | 162         | 158         | 162         | 154         |             | 97 / 153                            |
| run-up in sec                      | 18          |             |             |             |             |                                     |
| run-down in sec, braked            | 16          |             |             |             |             |                                     |
| temperature in °C <sup>1)</sup>    | -1          |             |             |             |             |                                     |

| capacity in ml  | 5                        | 6                        | 7                        | 10          | 15                       |
|---|--------------------------|--------------------------|--------------------------|-------------|--------------------------|
| Ø x L in mm   | 12x75                    | 12x82                    | 12x100                   | 17x70       | 17x100                   |
| Cat. No.  | <b>0553<sup>2)</sup></b> | <b>0501<sup>2)</sup></b> | <b>0578<sup>2)</sup></b> | <b>2079</b> | <b>0518<sup>2)</sup></b> |
| lid with bio-containment <sup>5)</sup> Cat. No. <b>5093</b> |                          |                          |                          |             |                          |
| carrier Cat. No. <b>5092</b>                                |                          |                          |                          |             |                          |
| Cat. No.  | <b>5128</b>              | <b>5120</b>              | <b>5136</b>              |             |                          |
| boring Ø x L in mm  | 12.8x45                  |                          | 12.8x82                  |             | 17.5x60.7                |
| tubes per rotor   | 48                       |                          |                          | 32          |                          |
| max. RCF <sup>2)</sup>                                      | 3,005                    |                          |                          | 2,952       |                          |
| radius in mm  | 168                      |                          |                          | 165         |                          |
| run-up in sec   | 18                       |                          |                          |             |                          |
| run-down in sec, braked                                     | 16                       |                          |                          |             |                          |
| temperature in °C <sup>1)</sup>                             | -1                       |                          |                          |             |                          |

| capacity in ml  | 25                       | 50                       | 100                      | 100                      | 250                      | 1.1-1.4                             | 2.6-3.4     | 2.7-3       | 4-5.5       | 4.5-5       | 4.9       | 7.5-8.5 | 9-10        | 10          | 1.6-5   | 4-7    |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|-------------|-------------|-------------|-------------|-----------|---------|-------------|-------------|---------|--------|
| Ø x L in mm   | 24x100                   | 34x100                   | 44x100                   | 40x115                   | 65x115                   | 8x66                                | 13x65       | 11x66       | 15x75       | 11x92       | 13x90     | 15x92   | 16x92       | 15x102      | 13x75   | 13x100 |
| Cat. No.  | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>0526<sup>2)</sup></b> | <b>0523<sup>2)</sup></b> | <b>0530<sup>2)</sup></b> | <b>blood collection/urine tubes</b> |             |             |             |             |           |         |             |             |         |        |
| lid with bio-containment <sup>5)</sup> Cat. No. <b>5093</b> |                          |                          |                          |                          |                          |                                     |             |             |             |             |           |         |             |             |         |        |
| carrier Cat. No. <b>5092</b>                                |                          |                          |                          |                          |                          |                                     |             |             |             |             |           |         |             |             |         |        |
| Cat. No.  | <b>5122</b>              | <b>5124</b>              | <b>5125</b>              | <b>5126</b>              | <b>1791</b>              | <b>5138</b>                         | <b>5136</b> | <b>5120</b> | <b>5137</b> | <b>5136</b> |           |         | <b>5138</b> | <b>5120</b> |         |        |
| boring Ø x L in mm  | 25.5x82                  | 35.5x82.5                | 45.5x85                  | 42x85                    | 66x103                   | 12.8x54.5                           |             | 17.5x60.7   | 12.8x82     | 13.5x60.7   | 17.5x60.7 |         |             | 12.8x54.5   | 12.8x82 |        |
| tubes per rotor   | 16                       | 4                        |                          |                          |                          | 48                                  |             |             | 32          | 48          | 32        |         |             | 48          | 48      |        |
| max. RCF <sup>2)</sup>                                      | 2,898                    | 2,952                    |                          | 3,095                    | 2,540                    |                                     | 2,952       | 3,005       | 2,952       |             |           | 2,540   | 3,005       |             |         |        |
| radius in mm  | 162                      | 165                      |                          | 173                      | 142                      |                                     | 165         | 168         | 165         |             |           | 142     | 168         |             |         |        |
| run-up in sec   | 18                       |                          |                          |                          |                          |                                     |             |             |             |             |           |         |             |             |         |        |
| run-down in sec, braked                                     | 16                       |                          |                          |                          |                          |                                     |             |             |             |             |           |         |             |             |         |        |
| temperature in °C <sup>1)</sup>                             | -1                       |                          |                          |                          |                          |                                     |             |             |             |             |           |         |             |             |         |        |

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.

2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.

3) When using these tubes, carrier 5051 resp. 5092 cannot be closed with lid 5053 resp. 5093.

4) Please remove the inserts.



**Swing-out rotor, 4-place**



±90°

n = 4,600 min<sup>-1</sup>  
max. RCF 3,832

illustrated with carriers 1495 and lids 1492  
with bio-containment<sup>5)</sup>

**Swing-out rotor 4753**

**Cat. No. (without carriers) 4754**

|  |                   |                          |             |             |             |             |             |             |             |             |                           |                        |
|--|-------------------|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------------------|------------------------|
| capacity in ml   | 4-7               | 8.5-10                   | 8           | 15          | 50          | 12          | 25          | 30          | 50          | 10          | 250                       | 290                    |
| Ø x L in mm  | 16 x 75           | 16 x 100                 | 16 x 125    | 17 x 120    | 29 x 115    | 17 x 100    | 25 x 90     | 25 x 110    | 29 x 115    | 16 x 80     | 61 x 122                  | 62 x 137               |
| <b>Cat. No.</b>  | blood/urine tubes |                          | <b>0509</b> | <b>0513</b> | -           |             |             |             |             |             | <b>5127<sup>2B)</sup></b> | <b>-<sup>2B)</sup></b> |
| lid with bio-containment <sup>5)</sup><br>Cat. No. <b>5093</b> |                   |                          |             |             |             |             |             |             |             |             |                           |                        |
| rotor 4753<br><b>carrier</b><br>Cat. No. <b>5092</b>           |                   |                          |             |             |             |             |             |             |             |             |                           |                        |
| <b>Cat. No.</b>  | <b>5136</b>       | <b>5121<sup>4)</sup></b> | <b>5129</b> | <b>5123</b> | <b>5121</b> | <b>5134</b> | <b>5122</b> | <b>5135</b> | <b>5136</b> | <b>6319</b> |                           |                        |
| boring Ø x L in mm   | 17.5 x 60.7       | 17.5 x 82                | 17 x 85     | 30 x 85     | 17.5 x 82   | 26 x 73     | 25.5 x 82   | 30 x 99     | 17.5 x 60.7 | 66 x 103    |                           |                        |
| tubes per rotor  | 32                | 28                       | 28          | 8           | 28          | 12          | 16          | 8           | 32          | 4           |                           |                        |
| max. RCF <sup>2)</sup>   | 2,952             | 3,059                    | 3,095       |             | 3,005       | 2,826       | 2,898       | 3,023       | 2,952       | 3,095       |                           |                        |
| radius in mm   | 165               | 171                      | 173         |             | 168         | 158         | 162         | 169         | 165         | 173         |                           |                        |
| run-up in sec  | 18                |                          |             |             |             |             |             |             |             |             |                           |                        |
| run-down in sec, braked  | 16                |                          |             |             |             |             |             |             |             |             |                           |                        |
| temperature in °C <sup>1)</sup>                                | -1                |                          |             |             |             |             |             |             |             |             |                           |                        |

|  |             |             |               |             |         |                          |                          |                          |             |                          |                          |                          |                          |             |                          |
|--|-------------|-------------|---------------|-------------|---------|--------------------------|--------------------------|--------------------------|-------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------|--------------------------|
| capacity in ml   | 1.5         | 2.0         | 1             | 3           | 4       | 5                        | 6                        | 7                        | 8           | 9                        | 15                       | 25                       | 50                       | 94          | 100                      |
| Ø x L in mm  | 11 x 38     | 11 x 38     | 6 x 45        | 10 x 60     | 10 x 88 | 12 x 75                  | 12 x 82                  | 12 x 100                 | 16 x 81     | 14 x 100                 | 17 x 100                 | 24 x 100                 | 34 x 100                 | 38 x 102    | 44 x 100                 |
| <b>Cat. No.</b>  | <b>2078</b> | <b>0536</b> | <b>Rhesus</b> | -           |         | <b>0553<sup>2)</sup></b> | <b>0501<sup>2)</sup></b> | <b>0578<sup>2)</sup></b> | -           | <b>0500<sup>2)</sup></b> | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>0549</b> | <b>0526<sup>2)</sup></b> |
| lid with bio-containment <sup>5)</sup><br>Cat. No. <b>1492</b> |             |             |               |             |         |                          |                          |                          |             |                          |                          |                          |                          |             |                          |
| rotor 4754<br><b>carrier</b><br>Cat. No. <b>1495</b>           |             |             |               |             |         |                          |                          |                          |             |                          |                          |                          |                          |             |                          |
| <b>Cat. No.</b>  | <b>1351</b> | <b>1339</b> | <b>1343</b>   | <b>1383</b> |         |                          | <b>1348</b>              | <b>1329</b>              | <b>1330</b> | <b>1331</b>              | <b>1396</b>              | <b>0761</b>              |                          |             |                          |
| boring Ø x L in mm   | 11.2 x 38   | 6.5 x 34    | 10.5 x 43     | 13.4 x 48   |         |                          | 16.5 x 56                | 17.6 x 91                | 25.2 x 87   | 35.2 x 87                | 38.5 x 92                | 45.9 x 98                |                          |             |                          |
| tubes per rotor  | 20          | 108         | 36            | 20          |         |                          | 16                       | 16                       | 4           |                          |                          |                          |                          |             |                          |
| max. RCF <sup>2)</sup>   | 3,549       | 3,738       | 3,785         | 3,690       |         |                          | 3,690                    | 3,667                    | 3,525       | 3,501                    | 3,761                    | 3,690                    |                          |             |                          |
| radius in mm   | 150         | 158         | 160           | 156         |         |                          | 156                      | 155                      | 149         | 148                      | 159                      | 156                      |                          |             |                          |
| run-up in sec  | 14          |             |               |             |         |                          |                          |                          |             |                          |                          |                          |                          |             |                          |
| run-down in sec, braked  | 14          |             |               |             |         |                          |                          |                          |             |                          |                          |                          |                          |             |                          |
| temperature in °C <sup>1)</sup>                                | 0           |             |               |             |         |                          |                          |                          |             |                          |                          |                          |                          |             |                          |

<sup>5)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

<sup>23)</sup> Please ask for our detailed cyto brochure.

<sup>2B)</sup> At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.



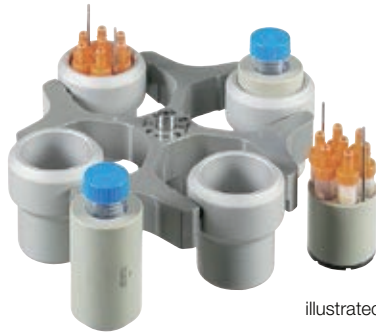
illustrated with carriers 1495

**Swing-out rotor Cat. No. (without carriers) 4754**

|   |                                     |             |             |             |             |             |                          |             |             |       |        |       |        |
|---|-------------------------------------|-------------|-------------|-------------|-------------|-------------|--------------------------|-------------|-------------|-------|--------|-------|--------|
| capacity in ml  | 1.1–1.4                             | 2.6–3.4     | 2.7–3       | 4–5.5       | 4.5–5       | 4.9         | 7.5–8.5                  | 9–10        | 10          | 1.6–5 | 4–7    | 4–7   | 8.5–10 |
| Ø x L in mm   | 8x66                                | 13x65       | 11x66       | 15x75       | 11x92       | 13x90       | 15x92                    | 16x92       | 15x102      | 13x75 | 13x100 | 16x75 | 16x100 |
| <b>Cat. No.</b>   | <b>blood collection/urine tubes</b> |             |             |             |             |             |                          |             |             |       |        |       |        |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 1492 |                                     |             |             |             |             |             |                          |             |             |       |        |       |        |
| carrier<br>Cat. No. 1495                                |                                     |             |             |             |             |             |                          |             |             |       |        |       |        |
| <b>Cat. No.</b>   | <b>1457</b>                         | <b>1383</b> | <b>1459</b> | <b>1383</b> | <b>1459</b> | <b>1329</b> | <b>1329<sup>4)</sup></b> | <b>1383</b> | <b>1348</b> |       |        |       |        |
| boring Ø x L in mm                                      | 9x47                                | 13.4x48     | 15.6x47     | 13.4x48     | 15.6x47     | 17.6x91     |                          | 13.4x48     | 16.5x56     |       |        |       |        |
| tubes per rotor   | 28                                  | 20          | 16          | 20          | 16          | 16          |                          | 20          | 16          |       |        |       |        |
| max. RCF <sup>2)</sup>                                  | 3,714                               | 3,690       | 3,714       | 3,690       | 3,714       | 3,667       | 3,832                    | 3,690       |             |       |        |       |        |
| radius in mm  | 157                                 | 156         | 157         | 156         | 157         | 155         | 162                      | 156         |             |       |        |       |        |
| run-up in sec   | 14                                  |             |             |             |             |             |                          |             |             |       |        |       |        |
| run-down in sec, braked                                 | 14                                  |             |             |             |             |             |                          |             |             |       |        |       |        |
| temperature in °C <sup>1)</sup>                         | 0                                   |             |             |             |             |             |                          |             |             |       |        |       |        |




























|   |             |             |             |             |             |             |             |             |             |             |                          |             |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------------|-------------|
| capacity in ml  | 15          | 15          | 50          | 12          | 25          | 30          | 50          | 10          | 30          | 50          | 85                       | 30          |
| Ø x L in mm   | 17x120      | 17x120      | 29x115      | 17x100      | 25x90       | 25x110      | 29x115      | 16x80       | 26x95       | 29x107      | 38x106                   | 44x105      |
| <b>Cat. No.</b>   | <b>0509</b> | <b>0509</b> | <b>0513</b> | <b>-</b>    |             |             |             | <b>0545</b> | <b>0546</b> | <b>0547</b> | <b>0534<sup>6)</sup></b> |             |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 1492 |             |             |             |             |             |             |             |             |             |             |                          |             |
| carrier<br>Cat. No. 1495                                |             |             |             |             |             |             |             |             |             |             |                          |             |
| <b>Cat. No.</b>   | <b>1347</b> | <b>1356</b> | <b>1384</b> | <b>6311</b> | <b>1363</b> | <b>1365</b> | <b>6318</b> | <b>1348</b> | <b>4417</b> | <b>4416</b> | <b>1396</b>              | <b>0765</b> |
| boring Ø x L in mm                                      | 17x90       | 17x107      | 30x90       | 17x80       | 26x72       | 26x80       | 29.5x80     | 16.5x56     | 26x83       | 29x93       | 38.5x92                  | 45.9x98     |
| tubes per rotor   | 4           | 12          | 4           | 4           | 4           | 4           | 16          | 4           |             |             |                          |             |
| max. RCF <sup>2)</sup>                                  | 3,832       |             |             |             | 3,407       | 3,832       |             | 3,690       | 3,549       | 3,785       | 3,761                    | 3,667       |
| radius in mm  | 162         |             |             |             | 144         | 162         |             | 156         | 150         | 160         | 159                      | 155         |
| run-up in sec   | 14          |             |             |             |             |             |             |             |             |             |                          |             |
| run-down in sec, braked                                 | 14          |             |             |             |             |             |             |             |             |             |                          |             |
| temperature in °C <sup>1)</sup>                         | 0           |             |             |             |             |             |             |             |             |             |                          |             |




























1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.  
 2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.  
 3) When using these tubes, carrier 1495 cannot be closed with lid 1492.



illustrated with carriers 1425

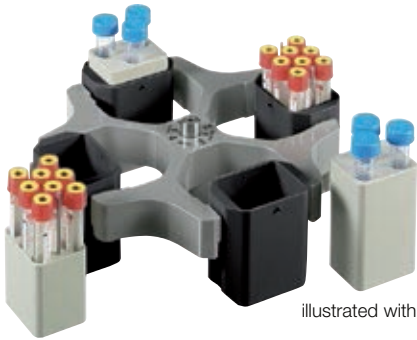
**Swing-out rotor Cat. No. (without carriers) 4754**

|  |   |   |   |   |   |   |   |   |   |  |   |   |   |
|--|---|---|---|---|---|---|---|---|---|--|---|---|---|
| capacity in ml   | 1.5   | 2.0   | 1   | 3   | 4   | 5   | 6   | 7   | 9   | 15   | 25  | 50  | 100   |
| Ø x L in mm  | 11 x 38   | 11 x 38   | 6 x 45  | 10 x 60   | 12 x 60   | 12 x 75   | 12 x 82   | 12 x 100  | 14 x 100  | 17 x 100   | 24 x 100  | 34 x 100  | 44 x 100  |
| <b>Cat. No.</b>  | <b>2078</b>   | <b>0536</b>   | <b>Rhesus</b>   | <b>-</b>  |   | <b>0553<sup>2)</sup></b>  | <b>0501<sup>2)</sup></b>  | <b>0578<sup>2)</sup></b>  | <b>0500<sup>2)</sup></b>  | <b>0518<sup>2)</sup></b>   | <b>0519<sup>2)</sup></b>  | <b>0521<sup>2)</sup></b>  | <b>0526<sup>2)</sup></b>  |
| <br><b>carrier</b><br>Cat. No. 1425 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Cat. No.</b>  | <b>1444</b>   | <b>1432</b>   | <b>1433</b>   | <b>1438</b>   |   | <b>1434</b>   |   | <b>1431</b>   | <b>1435</b>   | <b>1436</b>  | <b>1437</b>   |   |   |
| boring Ø x L in mm   | 11.5 x 38   | 6.5 x 34  | 10.5 x 40   | 13.4 x 50   |   | 12.7 x 60   |   | 17.5 x 84   | 25.5 x 84   | 35.5 x 84  | 45.5 x 86   |   |   |
| tubes per rotor  | 36  | 144   | 56  | 28  |   | 48  |   | 28  | 8   | 4  | 4   |   |   |
| max. RCF <sup>2)</sup>   | 3,572   | 3,643   |   |   |   |   |   | 3,596   |   |  |   |   | 3,501   |
| radius in mm   | 151   | 154   |   |   |   |   |   | 152   |   |  |   |   | 148   |
| run-up in sec  | 14  |   |   |   |   |   |   |   |   |  |   |   |   |
| run-down in sec, braked  | 14  |   |   |   |   |   |   |   |   |  |   |   |   |
| temperature in °C <sup>1)</sup>  | 0   |   |   |   |   |   |   |   |   |  |   |   |   |

|  |   |   |   |   |   |   |   |   |   |  |   |   |   |          |
|--|---|---|---|---|---|---|---|---|---|--|---|---|---|----------|
| capacity in ml   | 2.6-3.4   | 2.7-3   | 4-5.5   | 4.5-5   | 4.9   | 7.5-8.5   | 9-10  | 1.6-5   | 4-7   | 4-7  | 8.5-10  | 15  | 50  | 50       |
| Ø x L in mm  | 13 x 65   | 11 x 66   | 15 x 75   | 11 x 92   | 13 x 90   | 15 x 92   | 16 x 92   | 13 x 75   | 13 x 100  | 16 x 75  | 16 x 100  | 17 x 120  | 29 x 115  | 29 x 115 |
| <b>Cat. No.</b>  | <b>blood collection/urine tubes</b>   |   |   |   |   |   |   |   |   |  |   | <b>0509</b>   | <b>0513</b>   | <b>-</b> |
| <br><b>carrier</b><br>Cat. No. 1425 |  |  |  |  |  |  |  |  |  |  |  |  |  |          |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |          |
| <b>Cat. No.</b>  | <b>1438</b>   | <b>1441</b>   | <b>1438</b>   | <b>1431</b>   | <b>1439</b>   | <b>1438</b>   | <b>1441</b>   | <b>1736</b>   | <b>1443</b>   | <b>1737</b>  |   |   |   |          |
| boring Ø x L in mm   | 13.4 x 50   | 16.5 x 50   | 13.4 x 50   | 17.5 x 84   | 17 x 45   | 13.4 x 50   | 16.5 x 50   | 17 x 90   | 30 x 90   |  |   |   |   |          |
| tubes per rotor  | 28  |   |   |   |   | 16  | 28  |   | 16  | 4  |   |   |   |          |
| max. RCF <sup>2)</sup>   | 3,596   |   |   |   |   | 3,596   | 3,596   |   | 3,738   | 3,738  |   |   |   |          |
| radius in mm   | 152   |   |   |   |   | 152   | 152   |   | 158   | 158  |   |   |   |          |
| run-up in sec  | 14  |   |   |   |   |   |   |   |   |  |   |   |   |          |
| run-down in sec, braked  | 14  |   |   |   |   |   |   |   |   |  |   |   |   |          |
| temperature in °C <sup>1)</sup>  | 0   |   |   |   |   |   |   |   |   |  |   |   |   |          |

4) Please remove the inserts.  
 5) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.  
 6) A rubber stopper for closing the tube is available under Cat. No. 0535. The tube may not be centrifuged with the stopper. The stopper only serves to close the tube for agitating or mixing.

ROTINA 420



illustrated with carriers 1427



illustrated with carriers 1427 and lids 1421

**Swing-out rotor Cat. No. (without carriers) 4754**

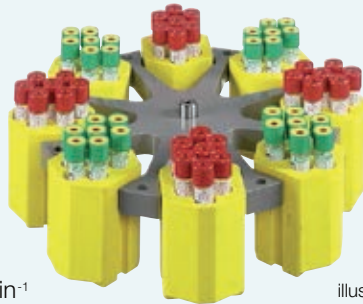
|                                 |                  |               |             |             |                          |                          |                          |                          |                          |                          |                          |             |             |                          |
|---------------------------------|------------------|---------------|-------------|-------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------|-------------|--------------------------|
| capacity in ml                  | 1.5/2.0          | 1             | 3           | 4           | 5                        | 6                        | 7                        | 9                        | 15                       | 25                       | 50                       | 15          | 50          | 50                       |
| Ø x L in mm                     | 11 x 38          | 6 x 45        | 10 x 60     | 12 x 60     | 12 x 75                  | 12 x 82                  | 12 x 100                 | 14 x 100                 | 17 x 100                 | 24 x 100                 | 34 x 100                 | 17 x 120    | 29 x 115    | 29 x 115                 |
| <b>Cat. No.</b>                 | <b>2078/0536</b> | <b>Rhesus</b> | <b>-</b>    |             | <b>0553<sup>2)</sup></b> | <b>0501<sup>2)</sup></b> | <b>0578<sup>2)</sup></b> | <b>0500<sup>2)</sup></b> | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>0509</b> | <b>0513</b> | <b>-</b>                 |
| lid Cat. No. 1421               |                  |               |             |             |                          |                          |                          |                          |                          |                          |                          |             |             |                          |
| <b>carrier</b><br>Cat. No. 1427 |                  |               |             |             |                          |                          |                          |                          |                          |                          |                          |             |             |                          |
| <b>Cat. No.</b>                 | <b>5277</b>      | <b>1357</b>   | <b>1327</b> | <b>1326</b> | <b>1732</b>              | <b>5229</b>              | <b>5230</b>              | <b>5237</b>              | <b>5231</b>              | <b>5232</b>              | <b>5233</b>              | <b>1733</b> | <b>5276</b> | <b>5233<sup>4)</sup></b> |
| boring Ø x L in mm              | 11.5 x 38        | 6.5 x 23      | 10.5 x 23   | 12.5 x 44   | 13.4 x 58                | 12.5 x 44                | 12.4 x 87                | 15 x 73                  | 17.8 x 87                | 25.5 x 87                | 35.5 x 87                | 17 x 90     | 30 x 90     | 35.5 x 87                |
| tubes per rotor                 | 36               | 120           | 48          |             | 32                       | 48                       | 48                       | 24                       | 24                       | 8                        | 4                        | 12          | 4           |                          |
| max. RCF <sup>2)</sup>          | 3,761            | 3,738         | 3,714       |             | 3,690                    | 3,714                    | 3,620                    |                          |                          |                          | 3,809                    | 3,714       |             |                          |
| radius in mm                    | 159              | 158           | 157         |             | 156                      | 157                      | 153                      |                          |                          |                          | 161                      | 157         |             |                          |
| run-up in sec                   | 14               |               |             |             |                          |                          |                          |                          |                          |                          |                          |             |             |                          |
| run-down in sec, braked         | 14               |               |             |             |                          |                          |                          |                          |                          |                          |                          |             |             |                          |
| temperature in °C <sup>1)</sup> | 0                |               |             |             |                          |                          |                          |                          |                          |                          |                          |             |             |                          |

|                                 |                                     |             |             |             |             |             |             |                          |             |             |             |          |
|---------------------------------|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------------|-------------|-------------|-------------|----------|
| capacity in ml                  | 1.1-1.4                             | 2.6-3.4     | 2.7-3       | 4-5.5       | 4.5-5       | 4.9         | 7.5-8.5     | 9-10                     | 1.6-5       | 4-7         | 4-7         | 8.5-10   |
| Ø x L in mm                     | 8 x 66                              | 13 x 65     | 11 x 66     | 15 x 75     | 11 x 92     | 13 x 90     | 15 x 92     | 16 x 92                  | 13 x 75     | 13 x 100    | 16 x 75     | 16 x 100 |
| <b>Cat. No.</b>                 | <b>blood collection/urine tubes</b> |             |             |             |             |             |             |                          |             |             |             |          |
| lid Cat. No. 1421               |                                     |             |             |             |             |             |             |                          |             |             |             |          |
| <b>carrier</b><br>Cat. No. 1427 |                                     |             |             |             |             |             |             |                          |             |             |             |          |
| <b>Cat. No.</b>                 | <b>5278</b>                         | <b>1732</b> | <b>5229</b> | <b>5279</b> | <b>5230</b> | <b>1732</b> | <b>5279</b> | <b>5271<sup>4)</sup></b> | <b>1732</b> | <b>5271</b> | <b>5231</b> |          |
| boring Ø x L in mm              | 9 x 41                              | 13.4 x 58   | 12.5 x 44   | 15.6 x 41   | 12.4 x 87   | 13.4 x 58   | 15.6 x 41   | 17 x 66                  | 13.4 x 58   | 17 x 66     | 17.8 x 87   |          |
| tubes per rotor                 | 48                                  | 32          | 48          | 20          | 48          | 32          | 20          |                          | 32          | 20          | 24          |          |
| max. RCF <sup>2)</sup>          | 3,761                               | 3,690       | 3,714       | 3,761       | 3,620       | 3,690       | 3,761       | 3,643                    | 3,690       | 3,643       | 3,620       |          |
| radius in mm                    | 159                                 | 156         | 157         | 159         | 153         | 156         | 159         | 154                      | 156         | 154         | 153         |          |
| run-up in sec                   | 14                                  |             |             |             |             |             |             |                          |             |             |             |          |
| run-down in sec, braked         | 14                                  |             |             |             |             |             |             |                          |             |             |             |          |
| temperature in °C <sup>1)</sup> | 0                                   |             |             |             |             |             |             |                          |             |             |             |          |

|                                    |
|------------------------------------|
| suspension for cyto accessories    |
| <b>cyto chambers<sup>23)</sup></b> |
|                                    |
| <b>1452</b>                        |
| -                                  |
| 4                                  |
| 2,721                              |
| 115                                |
| 14                                 |
| 14                                 |
| 0                                  |

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.  
 2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.  
 3) When using these tubes, carrier 1427 cannot be closed with lid 1421.

**Swing-out rotor, 8-place**



















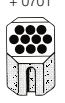
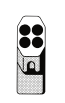
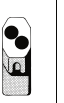
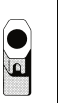
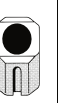
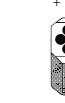

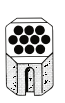
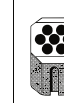
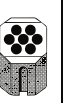















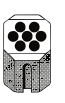
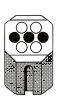

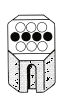
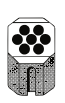
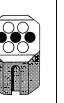
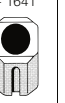
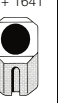
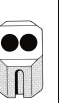



±90°

n = 3,800 min<sup>-1</sup>  
max. RCF 2,906

illustrated with carriers 1742

**Cat. No.** (without carriers) **4758**

| capacity in ml  | 5   | 6   | 7   | 9   | 15  | 20  | 45  | 50   | 1.1–1.4   | 2.6–3.4   | 4–5.5   | 4.5–5   | 4.9   | 7.5–8.5   |
|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|
| Ø x L in mm   | 12 x 75   | 12 x 82   | 12 x 100  | 14 x 100  | 17 x 100  | 21 x 100  | 31 x 100  | 34 x 100   | 8 x 66  | 13 x 65   | 15 x 75   | 11 x 92   | 13 x 90   | 15 x 92   |
| Cat. No.  | <b>0553<sup>2)</sup></b>  | <b>0501<sup>2)</sup></b>  | <b>0578<sup>2)</sup></b>  | <b>0500<sup>2)</sup></b>  | <b>0518<sup>2)</sup></b>  | -   | -   | <b>0521<sup>2)</sup></b>   | <b>blood collection/urine tubes</b>   |   |   |   |   |   |
| <br><b>rotor</b><br>Cat. No. <b>4758</b> |  |  |  |  |  |  |  |   |  |  |  |  |  |  |
|   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cat. No.  | <b>1369-91</b>  | <b>1372</b>   | <b>1369-92</b>  | <b>1741</b>   | <b>1742<sup>9)</sup></b>  | <b>1346</b>   | <b>1345</b>   | <b>1746</b>  | <b>1741</b>   | <b>1742<sup>9)</sup></b>  | <b>1741</b>   | <b>1742<sup>9)</sup></b>  | <b>1741</b>   | <b>1742<sup>9)</sup></b>  |
| boring Ø x L in mm  | 11.5 x 64.4   | 13.5 x 65   | 11.5 x 71.5   | 14.6 x 78   | 17.6 x 78   | 21.5 x 74   | 32 x 74   | 35 x 78  | 14.6 x 78   | 17.6 x 78   | 14.6 x 78   | 17.6 x 78   | 14.6 x 78   | 17.6 x 78   |
| tubes per rotor   | 32  | 136   | 32  | 80  | 56  | 16  | 8   | 8  | 80  | 56  | 80  | 56  | 80  | 56  |
| max. RCF <sup>2)</sup>  | 2,551   | 2,648   | 2,777   | 2,874   | 2,906   | 2,825   | 2,825   | 2,906  | 2,874   | 2,793   | 2,906   | 2,874   | 2,793   | 2,906   |
| radius in mm  | 158   | 164   | 172   | 178   | 180   | 175   | 175   | 180  | 178   | 173   | 180   | 178   | 173   | 180   |
| run-up in sec   | 19  |   |   |   |   |   |   |  |   |   |   |   |   |   |
| run-down in sec, braked   | 16  |   |   |   |   |   |   |  |   |   |   |   |   |   |
| temperature in °C <sup>1)</sup>   | 0   |   |   |   |   |   |   |  |   |   |   |   |   |   |

| capacity in ml  | 9–10  | 10  | 1.6–5/4–7   | 4–7   | 8.5–10  | 15  | 50  | 30   | suspension for cyto accessories   |   |   |   |
|---|---|---|---|---|---|---|---|--|---|---|---|---|
| Ø x L in mm   | 16 x 92   | 15 x 102  | 13 x 75/16 x 75   | 13 x 100  | 16 x 100  | 17 x 120  | 29 x 115  | 26 x 95  | cyto chambers <sup>23)</sup>  |   |   |   |
| Cat. No.  | <b>blood collection/urine tubes</b>   |   |   |   |   | <b>0509</b>   | <b>0513</b>   | <b>0545</b>  | <b>cyto chambers<sup>23)</sup></b>  |   |   |   |
| <br><b>rotor</b><br>Cat. No. <b>4758</b> |  |  |  |  |  |  |  |   |  |  |  |   |
|   |  |  |  |  |  |  |  |  |  |  |  |  |
| Cat. No.  | <b>1742<sup>9)</sup></b>  | <b>1742<sup>9,25)</sup></b>   | <b>1742<sup>9)</sup></b>  | <b>1741<sup>25)</sup></b>   | <b>1742<sup>9)</sup></b>  | <b>1742<sup>9,25)</sup></b>   | <b>1746</b>   | <b>1746</b>  | <b>1745</b>   | <b>1660</b>   | <b>1680</b>   |   |
| boring Ø x L in mm  | 17.6 x 78   | 17.6 x 78   | 17.6 x 78   | 14.6 x 78   | 17.6 x 78   | 17.6 x 78   | 30 x 98   | 30 x 98  | 26 x 78   | -   |   |   |
| tubes per rotor   | 56  | 24  | 56  | 32  | 56  | 24  | 8   | 8  | 16  | 8   |   |   |
| max. RCF <sup>2)</sup>  | 2,906   | 2,906   | 2,793   | 2,906   | 2,906   | 2,906   | 2,906   | 2,906  | 2,906   | 2,179   |   |   |
| radius in mm  | 180   | 180   | 173   | 180   | 180   | 180   | 180   | 180  | 180   | 135   |   |   |
| run-up in sec   | 19  |   |   |   |   |   |   |  |   |   |   |   |
| run-down in sec, braked   | 16  |   |   |   |   |   |   |  |   |   |   |   |
| temperature in °C <sup>1)</sup>   | 0   |   |   |   |   |   |   |  |   |   |   |   |

4) Please remove the inserts.  
 9) For further tubes accommodated by adapter 1742, please refer to page 80.  
 23) Please ask for our detailed cyto brochure.  
 25) Please load only the middle row.

ROTINA 420

### Angle rotor, 30-place

### Angle rotor, 4-place



↙ 45°

n = 15,000 min<sup>-1</sup>  
max. RCF 24,400

with bio-containment<sup>5)</sup>












↙ 25°

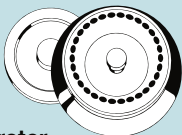








n = 9,500 min<sup>-1</sup>  
max. RCF 12,007










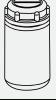
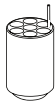

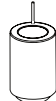
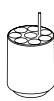

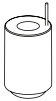

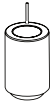
**Swing-out rotor 4758**

**Cat. No. 4790-A**

**Cat. No. 4795**

| capacity in ml   | 1.5/2.0   | 1   | 3   | 4   |
|--|---|---|---|---|
| Ø x L in mm  | 11 x 38   | 6 x 45  | 10 x 60   | 12 x 60   |
| Cat. No.   | <b>2078 / 0536</b>  | <b>Rhesus</b>   | -   | -   |
| <br>rotor 4758<br>carrier<br>Cat. No. <b>1366</b> |  |  |  |  |
|  |  |  |  |  |
| Cat. No.   | <b>5277</b>   | <b>1357</b>   | <b>1327</b>   | <b>1326</b>   |
| boring Ø x L in mm   | 11.5 x 38   | 6.5 x 23  | 10.5 x 23   | 12.5 x 44   |
| tubes per rotor  | 72  | 240   | 96  |   |
| max. RCF <sup>2)</sup>   | 2,470   | 2,454   | 2,438   |   |
| radius in mm   | 153   | 152   | 151   |   |
| run-up in sec  | 19  |   |   |   |
| run-down in sec, braked  | 16  |   |   |   |
| temperature in °C <sup>1)</sup>  | 0   |   |   |   |

| capacity in ml   | 0.2   | 0.4   | 0.5   | 0.8   | 1.5   | 2.0   |
|--|---|---|---|---|---|---|
| Ø x L in mm  | 6 x 18  | 6 x 45  | 8 x 30  | 8 x 45  | 11 x 38   |   |
| Cat. No.   | -   |   |   |   | <b>2078</b>   | <b>0536</b>   |
| <br>lid with bio-containment <sup>5)</sup><br>incl. |    |  |  |  |  |  |
|  |  |  |   |   |   |   |
| Cat. No.   | <b>2024</b>   | <b>2023</b>   | <b>2031<sup>7)</sup></b>  | -   |   |   |
| boring Ø x L in mm   | 6 x 40  | 8 x 40  | 10.2 x 19   | 11.2 x 40.9   |   |   |
| tubes per rotor  | 30  |   |   |   |   |   |
| max. RCF <sup>2)</sup>   | 24,400  |   |   |   |   |   |
| radius in mm   | 97  |   |   |   |   |   |
| run-up in sec  | 19  |   |   |   |   |   |
| run-down in sec, braked  | 24  |   |   |   |   |   |
| temperature in °C <sup>1)</sup>  | +4  |   |   |   |   |   |

| capacity in ml   | 15  | 25  | 94  | 10  | 30  | 50   | 85  | 94  | 250   |
|--|---|---|---|---|---|--|---|---|---|
| Ø x L in mm  | 17x100  | 24x100  | 38 x 102  | 16x80   | 26 x 95   | 29 x 107   | 38 x 106  | 38 x 102  | 61 x 122  |
| Cat. No.   | <b>0518<sup>2)</sup></b>  | <b>0519<sup>2)</sup></b>  | <b>0549</b>   | -   | <b>0545</b>   | <b>0546</b>  | <b>0547</b>   | <b>0538<sup>13)</sup></b>   | <b>5127<sup>28)</sup></b>   |
| <br>rotor<br>Cat. No. <b>4795</b> |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |   |
| Cat. No.   | <b>5646</b>   | <b>5642</b>   | <b>5644</b>   | <b>5641</b>   | <b>5642</b>   | <b>5643</b>  | <b>5644</b>   | -   |   |
| boring Ø x L in mm   | 17.6 x 83   | 26 x 80   | 38.6 x 88   | 16.6 x 70   | 26 x 80   | 29 x 90  | 38.6 x 88   |   | 61.5 x 109  |
| tubes per rotor  | 28  | 12  | 4   | 32  | 12  | 4  | 4   |   | 4   |
| max. RCF <sup>2)</sup>   | 11,301  | 10,897  | 10,292  | 11,402  | 10,897  | 10,090   | 10,292  |   | 12,007  |
| radius in mm   | 112   | 108   | 102   | 113   | 108   | 100  | 102   |   | 119   |
| run-up in sec  | 45  |   |   |   |   |  |   |   |   |
| run-down in sec, braked  | 55  |   |   |   |   |  |   |   |   |
| temperature in °C <sup>1)</sup>  | +2  |   |   |   |   |  |   |   |   |

<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.

<sup>5)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.



### Angle rotor, 6-place

### Angle rotor, 6-place, for PCR strips



45°

n = 11,000 min<sup>-1</sup>  
max. RCF 16,504

with bio-containment<sup>5)</sup>

**Cat. No. 4794**



45°

n = 14,000 min<sup>-1</sup>  
max. RCF 18,845

lid (optional)  
Cat. No. 1162

**Cat. No. (without lid) 4760**

| capacity in ml                               | 1.5         | 2.0         | 3       | 15                       | 25                       | 50                       | 75          | 94          | 7.5–8.5                             | 9–10    | 10       | 8.5–10   |
|--|-------------|-------------|---------|--------------------------|--------------------------|--------------------------|-------------|-------------|-------------------------------------|---------|----------|----------|
| Ø x L in mm                                  | 11 x 38     |             | 10 x 60 | 17 x 100                 | 24 x 100                 | 34 x 100                 | 35 x 105    | 38 x 102    | 15 x 92                             | 16 x 92 | 15 x 102 | 16 x 100 |
| <b>Cat. No.</b>                              | <b>2078</b> | <b>0536</b> | -       | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>0548</b> | <b>0549</b> | <b>blood collection/urine tubes</b> |         |          |          |
| lid with bio-containment <sup>5)</sup> incl. |             |             |         |                          |                          |                          |             |             |                                     |         |          |          |
| <b>rotor</b><br>Cat. No. <b>4794</b>         |             |             |         |                          |                          |                          |             |             |                                     |         |          |          |
| <b>Cat. No.</b>                              | <b>1449</b> |             |         | <b>1451</b>              | <b>1447</b>              | <b>1463</b>              |             | -           | <b>1451</b>                         |         |          |          |
| boring Ø x L in mm                           | 11.4 x 39   |             |         | 17.5 x 92                | 26 x 85                  | 35 x 89                  |             | 38.2 x 89.6 | 17.5 x 92                           |         |          |          |
| tubes per rotor                              | 24          |             |         | 6                        |                          |                          |             | 6           | 6                                   |         |          |          |
| max. RCF <sup>2)</sup>                       | 15,828      |             |         | 15,557                   | 15,151                   | 16,233                   |             | 16,504      | 15,557                              |         |          |          |
| radius in mm                                 | 117         |             |         | 115                      | 112                      | 120                      |             | 122         | 115                                 |         |          |          |
| run-up in sec                                | 40          |             |         |                          |                          |                          |             |             |                                     |         |          |          |
| run-down in sec, braked                      | 63          |             |         |                          |                          |                          |             |             |                                     |         |          |          |
| temperature in °C <sup>1)</sup>              | +4          |             |         |                          |                          |                          |             |             |                                     |         |          |          |

| capacity in ml                               | 15          | 50          | 10          | 30          | 50          | 85          | 94                        |
|--|-------------|-------------|-------------|-------------|-------------|-------------|---------------------------|
| Ø x L in mm                                  | 17 x 120    | 29 x 115    | 16 x 80     | 26 x 95     | 29 x 107    | 38 x 106    | 38 x 102                  |
| <b>Cat. No.</b>                              | <b>0509</b> | <b>0513</b> | -           | <b>0545</b> | <b>0546</b> | <b>0547</b> | <b>0538<sup>13)</sup></b> |
| lid with bio-containment <sup>5)</sup> incl. |             |             |             |             |             |             |                           |
| <b>rotor</b><br>Cat. No. <b>4794</b>         |             |             |             |             |             |             |                           |
| <b>Cat. No.</b>                              | <b>1466</b> | <b>1454</b> | <b>1448</b> | <b>1447</b> | <b>1446</b> |             | -                         |
| boring Ø x L in mm                           | 17 x 106    | 29.8 x 97   | 16.5 x 74   | 26 x 85     | 29 x 92     | 38.2 x 89.6 |                           |
| tubes per rotor                              | 6           | 6           | 12          | 6           |             |             |                           |
| max. RCF <sup>2)</sup>                       | 15,828      | 16,098      | 15,557      | 15,151      | 15,828      | 16,504      |                           |
| radius in mm                                 | 117         | 119         | 115         | 112         | 117         | 122         |                           |
| run-up in sec                                | 40          |             |             |             |             |             |                           |
| run-down in sec, braked                      | 63          |             |             |             |             |             |                           |
| temperature in °C <sup>1)</sup>              | +4          |             |             |             |             |             |                           |

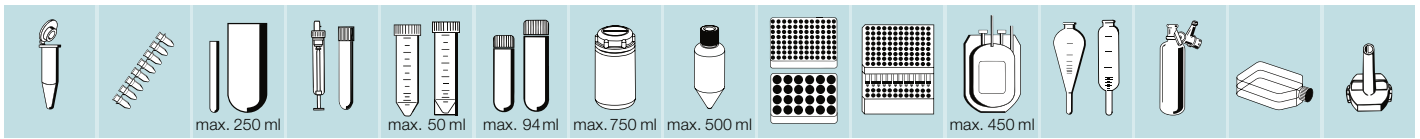
| capacity in ml                       | 0.2        | 0.2               |
|--------------------------------------|------------|-------------------|
| Ø x L in mm                          | 6 x 18     | -                 |
| <b>Cat. No.</b>                      | -          | <b>PCR strips</b> |
| <b>rotor</b><br>Cat. No. <b>4760</b> |            |                   |
| <b>Cat. No.</b>                      | -          |                   |
| boring Ø x L in mm                   | 6.5 x 15.5 |                   |
| tubes per rotor                      | 48         | 6 x 8             |
| max. RCF <sup>2)</sup>               | 18,845     |                   |
| radius in mm                         | 86         |                   |
| run-up in sec                        | 15         |                   |
| run-down in sec, braked              | 15         |                   |
| temperature in °C <sup>1)</sup>      | +1         |                   |

<sup>7)</sup> For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters 2031.

<sup>13)</sup> The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 106 mm.

<sup>28)</sup> At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

# ROTANTA 460/460 R



**Advanced laboratory technology makes a significant contribution to shortening processing times**

Enhanced performance and an extended range of accessories guarantee fast, trouble-free operation in daily laboratory use. With a maximum capacity of 3 litres per run, the ROTANTA centrifuges are proving themselves in clinics and laboratory centres, as well as in Life Science R & D departments.



ROTANTA 460

## TECHNOLOGY

| TECHNOLOGY                               | ROTANTA 460  |                    | ROTANTA 460 R <sup>2)</sup> |                    |           |
|--|--|--------------------|-----------------------------|--------------------|-----------|
|  | classic  |                    | cooled                      |                    |           |
| Benchtop centrifuge, without rotor       |  |                    |                             |                    |           |
| Power supply <sup>*)</sup>               | 200 – 240 V 1 ~  | 100 – 127 V 1 ~    | 200 – 240 V 1 ~             | 100–127 V 1 ~      | 100 V 1 ~ |
| Frequency                                | 50 – 60 Hz   |                    | 50 Hz                       | 60 Hz              | 50 Hz     |
| Consumption                              | 1,000 VA   | 1,100 VA           | 1,800 VA                    | 2,000 VA           |           |
| Emission, Immunity                       | EN / IEC 61326-1, class B  | FCC class B        | EN / IEC 61326-1, class B   | FCC class B        |           |
| Max. capacity                            | 4x 750 ml  |                    |                             |                    |           |
| Max. RPM (speed)                         | 15,000 min <sup>-1</sup>   |                    |                             |                    |           |
| Max. RCF                                 | 24,400   |                    |                             |                    |           |
| Running time                             | 1 sec - 99 h : 59 min : 59 sec, ∞ continuous run, short cycle mode |                    |                             |                    |           |
| Dimensions (HxWxD)                       | 456 x 554 x 706 mm   | 456 x 554 x 715 mm | 456 x 770 x 706 mm          | 456 x 770 x 715 mm |           |
| Weight                                   | approx. 101 kg   | approx. 111 kg     | approx. 141 kg              | approx. 151 kg     |           |
| <b>Refrigeration</b>                     |  |                    |                             |                    |           |
| Temperature control, infinitely variable | -  |                    | from -20 to +40 °C          |                    |           |
| <b>Cat. No.</b>                          | <b>5650</b>  | <b>5650-01</b>     | <b>5660</b>                 | <b>5660-01</b>     |           |

<sup>\*)</sup> Other voltages on request.

<sup>2)</sup> For a list of further versions of this model, please refer to page 12.

# ROTANTA 460 RC / 460 RF

Model ROTANTA 460 RC is a refrigerated floor-standing centrifuge. It rests on castors, can be easily pushed beneath the workbench and thus does not take up any space on top of the workbench. A further option is the refrigerated ROTANTA 460 RF floor-standing centrifuge.



## TECHNOLOGY

|  | ROTANTA 460 RC <sup>*)</sup>                                       | ROTANTA 460 RF <sup>*)</sup>                           |
|--|--|--|
|  | <b>Underbench centrifuge, cooled, without rotor</b>                | <b>Floorstanding centrifuge, cooled, without rotor</b> |
| Power supply <sup>*)</sup>               | 200 – 240 V 1 ~  |  |
| Frequency                                | 50 Hz  |  |
| Consumption                              | 1,800 VA   |  |
| Emission, Immunity                       | EN / IEC 61326-1, class B  |  |
| Max. capacity                            | 4x750 ml   |  |
| Max. RPM (speed)                         | 15,000 min <sup>-1</sup>   |  |
| Max. RCF                                 | 24,400   |  |
| Running time                             | 1 sec - 99 h : 59 min : 59 sec, ∞ continuous run, short cycle mode |  |
| Dimensions (HxWxD)                       | 683 x 554 x 697 mm   | 961 x 554 x 697 mm                                     |
| Weight                                   | approx. 140 kg   | approx. 164 kg   |
| <b>Refrigeration</b>                     |  |  |
| Temperature control, infinitely variable | from -20 to +40 °C   |  |
| <b>Cat. No.</b>                          | <b>5670</b>  | <b>5675</b>  |

## Swing-out rotor, 4-place



± 90°

n = 4,600 min<sup>-1</sup>  
max. RCF 5,063

illustrated with carriers 5625-A and lids 5627  
with bio-containment<sup>5)</sup>

**Cat. No.** (without carriers) **5699**

|   |               |             |         |             |         |                          |                          |                          |             |                          |                          |                          |             |             |
|---|---------------|-------------|---------|-------------|---------|--------------------------|--------------------------|--------------------------|-------------|--------------------------|--------------------------|--------------------------|-------------|-------------|
| capacity in ml  | 1.5           | 2.0         | 3       | 4           | 4       | 5                        | 6                        | 7                        | 10          | 15                       | 25                       | 50                       | 75          | 94          |
| Ø x L in mm   | 11 x 38       |             | 10 x 60 | 10 x 88     | 12 x 60 | 12 x 75                  | 12 x 82                  | 12 x 100                 | 17 x 70     | 17 x 100                 | 24 x 100                 | 34 x 100                 | 35 x 105    | 38 x 102    |
| <b>Cat. No.</b>   | <b>2078</b>   | <b>0536</b> | -       |             |         | <b>0553<sup>2)</sup></b> | <b>0501<sup>2)</sup></b> | <b>0578<sup>2)</sup></b> | <b>2079</b> | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>0548</b> | <b>0549</b> |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 5627 |               |             |         |             |         |                          |                          |                          |             |                          |                          |                          |             |             |
| <b>carrier</b><br>Cat. No. 5625-A                       |               |             |         |             |         |                          |                          |                          |             |                          |                          |                          |             |             |
| <b>Cat. No.</b>   | <b>4730</b>   |             |         | <b>4732</b> |         |                          |                          | <b>4733</b>              |             | <b>4734</b>              | <b>4735</b>              | <b>4736</b>              |             |             |
| boring Ø x L in mm                                      | 11 x 84       |             |         | 13.5 x 84   |         |                          |                          | 17.5 x 84                |             | 26.5 x 84                | 36 x 80                  | 42 x 80                  |             |             |
| tubes per rotor   | 224           |             | 120     |             | 80      |                          |                          |                          | 68          |                          | 24                       | 12                       |             |             |
| max. RCF <sup>2)</sup> upper/lower                      | 3,572 / 4,637 |             |         | 4,637       |         |                          |                          |                          |             |                          | 4,495                    |                          |             |             |
| radius in mm upper/lower                                | 151 / 196     |             |         | 196         |         |                          |                          |                          |             |                          | 190                      |                          |             |             |
| run-up in sec   | 90            |             |         |             |         |                          |                          |                          |             |                          |                          |                          |             |             |
| run-down in sec, braked                                 | 95            |             |         |             |         |                          |                          |                          |             |                          |                          |                          |             |             |
| temperature in °C <sup>1)</sup>                         | + 4           |             |         |             |         |                          |                          |                          |             |                          |                          |                          |             |             |

|   |                          |                          |                          |                                     |             |             |             |             |         |         |         |          |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|-------------|-------------|-------------|-------------|---------|---------|---------|----------|
| capacity in ml  | 100                      | 100                      | 250                      | 1.1-1.4                             | 2.6-3.4     | 2.7-3       | 4-5.5       | 4.5-5       | 4.9     | 7.5-8.5 | 9-10    | 10       |
| Ø x L in mm   | 44 x 100                 | 40 x 115                 | 65 x 115                 | 8 x 66                              | 13 x 65     | 11 x 66     | 15 x 75     | 11 x 92     | 13 x 90 | 15 x 92 | 16 x 92 | 15 x 102 |
| <b>Cat. No.</b>   | <b>0526<sup>2)</sup></b> | <b>0523<sup>2)</sup></b> | <b>0530<sup>2)</sup></b> | <b>blood collection/urine tubes</b> |             |             |             |             |         |         |         |          |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 5627 |                          |                          |                          |                                     |             |             |             |             |         |         |         |          |
| <b>carrier</b><br>Cat. No. 5625-A                       |                          |                          |                          |                                     |             |             |             |             |         |         |         |          |
| <b>Cat. No.</b>   | <b>4737</b>              | <b>4736</b>              | <b>4738</b>              | <b>4730</b>                         | <b>4732</b> | <b>4733</b> | <b>4732</b> | <b>4733</b> |         |         |         |          |
| boring Ø x L in mm                                      | 46 x 84                  | 42 x 80                  | 66 x 80                  | 11 x 84                             | 13.5 x 84   | 17.5 x 84   | 13.5 x 84   | 17.5 x 84   |         |         |         |          |
| tubes per rotor   | 8                        | 12                       | 4                        | 120                                 | 80          | 68          | 80          | 68          |         |         |         |          |
| max. RCF <sup>2)</sup>                                  | 4,637                    | 4,495                    |                          | 4,637                               |             |             |             |             |         |         |         |          |
| radius in mm  | 196                      | 190                      |                          | 196                                 |             |             |             |             |         |         |         |          |
| run-up in sec   | 90                       |                          |                          |                                     |             |             |             |             |         |         |         |          |
| run-down in sec, braked                                 | 95                       |                          |                          |                                     |             |             |             |             |         |         |         |          |
| temperature in °C <sup>1)</sup>                         | + 4                      |                          |                          |                                     |             |             |             |             |         |         |         |          |

<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.

<sup>4)</sup> Please remove the inserts.



Most of the adapters for carriers 5625-A and 5620-A are built in layers. For shorter tubes, 1 to 2 layers should be removed. In the tables, the required layers are marked in grey.

**Swing-out rotor 5699**

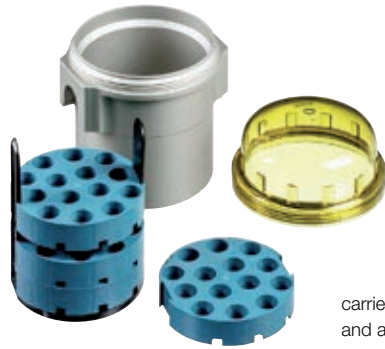
|  |                                     |             |             |                          |             |             |                          |             |                          |             |             |                          |             |                          |             |             |                           |
|--|-------------------------------------|-------------|-------------|--------------------------|-------------|-------------|--------------------------|-------------|--------------------------|-------------|-------------|--------------------------|-------------|--------------------------|-------------|-------------|---------------------------|
| capacity in ml   | 1.6-5                               | 4-7         | 4-7         | 8.5-10                   | 14          | 15          | 50                       | 12          | 25                       | 30          | 50          | 10                       | 30          | 50                       | 85          | 94          |                           |
| Ø x L in mm  | 13x75                               | 13x100      | 16x75       | 16x100                   | 16.5x106    | 17x120      | 29x115                   | 17x100      | 25x90                    | 25x110      | 29x115      | 16x80                    | 26x95       | 29x107                   | 38x106      | 38x102      |                           |
| <b>Cat. No.</b>  | <b>blood collection/urine tubes</b> |             |             |                          | -           | <b>0509</b> | <b>0513</b>              | -           |                          |             |             |                          | -           | <b>0545</b>              | <b>0546</b> | <b>0547</b> | <b>0538<sup>13)</sup></b> |
| lid with bio-containment <sup>5)</sup><br>Cat. No. <b>5627</b> |                                     |             |             |                          |             |             |                          |             |                          |             |             |                          |             |                          |             |             |                           |
| <b>carrier</b><br>Cat. No. <b>5625-A</b>                       |                                     |             |             |                          |             |             |                          |             |                          |             |             |                          |             |                          |             |             |                           |
| <b>Cat. No.</b>  | <b>4732</b>                         | <b>4733</b> | <b>4733</b> | <b>4739<sup>4)</sup></b> | <b>4739</b> | <b>4740</b> | <b>4739<sup>4)</sup></b> | <b>4734</b> | <b>4740<sup>4)</sup></b> | <b>4733</b> | <b>4734</b> | <b>4740<sup>4)</sup></b> | <b>4734</b> | <b>4740<sup>4)</sup></b> | <b>4736</b> |             |                           |
| boring Ø x L in mm   | 13.5x84                             |             | 17.5x84     |                          | 17x80       |             | 30x80                    | 17x80       | 26.5x84                  |             | 30x80       | 17.5x84                  | 26.5x84     | 30x80                    | 42x80       |             |                           |
| tubes per rotor  | 80                                  |             | 68          |                          | 48          |             | 20                       | 48          | 24                       |             | 20          | 68                       | 24          | 20                       | 12          |             |                           |
| max. RCF <sup>2)</sup>   | 4,637                               |             |             |                          |             |             |                          |             |                          |             |             |                          |             |                          | 4,495       |             |                           |
| radius in mm   | 196                                 |             |             |                          |             |             |                          |             |                          |             |             |                          |             |                          | 190         |             |                           |
| run-up in sec  | 90                                  |             |             |                          |             |             |                          |             |                          |             |             |                          |             |                          |             |             |                           |
| run-down in sec, braked  | 95                                  |             |             |                          |             |             |                          |             |                          |             |             |                          |             |                          |             |             |                           |
| temperature in °C <sup>1)</sup>                                | +4                                  |             |             |                          |             |             |                          |             |                          |             |             |                          |             |                          |             |             |                           |

|  |               |             |               |       |       |                          |                          |                          |             |                          |                          |             |                          |             |             |                          |  |
|--|---------------|-------------|---------------|-------|-------|--------------------------|--------------------------|--------------------------|-------------|--------------------------|--------------------------|-------------|--------------------------|-------------|-------------|--------------------------|--|
| capacity in ml   | 1.5           | 2.0         | 3             | 4     | 4     | 5                        | 6                        | 7                        | 10          | 15                       | 25                       | 45          | 50                       | 75          | 94          | 100                      |  |
| Ø x L in mm  | 11x38         |             | 10x60         | 10x88 | 12x60 | 12x75                    | 12x82                    | 12x100                   | 17x70       | 17x100                   | 24x100                   | 31x100      | 34x100                   | 35x105      | 38x102      | 40x115                   |  |
| <b>Cat. No.</b>  | <b>2078</b>   | <b>0536</b> | -             |       |       | <b>0553<sup>2)</sup></b> | <b>0501<sup>2)</sup></b> | <b>0578<sup>2)</sup></b> | <b>2079</b> | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | -           | <b>0521<sup>2)</sup></b> | <b>0548</b> | <b>0549</b> | <b>0523<sup>2)</sup></b> |  |
| lid with bio-containment <sup>5)</sup><br>Cat. No. <b>5621</b> |               |             |               |       |       |                          |                          |                          |             |                          |                          |             |                          |             |             |                          |  |
| <b>carrier</b><br>Cat. No. <b>5620-A</b>                       |               |             |               |       |       |                          |                          |                          |             |                          |                          |             |                          |             |             |                          |  |
| <b>Cat. No.</b>  | <b>4830</b>   |             | <b>4830</b>   |       |       | <b>4832</b>              |                          |                          | <b>4833</b> |                          | <b>4834</b>              | <b>4835</b> |                          | <b>4836</b> |             |                          |  |
| boring Ø x L in mm   | 11x84         |             | 11x84         |       |       | 13.5x84                  |                          |                          | 17.5x84     |                          | 26.5x84                  | 36x80       |                          | 42x80       |             |                          |  |
| tubes per rotor  | 192           |             | 96            |       |       | 76                       |                          |                          | 28          |                          | 16                       | 12          |                          |             |             |                          |  |
| max. RCF <sup>2)</sup> upper/lower                             | 3,572 / 4,637 |             | 3,572 / 4,637 |       |       | 4,637                    |                          |                          | 4,637       |                          | 4,637                    |             | 4,495                    |             | 4,495       |                          |  |
| radius in mm upper/lower                                       | 151 / 196     |             | 151 / 196     |       |       | 196                      |                          |                          | 196         |                          | 196                      |             | 190                      |             | 190         |                          |  |
| run-up in sec  | 90            |             |               |       |       |                          |                          |                          |             |                          |                          |             |                          |             |             |                          |  |
| run-down in sec, braked  | 95            |             |               |       |       |                          |                          |                          |             |                          |                          |             |                          |             |             |                          |  |
| temperature in °C <sup>1)</sup>                                | +4            |             |               |       |       |                          |                          |                          |             |                          |                          |             |                          |             |             |                          |  |

<sup>5)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

<sup>13)</sup> The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 106 mm.

ROTANTA 460



carrier 5620-A with lid 5621  
and adapter 4839

## Swing-out rotor 5699

|   |                          |                          |                                     |             |             |             |             |                          |             |             |             |             |             |             |             |
|---|--------------------------|--------------------------|-------------------------------------|-------------|-------------|-------------|-------------|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| capacity in ml  | 100                      | 250                      | 1.1–1.4                             | 2.6–3.4     | 2.6–3.4     | 2.7–3       | 4–5.5       | 4.5–5                    | 4.9         | 4.9         | 7.5–8.5     | 9–10        | 9–10        | 10          | 1.6–5       |
| Ø x L in mm   | 44x100                   | 65x115                   | 8x66                                | 13x65       | 13x65       | 11x66       | 15x75       | 11x92                    | 13x90       | 13x90       | 15x92       | 16x92       | 16x92       | 15x102      | 13x75       |
| <b>Cat. No.</b>   | <b>0526<sup>2)</sup></b> | <b>0530<sup>2)</sup></b> | <b>blood collection/urine tubes</b> |             |             |             |             |                          |             |             |             |             |             |             |             |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 5621 |                          |                          |                                     |             |             |             |             |                          |             |             |             |             |             |             |             |
| <b>carrier</b><br>Cat. No. 5620-A                       |                          |                          |                                     |             |             |             |             |                          |             |             |             |             |             |             |             |
| <b>Cat. No.</b>   | <b>4837</b>              | <b>4838</b>              | <b>4830</b>                         | <b>4847</b> | <b>4832</b> | <b>4833</b> | <b>4832</b> | <b>4847<sup>4)</sup></b> | <b>4833</b> | <b>4848</b> | <b>4833</b> | <b>4847</b> | <b>4833</b> | <b>4847</b> | <b>4834</b> |
| boring Ø x L in mm                                      | 46x84                    | 66x80                    | 11x84                               | 13.2x61     | 13.5x84     | 17.5x84     | 13.5x84     | 13.2x61                  | 17.5x84     | 17.5x61     | 17.5x84     | 17.5x61     | 17.5x84     | 13.2x61     | 13.2x61     |
| tubes per rotor   | 8                        | 4                        | 96                                  | 108         | 76          |             |             | 108                      | 76          | 88          | 76          | 108         | 76          | 108         | 108         |
| max. RCF <sup>2)</sup>                                  | 4,637                    | 4,495                    | 4,637                               | 4,116       | 4,637       |             |             | 4,684                    | 4,637       | 4,684       | 4,637       | 4,684       | 4,637       | 4,116       | 4,116       |
| radius in mm  | 196                      | 190                      | 196                                 | 174         | 196         |             |             | 198                      | 196         | 198         | 196         | 198         | 196         | 174         | 174         |
| run-up in sec   | 90                       |                          |                                     |             |             |             |             |                          |             |             |             |             |             |             |             |
| run-down in sec, braked                                 | 95                       |                          |                                     |             |             |             |             |                          |             |             |             |             |             |             |             |
| temperature in °C <sup>1)</sup>                         | +4                       |                          |                                     |             |             |             |             |                          |             |             |             |             |             |             |             |

|   |                                     |                          |             |             |             |             |             |                          |             |             |             |                          |             |             |             |          |
|---|-------------------------------------|--------------------------|-------------|-------------|-------------|-------------|-------------|--------------------------|-------------|-------------|-------------|--------------------------|-------------|-------------|-------------|----------|
| capacity in ml  | 1.6–5                               | 4–7                      | 4–7         | 4–7         | 4–7         | 8           | 8.5–10      | 8.5–10                   | 14          | 15          | 50          | 50                       | 12          | 25          | 30          |          |
| Ø x L in mm   | 13x75                               | 13x100                   | 13x100      | 16x75       | 16x75       | 16x125      | 16x100      | 16x100                   | 16.5x106    | 17x120      | 29x115      | 29x115                   | 17x100      | 25x90       | 25x110      |          |
| <b>Cat. No.</b>   | <b>blood collection/urine tubes</b> |                          |             |             |             |             |             |                          |             |             | <b>-</b>    | <b>0509</b>              | <b>0513</b> | <b>0513</b> | <b>-</b>    | <b>-</b> |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 5621 |                                     |                          |             |             |             |             |             |                          |             |             |             |                          |             |             |             |          |
| <b>carrier</b><br>Cat. No. 5620-A                       |                                     |                          |             |             |             |             |             |                          |             |             |             |                          |             |             |             |          |
| <b>Cat. No.</b>   | <b>4832</b>                         | <b>4847<sup>4)</sup></b> | <b>4832</b> | <b>4833</b> | <b>4848</b> | <b>4833</b> | <b>4848</b> | <b>4839<sup>4)</sup></b> | <b>4839</b> | <b>5647</b> | <b>4840</b> | <b>4839<sup>4)</sup></b> | <b>4834</b> | <b>4834</b> | <b>4834</b> |          |
| boring Ø x L in mm                                      | 13.5x84                             | 13.2x61                  | 13.5x84     | 17.5x84     | 17.5x61     | 17.5x84     | 17.5x61     | 17x80                    | 30x96.5     | 30x80       | 17x80       | 26.5x84                  | 26.5x84     | 26.5x84     | 26.5x84     |          |
| tubes per rotor   | 76                                  | 108                      | 76          | 76          | 88          | 76          | 88          | 56                       | 28          | 20          | 56          | 28                       | 56          | 28          | 28          |          |
| max. RCF <sup>2)</sup>                                  | 4,637                               | 4,684                    | 4,637       | 4,637       | 4,684       | 4,637       | 4,684       | 4,637                    | 4,708       | 4,637       | 4,637       | 4,637                    | 4,637       | 4,637       | 4,637       |          |
| radius in mm  | 196                                 | 198                      | 196         | 196         | 198         | 196         | 198         | 196                      | 199         | 199         | 196         | 196                      | 196         | 196         | 196         |          |
| run-up in sec   | 90                                  |                          |             |             |             |             |             |                          |             |             |             |                          |             |             |             |          |
| run-down in sec, braked                                 | 95                                  |                          |             |             |             |             |             |                          |             |             |             |                          |             |             |             |          |
| temperature in °C <sup>1)</sup>                         | +4                                  |                          |             |             |             |             |             |                          |             |             |             |                          |             |             |             |          |

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.

2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.

3) When using these tubes, carrier 5620-A cannot be closed with lid 5621.

4) Please remove the inserts.





illustrated with carriers 5620-A  
and lids 5621  
with bio-containment<sup>5)</sup>

**Swing-out rotor 5699**

|   |                           |                           |             |             |             |                           |                           |             |                            |                            |                  |                |                            |                            |                            |  |
|---|---------------------------|---------------------------|-------------|-------------|-------------|---------------------------|---------------------------|-------------|----------------------------|----------------------------|------------------|----------------|----------------------------|----------------------------|----------------------------|--|
| capacity in ml  | 50                        | 50                        | 10          | 10          | 30          | 50                        | 50                        | 85          | 94                         | 250                        | 290              | 500            | 600                        | 650                        | 750                        |  |
| Ø x L in mm   | 29 x 115                  | 29 x 115                  | 16 x 80     | 16 x 80     | 26 x 95     | 29 x 107                  | 29 x 107                  | 38 x 106    | 38 x 102                   | 61 x 122                   | 62 x 137         | 96 x 147       | 93 x 134                   | 97 x 139                   | 97 x 152                   |  |
| <b>Cat. No.</b>   | -                         | -                         | -           | -           | <b>0545</b> | <b>0546</b>               | <b>0546</b>               | <b>0547</b> | <b>0538</b> <sup>13)</sup> | <b>5127</b> <sup>28)</sup> | - <sup>28)</sup> | <b>Corning</b> | <b>0551</b> <sup>28)</sup> | <b>0554</b> <sup>28)</sup> | <b>0512</b> <sup>28)</sup> |  |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 5621 |                           |                           |             |             |             |                           |                           |             |                            |                            |                  |                |                            |                            |                            |  |
| <b>carrier</b><br>Cat. No. 5620-A                       |                           |                           |             |             |             |                           |                           |             |                            |                            |                  |                |                            |                            |                            |  |
| <b>Cat. No.</b>   | <b>5647</b> <sup>4)</sup> | <b>4840</b> <sup>4)</sup> | <b>4833</b> | <b>4848</b> | <b>4834</b> | <b>4840</b> <sup>4)</sup> | <b>5647</b> <sup>4)</sup> | <b>4836</b> |                            | <b>4841</b>                | <b>4845</b>      | <b>4845</b>    | <b>4846</b>                | <b>4845</b>                |                            |  |
| boring Ø x L in mm                                      | 30 x 96.5                 | 30 x 80                   | 17.5 x 84   | 17.5 x 61   | 26.5 x 84   | 30 x 80                   | 30 x 96.5                 | 42 x 80     |                            | 62 x 100                   | 98 x 100         | 94 x 95        | 98 x 100                   |                            |                            |  |
| tubes per rotor   | 28                        | 20                        | 76          | 88          | 28          | 20                        | 28                        | 12          |                            |                            |                  |                | 4                          |                            |                            |  |
| max. RCF <sup>2)</sup>                                  | 4,708                     | 4,637                     | 4,637       | 4,684       | 4,637       | 4,708                     | 4,495                     |             |                            |                            |                  |                | 4,779                      |                            |                            |  |
| radius in mm  | 199                       | 196                       | 196         | 198         | 196         | 199                       | 190                       |             |                            |                            |                  |                | 202                        |                            |                            |  |
| run-up in sec   | 90                        |                           |             |             |             |                           |                           |             |                            |                            |                  |                |                            |                            |                            |  |
| run-down in sec, braked                                 | 95                        |                           |             |             |             |                           |                           |             |                            |                            |                  |                |                            |                            |                            |  |
| temperature in °C <sup>1)</sup>                         | +4                        |                           |             |             |             |                           |                           |             |                            |                            |                  |                |                            |                            |                            |  |

|   |             |                      |                |                |              |              |                |                |              |  |
|---|-------------|----------------------|----------------|----------------|--------------|--------------|----------------|----------------|--------------|--|
| capacity in ml  | 450         | 750                  | 30/50          |                | 40           | 160          | 200            |                |              |  |
| Ø x L in mm   | 97 x 113    | 96 x 135             | -              |                |              |              |                |                |              |  |
| <b>Cat. No.</b>   | <b>4447</b> | <b>4234-A</b>        | <b>Falcon®</b> | <b>Corning</b> | <b>Nunc®</b> | <b>Nunc®</b> | <b>Falcon®</b> | <b>Greiner</b> | <b>Nunc®</b> |  |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 5621 |             |                      |                |                |              |              |                |                |              |  |
| <b>carrier</b><br>Cat. No. 5620-A                       |             |                      |                |                |              |              |                |                |              |  |
| <b>Cat. No.</b>   | <b>4845</b> | <b>4849</b>          | <b>4852</b>    | <b>4851</b>    | <b>4831</b>  |              |                |                |              |  |
| boring Ø x L in mm                                      | 98 x 100    | -                    |                |                |              |              |                |                |              |  |
| tubes per rotor   | 4           | 4                    |                |                |              |              |                |                |              |  |
| max. RCF <sup>2)</sup>                                  | 4,779       | 4,613 <sup>31)</sup> |                |                |              |              |                |                |              |  |
| radius in mm  | 202         | 195                  |                |                |              |              |                |                |              |  |
| run-up in sec   | 90          |                      |                |                |              |              |                |                |              |  |
| run-down in sec, braked                                 | 95          |                      |                |                |              |              |                |                |              |  |
| temperature in °C <sup>1)</sup>                         | +4          |                      |                |                |              |              |                |                |              |  |

**Accommodated cell culture flasks:**

**30/50 ml**  
from Becton Dickinson, No. 353014  
from Corning, No. 430168

**40 ml**  
from Nunc, No. 156340

**160 ml**  
from Nunc, No. 156472

**200 ml**  
from Becton Dickinson, No. 353024  
from Greiner, No. 658170  
from Nunc, No. 153732 or 147589

<sup>5)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

<sup>13)</sup> The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 106 mm.

<sup>28)</sup> At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

<sup>31)</sup> Please note that the RCF values indicated refer only to rotor performance.

The max. RCF for the accommodated cell culture flasks is 2,300.



illustrated with carriers 5620-A  
and lids 5621  
with bio-containment<sup>5)</sup>

## Swing-out rotor 5699

| capacity in ml  | 1.5           | 2.0         | 5                        | 7                        | 8           | 9                        | 10          | 15                       | 25                       | 50                       | 100                      | 2.6–3.4                       | 2.7–3       | 4–5.5       | 4.5–5   |  |
|---|---------------|-------------|--------------------------|--------------------------|-------------|--------------------------|-------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------|-------------|-------------|---------|--|
| Ø x L in mm   | 11 x 38       |             | 12 x 75                  | 12 x 100                 | 16 x 81     | 14 x 100                 | 17 x 70     | 17 x 100                 | 24 x 100                 | 34 x 100                 | 44 x 100                 | 13 x 65                       | 11 x 66     | 15 x 75     | 11 x 92 |  |
| <b>Cat. No.</b>   | <b>2078</b>   | <b>0536</b> | <b>0553<sup>2)</sup></b> | <b>0578<sup>2)</sup></b> | -           | <b>0500<sup>2)</sup></b> | <b>2079</b> | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>0526<sup>2)</sup></b> | <b>blood collection tubes</b> |             |             |         |  |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 5621 |               |             |                          |                          |             |                          |             |                          |                          |                          |                          |                               |             |             |         |  |
| <b>carrier</b><br>Cat. No. 5623-A                       |               |             |                          |                          |             |                          |             |                          |                          |                          |                          |                               |             |             |         |  |
| <b>Cat. No.</b>   | <b>4432</b>   |             | <b>4433</b>              |                          | <b>4434</b> |                          |             | <b>4438</b>              | <b>4439</b>              | <b>4442</b>              | <b>4435</b>              | <b>4433</b>                   | <b>4434</b> | <b>4433</b> |         |  |
| boring Ø x L in mm                                      | 11.5 x 38     |             | 13 x 58                  |                          | 17.5 x 53   |                          |             | 26 x 72                  | 36 x 79                  | 45 x 78                  | 13.5 x 58                | 13 x 58                       | 17.5 x 53   | 13 x 58     |         |  |
| tubes per rotor   | 168           |             | 120                      |                          | 76          |                          |             | 28                       | 16                       | 8                        | 84                       | 120                           | 76          | 120         |         |  |
| max. RCF <sup>2)</sup> upper/lower                      | 3,407 / 4,542 |             | 4,471                    |                          | 4,637       |                          |             | 4,353                    | 4,424                    | 4,400                    | 4,471                    |                               | 4,637       | 4,471       |         |  |
| radius in mm upper/lower                                | 144 / 192     |             | 189                      |                          | 196         |                          |             | 184                      | 187                      | 186                      | 189                      |                               | 196         | 189         |         |  |
| run-up in sec   | 90            |             |                          |                          |             |                          |             |                          |                          |                          |                          |                               |             |             |         |  |
| run-down in sec, braked                                 | 95            |             |                          |                          |             |                          |             |                          |                          |                          |                          |                               |             |             |         |  |
| temperature in °C <sup>1)</sup>                         | +4            |             |                          |                          |             |                          |             |                          |                          |                          |                          |                               |             |             |         |  |

| capacity in ml  | 4.9                                 | 7.5–8.5     | 9–10    | 10          | 1.6–5   | 4–7         | 4–7     | 8           | 8.5–10   | 10          | 15          | 50                       | 25          | 30                       | 50       | 50       |   |             |
|---|-------------------------------------|-------------|---------|-------------|---------|-------------|---------|-------------|----------|-------------|-------------|--------------------------|-------------|--------------------------|----------|----------|---|-------------|
| Ø x L in mm   | 13 x 90                             | 15 x 92     | 16 x 92 | 15 x 102    | 13 x 75 | 13 x 100    | 16 x 75 | 16 x 125    | 16 x 100 | 16 x 80     | 17 x 120    | 29 x 115                 | 25 x 90     | 25 x 110                 | 29 x 115 | 29 x 107 |   |             |
| <b>Cat. No.</b>   | <b>blood collection/urine tubes</b> |             |         |             |         |             |         |             |          |             |             | -                        | <b>0509</b> | <b>0513</b>              | -        | -        | - | <b>0546</b> |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 5621 |                                     |             |         |             |         |             |         |             |          |             |             |                          |             |                          |          |          |   |             |
| <b>carrier</b><br>Cat. No. 5623-A                       |                                     |             |         |             |         |             |         |             |          |             |             |                          |             |                          |          |          |   |             |
| <b>Cat. No.</b>   | <b>4435</b>                         | <b>4434</b> |         | <b>4435</b> |         | <b>4434</b> |         | <b>4469</b> |          | <b>4468</b> | <b>4438</b> | <b>4468<sup>4)</sup></b> | <b>4468</b> | <b>4468<sup>4)</sup></b> |          |          |   |             |
| boring Ø x L in mm                                      | 13.5 x 58                           | 17.5 x 53   |         | 13.5 x 58   |         | 17.5 x 53   |         | 17 x 93.1   |          | 31 x 96     | 26 x 72     | 31 x 96                  |             |                          |          |          |   |             |
| tubes per rotor   | 84                                  | 76          |         | 84          |         | 76          |         | 56          |          | 28          | 28          | 28                       |             |                          |          |          |   |             |
| max. RCF <sup>2)</sup>                                  | 4,471                               | 4,637       |         | 4,471       |         | 4,637       |         | 4,755       |          | 4,613       | 4,566       | 4,613                    |             |                          |          |          |   |             |
| radius in mm  | 189                                 | 196         |         | 189         |         | 196         |         | 201         |          | 195         | 193         | 195                      |             |                          |          |          |   |             |
| run-up in sec   | 90                                  |             |         |             |         |             |         |             |          |             |             |                          |             |                          |          |          |   |             |
| run-down in sec, braked                                 | 95                                  |             |         |             |         |             |         |             |          |             |             |                          |             |                          |          |          |   |             |
| temperature in °C <sup>1)</sup>                         | +4                                  |             |         |             |         |             |         |             |          |             |             |                          |             |                          |          |          |   |             |

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.

2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.

3) When using these tubes, carrier 5623-A cannot be closed with lid 5621.

4) Please remove the inserts.



illustrated with carriers 5620-A

### Swing-out rotor 5699

|  |                           |                        |                           |                           |                |                 |              |                |                |                |
|--|---------------------------|------------------------|---------------------------|---------------------------|----------------|-----------------|--------------|----------------|----------------|----------------|
| capacity in ml   | 250                       | 290                    | 650                       | 750                       | 175            | 175             | 200          | 225            | 250            | 500            |
| Ø x L in mm  | 61 x 122                  | 62 x 137               | 97 x 139                  | 97 x 152                  | 61 x 118       | 62 x 144        | 60 x 130     | 61 x 137       | 60 x 162       | 96 x 147       |
| <b>Cat. No.</b>  | <b>5127<sup>2B)</sup></b> | <b>-<sup>2B)</sup></b> | <b>0554<sup>2B)</sup></b> | <b>0512<sup>2B)</sup></b> | <b>Falcon®</b> | <b>Nalgene®</b> | <b>Nunc®</b> | <b>Falcon®</b> | <b>Corning</b> | <b>Corning</b> |
| lid with bio-containment <sup>5)</sup><br>Cat. No. <b>5621</b> |                           |                        |                           |                           |                |                 |              |                |                |                |
| <b>carrier</b><br>Cat. No. <b>5623-A</b>                       |                           |                        |                           |                           |                |                 |              |                |                |                |
| <b>Cat. No.</b>  | <b>4443</b>               | <b>4451</b>            | <b>4440</b>               | <b>4430</b>               | <b>4440</b>    | <b>4430</b>     | <b>4440</b>  | <b>4430</b>    | <b>4449</b>    |                |
| boring Ø x L in mm   | 62 x 92                   | 98.4 x 116             | -                         |                           |                |                 |              |                |                |                |
| tubes per rotor  | 4                         |                        |                           |                           | 4              |                 |              |                |                |                |
| max. RCF <sup>2)</sup>   | 4,873                     |                        |                           |                           | 5,063          |                 |              |                |                |                |
| radius in mm   | 206                       |                        |                           |                           | 214            |                 |              |                |                |                |
| run-up in sec  | 90                        |                        |                           |                           |                |                 |              |                |                |                |
| run-down in sec, braked  | 95                        |                        |                           |                           |                |                 |              |                |                |                |
| temperature in °C <sup>1)</sup>                                | +4                        |                        |                           |                           |                |                 |              |                |                |                |

|  |             |               |                                  |
|--|-------------|---------------|----------------------------------|
| capacity in ml   | 450         | 750           | 450                              |
| Ø x L in mm  | 97 x 113    | 96 x 135      | triplicate system without filter |
| <b>Cat. No.</b>  | <b>4447</b> | <b>4234-A</b> | <b>blood bags<sup>32)</sup></b>  |
| lid with bio-containment <sup>5)</sup><br>Cat. No. <b>5621</b> |             |               |                                  |
| <b>carrier</b><br>Cat. No. <b>5623-A</b>                       |             |               |                                  |
| <b>Cat. No.</b>  | <b>4451</b> | <b>-</b>      |                                  |
| boring Ø x L in mm   | 98.4 x 116  |               |                                  |
| tubes per rotor  | 4           |               |                                  |
| max. RCF <sup>2)</sup>   | 5,063       |               |                                  |
| radius in mm   | 214         |               |                                  |
| run-up in sec  | 90          |               |                                  |
| run-down in sec, braked  | 95          |               |                                  |
| temperature in °C <sup>1)</sup>                                | +4          |               |                                  |

<sup>5)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.



<sup>2B)</sup> At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

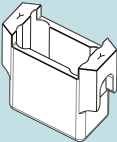
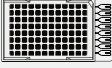

<sup>32)</sup> We recommend the use of the refrigerated ROTANTA 460 R, 460 RC and 460 RF to ensure that the temperature of the blood is maintained during centrifugation.

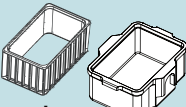














illustrated with carriers 5628  
and adapters 6338-A

## Swing-out rotor 5699

|   |   |   |
|---|---|---|
| capacity in ml  | 450   |   |
| <b>blood bags</b> <sup>32)</sup>  | triplicate system   | quadruplicate system                      |
| <b>Cat. No.</b>   | <b>5693</b>   | <b>5695</b>                               |
| <br><b>carrier</b><br>Cat. No. <b>5691-A</b> | holder for systems without filter   | holder for systems with or without filter |
|   |  |   |
| <b>Cat. No.</b>   | <b>5692</b>   |   |
| boring Ø x L in mm  | -   |   |
| blood bag systems per rotor   | 4   |   |
| max. RCF <sup>2)</sup>  | 4,637   |   |
| radius in mm  | 196   |   |
| run-up in sec   | 90  |   |
| run-down in sec, braked   | 95  |   |
| temperature in °C <sup>1)</sup>   | +11   |   |

|   |   |
|---|---|
| capacity in ml  | -   |
| L x W x H in mm   | 152.5 x 85.5 x 12   |
| <b>Cat. No.</b>   | -   |
| <br><b>carrier</b><br>Cat. No. <b>5636</b> | TaqMan array  |
|   | <br> |
| <b>Cat. No.</b>   | <b>5648</b>   |
| boring Ø x L in mm  | -   |
| arrays per rotor  | 12  |
| max. RCF <sup>2)</sup>  | 4,921   |
| radius in mm  | 208   |
| run-up in sec   | 90  |
| run-down in sec, braked   | 95  |
| temperature in °C <sup>1)</sup>   | +4  |

|   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| capacity in ml  | 1.5   | 2.0   | 3   | 5   | 6   | 7   | 9   | 25  | 50  | 100   | 100   | 250   |
| Ø x L in mm   | 11 x 38   |   | 10x60   | 12 x 75   | 12 x 82   | 12x100  | 14 x 100  | 24x100  | 34x100  | 44x100  | 40x115  | 65x115  |
| <b>Cat. No.</b>   | <b>2078</b>   | <b>0536</b>   | -   | <b>0553</b> <sup>2)</sup>   | <b>0501</b> <sup>2)</sup>   | <b>0578</b> <sup>2)</sup>   | <b>0500</b> <sup>2)</sup>   | <b>0519</b> <sup>2)</sup>   | <b>0521</b> <sup>2)</sup>   | <b>0526</b> <sup>2)</sup>   | <b>0523</b> <sup>2)</sup>   | <b>0530</b> <sup>2)</sup>   |
| (adaptable only without lid 5629) adapting frame<br>Cat. No. <b>5220-A</b><br><br><b>carrier</b><br>Cat. No. <b>5628</b> <sup>1)</sup> |  |  |  |  |  |  |  |  |  |  |  |  |
|   | + 5220-A  | + 5220-A  |   | + 5220-A  |   | + 5220-A  | + 5220-A  | + 5220-A  | + 5220-A  | + 5220-A  | + 5220-A  | + 5220-A  |
| <b>Cat. No.</b> <sup>2)</sup>   | <b>5281</b>   | <b>5267</b>   |   | <b>5268</b>   |   | <b>5264</b>   | <b>5242</b>   | <b>5243</b>   | <b>5262</b>   | <b>5249</b>   | <b>5263-A</b>   |   |
| boring Ø x L in mm  | 11.5 x 50   |   | 11 x 44   | 13.5 x 52   |   | 16 x 50   | 26 x 86   | 36 x 86   | 45.5 x 86   | 42 x 86   | 66 x 87   |   |
| tubes per rotor   | 128   | 160   |   | 96  |   | 96  | 40  | 16  | 8   |   | 4   |   |
| max. RCF <sup>2)</sup>  | 4,164   | 4,069   |   | 4,164   |   | 4,116   | 4,093   |   | 4,069   |   | 4,045   |   |
| radius in mm  | 176   | 172   |   | 176   |   | 174   | 173   |   | 172   |   | 171   |   |
| run-up in sec   | 90  |   |   |   |   |   |   |   |   |   |   |   |
| run-down in sec, braked   | 95  |   |   |   |   |   |   |   |   |   |   |   |
| temperature in °C <sup>1)</sup>   | +4  |   |   |   |   |   |   |   |   |   |   |   |

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.

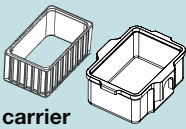












2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.








4) Please remove the inserts.



illustrated with carriers 5628,  
adapting frame 5220-A and  
adapters 5258

**Swing-out rotor 5699**

|  |   |   |   |   |   |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| capacity in ml   | 1.1–1.4   | 2.6–3.4   | 2.7–3   | 4–5.5   | 4.5–5   | 4.9   | 7.5–8.5   | 9–10  | 1.6–5   | 4–7   | 4–7   | 8.5–10  |
| Ø x L in mm  | 8x66  | 13x65   | 11x66   | 15x75   | 11x92   | 13x90   | 15x92   | 16x92   | 13x75   | 16x75   | 13x100  | 16x100  |
| <b>Cat. No.</b>  | <b>blood collection/urine tubes</b>   |   |   |   |   |   |   |   |   |   |   |   |
| (adaptable only without lid 5629) adapting frame Cat. No. 5220-A<br><br><b>carrier</b><br>Cat. No. 5628 <sup>11)</sup> |  |  |  |  |  |  |  |  |  |  |  |  |
|  | + 5220-A  | + 5220-A  | + 5220-A  | + 5220-A  | + 5220-A  | + 5220-A  | + 5220-A  | + 5220-A  | + 5220-A  | + 5220-A  | + 5220-A  | + 5220-A  |
| <b>Cat. No.<sup>22)</sup></b>  | <b>5267</b>   | <b>5268</b>   | <b>5227</b>   | <b>5264</b>   | <b>5227</b>   | <b>5268</b>   | <b>5264</b>   | <b>5258</b>   | <b>5268</b>   | <b>5264</b>   | <b>5268</b>   | <b>5258</b>   |
| boring Ø x L in mm   | 11 x 44   | 13.5 x 52   | 12.5 x 42   | 16 x 50   | 12.5 x 42   | 13.5 x 52   | 16 x 50   | 17.6 x 86   | 13.5 x 52   | 16 x 50   | 13.5 x 52   | 17.6 x 86   |
| tubes per rotor  | 160   | 96  | 160   | 96  | 160   | 96  | 96  | 88  | 96  |   | 88  |   |
| max. RCF <sup>2)</sup>   | 4,069   | 4,164   | 4,116   |   | 4,164   |   | 4,116   | 4,093   | 4,164   | 4,116   | 4,164   | 4,093   |
| radius in mm   | 172   | 176   | 174   |   | 176   |   | 174   | 173   | 176   | 174   | 176   | 173   |
| run-up in sec  | 90  |   |   |   |   |   |   |   |   |   |   |   |
| run-down in sec, braked  | 95  |   |   |   |   |   |   |   |   |   |   |   |
| temperature in °C <sup>1)</sup>  | +4  |   |   |   |   |   |   |   |   |   |   |   |

|  |   |   |   |   |   |   |
|--|---|---|---|---|---|---|
| capacity in ml   | 15  | 30  | 50  | 50  | 250   | two-tier frame for cyto accessories   |
| Ø x L in mm  | 17 x 120  | 25 x 110  | 29 x 115  | 29 x 115  | 61 x 122  |   |
| <b>Cat. No.</b>  | <b>0509</b>   | -   | <b>0513</b>   | -   | <b>5127<sup>28)</sup></b>   | <b>cyto chambers<sup>23)</sup></b>  |
| (adaptable only without lid 5629) adapting frame Cat. No. 5220-A<br><br><b>carrier</b><br>Cat. No. 5628 <sup>11)</sup> |  |  |  |  |  |  |
|  | + 5220-A  | + 5220-A  | + 5220-A  | + 5220-A  | + 5220-A + 6319   | + 5220-A  |
| <b>Cat. No.<sup>22)</sup></b>  | <b>6337-A</b>   | <b>5266<sup>4)</sup></b>  | <b>6338-A</b>   | <b>6339-A</b>   | <b>5263-A<sup>4)</sup></b>  | <b>5280</b>   |
| boring Ø x L in mm   | 17 x 90   | 26 x 86   | 30 x 90   | 30 x 87   | 66 x 87   | -   |
| tubes per rotor  | 56  | 40  | 24  | 24  | 4   | 16  |
| max. RCF <sup>2)</sup> upper/lower   | 4,258   | 4,187   | 4,258   | 4,187   |   | 2,744 / 4,069   |
| radius in mm upper/lower   | 180   | 177   | 180   | 177   |   | 116 / 172   |
| run-up in sec  | 90  |   |   |   |   |   |
| run-down in sec, braked  | 95  |   |   |   |   |   |
| temperature in °C <sup>1)</sup>  | +4  |   |   |   |   |   |

For detailed information on the comprehensive Hettich cyto system please turn to the pages 156–158.



Carrier 5628, adapting frame 5220-A and adapters 5258



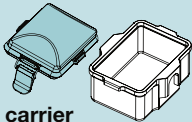

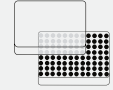
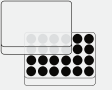






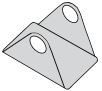
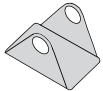

Carrier 5628 and adapter 6338-A

11) Please make sure not to exceed the max. permissible loading weight of 800g of carrier 5628. The loading weight is the sum of the weight of the respective adapters, of frame 5220-A (where required), the tubes, and their contents.  
22) With the exception of adapters 5263-A, 6337-A, 6338-A and 6339-A, two of these adapters need to be placed into carrier 5628.  
23) Please ask for our detailed cyto brochure.  
28) At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.  
32) We recommend the use of the refrigerated ROTANTA 460 R, 460 RC and 460 RF to ensure that the temperature of the blood is maintained during centrifugation.



illustrated with carriers 5628  
and lids 5629  
with bio-containment<sup>5)</sup>  
and removal frame 4626

**Swing-out rotor Cat. No. (without carriers) 5699**

|  |   |   |   |   |   |  |   |   |   |
|--|---|---|---|---|---|--|---|---|---|
| D x W x H in mm  | 86x128x15   | 86x128x17.5   | 86x128x22   | 86x128x44.5   | 86x128x46   | 86x128x83  | 59x84x11  | 82x124x20   | -   |
| capacity in ml   | -   |   |   |   |   |  |   |   |   |
| capacity in ml   | 0.2   |   |   |   |   |  |   |   |   |
| <b>Cat. No.</b>  | <b>MTP</b>  |   | <b>CP</b>   | <b>DWP</b>  | <b>MS</b>   | <b>QP</b>  | <b>Microtest plate (Terasaki)</b>   | <b>PCR plate, 96 wells</b>  | <b>PCR strips</b>   |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 5629<br><br><b>carrier</b><br>Cat. No. 5628 <sup>1)</sup> |  |  |  |  |  |  |  |  |  |
|  |  |   |   |   |   |  |   |  |  |
| <b>Cat. No.</b>  | <b>4626</b>   |   |   |   |   |  |   | <b>4626 + 1485</b>  |   |
| boring Ø x L in mm   | -   |   |   |   |   |  |   |   |   |
| plates/strips per rotor  | 24  | 20  | 16  | 4   | 4   | 4  | 8   | 4   | 48x8  |
| max. RCF <sup>2)</sup>   | 4,211   |   |   |   |   |  |   |   |   |
| radius in mm   | max. 178  |   |   |   |   |  |   |   |   |
| run-up in sec  | 90  |   |   |   |   |  |   |   |   |
| run-down in sec, braked  | 95  |   |   |   |   |  |   |   |   |
| temperature in °C <sup>1)</sup>  | + 4   |   |   |   |   |  |   |   |   |

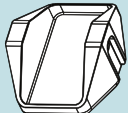








1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.  
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.





illustrated with carriers 5630-B  
and removal frame 4626

### Swing-out rotor 5699

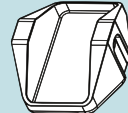

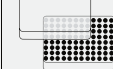








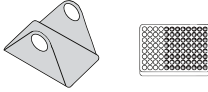
|   |   |   |   |   |   |
|---|---|---|---|---|---|
| capacity in ml  | 40  | 160   | 200   |   |   |
| L x W x H in mm   | -   |   |   |   |   |
| <b>Cat. No.</b>   | <b>Nunc®</b>  | <b>Nunc®</b>  | <b>Falcon®</b>  | <b>Greiner</b>  | <b>Nunc®</b>  |
| <br><b>carrier</b><br>Cat. No. <b>5630-B</b> |  |  |  |  |  |
|   |  |  |   |  |   |
| <b>Cat. No.</b>   | <b>5672</b>   | <b>5673</b>   | <b>5671</b>   |   |   |
| boring Ø x L in mm  | -   |   |   |   |   |
| flasks per rotor  | 4   |   |   |   |   |
| max. RCF <sup>2)</sup>  | 3,785 <sup>3)</sup>   |   |   |   |   |
| radius in mm  | 160   |   |   |   |   |
| run-up in sec   | 90  |   |   |   |   |
| run-down in sec, braked   | 95  |   |   |   |   |
| temperature in °C <sup>1)</sup>   | +4  |   |   |   |   |

#### Accommodated cell culture flasks:

**40 ml**  
from Nunc, No. 156340 or 156367

**160 ml**  
from Nunc, No. 156472 or 156499

**200 ml**  
from Becton Dickinson, No. 353024  
from Greiner, No. 658170  
from Nunc, No. 153732 or 147589

|   |   |   |   |   |   |  |   |   |   |  |
|---|---|---|---|---|---|--|---|---|---|--|
| L x W x H in mm   | 86 x 128 x 15   | 86 x 128 x 17.5   | 86 x 128 x 22   | 86 x 128 x 44.5   | 86 x 128 x 46   | 86 x 128 x 83  | 59 x 84 x 11  | 82 x 124 x 20   | -   |  |
| capacity in ml  | -   |   |   |   |   |  |   |   |   |  |
| <b>Cat. No.</b>   | <b>MTP</b>  |   | <b>CP</b>   | <b>DWP</b>  | <b>MS</b>   | <b>QP</b>  | <b>Microtest plate (Terasaki)</b>   | <b>PCR plate, 96 wells</b>  | <b>PCR strips</b>   |  |
| <br><b>carrier</b><br>Cat. No. <b>5630-B</b> |  |  |  |  |  |  |  |  |  |  |
|   |  |   |   |   |   |  |   |  |   |  |
| <b>Cat. No.</b>   | <b>4626</b>   |   |   |   |   |  |   | <b>4626 + 1485</b>  |   |  |
| boring Ø x L in mm  | -   |   |   |   |   |  |   |   |   |  |
| flasks per rotor  | 20  | 16  | 12  | 4   | 4   | 4  | 8   | 4   | 48 x 8  |  |
| max. RCF <sup>2)</sup>  | 3,832   |   |   |   |   |  |   |   |   |  |
| radius in mm  | max. 162  |   |   |   |   |  |   |   |   |  |
| run-up in sec   | 90  |   |   |   |   |  |   |   |   |  |
| run-down in sec, braked   | 95  |   |   |   |   |  |   |   |   |  |
| temperature in °C <sup>1)</sup>   | +4  |   |   |   |   |  |   |   |   |  |

<sup>5)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

<sup>1)</sup> Please make sure not to exceed the max. permissible loading weight of 800g of carrier 5628. The loading weight is the sum of the weight of the respective adapters, of frame 5220-A (where required), the tubes, and their contents.

<sup>3)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. RCF for the accommodated cell culture flasks is 2,300.

## Swing-out rotor, 4-place

±90°

n = 3,800 min<sup>-1</sup>  
max. RCF 3,196



illustrated with carriers 5651-A  
and lids 5652  
with bio-containment<sup>5)</sup>

**Cat. No.** (without carriers) **5654**

|  |             |       |       |                          |                          |                          |             |             |                          |                               |             |             |             |
|--|-------------|-------|-------|--------------------------|--------------------------|--------------------------|-------------|-------------|--------------------------|-------------------------------|-------------|-------------|-------------|
| capacity in ml   | 3           | 4     | 4     | 5                        | 6                        | 7                        | 10          | 10          | 15                       | 1.1–1.4                       | 2.6–3.4     | 2.7–3       | 4.5–5       |
| Ø x L in mm  | 10x60       | 10x88 | 12x60 | 12x75                    | 12x82                    | 12x100                   | 17x70       | 13x100      | 17x100                   | 8x66                          | 13x65       | 11x66       | 11x92       |
| <b>Cat. No.</b>  | -           | -     | -     | <b>0553<sup>2)</sup></b> | <b>0501<sup>2)</sup></b> | <b>0578<sup>2)</sup></b> | <b>2079</b> | -           | <b>0518<sup>2)</sup></b> | <b>blood collection tubes</b> |             |             |             |
| lid with bio-containment <sup>5)</sup><br>Cat. No. <b>5652</b> |             |       |       |                          |                          |                          |             |             |                          |                               |             |             |             |
| <b>carrier</b><br>Cat. No. <b>5651-A</b>                       |             |       |       |                          |                          |                          |             |             |                          |                               |             |             |             |
| <b>Cat. No.</b>  | <b>5684</b> |       |       | <b>5682</b>              | <b>5674</b>              | <b>5685</b>              | <b>5682</b> | <b>5684</b> | <b>5674</b>              | <b>5684</b>                   | <b>5674</b> | <b>5684</b> | <b>5684</b> |
| boring Ø x L in mm   | 12.5x40     |       |       | 17.2x46.5                |                          |                          | 13.2x42.4   | 17.2x46.5   | 12.5x40                  | 13.2x42.4                     | 12.5x40     |             |             |
| tubes per rotor  | 292         |       |       | 148                      |                          |                          | 196         | 188         | 148                      | 292                           | 196         | 292         |             |
| max. RCF   | 2,874       |       |       | 2,970                    |                          |                          | 2,906       |             | 2,970                    | 2,874                         | 2,906       | 2,874       |             |
| radius in mm   | 178         |       |       | 184                      |                          |                          | 180         |             | 184                      | 178                           | 180         | 178         |             |
| run-up in sec  | 61          |       |       |                          |                          |                          |             |             |                          |                               |             |             |             |
| run-down in sec, braked  | 57          |       |       |                          |                          |                          |             |             |                          |                               |             |             |             |
| temperature in °C <sup>1)</sup>                                | 0           |       |       |                          |                          |                          |             |             |                          |                               |             |             |             |

|  |                                     |             |             |             |             |             |             |             |             |             |                          |                          |
|--|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------------|--------------------------|
| capacity in ml   | 4–5.5                               | 4.9         | 7.5–8.5     | 9–10        | 10          | 1.6–5       | 4–7         | 4–7         | 8.5–10      | 10          | 15                       | 50                       |
| Ø x L in mm  | 15x75                               | 13x90       | 15x92       | 16x92       | 15x102      | 13x75       | 16x75       | 13x100      | 16x100      | 16x80       | 17x120                   | 29x115                   |
| <b>Cat. No.</b>  | <b>blood collection/urine tubes</b> |             |             |             |             |             |             |             |             |             | <b>0509<sup>2)</sup></b> | <b>0513<sup>2)</sup></b> |
| lid with bio-containment <sup>5)</sup><br>Cat. No. <b>5652</b> |                                     |             |             |             |             |             |             |             |             |             |                          |                          |
| <b>carrier</b><br>Cat. No. <b>5651-A</b>                       |                                     |             |             |             |             |             |             |             |             |             |                          |                          |
| <b>Cat. No.</b>  | <b>5682</b>                         | <b>5674</b> | <b>5682</b> | <b>5674</b> | <b>5682</b> | <b>5674</b> | <b>5685</b> | <b>5682</b> | <b>5683</b> | <b>5686</b> | <b>5683</b>              | <b>5686</b>              |
| boring Ø x L in mm   | 17.2x46.5                           | 13.2x42.4   | 17.2x46.5   |             | 13.2x42.4   | 17.2x46.5   | 13.2x42.4   | 13.2x42.4   | 17.2x46.5   |             | 17x60                    | 30x60                    |
| tubes per rotor  | 148                                 | 196         | 148         |             | 196         | 148         | 196         | 188         | 148         |             | 96                       | 40                       |
| max. RCF   | 2,970                               | 2,906       | 2,970       |             | 2,906       | 2,970       | 2,906       | 2,906       | 2,970       |             | 3,196                    | 3,196                    |
| radius in mm   | 184                                 | 180         | 184         |             | 180         | 184         | 180         | 180         | 184         |             | 198                      | 198                      |
| run-up in sec  | 61                                  |             |             |             |             |             |             |             |             |             |                          |                          |
| run-down in sec, braked  | 57                                  |             |             |             |             |             |             |             |             |             |                          |                          |
| temperature in °C <sup>1)</sup>                                | 0                                   |             |             |             |             |             |             |             |             |             |                          |                          |

<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.

<sup>3)</sup> When using these tubes, carrier 5651-A cannot be closed with lid 5652.



illustrated with carriers 5651-A  
and lids 5652  
with bio-containment<sup>5)</sup>

**Swing-out rotor 5654**

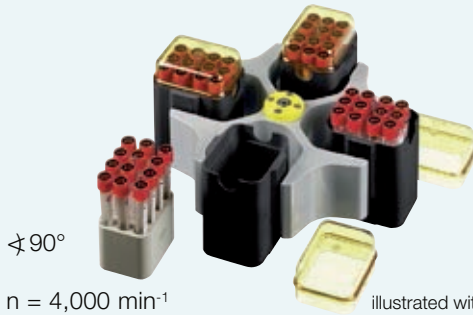
|   |                |                 |              |                |                           |                        |             |                |                           |                           |                           |
|---|----------------|-----------------|--------------|----------------|---------------------------|------------------------|-------------|----------------|---------------------------|---------------------------|---------------------------|
| capacity in ml  | 175            | 175             | 200          | 225            | 250                       | 290                    | 450         | 500            | 600                       | 650                       | 750                       |
| Ø x L in mm   | 61x118         | 62x144          | 60x130       | 61x137         | 61x122                    | 62x137                 | 97x113      | 96x147         | 93x134                    | 97x139                    | 97x152                    |
| <b>Cat. No.</b>   | <b>Falcon®</b> | <b>Nalgene®</b> | <b>Nunc®</b> | <b>Falcon®</b> | <b>5127<sup>2B)</sup></b> | <b>-<sup>2B)</sup></b> | <b>4447</b> | <b>Corning</b> | <b>0551<sup>2B)</sup></b> | <b>0554<sup>2B)</sup></b> | <b>0512<sup>2B)</sup></b> |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 5652 |                |                 |              |                |                           |                        |             |                |                           |                           |                           |
| <b>carrier</b><br>Cat. No. 5651-A                       |                |                 |              |                |                           |                        |             |                |                           |                           |                           |
| <b>Cat. No.</b>   | <b>5681</b>    |                 |              |                |                           |                        | <b>5687</b> |                |                           |                           |                           |
| boring Ø x L in mm                                      | 62x100         |                 |              |                |                           |                        | 98x100      |                |                           |                           |                           |
| tubes per rotor   | 8              |                 |              |                |                           |                        | 4           |                |                           |                           |                           |
| max. RCF  | 3,196          |                 |              |                |                           |                        | 3,196       |                |                           |                           |                           |
| radius in mm  | 198            |                 |              |                |                           |                        | 198         |                |                           |                           |                           |
| run-up in sec   | 61             |                 |              |                |                           |                        |             |                |                           |                           |                           |
| run-down in sec, braked                                 | 57             |                 |              |                |                           |                        |             |                |                           |                           |                           |
| temperature in °C <sup>1)</sup>                         | 0              |                 |              |                |                           |                        |             |                |                           |                           |                           |

|   |               |                 |               |                 |               |               |                                   |                            |                   |  |     |
|---|---------------|-----------------|---------------|-----------------|---------------|---------------|-----------------------------------|----------------------------|-------------------|--|-----|
| D x W x H in mm   | 86 x 128 x 15 | 86 x 128 x 17.5 | 86 x 128 x 22 | 86 x 128 x 44.5 | 86 x 128 x 46 | 86 x 128 x 83 | 59 x 84 x 11                      | 82 x 124 x 20              | -                 |  |     |
| capacity in ml  | -             |                 |               |                 |               |               |                                   |                            |                   |  | 0.2 |
| <b>Cat. No.</b>   | <b>MTP</b>    |                 | <b>CP</b>     | <b>DWP</b>      | <b>MS</b>     | <b>QP</b>     | <b>Microtest plate (Terasaki)</b> | <b>PCR plate, 96 wells</b> | <b>PCR strips</b> |  |     |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 5629 |               |                 |               |                 |               |               |                                   |                            |                   |  |     |
| <b>carrier</b><br>Cat. No. 5653                         |               |                 |               |                 |               |               |                                   |                            |                   |  |     |
| <b>Cat. No.</b>   | <b>4626</b>   |                 |               |                 |               |               |                                   | <b>4626 + 1485</b>         |                   |  |     |
| boring Ø x L in mm                                      | -             |                 |               |                 |               |               |                                   |                            |                   |  |     |
| plates/strips per rotor                                 | 24            | 20              | 16            | 4               | 4             | 4             | 8                                 | 4                          | 48 x 8            |  |     |
| max. RCF <sup>2)</sup>                                  | 2,890         |                 |               |                 |               |               |                                   |                            |                   |  |     |
| radius in mm  | max. 179      |                 |               |                 |               |               |                                   |                            |                   |  |     |
| run-up in sec   | 61            |                 |               |                 |               |               |                                   |                            |                   |  |     |
| run-down in sec, braked                                 | 57            |                 |               |                 |               |               |                                   |                            |                   |  |     |
| temperature in °C <sup>1)</sup>                         | -4            |                 |               |                 |               |               |                                   |                            |                   |  |     |

<sup>5)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

<sup>2B)</sup> At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

## Swing-out rotor, 4-place



±90°

n = 4,000 min<sup>-1</sup>  
max. RCF 3,095

illustrated with carriers 5051  
and lids 5053

**Cat. No.** (without carriers) **5694**

| capacity in ml                     | 1.5         | 2.0         | 1.5         | 2.0                       | 5                        | 6                         | 7                        | 9                        | 15                       | 25                       | 50                       | 100                      | 100                      | 1.1–1.4                       | 2.6–3.4 | 2.7–3   | 4–5.5   |
|------------------------------------|-------------|-------------|-------------|---------------------------|--------------------------|---------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------|---------|---------|---------|
| Ø x L in mm                        | 11 x 38     |             | 11 x 38     |                           | 12 x 75                  | 12 x 82                   | 12 x 100                 | 14 x 100                 | 17 x 100                 | 24 x 100                 | 34 x 100                 | 44 x 100                 | 40 x 115                 | 8 x 66                        | 13 x 65 | 11 x 66 | 15 x 75 |
| Cat. No.                           | -           | -           | <b>2078</b> | <b>0536</b>               | <b>0553<sup>2)</sup></b> | <b>0501<sup>2)</sup></b>  | <b>0578<sup>2)</sup></b> | <b>0500<sup>2)</sup></b> | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>0526<sup>2)</sup></b> | <b>0523<sup>2)</sup></b> | <b>blood collection tubes</b> |         |         |         |
| lid Cat. No. <b>5053</b>           |             |             |             |                           |                          |                           |                          |                          |                          |                          |                          |                          |                          |                               |         |         |         |
| carrier<br>Cat. No. <b>5051</b>    |             |             |             |                           |                          |                           |                          |                          |                          |                          |                          |                          |                          |                               |         |         |         |
| Cat. No.                           | <b>5257</b> | <b>5281</b> | <b>5227</b> | <b>5247<sup>18)</sup></b> | <b>5264</b>              | <b>5248<sup>18)</sup></b> | <b>5242</b>              | <b>5243</b>              | <b>5262</b>              | <b>5249</b>              | <b>5267</b>              | <b>5268</b>              | <b>5227</b>              | <b>5264</b>                   |         |         |         |
| boring Ø x L in mm                 | 12.5 x 42   | 11.5 x 50   | 12.5 x 42   | 12.5 x 86                 | 16 x 50                  | 17.5 x 86                 | 26 x 86                  | 36 x 86                  | 45.5 x 86                | 42 x 86                  | 11 x 44                  | 13.5 x 52                | 12.5 x 42                | 16 x 50                       |         |         |         |
| tubes per rotor                    | 160         | 64          | 80          | 80                        | 48                       | 48                        | 20                       | 8                        | 4                        | 80                       | 48                       | 80                       | 48                       |                               |         |         |         |
| max. RCF <sup>2)</sup> upper/lower | 1,950/2,826 | 2,826       | 2,773       | 2,755                     | 2,773                    | 2,755                     | 2,755                    | 2,755                    | 2,755                    | 2,737                    | 2,808                    | 2,773                    |                          |                               |         |         |         |
| radius in mm upper/lower           | 109/158     | 158         | 155         | 154                       | 155                      | 154                       | 154                      | 154                      | 154                      | 153                      | 157                      | 155                      |                          |                               |         |         |         |
| run-up in sec                      | 42          |             |             |                           |                          |                           |                          |                          |                          |                          |                          |                          |                          |                               |         |         |         |
| run-down in sec, braked            | 51          |             |             |                           |                          |                           |                          |                          |                          |                          |                          |                          |                          |                               |         |         |         |
| temperature in °C <sup>1)</sup>    | -3          |             |             |                           |                          |                           |                          |                          |                          |                          |                          |                          |                          |                               |         |         |         |

| capacity in ml                     | 4.5–5                               | 4.9         | 7.5–8.5     | 9–10        | 10          | 1.6–5       | 4–7         | 4–7         | 8.5–10      | 15          | 50          | 12          | 30          | 50          | two-tier frame for cyto accessories |
|------------------------------------|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------------------------------|
| Ø x L in mm                        | 11 x 92                             | 13 x 90     | 15 x 92     | 16 x 92     | 15 x 102    | 13 x 75     | 16 x 75     | 13 x 100    | 16 x 100    | 17 x 120    | 29 x 115    | 17 x 100    | 25 x 110    | 29 x 115    |                                     |
| Cat. No.                           | <b>blood collection/urine tubes</b> |             |             |             |             |             |             |             |             |             | <b>0509</b> | <b>0513</b> | -           | -           | <b>cyto chambers<sup>23)</sup></b>  |
| lid Cat. No. <b>5053</b>           |                                     |             |             |             |             |             |             |             |             |             |             |             |             |             |                                     |
| carrier<br>Cat. No. <b>5051</b>    |                                     |             |             |             |             |             |             |             |             |             |             |             |             |             |                                     |
| Cat. No.                           | <b>5227</b>                         | <b>5268</b> | <b>5264</b> | <b>5258</b> | <b>5268</b> | <b>5264</b> | <b>5268</b> | <b>5248</b> | <b>6306</b> | <b>5259</b> | <b>6306</b> | <b>5266</b> | <b>5243</b> | <b>5280</b> |                                     |
| boring Ø x L in mm                 | 12.5 x 42                           | 13.5 x 52   | 16 x 50     | 17.6 x 86   | 13.5 x 52   | 16 x 50     | 13.5 x 52   | 17.5 x 86   | 17 x 90     | 30 x 86     | 17 x 90     | 26 x 86     | 36 x 86     | -           |                                     |
| tubes per rotor                    | 80                                  | 48          | 48          | 44          | 48          | 48          | 28          | 8           | 28          | 20          | 8           | 8           | 8           |             |                                     |
| max. RCF <sup>2)</sup> upper/lower | 2,773                               | 2,808       | 2,773       | 2,755       | 2,808       | 2,773       | 2,808       | 2,755       | 2,898       | 2,826       | 2,898       | 2,755       | 1,735/2,737 |             |                                     |
| radius in mm upper/lower           | 155                                 | 157         | 155         | 154         | 157         | 155         | 157         | 154         | 162         | 158         | 162         | 154         | 97/153      |             |                                     |
| run-up in sec                      | 42                                  |             |             |             |             |             |             |             |             |             |             |             |             |             |                                     |
| run-down in sec, braked            | 51                                  |             |             |             |             |             |             |             |             |             |             |             |             |             |                                     |
| temperature in °C <sup>1)</sup>    | -3                                  |             |             |             |             |             |             |             |             |             |             |             |             |             |                                     |

<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.

<sup>3)</sup> When using these tubes, carrier 5051 resp. 5092 cannot be closed with lid 5053 resp. 5093.

<sup>4)</sup> Please remove the inserts.



illustrated with carriers 5051  
and lids 5053

**Swing-out rotor 5694**



















|   |                          |                          |                          |             |                          |                          |                          |                          |                          |                          |                               |             |             |             |
|---|--------------------------|--------------------------|--------------------------|-------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------|-------------|-------------|-------------|
| capacity in ml  | 5                        | 6                        | 7                        | 10          | 15                       | 25                       | 50                       | 100                      | 100                      | 250                      | 1.1–1.4                       | 1.1–1.4     | 2.6–3.4     | 2.6–3.4     |
| Ø x L in mm   | 12 x 75                  | 12 x 82                  | 12 x 100                 | 17 x 70     | 17 x 100                 | 24 x 100                 | 34 x 100                 | 44 x 100                 | 40 x 115                 | 65 x 115                 | 8 x 66                        | 8 x 66      | 13 x 65     | 13 x 65     |
| <b>Cat. No.</b>   | <b>0553<sup>2)</sup></b> | <b>0501<sup>2)</sup></b> | <b>0578<sup>2)</sup></b> | <b>2079</b> | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>0526<sup>2)</sup></b> | <b>0523<sup>2)</sup></b> | <b>0530<sup>2)</sup></b> | <b>blood collection tubes</b> |             |             |             |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 5093 |                          |                          |                          |             |                          |                          |                          |                          |                          |                          |                               |             |             |             |
| <b>carrier</b><br>Cat. No. 5092                         |                          |                          |                          |             |                          |                          |                          |                          |                          |                          |                               |             |             |             |
| <b>Cat. No.</b>   | <b>5128</b>              | <b>5120</b>              | <b>5136</b>              | <b>5122</b> | <b>5124</b>              | <b>5125</b>              | <b>5126</b>              | <b>1791</b>              | <b>5137</b>              | <b>5138</b>              | <b>5137</b>                   | <b>5138</b> | <b>5137</b> | <b>5138</b> |
| boring Ø x L in mm                                      | 12.8 x 45                | 12.8 x 82                | 17.5 x 60.7              | 25.5 x 82   | 35.5 x 82.5              | 45.5 x 85                | 42 x 85                  | 66 x 103                 | 13.5 x 60.7              | 12.8 x 54.5              | 13.5 x 60.7                   | 12.8 x 54.5 | 12.8 x 54.5 | 12.8 x 54.5 |
| tubes per rotor   | 48                       |                          | 32                       |             | 16                       |                          | 4                        |                          | 32                       |                          | 48                            |             | 32          |             |
| max. RCF <sup>2)</sup>                                  | 3,005                    |                          | 2,952                    |             | 2,898                    |                          | 2,952                    |                          | 3,095                    |                          | 2,952                         |             | 2,540       |             |
| radius in mm  | 168                      |                          | 165                      |             | 162                      |                          | 165                      |                          | 173                      |                          | 165                           |             | 142         |             |
| run-up in sec   | 42                       |                          |                          |             |                          |                          |                          |                          |                          |                          |                               |             |             |             |
| run-down in sec, braked                                 | 51                       |                          |                          |             |                          |                          |                          |                          |                          |                          |                               |             |             |             |
| temperature in °C <sup>1)</sup>                         | -3                       |                          |                          |             |                          |                          |                          |                          |                          |                          |                               |             |             |             |

|   |                                     |             |             |             |             |             |             |             |             |             |                          |             |             |             |
|---|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------------|-------------|-------------|-------------|
| capacity in ml  | 2.7–3                               | 2.7–3       | 4–5.5       | 4.5–5       | 4.9         | 7.5–8.5     | 9–10        | 10          | 1.6–5       | 1.6–5       | 4–7                      | 4–7         | 8           | 8.5–10      |
| Ø x L in mm   | 11 x 66                             | 11 x 66     | 15 x 75     | 11 x 92     | 13 x 90     | 15 x 92     | 16 x 92     | 15 x 102    | 13 x 75     | 13 x 75     | 13 x 100                 | 16 x 75     | 16 x 125    | 16 x 100    |
| <b>Cat. No.</b>   | <b>blood collection/urine tubes</b> |             |             |             |             |             |             |             |             |             |                          |             |             |             |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 5093 |                                     |             |             |             |             |             |             |             |             |             |                          |             |             |             |
| <b>carrier</b><br>Cat. No. 5092                         |                                     |             |             |             |             |             |             |             |             |             |                          |             |             |             |
| <b>Cat. No.</b>   | <b>5137</b>                         | <b>5138</b> | <b>5136</b> | <b>5120</b> | <b>5137</b> | <b>5136</b> | <b>5137</b> | <b>5138</b> | <b>5120</b> | <b>5136</b> | <b>5121<sup>4)</sup></b> | <b>5136</b> | <b>5136</b> | <b>5136</b> |
| boring Ø x L in mm                                      | 13.5 x 60.7                         | 12.8 x 54.5 | 17.5 x 60.7 | 12.8 x 82   | 13.5 x 60.7 | 17.5 x 60.7 | 17.5 x 60.7 | 13.5 x 60.7 | 12.8 x 54.5 | 12.8 x 82   | 17.5 x 60.7              | 17.5 x 82   | 17.5 x 82   | 17.5 x 60.7 |
| tubes per rotor   | 32                                  | 48          | 32          | 48          | 32          | 32          | 32          | 32          | 48          | 48          | 32                       | 28          | 32          | 32          |
| max. RCF <sup>2)</sup>                                  | 2,952                               | 2,540       | 2,952       | 3,005       | 2,952       | 2,952       | 2,952       | 2,952       | 2,540       | 3,005       | 2,952                    | 3,059       | 2,952       | 2,952       |
| radius in mm  | 165                                 | 142         | 165         | 168         | 165         | 165         | 165         | 165         | 142         | 168         | 165                      | 171         | 165         | 165         |
| run-up in sec   | 42                                  |             |             |             |             |             |             |             |             |             |                          |             |             |             |
| run-down in sec, braked                                 | 51                                  |             |             |             |             |             |             |             |             |             |                          |             |             |             |
| temperature in °C <sup>1)</sup>                         | -3                                  |             |             |             |             |             |             |             |             |             |                          |             |             |             |

<sup>18)</sup> With Cat. No. 5247-91 or 5248-91 these adapters can also be ordered with a decanting aid.  
<sup>23)</sup> Please ask for our detailed cyto brochure.

ROTANTA 460

## Swing-out rotor 5694

|  |   |   |   |   |   |   |   |  |   |
|--|---|---|---|---|---|---|---|--|---|
| capacity in ml   | 15  | 50  | 12  | 25  | 30  | 50  | 10  | 250  | 290   |
| Ø x L in mm  | 17 x 120  | 29 x 115  | 17 x 100  | 25 x 90   | 25 x 110  | 29 x 115  | 16 x 80   | 61 x 122   | 62 x 137  |
| <b>Cat. No.</b>  | <b>0509</b>   | <b>0513</b>   | -   |   |   |   |   | <b>5127<sup>2b)</sup></b>  | <b>-<sup>2b)</sup></b>  |
| lid with bio-containment <sup>5)</sup><br>Cat. No. <b>5093</b> |  |  |  |  |  |  |  |   |    |
| <b>carrier</b><br>Cat. No. <b>5092</b>                         |  |  |  |  |  |  |  |  |  |
| <b>Cat. No.</b>  | <b>5129</b>   | <b>5123</b>   | <b>5121</b>   | <b>5134</b>   | <b>5122</b>   | <b>5135</b>   | <b>5136</b>   | <b>6319</b>  |   |
| boring Ø x L in mm   | 17 x 85   | 30 x 85   | 17.5 x 82   | 26 x 73   | 25.5 x 82   | 30 x 99   | 17.5 x 60.7   | 66 x 103   |   |
| tubes per rotor  | 28  | 8   | 28  | 12  | 16  | 8   | 32  | 4  |   |
| max. RCF <sup>2)</sup>   | 3,095   |   | 3,005   | 2,826   | 2,898   | 3,023   | 2,952   | 3,095  |   |
| radius in mm   | 173   |   | 168   | 158   | 162   | 169   | 165   | 173  |   |
| run-up in sec  | 42  |   |   |   |   |   |   |  |   |
| run-down in sec, braked  | 51  |   |   |   |   |   |   |  |   |
| temperature in °C <sup>1)</sup>                                | -3  |   |   |   |   |   |   |  |   |

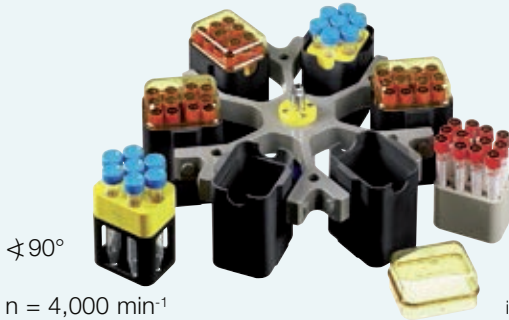
<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.

<sup>3)</sup> When using these tubes, carrier 5092 resp. 5051 cannot be closed with lid 5093 resp. 5053.



**Swing-out rotor, 6-place**



↻ 90°

n = 4,000 min<sup>-1</sup>  
max. RCF 3,631

illustrated with carriers 5051

**Cat. No.** (without carriers) **4446**

|                                    |             |             |             |             |                           |                          |                           |                          |                          |                          |                          |                          |                          |                          |                               |         |         |  |
|------------------------------------|-------------|-------------|-------------|-------------|---------------------------|--------------------------|---------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------|---------|---------|--|
| capacity in ml                     | 1.5         | 2.0         | 1.5         | 2.0         | 3                         | 5                        | 6                         | 7                        | 9                        | 15                       | 25                       | 50                       | 100                      | 100                      | 1.1–1.4                       | 2.6–3.4 | 2.7–3   |  |
| Ø x L in mm                        | 11 x 38     |             | 11 x 38     |             | 10 x 60                   | 12 x 75                  | 12 x 82                   | 12 x 100                 | 14 x 100                 | 17 x 100                 | 24 x 100                 | 34 x 100                 | 44 x 100                 | 40 x 115                 | 8 x 66                        | 13 x 65 | 11 x 66 |  |
| <b>Cat. No.</b>                    | -           | -           | <b>2078</b> | <b>0536</b> | -                         | <b>0553<sup>2)</sup></b> | <b>0501<sup>2)</sup></b>  | <b>0578<sup>2)</sup></b> | <b>0500<sup>2)</sup></b> | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>0526<sup>2)</sup></b> | <b>0523<sup>2)</sup></b> | <b>blood collection tubes</b> |         |         |  |
| lid Cat. No. 5053                  |             |             |             |             |                           |                          |                           |                          |                          |                          |                          |                          |                          |                          |                               |         |         |  |
| carrier<br>Cat. No. 5051           |             |             |             |             |                           |                          |                           |                          |                          |                          |                          |                          |                          |                          |                               |         |         |  |
| <b>Cat. No.</b>                    | <b>5257</b> | <b>5281</b> | <b>5267</b> | <b>5227</b> | <b>5247<sup>18)</sup></b> | <b>5264</b>              | <b>5248<sup>18)</sup></b> | <b>5242</b>              | <b>5243</b>              | <b>5262</b>              | <b>5249</b>              | <b>5267</b>              | <b>5268</b>              | <b>5227</b>              |                               |         |         |  |
| boring Ø x L in mm                 | 12.5 x 42   | 11.5 x 50   | 11 x 44     | 12.5 x 42   | 12.5 x 86                 | 16 x 50                  | 17.5 x 86                 | 26 x 86                  | 36 x 86                  | 45.5 x 86                | 42 x 86                  | 11 x 44                  | 13.5 x 52                | 12.5 x 42                |                               |         |         |  |
| tubes per rotor                    | 240         | 96          | 120         | 120         | 120                       | 72                       | 72                        | 30                       | 12                       | 6                        | 6                        | 120                      | 72                       | 120                      |                               |         |         |  |
| max. RCF <sup>2)</sup> upper/lower | 2,486/3,363 | 3,363       | 3,274       | 3,309       | 3,291                     | 3,309                    | 3,291                     | 3,291                    | 3,291                    | 3,291                    | 3,291                    | 3,274                    | 3,345                    | 3,309                    |                               |         |         |  |
| radius in mm upper/lower           | 139/188     | 188         | 183         | 185         | 184                       | 185                      | 184                       | 184                      | 184                      | 184                      | 184                      | 183                      | 187                      | 185                      |                               |         |         |  |
| run-up in sec                      | 45          |             |             |             |                           |                          |                           |                          |                          |                          |                          |                          |                          |                          |                               |         |         |  |
| run-down in sec, braked            | 55          |             |             |             |                           |                          |                           |                          |                          |                          |                          |                          |                          |                          |                               |         |         |  |
| temperature in °C <sup>1)</sup>    | 0           |             |             |             |                           |                          |                           |                          |                          |                          |                          |                          |                          |                          |                               |         |         |  |

|                                 |                                     |             |             |             |             |             |             |             |             |             |             |             |             |             |             |                                     |  |  |
|---------------------------------|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------------------------------|--|--|
| capacity in ml                  | 4–5.5                               | 4.5–5       | 4.9         | 7.5–8.5     | 9–10        | 10          | 1.6–5       | 4–7         | 4–7         | 8.5–10      | 15          | 50          | 12          | 30          | 50          | two-tier frame for cyto accessories |  |  |
| Ø x L in mm                     | 15 x 75                             | 11 x 92     | 13 x 90     | 15 x 92     | 16 x 92     | 15 x 102    | 13 x 75     | 16 x 75     | 13 x 100    | 16 x 100    | 17 x 120    | 29 x 115    | 17 x 100    | 25 x 110    | 29 x 115    |                                     |  |  |
| <b>Cat. No.</b>                 | <b>blood collection/urine tubes</b> |             |             |             |             |             |             |             |             |             |             | <b>0509</b> | <b>0513</b> | -           | -           | <b>cyto chambers<sup>23)</sup></b>  |  |  |
| lid Cat. No. 5053               |                                     |             |             |             |             |             |             |             |             |             |             |             |             |             |             |                                     |  |  |
| carrier<br>Cat. No. 5051        |                                     |             |             |             |             |             |             |             |             |             |             |             |             |             |             |                                     |  |  |
| <b>Cat. No.</b>                 | <b>5264</b>                         | <b>5227</b> | <b>5268</b> | <b>5264</b> | <b>5258</b> | <b>5268</b> | <b>5264</b> | <b>5268</b> | <b>5248</b> | <b>6306</b> | <b>5259</b> | <b>6306</b> | <b>5266</b> | <b>5243</b> | <b>5280</b> |                                     |  |  |
| boring Ø x L in mm              | 16 x 50                             | 12.5 x 42   | 13.5 x 52   | 16 x 50     | 17.6 x 86   | 13.5 x 52   | 16 x 50     | 13.5 x 52   | 17.5 x 86   | 17 x 90     | 30 x 86     | 17 x 90     | 26 x 86     | 36 x 86     | -           |                                     |  |  |
| tubes per rotor                 | 72                                  | 120         | 72          | 72          | 66          | 72          | 72          | 72          | 42          | 12          | 42          | 30          | 12          | 12          |             |                                     |  |  |
| max. RCF <sup>2)</sup>          | 3,309                               | 3,309       | 3,345       | 3,309       | 3,291       | 3,345       | 3,309       | 3,345       | 3,291       | 3,434       | 3,363       | 3,434       | 3,291       | 3,291       | 2,290/3,291 |                                     |  |  |
| radius in mm                    | 185                                 | 185         | 187         | 185         | 184         | 187         | 185         | 187         | 184         | 192         | 188         | 192         | 184         | 184         | 128/184     |                                     |  |  |
| run-up in sec                   | 45                                  |             |             |             |             |             |             |             |             |             |             |             |             |             |             |                                     |  |  |
| run-down in sec, braked         | 55                                  |             |             |             |             |             |             |             |             |             |             |             |             |             |             |                                     |  |  |
| temperature in °C <sup>1)</sup> | 0                                   |             |             |             |             |             |             |             |             |             |             |             |             |             |             |                                     |  |  |

<sup>18)</sup> With Cat. No. 5247-91 or 5248-91 these adapters can also be ordered with a decanting aid.  
<sup>23)</sup> Please ask for our detailed cyto brochure.  
<sup>28)</sup> At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

ROTANTA 460



illustrated with carriers 5092  
and lids 5093  
with bio-containment<sup>5)</sup>

**Swing-out rotor Cat. No. (without carriers) 4446**

| capacity in ml  | 5                        | 6                        | 7                        | 10          | 15                       | 25                       | 50                       | 100                      | 100                      | 250                      | 1.1–1.4                       | 1.1–1.4     | 2.6–3.4     | 2.6–3.4     |
|---|--------------------------|--------------------------|--------------------------|-------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------|-------------|-------------|-------------|
| Ø x L in mm   | 12x75                    | 12x82                    | 12x100                   | 17x70       | 17x100                   | 24x100                   | 34x100                   | 44x100                   | 40x115                   | 65x115                   | 8x66                          | 8x66        | 13x65       | 13x65       |
| <b>Cat. No.</b>   | <b>0553<sup>2)</sup></b> | <b>0501<sup>2)</sup></b> | <b>0578<sup>2)</sup></b> | <b>2079</b> | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>0526<sup>2)</sup></b> | <b>0523<sup>2)</sup></b> | <b>0530<sup>2)</sup></b> | <b>blood collection tubes</b> |             |             |             |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 5093 |                          |                          |                          |             |                          |                          |                          |                          |                          |                          |                               |             |             |             |
| <b>carrier</b><br>Cat. No. 5092                         |                          |                          |                          |             |                          |                          |                          |                          |                          |                          |                               |             |             |             |
| <b>Cat. No.</b>   | <b>5128</b>              | <b>5120</b>              | <b>5136</b>              | <b>5122</b> | <b>5124</b>              | <b>5125</b>              | <b>5126</b>              | <b>1791</b>              | <b>5137</b>              | <b>5138</b>              | <b>5137</b>                   | <b>5138</b> | <b>5137</b> | <b>5138</b> |
| boring Ø x L in mm                                      | 12.8x45                  | 12.8x82                  | 17.5x60.7                | 25.5x82     | 35.5x82.5                | 45.5x85                  | 42x85                    | 66x103                   | 13.5x60.7                | 12.8x54.5                | 13.5x60.7                     | 12.8x54.5   | 13.5x60.7   | 12.8x54.5   |
| tubes per rotor   | 72                       | 72                       | 48                       | 24          | 6                        |                          | 6                        | 6                        | 48                       | 72                       | 48                            | 72          | 48          | 72          |
| max. RCF <sup>2)</sup>                                  | 3,542                    | 3,542                    | 3,488                    | 3,434       | 3,488                    |                          | 3,631                    | 3,488                    | 3,077                    | 3,488                    | 3,077                         | 3,488       | 3,077       | 3,488       |
| radius in mm  | 198                      | 198                      | 195                      | 192         | 195                      |                          | 203                      | 195                      | 172                      | 195                      | 172                           | 195         | 172         | 195         |
| run-up in sec   | 45                       |                          |                          |             |                          |                          |                          |                          |                          |                          |                               |             |             |             |
| run-down in sec, braked                                 | 55                       |                          |                          |             |                          |                          |                          |                          |                          |                          |                               |             |             |             |
| temperature in °C <sup>1)</sup>                         | 0                        |                          |                          |             |                          |                          |                          |                          |                          |                          |                               |             |             |             |



















| capacity in ml  | 2.7–3                               | 2.7–3       | 4.9         | 4–5.5       | 4.5–5       | 7.5–8.5     | 9–10        | 10          | 1.6–5       | 1.6–5       | 4–7         | 4–7         | 8           | 8.5–10      |
|---|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Ø x L in mm   | 11x66                               | 11x66       | 13x90       | 15x75       | 11x92       | 15x92       | 16x92       | 15x102      | 13x75       | 13x75       | 13x100      | 16x75       | 16x125      | 16x100      |
| <b>Cat. No.</b>   | <b>blood collection/urine tubes</b> |             |             |             |             |             |             |             |             |             |             |             |             |             |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 5093 |                                     |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <b>carrier</b><br>Cat. No. 5092                         |                                     |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <b>Cat. No.</b>   | <b>5137</b>                         | <b>5138</b> | <b>5137</b> | <b>5136</b> | <b>5120</b> | <b>5136</b> | <b>5136</b> | <b>5137</b> | <b>5138</b> | <b>5120</b> | <b>5136</b> | <b>5121</b> | <b>5136</b> | <b>5136</b> |
| boring Ø x L in mm                                      | 13.5x60.7                           | 12.8x54.5   | 13.5x60.7   | 17.5x60.7   | 12.8x82     | 17.5x60.7   | 17.5x60.7   | 13.5x60.7   | 12.8x54.5   | 12.8x82     | 17.5x60.7   | 17.5x82     | 17.5x60.7   | 17.5x60.7   |
| tubes per rotor   | 48                                  | 72          | 48          | 48          | 72          | 48          | 48          | 48          | 72          | 72          | 48          | 42          | 48          | 48          |
| max. RCF <sup>2)</sup>                                  | 3,488                               | 3,077       | 3,488       | 3,488       | 3,542       | 3,488       | 3,488       | 3,488       | 3,077       | 3,542       | 3,488       | 3,542       | 3,488       | 3,488       |
| radius in mm  | 195                                 | 172         | 195         | 195         | 198         | 195         | 195         | 195         | 172         | 198         | 195         | 198         | 195         | 195         |
| run-up in sec   | 45                                  |             |             |             |             |             |             |             |             |             |             |             |             |             |
| run-down in sec, braked                                 | 55                                  |             |             |             |             |             |             |             |             |             |             |             |             |             |
| temperature in °C <sup>1)</sup>                         | 0                                   |             |             |             |             |             |             |             |             |             |             |             |             |             |

<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.

<sup>3)</sup> When using these tubes, carrier 5092 cannot be closed with lid 5093.

**Swing-out rotor 4446**

|  |   |   |   |   |   |  |   |   |   |
|--|---|---|---|---|---|--|---|---|---|
| capacity in ml   | 15  | 50  | 12  | 25  | 30  | 50   | 10  | 250   | 290   |
| Ø x L in mm  | 17 x 120  | 29 x 115  | 17 x 100  | 25 x 90   | 25 x 110  | 29 x 115   | 16 x 80   | 61 x 122  | 62 x 137  |
| <b>Cat. No.</b>  | <b>0509</b>   | <b>0513</b>   | -   | -   | -   | -  | -   | <b>5127<sup>28)</sup></b>   | - <sup>28)</sup>  |
| lid with bio-containment <sup>5)</sup><br>Cat. No. <b>5093</b> |  |  |  |  |  |   |    |    |    |
| <b>carrier</b><br>Cat. No. <b>5092</b>                         |  |  |  |  |  |  |  |  |  |
| <b>Cat. No.</b>  | <b>5129</b>   | <b>5123</b>   | <b>5121</b>   | <b>5134</b>   | <b>5122</b>   | <b>5135</b>  | <b>5136</b>   | <b>6319</b>   |   |
| boring Ø x L in mm   | 17 x 85   | 30 x 85   | 17.5 x 82   | 26 x 73   | 25.5 x 82   | 30 x 99  | 17.5 x 60.7   | 66 x 103  |   |
| tubes per rotor  | 42  | 12  | 42  | 18  | 24  | 12   | 48  | 6   |   |
| max. RCF <sup>2)</sup>   | 3,631   |   | 3,542   | 3,363   | 3,434   | 3,560  | 3,488   | 3,631   |   |
| radius in mm   | 203   |   | 198   | 188   | 192   | 199  | 195   | 203   |   |
| run-up in sec  | 45  |   |   |   |   |  |   |   |   |
| run-down in sec, braked  | 55  |   |   |   |   |  |   |   |   |
| temperature in °C <sup>1)</sup>                                | 0   |   |   |   |   |  |   |   |   |

<sup>5)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

<sup>28)</sup> At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

## Swing-out rotor, 2-place

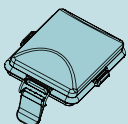
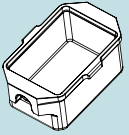








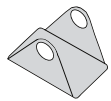
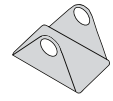



±90°

n = 5,900/6,200 min<sup>-1</sup>  
max. RCF 5,838/6,446

illustrated with carriers  
5631 and lids 4627  
with bio-containment<sup>5)</sup>  
and removal frame 4626

**Cat. No.** (without carriers) **5622**

|  |   |   |   |   |   |   |   |   |   |  |
|--|---|---|---|---|---|---|---|---|---|--|
| D x W x H in mm  | 86 x 128 x 15   | 86 x 128 x 17.5   | 86 x 128 x 22   | 86 x 128 x 44.5   | 86 x 128 x 46   | 86 x 128 x 83   | 59 x 84 x 11  | 82 x 124 x 20   | -   |  |
| capacity in ml   | -   |   |   |   |   |   |   |   |   |  |
| <b>Cat. No.</b>  | <b>MTP</b>  |   | <b>CP</b>   | <b>DWP</b>  | <b>MS</b>   | <b>QP</b>   | <b>Microtest plate (Terasaki)</b>   | <b>PCR plate, 96 wells</b>  | <b>PCR strips</b>   |  |
| <br><br><b>carrier</b><br>Cat. No. <b>5631</b> |  |  |  |  |  |  |  |  |   |  |
|  |  |   |   |   |   |   |   |  |  |  |
| <b>Cat. No.</b>  | <b>4626</b>   |   |   |   |   |   |   | <b>4626 + 1485</b>  |   |  |
| boring Ø x L in mm   | -   |   |   |   |   |   |   |   |   |  |
| plates/Strips pro rotor  | 12  | 10  | 8   | 2   |   | 4   | 2   | 24 x 8  |   |  |
| max. RCF <sup>2)</sup> classic/cooled  | 5,838/6,446   |   |   |   |   |   |   |   |   |  |
| radius in mm   | max. 150  |   |   |   |   |   |   |   |   |  |
| run-up in sec classic/cooled   | 50/52   |   |   |   |   |   |   |   |   |  |
| run-down in sec, braked classic/cooled   | 32/39   |   |   |   |   |   |   |   |   |  |
| temperature in °C <sup>1)</sup>  | +12   |   |   |   |   |   |   |   |   |  |

<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.

<sup>5)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

### Angle rotor, 30-place

### Angle rotor, 6-place



↘ 45°

n = 15,000 min<sup>-1</sup>  
max. RCF 24,400

with bio-containment<sup>5)</sup>

**Cat. No. 4489-A**



↘ 25°

n = 8,500/9,500 min<sup>-1</sup>  
max. RCF 11,228/14,025

with bio-containment<sup>5)</sup>

**Cat. No. 5645**

|  |             |             |                           |             |             |     |
|--|-------------|-------------|---------------------------|-------------|-------------|-----|
| capacity in ml                               | 0.2         | 0.4         | 0.5                       | 0.8         | 1.5         | 2.0 |
| Ø x L in mm                                  | 6x18        | 6x45        | 8x30                      | 8x45        | 11x38       |     |
| <b>Cat. No.</b>                              | -           |             |                           | <b>2078</b> | <b>0536</b> |     |
| lid with bio-containment <sup>5)</sup> incl. |             |             |                           |             |             |     |
| <b>rotor</b><br>Cat. No. <b>4489-A</b>       |             |             |                           |             |             |     |
| <b>Cat. No.</b>                              | <b>2024</b> | <b>2023</b> | <b>2031</b> <sup>7)</sup> | -           |             |     |
| boring Ø x L in mm                           | 6x40        | 8x40        | 10.2x19                   | 11.2x40.1   |             |     |
| tubes per rotor                              | 30          |             |                           |             |             |     |
| max. RCF <sup>2)</sup>                       | 24,400      |             |                           |             |             |     |
| radius in mm                                 | 97          |             |                           |             |             |     |
| run-up in sec                                | 73          |             |                           |             |             |     |
| run-down in sec, braked                      | 77          |             |                           |             |             |     |
| temperature in °C <sup>1)</sup>              | +7          |             |                           |             |             |     |

|  |                           |                           |              |               |               |              |              |                            |                            |
|--|---------------------------|---------------------------|--------------|---------------|---------------|--------------|--------------|----------------------------|----------------------------|
| capacity in ml                               | 15                        | 25                        | 94           | 10            | 30            | 50           | 85           | 94                         | 250                        |
| Ø x L in mm                                  | 17x100                    | 24x100                    | 38x102       | 16x80         | 26x95         | 29x107       | 38x106       | 38x102                     | 61x122                     |
| <b>Cat. No.</b>                              | <b>0518</b> <sup>2)</sup> | <b>0519</b> <sup>2)</sup> | <b>0549</b>  | -             | <b>0545</b>   | <b>0546</b>  | <b>0547</b>  | <b>0538</b> <sup>13)</sup> | <b>5127</b> <sup>28)</sup> |
| lid with bio-containment <sup>5)</sup> incl. |                           |                           |              |               |               |              |              |                            |                            |
| <b>rotor</b><br>Cat. No. <b>5645</b>         |                           |                           |              |               |               |              |              |                            |                            |
| <b>Cat. No.</b>                              | <b>5646</b>               | <b>5642</b>               | <b>5644</b>  | <b>5641</b>   | <b>5642</b>   | <b>5643</b>  | <b>5644</b>  | -                          |                            |
| boring Ø x L in mm                           | 17.6x83                   | 26x80                     | 38.6x88      | 16.6x70       | 26x80         | 29x90        | 38.6x88      |                            | 61.5x109                   |
| tubes per rotor                              | 42                        | 18                        | 6            | 48            | 18            | 6            | 6            |                            | 6                          |
| max. RCF <sup>2)</sup> classic/cooled        | 10,662/13,319             | 10,339/12,915             | 9,855/12,310 | 10,743/13,420 | 10,339/12,915 | 9,693/12,108 | 9,855/12,310 |                            | 11,228/14,025              |
| radius in mm                                 | 132                       | 128                       | 122          | 133           | 128           | 120          | 122          |                            | 139                        |
| run-up in sec classic/cooled                 | 98/115                    |                           |              |               |               |              |              |                            |                            |
| run-down in sec, braked classic/cooled       | 105/120                   |                           |              |               |               |              |              |                            |                            |
| temperature in °C <sup>1)</sup>              | +4                        |                           |              |               |               |              |              |                            |                            |

<sup>7)</sup> For centrifugation at high speeds, we recommend to use form-fitting, phenol-resistant adapters 2031.

<sup>13)</sup> The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 106 mm.

<sup>28)</sup> At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

## Angle rotor, 6-place



↙ 45°

n = 11.500 min<sup>-1</sup>  
max. RCF 18.038

with bio-containment<sup>5)</sup>

**Cat. No. 5615**

| capacity in ml                                  | 1.5         | 2.0         | 3           | 15                       | 25                       | 50                       | 75          | 94          | 7.5-8.5                  | 9-10        | 10          | 8.5-10   | 15          | 50          | 10      |
|---|-------------|-------------|-------------|--------------------------|--------------------------|--------------------------|-------------|-------------|--------------------------|-------------|-------------|----------|-------------|-------------|---------|
| Ø x L in mm                                     | 11 x 38     |             | 10 x 60     | 17 x 100                 | 24 x 100                 | 34 x 100                 | 35 x 105    | 38 x 102    | 15 x 92                  | 16 x 92     | 15 x 102    | 16 x 100 | 17 x 120    | 29 x 115    | 16 x 80 |
| <b>Cat. No.</b>                                 | <b>2078</b> | <b>0536</b> | -           | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>0548</b> | <b>0549</b> | <b>blood/urine tubes</b> |             |             |          | <b>0509</b> | <b>0513</b> | -       |
| lid with bio-containment <sup>5)</sup><br>incl. |             |             |             |                          |                          |                          |             |             |                          |             |             |          |             |             |         |
| <b>rotor</b><br>Cat. No. <b>5615</b>            |             |             |             |                          |                          |                          |             |             |                          |             |             |          |             |             |         |
| <b>Cat. No.</b>                                 | <b>1449</b> |             | <b>1451</b> | <b>1447</b>              | <b>1463</b>              | <b>1463</b>              | -           | <b>1451</b> | <b>1466</b>              | <b>1454</b> | <b>1448</b> |          |             |             |         |
| boring Ø x L in mm                              | 11.4 x 39   |             | 17.5 x 92   | 26 x 85                  | 35 x 89                  | 35 x 89                  | 38.2 x 89.6 | 17.5 x 92   |                          |             |             | 17 x 106 | 29.8 x 97   | 16.5 x 74   |         |
| tubes per rotor                                 | 24          |             | 6           |                          |                          |                          | 6           | 6           |                          |             |             | 6        | 12          |             |         |
| max. RCF <sup>2)</sup>                          | 17,299      |             | 17,003      | 16,560                   | 17,743                   | 17,743                   | 18,038      | 17,003      |                          |             |             | 17,299   | 17,595      | 17,003      |         |
| radius in mm                                    | 117         |             | 115         | 112                      | 120                      | 120                      | 122         | 115         |                          |             |             | 117      | 119         | 115         |         |
| run-up in sec                                   | 66          |             |             |                          |                          |                          |             |             |                          |             |             |          |             |             |         |
| run-down in sec. braked                         | 68          |             |             |                          |                          |                          |             |             |                          |             |             |          |             |             |         |
| temperature in °C <sup>1)</sup>                 | +4          |             |             |                          |                          |                          |             |             |                          |             |             |          |             |             |         |

| capacity in ml                                  | 30          | 50          | 85          | 94                        |
|---|-------------|-------------|-------------|---------------------------|
| Ø x L in mm                                     | 26 x 95     | 29 x 107    | 38 x 106    | 38 x 102                  |
| <b>Cat. No.</b>                                 | <b>0545</b> | <b>0546</b> | <b>0547</b> | <b>0538<sup>13)</sup></b> |
| lid with bio-containment <sup>5)</sup><br>incl. |             |             |             |                           |
| <b>rotor</b><br>Cat. No. <b>5615</b>            |             |             |             |                           |
| <b>Cat. No.</b>                                 | <b>1447</b> | <b>1446</b> | -           |                           |
| boring Ø x L in mm                              | 26 x 85     | 29 x 92     | 38.2 x 89.6 |                           |
| tubes per rotor                                 | 6           | 6           |             |                           |
| max. RCF <sup>2)</sup>                          | 16,560      | 17,299      | 18,038      |                           |
| radius in mm                                    | 112         | 117         | 122         |                           |
| run-up in sec                                   | 66          |             |             |                           |
| run-down in sec. braked                         | 68          |             |             |                           |
| temperature in °C <sup>1)</sup>                 | +4          |             |             |                           |

<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.

Please be aware that sample material will warm to + 40 °C when centrifuging it for 20 minutes at max. speed in rotor 5655 in the air-cooled ROTANTA 460.

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.



**Angle rotor, 14-place**

**Angle rotor, 6-place, for Schlenk tubes**



↘ 36°

n = 10.000 min<sup>-1</sup>  
max. RCF 17.441

**Cat. No. 5655**



↘ 45°

n = 2.000 min<sup>-1</sup>  
max. RCF 805

**Cat. No. 5616<sup>34)</sup>**

|                                      |                          |                          |                          |         |          |          |             |             |             |
|--------------------------------------|--------------------------|--------------------------|--------------------------|---------|----------|----------|-------------|-------------|-------------|
| capacity in ml                       | 15                       | 25                       | 7.5–8.5                  | 9–10    | 10       | 8.5–10   | 15          | 50          | 30          |
| Ø x L in mm                          | 17 x 100                 | 24 x 100                 | 15 x 92                  | 16 x 92 | 15 x 102 | 16 x 100 | 17 x 120    | 29 x 115    | 26 x 95     |
| <b>Cat. No.</b>                      | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>blood/urine tubes</b> |         |          |          | <b>0509</b> | <b>0513</b> | <b>0545</b> |
| lid incl.                            |                          |                          |                          |         |          |          |             |             |             |
| <b>rotor</b><br>Cat. No. <b>5655</b> |                          |                          |                          |         |          |          |             |             |             |
| <b>Cat. No.</b>                      | <b>1473</b>              | <b>1472</b>              | <b>1473</b>              |         |          |          | <b>1474</b> | -           | <b>1472</b> |
| boring Ø x L in mm                   | 17.5 x 91.5              | 26 x 85                  | 17.5 x 91.5              |         |          |          | 17 x 107    | 30 x 100    | 26 x 85     |
| tubes per rotor                      | 14                       |                          |                          |         |          |          |             |             |             |
| max. RCF <sup>2)</sup>               | 16.658                   | 16.211                   | 16.658                   |         |          |          | 16.994      | 17.441      | 16.211      |
| radius in mm                         | 149                      | 145                      | 149                      |         |          |          | 152         | 156         | 145         |
| run-up in sec                        | 145                      |                          |                          |         |          |          |             |             |             |
| run-down in sec. braked              | 108                      |                          |                          |         |          |          |             |             |             |
| temperature in °C <sup>1)</sup>      | +16                      |                          |                          |         |          |          |             |             |             |

|  |             |             |
|--|-------------|-------------|
| capacity in ml                                     | 25          | 50          |
| Ø x L in mm  | 24 x 146.5  | 38 x 148.5  |
| <b>Cat. No.</b>                                    | <b>0532</b> | <b>0533</b> |
|  |             |             |
| <b>rotor</b><br>Cat. No. <b>5616<sup>34)</sup></b> |             |             |
| <b>Cat. No.</b>                                    | <b>4317</b> | -           |
| boring Ø x L in mm                                 | 25 x 86     | 38.5 x 89.9 |
| tubes per rotor                                    | 6           |             |
| max. RCF   | 783         | 805         |
| radius in mm                                       | 175         | 180         |
| run-up in sec                                      | 17          |             |
| run-down in sec. braked                            | 21          |             |
| temperature in °C <sup>1)</sup>                    | - 14        |             |

<sup>5)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

<sup>13)</sup> The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 106 mm.

<sup>34)</sup> In the heatable models 5660-50, 5660-51, 5660-70, 5670-50 and 5675-50, rotor 5616 may only be used up to a maximum of + 40 °C.

**Swing-out rotor, 4-place, for ASTM tubes**

**Swing-out rotor, 6-place, for chrome bath tubes**



↗ 90°

n = 2,000 min<sup>-1</sup>  
max. RCF 984

**Cat. No.** (without carriers) **4474**



↗ 90°

n = 2,000 min<sup>-1</sup>  
max. RCF 917

**Cat. No.** **4619**<sup>34)</sup>

|                                      |                 |                           |                 |                           |
|--------------------------------------|-----------------|---------------------------|-----------------|---------------------------|
| capacity in ml                       | 50              | 100                       | 100             | 100                       |
| Ø x L in mm                          | 45 x 130        | 58 x 161                  | 44 x 168        | 37 x 200                  |
| <b>Cat. No.</b>                      | - <sup>2)</sup> | <b>0528</b> <sup>2)</sup> | - <sup>2)</sup> | <b>0531</b> <sup>2)</sup> |
| carrier Cat. No. <b>4275</b>         |                 |                           |                 |                           |
| <b>rotor</b><br>Cat. No. <b>4474</b> |                 |                           |                 |                           |
| <b>Cat. No.</b>                      | <b>4278-A</b>   | <b>0771</b>               | <b>4277</b>     | <b>4276</b>               |
| boring Ø x L in mm                   | -               |                           |                 |                           |
| tubes per rotor                      | 4               |                           |                 |                           |
| max. RCF <sup>2)</sup>               | 984             |                           | 961             |                           |
| radius in mm                         | 220             |                           | 215             |                           |
| run-up in sec                        | 17              |                           |                 |                           |
| run-down in sec, braked              | 20              |                           |                 |                           |
| temperature in °C <sup>1)</sup>      | -8              |                           |                 |                           |

|   |                                |
|---|--------------------------------|
| capacity in ml                                      | 30                             |
| Ø x L in mm   | 24 x 151                       |
| <b>Cat. No.</b>                                     | <b>0529/0508</b> <sup>6)</sup> |
| <b>rotor</b><br>Cat. No. <b>4619</b> <sup>34)</sup> |                                |
| <b>Cat. No.</b>                                     | -                              |
| boring Ø x L in mm                                  | -                              |
| tubes per rotor                                     | 6                              |
| max. RCF  | 917                            |
| radius in mm  | 205                            |
| run-up in sec                                       | 17                             |
| run-down in sec, braked                             | 21                             |
| temperature in °C <sup>1)</sup>                     | -11                            |

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.  
 2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000, for ASTM tubes it is 700.  
 6) The tube may not be centrifuged with the stopper. The stopper only serves to close the tube for agitating or mixing.  
 34) In the heatable models 5660-50, 5660-51, 5660-70, 5670-50 and 5675-50, rotor 4619 may only be used up to a maximum of + 40 °C.

## Floorstanding Centrifuges



FLOORSTANDING CENTRIFUGES

**ROTANTA 460 Robotic**

**ROTIXA 50 S/50 RS**

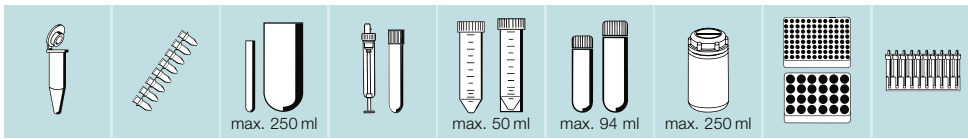
**ROTO SILENTA 630 RS**

**LABOMODERNE**

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Tél. 01 42 50 50 50

# ROTANTA 460 Robotic



## Faster – automatically

The ROTANTA 460 Robotic models are refrigerated centrifuges with PC control and rotor positioning. They are ideal for use wherever sample processing can be automated. Especially in genetic and pharmaceutical research, these centrifuges can significantly contribute to rationalisation of routine tasks.



## TECHNOLOGY

### ROTANTA 460 Robotic

| Floorstanding centrifuge, without rotor  | cooled  |                      |
|--|---|----------------------|
|  | rear hatch  | front hatch          |
| Power supply                             | Can be operated at different voltages. Units are fitted with a transformer. |                      |
| Frequency                                | 50–60 Hz  |                      |
| Consumption                              | max. 1,800 VA   |                      |
| Emission, Immunity                       | EN / IEC 61326-1, class B / FCC class A                                     |                      |
| Max. capacity *)                         | 4 x 250 ml  |                      |
| Max. RPM (speed)                         | 6,200 min <sup>-1</sup>   |                      |
| Max. RCF                                 | 6,446   |                      |
| Permissible density                      | 1.2 kg / dm <sup>3</sup>  |                      |
| Dimensions (H x W x D)                   | 684 x 554 x 697 mm  |                      |
| Weight                                   | approx. 159 kg  |                      |
| Temperature control, infinitely variable | from -20 to +40 °C  |                      |
| <b>Cat. No.</b>                          | <b>5680-RS232</b>   | <b>5680-10-RS232</b> |

\*) Basically, the ROTANTA 460 accepts a max. capacity of 4 x 750 ml. This capacity, however, requires accessories that are of only limited suitability for robotic applications. Details on request.

## Selected standard accessories



Swing-out rotor, 4-place  
illustrated with carriers 5632-R  
 $n = 4,600 \text{ min}^{-1}$ , max. RCF = 4,258

**Cat. No. 5699-R** (without carriers)



Swing-out rotor, 2-place  
illustrated with carriers 5631-R  
 $n = 6,200 \text{ min}^{-1}$ , max. RCF = 6,446

**Cat. No. 5622** (without carriers)



Swing-out rotor, 4-place  
illustrated with carriers 4463-R  
 $n = 4,500 \text{ min}^{-1}$ , max. RCF = 4,460

**Cat. No. 4444** (without carriers)



Swing-out rotor, 4-place  
illustrated with carriers 4486-R  
 $n = 4,500 \text{ min}^{-1}$ , max. RCF = 4,392

**Cat. No. 4444** (without carriers)

If you are looking for a benchtop solution, the MIKRO 220 Robotic and the ROTINA 380 Robotic are particularly suitable.

## Solutions specific to customer needs

ROTANTA 460 Robotic centrifuges can be integrated in any workstation. However, automated applications require customized solutions. In addition to our standard range of accessories we therefore manufacture special carriers and inserts that can be tailored to your robot.

**Please advise us of your requirements!**

Examples of special fabrications

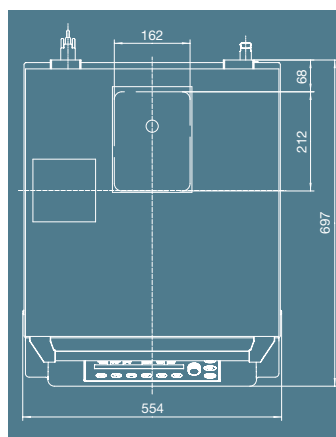


**Adapter in carrier 4486-R**  
for accommodating different tubes,  
with adapted grip rod



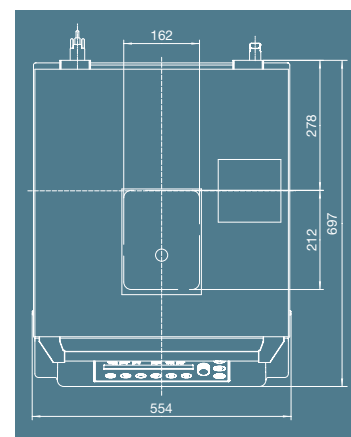
**Adapter in carrier 4465-R**  
for accommodating plates

**Rear access of the robotic arm**



**Cat. No. 5680-RS232**

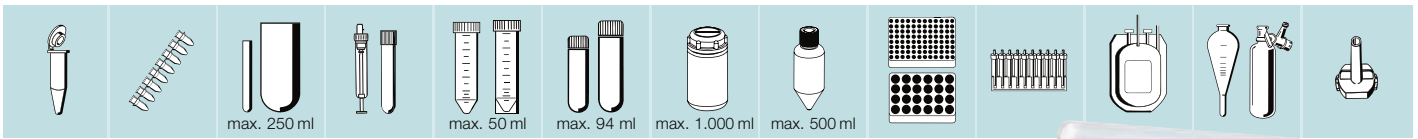
**Front access of the robotic arm**



**Cat. No. 5680-10-RS232**

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. Two lid versions are available as standard equipment, depending on whether robotic access is at the front or the back of the lid. By means of the dimensioned drawings, the location of the centrifuge can be defined precisely before delivery.

# ROTIXA 50 S/50 RS




## Best for high sample throughput

ROTIXA has become a synonym for high sample throughput. This is why the ROTIXA models are the centrifuges of choice for medical routine laboratories, as well as research and quality control laboratories in the life science industry. ROTIXA centrifuges feature the extended S control panel.



## TECHNOLOGY

|   | ROTIXA 50 S                                | ROTIXA 50 RS <sup>2)</sup> |
|---|--|----------------------------|
| <b>Floorstanding centrifuge, without rotor</b>  | <b>classic</b>                             | <b>cooled</b>              |
| Power supply <sup>*)</sup>  | 208 – 240 V 1~                             | 220 – 240 V 1~             |
| Frequency   | 50 – 60 Hz                                 |                            |
| Consumption   | 2,700 VA                                   | 3,680 VA                   |
| Emission, Immunity  | EN / IEC 61326-1, class B                  |                            |
|  Max. capacity | 4 x 1,000 ml                               |                            |
| Max. RPM (speed)  | 4,500 min <sup>-1</sup>                    |                            |
| Max. RCF  | 5,252                                      |                            |
| Running time  | 1 sec – 999 min : 59 sec, ∞ continuous run |                            |
| Dimensions (HxWxD)  | 1,030 x 650 x 720 mm                       |                            |
| Weight  | approx. 115 kg                             | approx. 172 kg             |
| <b>Refrigeration</b>  |  |                            |
| Temperature control, infinitely variable  | -  | from -20 to +40 °C         |
| <b>Cat. No.</b>   | <b>4905</b>                                | <b>4910</b>                |

<sup>\*)</sup> Other voltages on request.

<sup>2)</sup> For a list of further versions of this model, please refer to page 12.



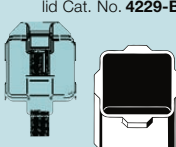
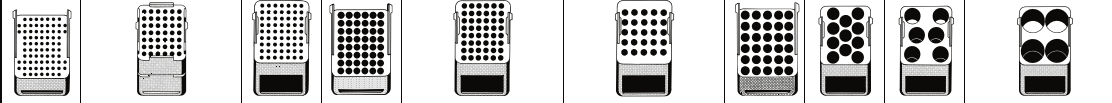
**Swing-out rotor, 4-place**

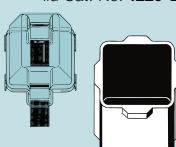
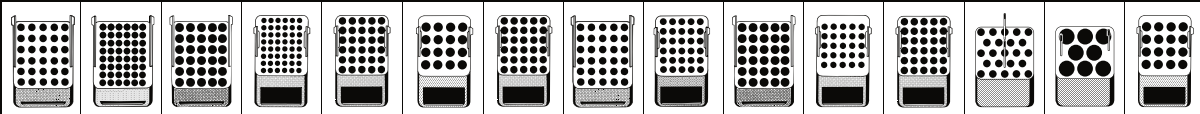
 $\pm 90^\circ$ 

 n = 4,500 min<sup>-1</sup>  
 max. RCF 5,252

 illustrated with carriers 4295-A  
 and lids 4229-B

**Cat. No.** (without carriers) **4294**

| capacity in ml                           | 0.8  | 1.5         | 2.0         | 4              | 5                        | 6                        | 7                        | 9                        | 12          | 15                       | 25                       | 50                       | 94          | 100                      |
|--|--|-------------|-------------|----------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------|--------------------------|--------------------------|--------------------------|-------------|--------------------------|
| Ø x L in mm                              | 8x45   | 11x38       |             | 10x88          | 12x75                    | 12x82                    | 12x100                   | 14x100                   | 16x101      | 17x100                   | 24x100                   | 34x100                   | 38x102      | 40x115                   |
| <b>Cat. No.</b>                          | -  | <b>2078</b> | <b>0536</b> | -              | <b>0553<sup>2)</sup></b> | <b>0501<sup>2)</sup></b> | <b>0578<sup>2)</sup></b> | <b>0500<sup>2)</sup></b> | -           | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>0549</b> | <b>0523<sup>2)</sup></b> |
| lid Cat. No. <b>4229-B</b>               |   |             |             |                |                          |                          |                          |                          |             |                          |                          |                          |             |                          |
| <b>carrier</b><br>Cat. No. <b>4295-A</b> |  |             |             |                |                          |                          |                          |                          |             |                          |                          |                          |             |                          |
| <b>Cat. No.</b>                          | <b>4226</b>  | <b>4225</b> | <b>4224</b> | <b>4213-93</b> | <b>4213</b>              |                          |                          | <b>4223</b>              | <b>4214</b> | <b>4215</b>              | <b>4216</b>              | <b>4218</b>              |             |                          |
| boring Ø x L in mm                       | 8.2x36   | 11.2x46     |             | 11x74          | 12.5x36                  | 12.5x74                  |                          | 16x74                    | 17.5x74     | 26x74                    | 35x74                    | 41.5x74                  |             |                          |
| tubes per rotor                          | 312  | 336         |             | 252            | 192                      | 192                      |                          | 100                      | 120         | 44                       | 24                       | 16                       |             |                          |
| max. RCF <sup>2)</sup> upper/lower       | 4,777  | 3,690/4,867 |             | 4,777          |                          |                          |                          |                          |             |                          |                          |                          |             |                          |
| radius in mm upper/lower                 | 211  | 163/215     |             | 211            |                          |                          |                          |                          |             |                          |                          |                          |             |                          |
| run-up in sec                            | 112  |             |             |                |                          |                          |                          |                          |             |                          |                          |                          |             |                          |
| run-down in sec, braked                  | 105  |             |             |                |                          |                          |                          |                          |             |                          |                          |                          |             |                          |
| temperature in °C <sup>1)</sup>          | +7   |             |             |                |                          |                          |                          |                          |             |                          |                          |                          |             |                          |

| capacity in ml                           | 2.6-3.4  | 2.7-3          | 4-5.5          | 4.5-5       | 7.5-8.5     | 9-10        | 10          | 1.6-5          | 4-7         | 4-7            | 8           | 8.5-10      | 15          | 50            | 12          |
|--|--|----------------|----------------|-------------|-------------|-------------|-------------|----------------|-------------|----------------|-------------|-------------|-------------|---------------|-------------|
| Ø x L in mm                              | 13x65  | 11x66          | 15x75          | 11x92       | 15x92       | 16x92       | 15x102      | 13x75          | 13x100      | 16x75          | 16x125      | 16x100      | 17x120      | 29x115        | 17x100      |
| <b>Cat. No.</b>                          | <b>blood collection/urine tubes</b>  |                |                |             |             |             |             |                |             |                |             |             | <b>0509</b> | <b>0513</b>   | -           |
| lid Cat. No. <b>4229-B</b>               |   |                |                |             |             |             |             |                |             |                |             |             |             |               |             |
| <b>carrier</b><br>Cat. No. <b>4295-A</b> |  |                |                |             |             |             |             |                |             |                |             |             |             |               |             |
| <b>Cat. No.</b>                          | <b>4222-93</b>   | <b>4213-93</b> | <b>4214-93</b> | <b>4213</b> | <b>4214</b> | <b>4220</b> | <b>4214</b> | <b>4222-93</b> | <b>4222</b> | <b>4214-93</b> | <b>4223</b> | <b>4214</b> | <b>4232</b> | <b>4245-A</b> | <b>4220</b> |
| boring Ø x L in mm                       | 13.2x36  | 12.5x36        | 17.5x36        | 12.5x74     | 17.5x74     | 17.5x74     | 17.5x74     | 13.2x36        | 13.2x74     | 17.5x36        | 16x74       | 17.5x74     | 17x70       | 30x70         | 17.5x74     |
| tubes per rotor                          | 120  | 192            | 120            | 192         | 120         | 64          | 120         | 120            | 120         | 120            | 100         | 120         | 92          | 32            | 64          |
| max. RCF <sup>2)</sup>                   | 4,777  |                |                |             |             |             |             |                |             |                |             |             | 4,958       | 4,777         |             |
| radius in mm                             | 211  |                |                |             |             |             |             |                |             |                |             |             | 219         | 211           |             |
| run-up in sec                            | 112  |                |                |             |             |             |             |                |             |                |             |             |             |               |             |
| run-down in sec, braked                  | 105  |                |                |             |             |             |             |                |             |                |             |             |             |               |             |
| temperature in °C <sup>1)</sup>          | +7   |                |                |             |             |             |             |                |             |                |             |             |             |               |             |

<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.

<sup>3)</sup> When using these tubes, carrier 4295-A cannot be closed with lid 4229-B.



illustrated with carriers 4293



illustrated with carriers 4298-A

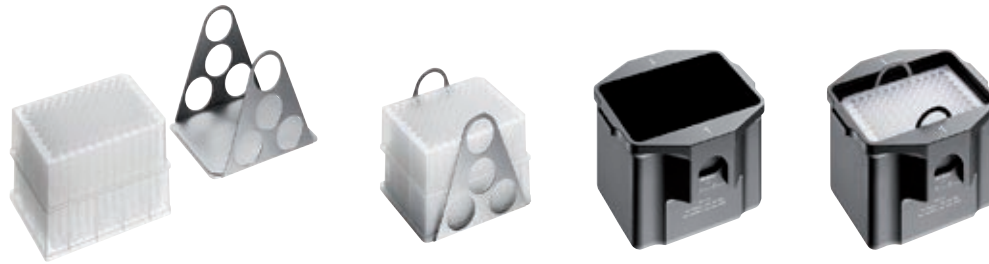
**Swing-out rotor Cat. No. (without carriers) 4294**

| capacity in ml                           | 25          | 30          | 50          | 85          | 94                        | 250                       | 290    | 600                       | 650                       | 750                       | 750           | 250            | 500            |
|--|-------------|-------------|-------------|-------------|---------------------------|---------------------------|--------|---------------------------|---------------------------|---------------------------|---------------|----------------|----------------|
| Ø x L in mm                              | 25x90       | 25x110      | 29x115      | 38x106      | 38x102                    | 61x122                    | 62x137 | 93x134                    | 97x139                    | 97x152                    | 96x135        | 60x162         | 96x147         |
| <b>Cat. No.</b>                          | -           | -           | -           | <b>0547</b> | <b>0538<sup>13)</sup></b> | <b>5127<sup>28)</sup></b> | -      | <b>0551<sup>28)</sup></b> | <b>0554<sup>28)</sup></b> | <b>0512<sup>28)</sup></b> | <b>4234-A</b> | <b>Corning</b> | <b>Corning</b> |
| lid Cat. No. <b>4229-B</b>               |             |             |             |             |                           |                           |        |                           |                           |                           |               |                |                |
| <b>carrier</b><br>Cat. No. <b>4295-A</b> |             |             |             |             |                           |                           |        |                           |                           |                           |               |                |                |
| <b>Cat. No.</b>                          | <b>4241</b> | <b>4215</b> | <b>4249</b> | <b>4218</b> |                           | <b>4238</b>               |        | <b>4233</b>               |                           | <b>4258</b>               |               | <b>6322</b>    | <b>4258</b>    |
| boring Ø x L in mm                       | 26x73       | 26x74       | 30x96       | 41.5x74     |                           | 62x90                     |        | 94x105                    |                           | 97.5x105                  |               | 61x125         | 97.5x105       |
| tubes per rotor                          | 32          | 44          | 24          | 16          |                           | 4                         |        | 4                         |                           | 4                         |               | 4              | 4              |
| max. RCF <sup>2)</sup>                   | 4,777       | 4,777       | 4,867       | 4,777       |                           |                           |        | 4,958                     |                           | 4,958                     |               | 4,777          | 4,958          |
| radius in mm                             | 211         | 211         | 215         | 211         |                           |                           |        | 219                       |                           | 219                       |               | 211            | 219            |
| run-up in sec                            | 112         |             |             |             |                           |                           |        |                           |                           |                           |               |                |                |
| run-down in sec, braked                  | 105         |             |             |             |                           |                           |        |                           |                           |                           |               |                |                |
| temperature in °C <sup>1)</sup>          | +7          |             |             |             |                           |                           |        |                           |                           |                           |               |                |                |

| capacity in ml                              | 450           | 500 |
|---|---------------|-----|
| <b>blood bags, triplicate<sup>32)</sup></b> |               |     |
| <b>Cat. No.</b>                             | -             | -   |
| <b>carrier</b><br>Cat. No. <b>4293</b>      |               |     |
| <b>Cat. No.</b>                             | <b>4244-A</b> |     |
| boring Ø x L in mm                          | -             |     |
| blood bag systems per rotor                 | 4             |     |
| max. RCF                                    | 5,252         |     |
| radius in mm                                | 232           |     |
| run-up in sec                               | 108           |     |
| run-down in sec, braked                     | 103           |     |
| temperature in °C <sup>1)</sup>             | +6            |     |

| capacity in ml                           | 450                  | 500 | 750           | 1,000         |
|--|----------------------|-----|---------------|---------------|
| <b>blood bags<sup>32)</sup></b>          | <b>quadruplicate</b> |     | <b>single</b> | <b>single</b> |
| <b>Cat. No.</b>                          | -                    |     | -             | -             |
| <b>carrier</b><br>Cat. No. <b>4298-A</b> |                      |     |               |               |
| <b>Cat. No.</b>                          | <b>4237-A</b>        |     | -             |               |
| boring Ø x L in mm                       | -                    |     |               |               |
| blood bag systems per rotor              | 4                    |     | 4             |               |
| max. RCF                                 | 5,003                |     | 5,071         |               |
| radius in mm                             | 221                  |     | 224           |               |
| run-up in sec                            | 108                  |     |               |               |
| run-down in sec, braked                  | 103                  |     |               |               |
| temperature in °C <sup>1)</sup>          | +6                   |     |               |               |

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.  
 2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.  
 3) When using these tubes, carrier 4295-A cannot be closed with lid 4229-B.



Carrier 4280, illustrated with Deep Well Plates and removal aid 4279

### Swing-out rotor 4294

| D x W x H in mm   | 86 x 128 x 15 | 86 x 128 x 17.5 | 86 x 128 x 22 | 86 x 128 x 44.5 | 86 x 128 x 46 | 86 x 128 x 83 | 82 x 124 x 20              | -                 |
|---|---------------|-----------------|---------------|-----------------|---------------|---------------|----------------------------|-------------------|
| Cat. No.  | <b>MTP</b>    |                 | <b>CP</b>     | <b>DWP</b>      | <b>MS</b>     | <b>QP</b>     | <b>PCR-Platte, 96-fach</b> | <b>PCR-Strips</b> |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 5629 |               |                 |               |                 |               |               |                            |                   |
| <b>carrier</b><br>Cat. No. 4280                         |               |                 |               |                 |               |               |                            |                   |
| <b>Cat. No.</b>   | <b>4279</b>   |                 |               |                 |               |               | <b>1485</b>                |                   |
| boring Ø x L in mm                                      | -             |                 |               |                 |               |               |                            |                   |
| plates/strips per rotor                                 | 24            |                 | 20            | 8               | 4             | 4             | 4                          | 48 x 8            |
| max. RCF <sup>2)</sup>                                  | 4,573         |                 |               |                 |               |               |                            |                   |
| radius in mm  | 202           |                 |               |                 |               |               |                            |                   |
| run-up in sec   | 112           |                 |               |                 |               |               |                            |                   |
| run-down in sec, braked                                 | 100           |                 |               |                 |               |               |                            |                   |
| temperature in °C <sup>1)</sup>                         | +9            |                 |               |                 |               |               |                            |                   |

| D x W x H in mm                   | 86 x 128 x 15 | 86 x 128 x 17.5 | 86 x 128 x 22 | 86 x 128 x 44.5 | 86 x 128 x 46 | 18 x 164 x 46    | 82 x 124 x 20              | -                 |
|-----------------------------------|---------------|-----------------|---------------|-----------------|---------------|------------------|----------------------------|-------------------|
| Cat. No.                          | <b>MTP</b>    |                 | <b>CP</b>     | <b>DWP</b>      | <b>MS</b>     | <b>LKB racks</b> | <b>PCR plate, 96 wells</b> | <b>PCR strips</b> |
|                                   |               |                 |               |                 |               |                  |                            |                   |
| <b>carrier</b><br>Cat. No. 4299-N |               |                 |               |                 |               |                  |                            |                   |
| <b>Cat. No.</b>                   | <b>4236</b>   |                 |               |                 |               | <b>-</b>         | <b>4236 + 1485</b>         |                   |
| boring Ø x L in mm                | -             |                 |               |                 |               |                  |                            |                   |
| plates/racks per rotor            | 16            |                 | 8             | 4               |               | 16               | 4                          | 48 x 8            |
| max. RCF <sup>2)</sup>            | 3,939         |                 |               |                 |               | 4,120            | 3,939                      |                   |
| radius in mm                      | 174           |                 |               |                 |               | 182              | 174                        |                   |
| run-up in sec                     | 108           |                 |               |                 |               |                  |                            |                   |
| run-down in sec, braked           | 103           |                 |               |                 |               |                  |                            |                   |
| temperature in °C <sup>1)</sup>   | +4            |                 |               |                 |               |                  |                            |                   |

<sup>5)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

<sup>13)</sup> The screw cap for tube No. 0538 is available with Cat. No. 0539. Dimensions with cap 38 x 106 mm.

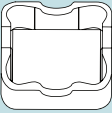
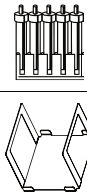
<sup>28)</sup> At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

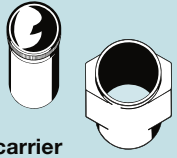










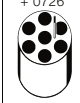
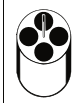
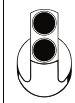
<sup>32)</sup> We recommend the use of the refrigerated ROTIXA 50 RS to ensure that the temperature of the blood is maintained during centrifugation.

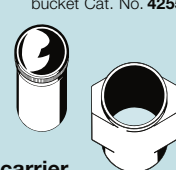




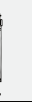






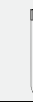


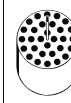
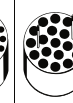
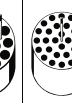







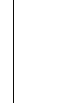



Carrier 4254, illustrated with bucket 4255 with lid

### Swing-out rotor 4294

|   |   |
|---|---|
| D x W x H in mm   | 20 x 118 x 70   |
| <b>Hitachi Racks</b>  |   |
| <b>Cat. No.</b>   | -   |
| <br><b>carrier</b><br>Cat. No. <b>4257</b> |  |
| <b>Cat. No.</b>   | <b>4259-A<sup>26)</sup></b>   |
| boring Ø x L in mm  | -   |
| racks per rotor   | 20  |
| max. RCF <sup>2)</sup>  | 4,867   |
| radius in mm  | 215   |
| run-up in sec   | 108   |
| run-down in sec, braked   | 103   |
| temperature in °C <sup>1)</sup>   | +6  |

|  |   |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|---|
| capacity in ml   | 5   | 7   | 9   | 10  | 15  | 25  | 50  | 100   |
| Ø x L in mm  | 12x75   | 12x100  | 14x100  | 17x70   | 17x100  | 24x100  | 34x100  | 44x100  |
| <b>Cat. No.</b>  | <b>0553<sup>2)</sup></b>  | <b>0578<sup>2)</sup></b>  | <b>0500<sup>2)</sup></b>  | <b>2079</b>   | <b>0518<sup>2)</sup></b>  | <b>0519<sup>2)</sup></b>  | <b>0521<sup>2)</sup></b>  | <b>0526<sup>2)</sup></b>  |
| bucket Cat. No. <b>4255</b><br> |  |  |    |  |  |  |  |  |
| <b>carrier</b><br>Cat. No. <b>4254</b>   |  |   |  |   |  |   |  |  |
| <b>Cat. No.</b>  | <b>4433</b>   |   | <b>4434</b>   |   | <b>4438</b>   |   | <b>4439</b>   | <b>4442</b>   |
| boring Ø x L in mm   | 13x58   |   | 17.5x53   |   | 26x72   |   | 36x79   | 45x78   |
| tubes per rotor  | 120   |   | 76  |   | 28  |   | 16  | 8   |
| max. RCF <sup>2)</sup>   | 4,618   |   | 4,777   |   | 4,505   |   | 4,573   | 4,551   |
| radius in mm   | 204   |   | 211   |   | 199   |   | 202   | 201   |
| run-up in sec  |   |   |   |   | 108   |   |   |   |
| run-down in sec, braked  |   |   |   |   | 103   |   |   |   |
| temperature in °C <sup>1)</sup>  |   |   |   |   | +6  |   |   |   |





















|  |   |   |   |   |   |   |   |   |   |  |   |   |   |
|--|---|---|---|---|---|---|---|---|---|--|---|---|---|
| capacity in ml   | 2.6-3.4   | 2.7-3   | 4-5.5   | 4.5-5   | 4.9   | 7.5-8.5   | 9-10  | 10  | 1.6-5   | 4-7  | 4-7   | 8   | 8.5-10  |
| Ø x L in mm  | 13x65   | 11x66   | 15x75   | 11x92   | 13x90   | 15x92   | 16x92   | 15x102  | 13x75   | 13x100   | 16x75   | 16x125  | 16x100  |
| <b>Cat. No.</b>  | <b>blood collection/urine tubes</b>   |   |   |   |   |   |   |   |   |  |   |   |   |
| bucket Cat. No. <b>4255</b><br> |  |  |  |  |  |  |  |  |  |   |    |  |  |
| <b>carrier</b><br>Cat. No. <b>4254</b>   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Cat. No.</b>  | <b>4435</b>   | <b>4433</b>   | <b>4434</b>   | <b>4433</b>   | <b>4435</b>   | <b>4434</b>   | <b>4434</b>   | <b>4435</b>   | <b>4435</b>   | <b>4434</b>  | <b>4434</b>   | <b>4434</b>   | <b>4434</b>   |
| boring Ø x L in mm   | 13.5x58   | 13x58   | 17.5x53   | 13x58   | 13.5x58   | 17.5x53   |   | 13.5x58   |   | 17.5x53  |   |   |   |
| tubes per rotor  | 84  | 120   | 76  | 120   | 84  | 76  |   | 84  |   | 76   |   |   |   |
| max. RCF <sup>2)</sup>   | 4,618   |   | 4,777   | 4,618   |   | 4,777   |   | 4,618   |   | 4,777  |   |   |   |
| radius in mm   | 204   |   | 211   | 204   |   | 211   |   | 204   |   | 211  |   |   |   |
| run-up in sec  | 108   |   |   |   |   |   |   |   |   |  |   |   |   |
| run-down in sec, braked  | 103   |   |   |   |   |   |   |   |   |  |   |   |   |
| temperature in °C <sup>1)</sup>  | +6  |   |   |   |   |   |   |   |   |  |   |   |   |















<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.

<sup>3)</sup> When using these tubes, bucket 4255 cannot be closed with its lid.

**Swing-out rotor 4294**

|   |   |   |   |   |   |   |   |   |  |   |   |   |
|---|---|---|---|---|---|---|---|---|--|---|---|---|
| capacity in ml  | 15  | 30  | 50  | 25  | 30  | 10  | 250   | 290   | 650  | 750   | 1,000   | 1,000   |
| Ø x L in mm   | 17 x 120  | 25 x 110  | 29 x 115  | 25 x 90   | 25 x 110  | 16 x 80   | 61 x 122  | 62 x 137  | 97 x 139   | 97 x 152  | 96 x 176  | 98 x 138  |
| <b>Cat. No.</b>   | <b>0509</b>   | -   | <b>0513</b>   | -   | -   | -   | <b>5127<sup>2B)</sup></b>   | - <sup>2B)</sup>  | <b>0554<sup>2B)</sup></b>  | <b>0512<sup>2B)</sup></b>   | <b>4239<sup>2B)</sup></b>   | <b>4255</b>   |
| bucket Cat. No. 4255<br>     |  |  |  |  |  |  |  |  |  |  |  |  |
| carrier<br>Cat. No. 4254<br> |  |  |  |  |  |  |   |   |  |   |   |   |
| <b>Cat. No.</b>   | <b>4437</b>   | <b>4438</b>   | <b>4441</b>   | <b>4438</b>   | <b>4434</b>   | <b>4443</b>   | -   |   |  |   |   |   |
| boring Ø x L in mm  | 17 x 88   | 26 x 72   | 30 x 87   | 26 x 72   | 17.5 x 53   | 62 x 92   | 98 x 138  |   | -  |   |   |   |
| tubes per rotor   | 48  | 28  | 20  | 28  | 76  | 4   | 4   |   |  |   |   |   |
| max. RCF <sup>2)</sup>  | 4,890   | 4,709   | 4,890   | 4,709   | 4,777   | 5,003   | 5,184   |   |  |   |   |   |
| radius in mm  | 216   | 208   | 216   | 208   | 211   | 221   | 229   |   |  |   |   |   |
| run-up in sec   | 108   |   |   |   |   |   |   |   |  |   |   |   |
| run-down in sec, braked   | 103   |   |   |   |   |   |   |   |  |   |   |   |
| temperature in °C <sup>1)</sup>   | +6  |   |   |   |   |   |   |   |  |   |   |   |

|   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|
| capacity in ml  | 175   | 175   | 200   | 225   | 250   | 500   |
| Ø x L in mm   | 61 x 118  | 62 x 144  | 60 x 130  | 61 x 137  | 60 x 162  | 96 x 147  |
| <b>Cat. No.</b>   | <b>Falcon®</b>  | <b>Nalgene®</b>   | <b>Nunc®</b>  | <b>Falcon®</b>  | <b>Corning</b>  |   |
| bucket Cat. No. 4255<br>     |  |  |  |  |  |  |
| carrier<br>Cat. No. 4254<br> |  |  |  |  |  |  |
| <b>Cat. No.</b>   | <b>4440</b>   | <b>4430</b>   | <b>4440</b>   | <b>4430</b>   | <b>4449</b>   |   |
| boring Ø x L in mm  | -   |   |   |   |   |   |
| tubes per rotor   | 4   |   |   |   |   |   |
| max. RCF <sup>2)</sup>  | 5,184   |   |   |   |   |   |
| radius in mm  | 229   |   |   |   |   |   |
| run-up in sec   | 108   |   |   |   |   |   |
| run-down in sec, braked   | 103   |   |   |   |   |   |
| temperature in °C <sup>1)</sup>   | +6  |   |   |   |   |   |

<sup>2B)</sup> When using removal frame 4259-A, please take the insert out of carrier 4257.

<sup>2B)</sup> At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

## Swing-out rotor, 6-place

±90°

n = 4,000 min<sup>-1</sup>  
max. RCF 3,631



illustrated with carriers 5051  
and lids 5053

**Cat. No.** (without carriers) **4296**

| capacity in ml                     | 1.5         | 2.0 | 1.5         | 2.0         | 5                        | 6                        | 7                         | 9                        | 15                       | 25                       | 50                        | 100                      | 100                      | two-tier frame for cyto accessories |             |  |             |  |             |  |             |  |  |
|------------------------------------|-------------|-----|-------------|-------------|--------------------------|--------------------------|---------------------------|--------------------------|--------------------------|--------------------------|---------------------------|--------------------------|--------------------------|-------------------------------------|-------------|--|-------------|--|-------------|--|-------------|--|--|
| Ø x L in mm                        | 11 x 38     |     | 11 x 38     |             | 12 x 75                  | 12 x 82                  | 12 x 100                  | 14 x 100                 | 17 x 100                 | 24 x 100                 | 34 x 100                  | 44 x 100                 | 40 x 115                 |                                     |             |  |             |  |             |  |             |  |  |
| <b>Cat. No.</b>                    | -           | -   | <b>2078</b> | <b>0536</b> | <b>0553<sup>2)</sup></b> | <b>0501<sup>2)</sup></b> | <b>0578<sup>2)</sup></b>  | <b>0500<sup>2)</sup></b> | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b>  | <b>0526<sup>2)</sup></b> | <b>0523<sup>2)</sup></b> | <b>cyto chambers<sup>2,3)</sup></b> |             |  |             |  |             |  |             |  |  |
| lid Cat. No. 5053                  |             |     |             |             |                          |                          |                           |                          |                          |                          |                           |                          |                          |                                     |             |  |             |  |             |  |             |  |  |
| carrier Cat. No. 5051              |             |     |             |             |                          |                          |                           |                          |                          |                          |                           |                          |                          |                                     |             |  |             |  |             |  |             |  |  |
| <b>Cat. No.</b>                    | <b>5257</b> |     | <b>5281</b> |             | <b>5227</b>              |                          | <b>5247<sup>18)</sup></b> |                          | <b>5264</b>              |                          | <b>5248<sup>18)</sup></b> |                          | <b>5242</b>              |                                     | <b>5243</b> |  | <b>5262</b> |  | <b>5249</b> |  | <b>5280</b> |  |  |
| boring Ø x L in mm                 | 12.5 x 42   |     | 11.5 x 50   |             | 12.5 x 42                |                          | 12.5 x 86                 |                          | 16 x 50                  |                          | 17.5 x 86                 |                          | 26 x 86                  |                                     | 36 x 86     |  | 45.5 x 86   |  | 42 x 86     |  | -           |  |  |
| tubes per rotor                    | 240         |     | 96          |             | 120                      |                          | 120                       |                          | 72                       |                          | 72                        |                          | 30                       |                                     | 12          |  | 6           |  | 12          |  |             |  |  |
| max. RCF <sup>2)</sup> upper/lower | 2,486/3,363 |     | 3,363       |             | 3,309                    |                          | 3,291                     |                          | 3,309                    |                          | 3,291                     |                          | 3,291                    |                                     | 3,291       |  | 3,291       |  | 2,290/3,274 |  |             |  |  |
| radius in mm upper/lower           | 139/188     |     | 188         |             | 185                      |                          | 184                       |                          | 185                      |                          | 184                       |                          | 184                      |                                     | 184         |  | 184         |  | 128/183     |  |             |  |  |
| run-up in sec                      | 33          |     |             |             |                          |                          |                           |                          |                          |                          |                           |                          |                          |                                     |             |  |             |  |             |  |             |  |  |
| run-down in sec, braked            | 38          |     |             |             |                          |                          |                           |                          |                          |                          |                           |                          |                          |                                     |             |  |             |  |             |  |             |  |  |
| temperature in °C <sup>1)</sup>    | -4          |     |             |             |                          |                          |                           |                          |                          |                          |                           |                          |                          |                                     |             |  |             |  |             |  |             |  |  |

| capacity in ml                  | 1.1–1.4                             | 2.6–3.4     | 2.7–3       | 4–5.5       | 4.5–5       | 4.9         | 7.5–8.5     | 9–10        | 10          | 1.6–5       | 4–7         | 4–7         | 8.5–10      | 15          | 50          |
|---------------------------------|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Ø x L in mm                     | 8x66                                | 13x65       | 11x66       | 15x75       | 11x92       | 13x90       | 15x92       | 16x92       | 15x102      | 13x75       | 13x100      | 16x75       | 16x100      | 17x120      | 29x115      |
| <b>Cat. No.</b>                 | <b>blood collection/urine tubes</b> |             |             |             |             |             |             |             |             |             |             |             |             | <b>0509</b> | <b>0513</b> |
| lid Cat. No. 5053               |                                     |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| carrier Cat. No. 5051           |                                     |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <b>Cat. No.</b>                 | <b>5267</b>                         | <b>5268</b> | <b>5227</b> | <b>5264</b> | <b>5227</b> | <b>5268</b> | <b>5264</b> | <b>5258</b> | <b>5268</b> | <b>5264</b> | <b>5248</b> | <b>6306</b> | <b>5259</b> |             |             |
| boring Ø x L in mm              | 11 x 44                             | 13.5 x 52   | 12.5 x 42   | 16 x 50     | 12.5 x 42   | 13.5 x 52   | 16 x 50     | 17.6 x 86   | 13.5 x 52   | 16 x 50     | 17.5 x 86   | 17 x 90     | 30 x 86     |             |             |
| tubes per rotor                 | 120                                 | 72          | 120         | 72          | 120         | 72          | 66          | 72          | 42          | 12          |             |             |             |             |             |
| max. RCF <sup>2)</sup>          | 3,274                               | 3,345       | 3,309       | 3,309       | 3,309       | 3,345       | 3,309       | 3,291       | 3,345       | 3,309       | 3,291       | 3,434       | 3,363       |             |             |
| radius in mm                    | 183                                 | 187         | 185         | 185         | 185         | 187         | 185         | 184         | 187         | 185         | 184         | 192         | 188         |             |             |
| run-up in sec                   | 33                                  |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| run-down in sec, braked         | 38                                  |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| temperature in °C <sup>1)</sup> | -4                                  |             |             |             |             |             |             |             |             |             |             |             |             |             |             |

<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.

<sup>3)</sup> When using these tubes, carrier 5051 cannot be closed with lid 5053.

<sup>5)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.





illustrated with carriers 5051



illustrated with carriers 5092 and lids 5093 with bio-containment<sup>5)</sup>

**Swing-out rotor Cat. No. (without carriers) 4296**

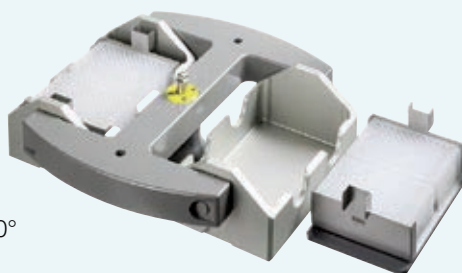
|                                 |             |             |             |
|---------------------------------|-------------|-------------|-------------|
| capacity in ml                  | 12          | 30          | 50          |
| Ø x L in mm                     | 17 x 100    | 25 x 110    | 29 x 115    |
| <b>Cat. No.</b>                 | -           |             |             |
| lid Cat. No. 5053               |             |             |             |
| <b>carrier</b><br>Cat. No. 5051 |             |             |             |
| <b>Cat. No.</b>                 | <b>6306</b> | <b>5266</b> | <b>5243</b> |
| boring Ø x L in mm              | 17 x 90     | 26 x 86     | 36 x 86     |
| tubes per rotor                 | 42          | 30          | 12          |
| max. RCF <sup>2)</sup>          | 3,434       | 3,291       |             |
| radius in mm                    | 192         | 184         |             |
| run-up in sec                   | 33          |             |             |
| run-down in sec, braked         | 38          |             |             |
| temperature in °C <sup>1)</sup> | -4          |             |             |

|   |                          |                          |                          |             |                          |                          |                          |                          |                          |
|---|--------------------------|--------------------------|--------------------------|-------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| capacity in ml  | 5                        | 6                        | 7                        | 10          | 15                       | 25                       | 50                       | 100                      | 100                      |
| Ø x L in mm   | 12 x 75                  | 12 x 82                  | 12 x 100                 | 17 x 70     | 17 x 100                 | 24 x 100                 | 34 x 100                 | 44 x 100                 | 40 x 115                 |
| <b>Cat. No.</b>   | <b>0553<sup>2)</sup></b> | <b>0501<sup>2)</sup></b> | <b>0578<sup>2)</sup></b> | <b>2079</b> | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>0526<sup>2)</sup></b> | <b>0523<sup>2)</sup></b> |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 5093 |                          |                          |                          |             |                          |                          |                          |                          |                          |
| <b>carrier</b><br>Cat. No. 5092                         |                          |                          |                          |             |                          |                          |                          |                          |                          |
| <b>Cat. No.</b>   | <b>5128</b>              | <b>5120</b>              | <b>5136</b>              | <b>5122</b> | <b>5124</b>              | <b>5125</b>              | <b>5126</b>              | <b>5125</b>              | <b>5126</b>              |
| boring Ø x L in mm                                      | 12.8 x 45                | 12.8 x 82                | 17.5 x 60.7              | 25.5 x 82   | 35.5 x 82.5              | 45.5 x 85                | 42 x 85                  |                          |                          |
| tubes per rotor   | 72                       | 72                       | 48                       | 24          | 6                        |                          |                          |                          |                          |
| max. RCF <sup>2)</sup>                                  | 3,542                    | 3,542                    | 3,488                    | 3,434       | 3,488                    |                          |                          |                          |                          |
| radius in mm  | 198                      | 198                      | 195                      | 192         | 195                      |                          |                          |                          |                          |
| run-up in sec   | 33                       |                          |                          |             |                          |                          |                          |                          |                          |
| run-down in sec, braked                                 | 38                       |                          |                          |             |                          |                          |                          |                          |                          |
| temperature in °C <sup>1)</sup>                         | -6                       |                          |                          |             |                          |                          |                          |                          |                          |

|   |                          |                                     |             |             |             |             |             |             |             |             |             |             |             |             |             |
|---|--------------------------|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| capacity in ml  | 250                      | 1.1-1.4                             | 1.1-1.4     | 2.6-3.4     | 2.7-3       | 2.7-3       | 4.5-5       | 4-5.5       | 4.9         | 7.5-8.5     | 9-10        | 10          | 1.6-5       | 4-7         | 4-7         |
| Ø x L in mm   | 65 x 115                 | 8 x 66                              | 6 x 88      | 13 x 65     | 11 x 66     | 11 x 66     | 11 x 92     | 15 x 75     | 13 x 90     | 15 x 92     | 16 x 92     | 15 x 102    | 13 x 75     | 13 x 100    | 16 x 75     |
| <b>Cat. No.</b>   | <b>0530<sup>2)</sup></b> | <b>blood collection/urine tubes</b> |             |             |             |             |             |             |             |             |             |             |             |             |             |
| lid with bio-containment <sup>5)</sup><br>Cat. No. 5093 |                          |                                     |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <b>carrier</b><br>Cat. No. 5092                         |                          |                                     |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <b>Cat. No.</b>   | <b>1791</b>              | <b>5137</b>                         | <b>5138</b> | <b>5138</b> | <b>5137</b> | <b>5138</b> | <b>5120</b> | <b>5136</b> | <b>5137</b> | <b>5136</b> | <b>5138</b> | <b>5120</b> | <b>5136</b> | <b>5120</b> | <b>5136</b> |
| boring Ø x L in mm                                      | 66 x 103                 | 13.5 x 60.7                         | 12.8 x 54.5 | 12.8 x 54.5 | 13.5 x 60.7 | 12.8 x 54.5 | 12.8 x 82   | 17.5 x 60.7 | 13.5 x 60.7 | 17.5 x 60.7 | 12.8 x 54.5 | 12.8 x 82   | 17.5 x 60.7 | 12.8 x 54.5 | 12.8 x 82   |
| tubes per rotor   | 6                        | 48                                  | 72          |             | 48          | 72          | 72          | 48          |             | 48          | 72          | 72          | 48          | 72          | 48          |
| max. RCF <sup>2)</sup>                                  | 3,631                    | 3,488                               | 3,077       |             | 3,488       | 3,077       | 3,542       | 3,488       |             | 3,488       | 3,077       | 3,542       | 3,488       | 3,077       | 3,488       |
| radius in mm  | 203                      | 195                                 | 172         |             | 195         | 172         | 198         | 195         |             | 195         | 172         | 198         | 195         | 172         | 195         |
| run-up in sec   | 33                       |                                     |             |             |             |             |             |             |             |             |             |             |             |             |             |
| run-down in sec, braked                                 | 38                       |                                     |             |             |             |             |             |             |             |             |             |             |             |             |             |
| temperature in °C <sup>1)</sup>                         | -6                       |                                     |             |             |             |             |             |             |             |             |             |             |             |             |             |

<sup>18)</sup> With Cat. No. 5247-91 or 5248-91 these adapters can also be ordered with a decanting aid.  
<sup>23)</sup> Please ask for our detailed cyto brochure.

## Swing-out rotor, 2-place



±90°

n = 3,600 min<sup>-1</sup>  
max. RCF 2,652

illustrated with carriers 4285-A,  
adapters 4281 and Deep Well Plates

### Swing-out rotor 4296

**Cat. No.** (without carriers) **4282**

| capacity in ml   | 8.5–10            | 8                        | 15          | 50          | 25          | 30          | 50          | 10          | 250                       | 290                    |  |
|--|-------------------|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------------------|------------------------|--|
| Ø x L in mm  | 16x100            | 16x125                   | 17x120      | 29x115      | 25x90       | 25x110      | 29x115      | 16x80       | 61x122                    | 62x137                 |  |
| <b>Cat. No.</b>  | blood/urine tubes |                          | <b>0509</b> | <b>0513</b> | -           |             |             |             | <b>5127<sup>2B)</sup></b> | <b>-<sup>2B)</sup></b> |  |
| lid with bio-containment <sup>5)</sup><br>Cat. No. <b>5093</b> |                   |                          |             |             |             |             |             |             |                           |                        |  |
| <b>carrier</b><br>Cat. No. <b>5092</b>                         |                   |                          |             |             |             |             |             |             |                           |                        |  |
| <b>Cat. No.</b>  | <b>5136</b>       | <b>5121<sup>4)</sup></b> | <b>5129</b> | <b>5123</b> | <b>5134</b> | <b>5122</b> | <b>5135</b> | <b>5136</b> | <b>6319</b>               |                        |  |
| boring Ø x L in mm   | 17.5x60.7         | 17.5x82                  | 17x85       | 30x85       | 26x73       | 25.5x82     | 30x99       | 17.5x60.7   | 66x103                    |                        |  |
| tubes per rotor  | 48                | 42                       | 42          | 12          | 18          | 24          | 12          | 48          | 6                         |                        |  |
| max. RCF <sup>2)</sup>   | 3,488             | 3,542                    | 3,631       | 3,631       | 3,363       | 3,434       | 3,560       | 3,488       | 3,631                     |                        |  |
| radius in mm   | 195               | 198                      | 203         | 203         | 188         | 192         | 199         | 195         | 203                       |                        |  |
| run-up in sec  | 33                |                          |             |             |             |             |             |             |                           |                        |  |
| run-down in sec, braked  | 38                |                          |             |             |             |             |             |             |                           |                        |  |
| temperature in °C <sup>1)</sup>                                | -6                |                          |             |             |             |             |             |             |                           |                        |  |

| D x W x H in mm                      | 86 x 128 x 15 | 86 x 128 x 17.5 | 86 x 128 x 22 | 86 x 128 x 44.5 | 59 x 84 x 11                      | 82 x 124 x 20              | -                 | 20 x 176 x 41        |
|--------------------------------------|---------------|-----------------|---------------|-----------------|-----------------------------------|----------------------------|-------------------|----------------------|
| <b>Cat. No.</b>                      | <b>MTP</b>    |                 | <b>CP</b>     | <b>DWP</b>      | <b>Microtest plate (Terasaki)</b> | <b>PCR plate, 96-place</b> | <b>PCR strips</b> | <b>Olympus racks</b> |
| carrier Cat. No. <b>4285-A</b>       |               |                 |               |                 |                                   |                            |                   |                      |
| <b>rotor</b><br>Cat. No. <b>4282</b> |               |                 |               |                 |                                   |                            |                   |                      |
| <b>Cat. No.</b>                      |               |                 | <b>4281</b>   |                 |                                   | <b>4281 + 1485</b>         |                   | <b>4283-B</b>        |
| boring Ø x L in mm                   | -             |                 |               |                 |                                   |                            |                   |                      |
| plates/racks per rotor               | 16            | 16              | 12            | 4               | 4                                 | 4                          | 48 x 8            | 12                   |
| max. RCF <sup>2)</sup>               | 2,434         |                 |               |                 |                                   | 2,434                      |                   | 2,652                |
| radius in mm                         | 168           |                 |               |                 |                                   | 168                        |                   | 183                  |
| run-up in sec                        | 87            |                 |               |                 |                                   |                            |                   |                      |
| run-down in sec, braked              | 87            |                 |               |                 |                                   |                            |                   |                      |
| temperature in °C <sup>1)</sup>      | -8            |                 |               |                 |                                   |                            |                   |                      |

<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for ASTM tubes annotated with footnote <sup>2)</sup> is 700.

<sup>3)</sup> When using these tubes, carrier 5092 cannot be closed with lid 5093.

**Swing-out rotor, 4-place, for ASTM tubes**

**Angle rotor, 6-place, for Schlenk tubes**



∠ 90°

n = 2,000 min<sup>-1</sup>  
max. RCF 984

illustrated with  
carriers 4275

**Cat. No.** (without carriers) **4274**



∠ 45°

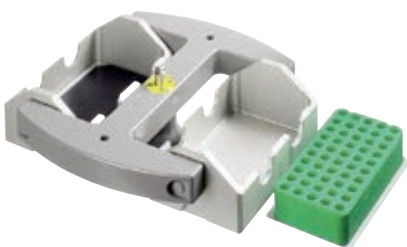
n = 2,000 min<sup>-1</sup>  
max. RCF 805

**Cat. No.** **4316**<sup>34)</sup>

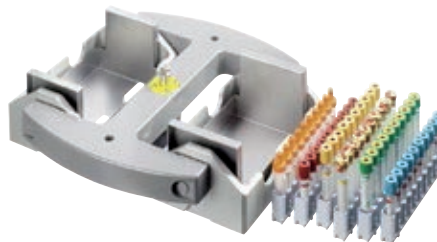
| D x W x H in mm                      | 20 x 118 x 70        | 25 x 193 x 60        | 110 x 210 x 44        |
|--------------------------------------|----------------------|----------------------|-----------------------|
| <b>Cat. No.</b>                      | <b>Hitachi racks</b> | <b>Behring racks</b> | <b>rack, 50-place</b> |
| carrier Cat. No. <b>4285-A</b>       |                      |                      |                       |
| <b>rotor</b><br>Cat. No. <b>4282</b> |                      |                      |                       |
| <b>Cat. No.</b>                      | <b>4287-B</b>        | <b>4288-A</b>        | <b>4263-A</b>         |
| boring Ø x L in mm                   | -                    |                      |                       |
| plates/racks per rotor               | 20                   | 10                   | 2                     |
| max. RCF <sup>2)</sup>               | 2,652                | 2,652                | 2,579                 |
| radius in mm                         | 183                  | 183                  | 178                   |
| run-up in sec                        | 87                   |                      |                       |
| run-down in sec, braked              | 87                   |                      |                       |
| temperature in °C <sup>1)</sup>      | -8                   |                      |                       |

| capacity in ml                       | 50            | 100                       | 100         | 100                       |
|--------------------------------------|---------------|---------------------------|-------------|---------------------------|
| Ø x L in mm                          | 45 x 130      | 58 x 161                  | 44 x 168    | 37 x 200                  |
| <b>Cat. No.</b>                      | -             | <b>0528</b> <sup>2)</sup> | -           | <b>0531</b> <sup>2)</sup> |
| carrier Cat. No. <b>4275</b>         |               |                           |             |                           |
| <b>rotor</b><br>Cat. No. <b>4274</b> |               |                           |             |                           |
| <b>Cat. No.</b>                      | <b>4278-A</b> | <b>0771</b>               | <b>4277</b> | <b>4276</b>               |
| boring Ø x L in mm                   | -             |                           |             |                           |
| tubes per rotor                      | 4             |                           |             |                           |
| max. RCF <sup>2)</sup>               | 984           | 961                       |             |                           |
| radius in mm                         | 220           | 215                       |             |                           |
| run-up in sec                        | 18            |                           |             |                           |
| run-down in sec, braked              | 23            |                           |             |                           |
| temperature in °C <sup>1)</sup>      | -8            |                           |             |                           |

**rotor 4282:**



illustrated with carriers 4285-A,  
inserts 4263-A and rack, 50-place



illustrated with carriers 4285-A,  
adapters 4283-B and Olympus racks

| capacity in ml                                      | 25          | 50          |
|---|-------------|-------------|
| <b>Cat. No.</b>                                     | <b>0532</b> | <b>0533</b> |
|   |             |             |
| <b>rotor</b><br>Cat. No. <b>4316</b> <sup>34)</sup> |             |             |
| <b>Cat. No.</b>                                     | <b>4317</b> | -           |
| boring Ø x L in mm                                  | 25 x 86     | -           |
| tubes per rotor                                     | 6           |             |
| max. RCF <sup>2)</sup>                              | 783         | 805         |
| radius in mm  | 175         | 180         |
| run-up in sec                                       | 48          |             |
| run-down in sec, braked                             | 48          |             |
| temperature in °C <sup>1)</sup>                     | -12         |             |

4) Please remove the inserts.

5) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

28) At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

34) In heating / cooling model 4910-50 rotor 4316 can only be used up to a maximum of + 40 °C.

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# ROTO SILENTA 630 RS



## Blood bags and much more

Now even safer and with smoother, quieter operation. Thanks to its improved running performance, the ROTO SILENTA 630 RS guarantees best separating results with blood bags, bottles up to 2,000 ml, tubes and blood collection tubes. Every commercial blood bag system can be accommodated. Loading the carriers and inserts is convenient and easy. Wind shielding the rotor is not necessary.



## TECHNOLOGY

## ROTO SILENTA 630 RS<sup>\*)</sup>

| Floorstanding centrifuge, without rotor  | cooled                                     |
|--|--|
| Power supply <sup>*)</sup>               | 400 V 3 ~ + N                              |
| Frequency                                | 50 – 60 Hz                                 |
| Consumption                              | 9,700 VA                                   |
| Emission, Immunity                       | EN/IEC 61326-1, class B                    |
| Max. capacity                            | 6 x 2,000 ml                               |
| Max. RPM (speed)                         | 4,500 min <sup>-1</sup>                    |
| max. RCF                                 | 6,520                                      |
| Running time                             | 1 sec – 999 min : 59 sec, ∞ continuous run |
| Dimensions (H x W x D)                   | 973 x 813 x 1,015 mm                       |
| Weight                                   | approx. 355 kg                             |
| <b>Refrigeration</b>                     |  |
| Temperature control, infinitely variable | from - 20 to + 40 °C                       |
| <b>Cat. No.</b>                          | <b>5005</b>                                |

<sup>\*)</sup> Other voltages on request.

<sup>\*)</sup> For a list of further versions of this model, please refer to page 12.



## Swing-out rotor, 6-place

In the following tables, the values for 6-place rotor 4176 have a light turquoise background, and those for 4-place rotor 4174 have a light orange background.











± 90°





n = 4,500 min<sup>-1</sup>  
max. RCF 6,520

illustrated with carriers 4591-A and inserts 4592-B

**Cat. No.** (without carriers) **4176**

| capacity in ml   | 500   | 500   | 500   | 500   | 500   | 750    |
|--|---|---|---|---|---|--------|
| <b>holding system for blood bags</b>   | Baxter/Fenwal   | Fresenius   | Terumo <sup>10)</sup>   | -   | -   | -      |
| <b>blood bags</b>  | quadruplicate   | quadruplicate   | quadruplicate   | quadruplicate   | quadruplicate   | single |
| <b>Cat. No.</b>  | 4526 <sup>27)</sup>   | 4527 <sup>27)</sup>   | 4528 <sup>27)</sup>   | -   | -   | -      |
| <br><b>carrier</b><br>Cat. No. 4524-A |  |  |  |  |  |        |
| <b>Cat. No.</b>  | 4525-A  |   |   | 4529 <sup>30)</sup> -A0,-AM,-AU   | 4592-B  |        |
| boring Ø x L in mm   | -   |   |   |   |   |        |
| blood bag systems per rotor  | 12   8  |   |   |   |   |        |
| max. RCF   | 6,498   5,683   |   |   |   |   |        |
| max. RCF <sup>30)</sup>  | 1,000   1,000   |   |   |   |   |        |
| radius in mm   | 287   251   |   |   |   |   |        |
| run-up in sec  | 125   125   |   |   |   |   |        |
| run-down in sec, braked  | 197   197   |   |   |   |   |        |
| temperature in °C <sup>1)</sup>  | +16   +10   |   |   |   |   |        |

| capacity in ml   | 450   |
|--|---|
| <b>blood bags, quadruplicate</b>   |   |
| <b>Cat. No.</b>  | -   |
| <br><b>carrier</b><br>Cat. No. 4546-A |  |
| <b>Cat. No.</b>  | 4559-A  |
| boring Ø x L in mm   | -   |
| blood bag systems per rotor  | 12   8  |
| max. RCF   | 6,271   5,479   |
| radius in mm   | 277   242   |
| run-up in sec  | 125   125   |
| run-down in sec, braked  | 197   197   |
| temperature in °C <sup>1)</sup>  | +13   0   |

| capacity in ml   | 450   | 450   | 500   | 750    |
|--|---|---|---|--------|
| <b>blood bags</b>  | triplicate  | triplicate  | quadruplicate   | single |
| <b>Cat. No.</b>  | -   | -   | -   | -      |
| <br><b>carrier</b><br>Cat. No. 4591-A |  |  |  |        |
| <b>Cat. No.</b>  | 4598  | 4598-P  | 4592-B  |        |
| boring Ø x L in mm   | -   |   |   |        |
| blood bag systems per rotor  | 12   8  |   |   |        |
| max. RCF   | 6,498   5,705   |   |   |        |
| radius in mm   | 287   252   |   |   |        |
| run-up in sec  | 125   125   |   |   |        |
| run-down in sec, braked  | 197   197   |   |   |        |
| temperature in °C <sup>1)</sup>  | +16   +10   |   |   |        |



carrier 4524-A  
with insert 4525-A

insert 4529-A in 4529-AM  
version (hooks for suspending  
the blood bags are fixed in  
middle position)

<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.

<sup>10)</sup> As well as Macopharma and Kawasumi.

<sup>27)</sup> Please order by pairs.



**Swing-out rotor, 4-place**

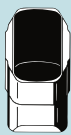









↻ 90°

n = 4,500 min<sup>-1</sup>  
max. RCF 5,705

illustrated with carriers 4591-A  
and inserts 4592-B

**Cat. No.** (without carriers) **4174**

| capacity in ml   | 100   | 2.000   |
|--|---|---|
|  | thrombocyte plate   | 180x150x100   |
| <b>Cat. No.</b>  | <b>4597</b>   | <b>0550</b>   |
| <br><b>carrier</b><br>Cat. No. <b>4595-B</b> <sup>35)</sup> |                  |  |
|  | <br>for 4 plates |   |
| <b>Cat. No.</b>  | <b>4596-B</b>   | -   |
| boring Ø x L in mm   | -   | -   |
| qty. per rotor   | 24   16   | 6   4   |
| max. RCF   | 3,821   3,328   | 3,848   3,369   |
| max. RCF <sup>36)</sup>  | 1,000   1,000   | -   -   |
| radius in mm   | 279   243   | 281   246   |
| run-up in sec  | 125   125   | 29   95   |
| run-down in sec, braked  | 197   197   | 41   131  |
| temperature in °C <sup>1)</sup>  | +16   -8  | +16   -8  |

| capacity in ml  | 500   | 750   | 1,000         |
|---|---|---|---------------|
| <b>blood bags</b>   | <b>quadruplicate</b>  | <b>single</b>   | <b>single</b> |
| <b>Cat. No.</b>   | -   | -   | -             |
| <br><b>carrier</b><br>Cat. No. <b>4523-A</b> |  |  |               |
|   |  |   |               |
| <b>Cat. No.</b>   | <b>4516-A</b>   | -   | -             |
| boring Ø x L in mm  | -   | -   | -             |
| blood bag systems per rotor   | 6   4   | 6   4   |               |
| max. RCF  | 6,452   5,637   | 6,520   5,705   |               |
| radius in mm  | 285   249   | 288   252   |               |
| run-up in sec   |   | 125   125   |               |
| run-down in sec, braked   |   | 197   197   |               |
| temperature in °C <sup>1)</sup>   |   | +9   +3   |               |



**Balancing inserts**

**Cat. No.**  
**4584-A** (for insert 4559-A),  
**4587-A** (for insert 4592-B) and  
**4589-A** (for insert 4516-A)

In case there are not enough blood bag systems to occupy every carrier of the rotor, empty carriers can be filled with balancing inserts. Taring weights supplied with the inserts may be used for fine balancing.



carrier 4591-A  
with insert 4592-B



carrier 4595-B, insert 4596-A  
and 4 thrombocyte plates 4597



carrier 4523-A  
with insert 4516-A



carrier 4546-A  
with insert 4559-A

<sup>30)</sup> When using inserts 4529-AO, 4529-AM, 4529-AU at lower speeds (e.g. for processing thrombocytes), the blood bags may be hung up to avoid accumulation of erythrocytes. Hooks at three different heights (4529-AO upper position, 4529-AM middle position, 4529-AU low position) allow to meet specific customer requirements. Suspended blood bags, however, may not be exposed to a RCF exceeding 1,000.

<sup>35)</sup> Adapter for accommodating sample tubes and blood collection tubes in carrier 4595-B on request.

<sup>36)</sup> The max. permissible RCF for centrifuging thromboplates 4597 is 1,000, for centrifuging bottles 0550 it is RCF 3,848.

In the following tables, the values for 6-place rotor 4176 have a light turquoise background, and those for 4-place rotor 4174 have a light orange background.



carrier 4579-A, illustrated with bucket 4255 with lid

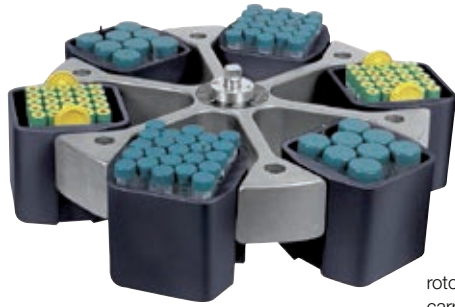
### Swing-out rotors 4176 / 4174

| capacity in ml                  | 5                        | 7                        | 9                        | 10          | 15                       | 25                       | 50                       | 100                      | 2.6–3.4                       | 2.7–3   |
|---------------------------------|--------------------------|--------------------------|--------------------------|-------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------|---------|
| Ø x L in mm                     | 12 x 75                  | 12 x 100                 | 14 x 100                 | 17 x 70     | 17 x 100                 | 24 x 100                 | 34 x 100                 | 44 x 100                 | 13 x 65                       | 11 x 66 |
| <b>Cat. No.</b>                 | <b>0553<sup>2)</sup></b> | <b>0578<sup>2)</sup></b> | <b>0500<sup>2)</sup></b> | <b>2079</b> | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>0526<sup>2)</sup></b> | <b>blood collection tubes</b> |         |
| bucket Cat. No. 4255            |                          |                          |                          |             |                          |                          |                          |                          |                               |         |
| carrier Cat. No. 4579-A         |                          |                          |                          |             |                          |                          |                          |                          |                               |         |
| <b>Cat. No.</b>                 | <b>4433</b>              |                          | <b>4434</b>              |             | <b>4438</b>              |                          | <b>4439</b>              |                          | <b>4442</b>                   |         |
| boring Ø x L in mm              | 13 x 58                  |                          | 17.5 x 53                |             | 26 x 72                  |                          | 36 x 79                  |                          | 45 x 78                       |         |
| tubes per rotor                 | 180   120                |                          | 114   76                 |             | 42   28                  |                          | 24   16                  |                          | 12   8                        |         |
| max. RCF <sup>2)</sup>          | 5,750   4,935            |                          | 5,886   5,094            |             | 5,615   4,845            |                          | 5,705   4,890            |                          | 5,683   4,867                 |         |
| radius in mm                    | 254   218                |                          | 260   225                |             | 248   214                |                          | 252   216                |                          | 251   215                     |         |
| run-up in sec                   | 125   125                |                          |                          |             |                          |                          |                          |                          |                               |         |
| run-down in sec, braked         | 197   197                |                          |                          |             |                          |                          |                          |                          |                               |         |
| temperature in °C <sup>1)</sup> | +4   -11                 |                          |                          |             |                          |                          |                          |                          |                               |         |

| capacity in ml                  | 4–5.5                               | 4.5–5         | 4.9           | 9–10          | 10       | 1.6–5         | 4–7      | 4–7           | 8.5–10   | 15            | 50          |
|---------------------------------|-------------------------------------|---------------|---------------|---------------|----------|---------------|----------|---------------|----------|---------------|-------------|
| Ø x L in mm                     | 15 x 75                             | 11 x 92       | 13 x 90       | 16 x 92       | 15 x 102 | 13 x 75       | 13 x 100 | 16 x 75       | 16 x 100 | 17 x 120      | 29 x 115    |
| <b>Cat. No.</b>                 | <b>blood collection/urine tubes</b> |               |               |               |          |               |          |               |          | <b>0509</b>   | <b>0513</b> |
| bucket Cat. No. 4255            |                                     |               |               |               |          |               |          |               |          |               |             |
| carrier Cat. No. 4579-A         |                                     |               |               |               |          |               |          |               |          |               |             |
| <b>Cat. No.</b>                 | <b>4434</b>                         | <b>4433</b>   | <b>4435</b>   | <b>4434</b>   |          | <b>4435</b>   |          | <b>4434</b>   |          | <b>4437</b>   | <b>4441</b> |
| boring Ø x L in mm              | 17.5 x 53                           | 13 x 58       | 13.5 x 58     | 17.5 x 53     |          | 13.5 x 58     |          | 17.5 x 53     |          | 17 x 88       | 30 x 87     |
| tubes per rotor                 | 114   76                            | 180   120     | 126   84      | 114   76      |          | 126   84      |          | 114   76      |          | 72   48       | 30   20     |
| max. RCF <sup>2)</sup>          | 5,886   5,094                       | 5,750   4,935 | 5,886   5,094 | 5,750   4,935 |          | 5,886   5,094 |          | 6,022   5,207 |          | 5,999   5,207 |             |
| radius in mm                    | 260   225                           | 254   218     | 260   225     | 254   218     |          | 260   225     |          | 266   230     |          | 265   230     |             |
| run-up in sec                   | 125   125                           |               |               |               |          |               |          |               |          |               |             |
| run-down in sec, braked         | 197   197                           |               |               |               |          |               |          |               |          |               |             |
| temperature in °C <sup>1)</sup> | +4   -11                            |               |               |               |          |               |          |               |          |               |             |




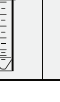
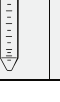
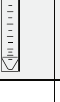
















<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.









<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.




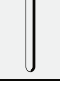








rotor 4176, illustrated with carriers 4522-A

**Swing-out rotors 4176 / 4174**

|                                 |   |   |   |   |   |   |   |   |   |   |   |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|
| capacity in ml                  | 25  | 30  | 10  | 250   | 290   | 650   | 750   | 1,000   | 1,000   | 175   | 175   |
| Ø x L in mm                     | 25 x 90   | 25 x 110  | 16 x 80   | 61 x 122  | 62 x 137  | 97 x 139  | 97 x 152  | 96 x 176  | 98 x 138  | 61 x 118  | 61 x 144  |
| <b>Cat. No.</b>                 | -   | -   | -   | <b>5127<sup>2B)</sup></b>   | - <sup>2B)</sup>  | <b>0554<sup>2B)</sup></b>   | <b>0512<sup>2B)</sup></b>   | <b>4239<sup>2B)</sup></b>   | <b>4255</b>   | <b>Falcon®</b>  | <b>Nalgene®</b>   |
| bucket Cat. No. 4255            |  |  |  |  |  |  |  |  |  |  |  |
| carrier Cat. No. 4579-A         |  |  |  |  |  |  |  |  |  |  |  |
| <b>Cat. No.</b>                 | <b>4438</b>   | <b>4434</b>   | <b>4443</b>   |   |   |   |   |   |   | <b>4440</b>   | <b>4430</b>   |
| boring Ø x L in mm              | 26 x 72   | 17.5 x 53   | 62 x 92   |   |   | 98 x 138  |   |   |   |   |   |
| tubes per rotor                 | 42   28   | 114   76  | 6   4   |   |   | 6   4   |   |   |   |   |   |
| max. RCF <sup>2)</sup>          | 5,818   5,026   | 5,886   5,094   | 6,113   5,320   | 6,113   5,411   |   | 6,294   5,501   |   |   |   |   |   |
| radius in mm                    | 257   222   | 260   225   | 270   235   | 270   239   |   | 278   243   |   |   |   |   |   |
| run-up in sec                   |   |   | 125   125   |   |   |   |   |   |   |   |   |
| run-down in sec, braked         |   |   | 197   197   |   |   |   |   |   |   |   |   |
| temperature in °C <sup>1)</sup> |   |   | +4   -11  |   |   |   |   |   |   |   |   |

|                                 |   |   |   |   |
|---------------------------------|---|---|---|---|
| capacity in ml                  | 200   | 225   | 250   | 500   |
| Ø x L in mm                     | 60 x 130  | 61 x 137  | 60 x 162  | 96 x 147  |
| <b>Cat. No.</b>                 | <b>Nunc®</b>  | <b>Falcon®</b>  | <b>Corning</b>  |   |
| bucket Cat. No. 4255            |  |  |  |  |
| carrier Cat. No. 4579-A         |  |  |  |  |
| <b>Cat. No.</b>                 | <b>4430</b>   | <b>4440</b>   | <b>4430</b>   | <b>4449</b>   |
| boring Ø x L in mm              |   |   |   |   |
| tubes per rotor                 |   | 6   4   |   |   |
| max. RCF <sup>2)</sup>          |   | 6,294   5,501   |   |   |
| radius in mm                    |   | 278   243   |   |   |
| run-up in sec                   |   | 125   125   |   |   |
| run-down in sec, braked         |   | 197   197   |   |   |
| temperature in °C <sup>1)</sup> |   | +4   -11  |   |   |

|                                 |   |   |  |   |   |
|---------------------------------|---|---|--|---|---|
| capacity in ml                  | 4   | 5   | 6  | 7   | 12  |
| Ø x L in mm                     | 10 x 88   | 12 x 75   | 12 x 82  | 12 x 100  | 16 x 101  |
| <b>Cat. No.</b>                 | -   | <b>0553<sup>2)</sup></b>  | <b>0501<sup>2)</sup></b>   | <b>0578<sup>2)</sup></b>  | -   |
| bucket Cat. No. 4255            |  |  |  |  |  |
| carrier Cat. No. 4522-A         |  |  |  |  |  |
| <b>Cat. No.</b>                 | <b>4224</b>   | <b>4213-93</b>  | <b>4213</b>  | <b>4223</b>   |   |
| boring Ø x L in mm              | 11 x 74   | 12.5 x 36   | 12.5 x 74  | 16 x 74   |   |
| tubes per rotor                 | 378   252   | 288   192   | 150   100  |   |   |
| max. RCF <sup>2)</sup>          |   | 5,818   5,003   |  |   |   |
| radius in mm                    |   | 257   221   |  |   |   |
| run-up in sec                   |   | 125   125   |  |   |   |
| run-down in sec, braked         |   | 197   197   |  |   |   |
| temperature in °C <sup>1)</sup> |   | +14   -1  |  |   |   |

<sup>3)</sup> When using these tubes, bucket 4255 cannot be closed with its lid.


























<sup>2B)</sup> At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.
























In the following tables, the values for 6-place rotor 4176 have a light turquoise background, and those for 4-place rotor 4174 have a light orange background.



carrier 4522-A with adapters for Falcon® tubes, blood collection tubes and bottles

### Swing-out rotors 4176 / 4174















|  |   |   |   |   |   |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| capacity in ml   | 15  | 25  | 50  | 100   | 2.6–3.4   | 2.7–3   | 4–5.5   | 4.5–5   | 7.5–8.5   | 9–10  | 10  | 1.6–5   |
| Ø x L in mm  | 17x100  | 24x100  | 34x100  | 40x115  | 13x65   | 11x66   | 15x75   | 11x92   | 15x92   | 16x92   | 15x102  | 13x75   |
| Cat. No.   | 0518 <sup>2)</sup>  | 0519 <sup>2)</sup>  | 0521 <sup>2)</sup>  | 0523 <sup>2)</sup>  | blood collection / urine tubes  |   |   |   |   |   |   |   |
| <br><b>carrier</b><br>Cat. No. 4522-A |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cat. No.   | 4214  | 4215  | 4216  | 4218  | 4222-93   | 4213-93   | 4214-93   | 4213  | 4214  | 4220  | 4214  | 4222-93   |
| boring Ø x L in mm   | 17.5x74   | 26x74   | 35x74   | 41.5x74   | 13.2x36   | 12.5x36   | 17.5x36   | 12.5x74   | 17.5x74   |   | 17.5x74   | 13.2x36   |
| tubes per rotor  | 180   120   | 66   44   | 36   24   | 24   16   | 180   120   | 288   192   | 180   120   | 288   192   | 180   120   | 96   64   | 180   120   |   |
| max. RCF <sup>2)</sup>   | 5,818   5,003   |   |   |   |   |   |   |   |   |   |   |   |
| radius in mm   | 257   221   |   |   |   |   |   |   |   |   |   |   |   |
| run-up in sec  | 125   125   |   |   |   |   |   |   |   |   |   |   |   |
| run-down in sec, braked  | 197   197   |   |   |   |   |   |   |   |   |   |   |   |
| temperature in °C <sup>1)</sup>  | +14   -1  |   |   |   |   |   |   |   |   |   |   |   |

|  |   |   |   |   |   |   |   |   |   |   |   |  |
|--|---|---|---|---|---|---|---|---|---|---|---|--|
| capacity in ml   | 4–7   | 4–7   | 8   | 8.5–10  | 15  | 50  | 12  | 25  | 30  |   | 50  |  |
| Ø x L in mm  | 16x75   | 13x100  | 16x125  | 16x100  | 17x120  | 29x115  | 17x100  | 25x90   | 25x110  |   | 29x115  |  |
| Cat. No.   | blood collection/urine tubes  |   |   |   | 0509  | 0513  | -   | -   | -   | -   | -   |  |
| <br><b>carrier</b><br>Cat. No. 4522-A |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cat. No.   | 4214-93   | 4222  | 4223  | 4214  | 4232  | 4245-A  | 4220  | 4241  | 4215  |   | 4249  |  |
| boring Ø x L in mm   | 17.5x36   | 13.2x74   | 16x74   | 17.5x74   | 17x70   | 30x70   | 17.5x74   | 26x73   | 26x74   |   | 30x96   |  |
| tubes per rotor  | 180   120   | 150   100   | 180   120   | 138   92  | 48   32   | 96   64   | 48   32   | 66   44   | 36   24   |   |   |  |
| max. RCF <sup>2)</sup>   | 5,818   5,003   |   |   |   | 5,999   5,184   |   | 5,818   5,003   |   |   |   | 5,909   5,094   |  |
| radius in mm   | 257   221   |   |   |   | 265   229   |   | 257   221   |   |   |   | 261   225   |  |
| run-up in sec  | 125   125   |   |   |   |   |   |   |   |   |   |   |  |
| run-down in sec, braked  | 197   197   |   |   |   |   |   |   |   |   |   |   |  |
| temperature in °C <sup>1)</sup>  | +14   -1  |   |   |   |   |   |   |   |   |   |   |  |

<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.

### Swing-out rotors 4176 / 4174

|   |   |   |   |   |   |  |   |   |
|---|---|---|---|---|---|--|---|---|
| capacity in ml  | 250   | 290   | 600   | 650   | 750   | 750  | 250   | 500   |
| Ø x L in mm   | 61x122  | 62 x137   | 93 x134   | 97 x139   | 97x152  | 96 x135  | 60 x162   | 96 x147   |
| <b>Cat. No.</b>   | <b>5127</b> <sup>28)</sup>  | - <sup>28)</sup>  | <b>0551</b> <sup>28)</sup>  | <b>0554</b> <sup>28)</sup>  | <b>0512</b> <sup>28)</sup>  | <b>4234-A</b>  | <b>Corning</b>  | <b>Corning</b>  |
| <br><b>carrier</b><br>Cat. No. <b>4522-A</b> |  |  |  |  |  |   |   |  |
|   |  |  |  |   |   |  |  |   |
| <b>Cat. No.</b>   | <b>4238</b>   | <b>4233</b>   | <b>4258</b>   |   |   | <b>6322</b>  | <b>4258 + 4449</b>  |   |
| boring Ø x L in mm  | 62 x 90   |   | 94 x 105  |   | 97.5 x 105  |  | 61 x 125  | 97.5 x 105  |
| tubes per rotor   | 6   4   |   |   |   |   |  |   |   |
| max. RCF <sup>2)</sup>  | 5,818   5,003   |   | 5,999   5,184   |   |   | 5,818   5,003  |   | 5,999   5,184   |
| radius in mm  | 257   221   |   | 265   229   |   |   | 257   221  |   | 265   229   |
| run-up in sec   | 125   125   |   |   |   |   |  |   |   |
| run-down in sec, braked   | 197   197   |   |   |   |   |  |   |   |
| temperature in °C <sup>1)</sup>   | +14   -1  |   |   |   |   |  |   |   |

### Centrifugation of toxic or infectious samples:

Bucket 5052 with lid 5057 is available for use with hazardous samples. Lid 5057 provides aerosol-proof<sup>5)</sup> containment and thus protects both the user and the environment against contamination.



lid 5057

Buckets 5052 and 4522-A have the same internal dimensions. This allows centrifugation of the adapters and sample tubes from the 4522-A bucket in bucket 5052 under the same conditions without the development of aerosols. Only if adapter 6322 is used will it not be possible to close bucket 5052 with lid 5057.

<sup>5)</sup> Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

<sup>28)</sup> At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

In the following tables, the values for 6-place rotor 4176 have a light turquoise background, and those for 4-place rotor 4174 have a light orange background.



rotor 4176, illustrated with carriers 4547-B and lids 5621

### Swing-out rotors 4176 / 4174

| capacity in ml                    | 5                        | 7                        | 9                        | 10            | 15                       | 25                       | 50                       | 100                      |
|-----------------------------------|--------------------------|--------------------------|--------------------------|---------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Ø x L in mm                       | 12 x 75                  | 12 x 100                 | 14 x 100                 | 17 x 70       | 17 x 100                 | 24 x 100                 | 34 x 100                 | 44 x 100                 |
| <b>Cat. No.</b>                   | <b>0553<sup>2)</sup></b> | <b>0578<sup>2)</sup></b> | <b>0500<sup>2)</sup></b> | <b>2079</b>   | <b>0518<sup>2)</sup></b> | <b>0519<sup>2)</sup></b> | <b>0521<sup>2)</sup></b> | <b>0526<sup>2)</sup></b> |
| lid Cat. No. 5621                 |                          |                          |                          |               |                          |                          |                          |                          |
| <b>carrier</b><br>Cat. No. 4547-B |                          |                          |                          |               |                          |                          |                          |                          |
| <b>Cat. No.</b>                   | <b>4433</b>              | <b>4433</b>              | <b>4434</b>              | <b>4434</b>   | <b>4435</b>              | <b>4438</b>              | <b>4439</b>              | <b>4442</b>              |
| boring Ø x L in mm                | 13 x 58                  | 13 x 58                  | 17.5 x 53                | 17.5 x 53     | 17.5 x 53                | 26 x 72                  | 36 x 79                  | 45 x 78                  |
| tubes per rotor                   | 180   120                | 180   120                | 114   76                 | 114   76      | 114   76                 | 42   28                  | 24   16                  | 12   8                   |
| max. RCF <sup>2)</sup>            | 5,841   5,026            | 5,841   5,026            | 5,977   5,184            | 5,977   5,184 | 5,977   5,184            | 5,728   4,913            | 5,773   4,981            | 5,750   4,958            |
| radius in mm                      | 258   222                | 258   222                | 264   229                | 264   229     | 264   229                | 253   217                | 255   220                | 254   219                |
| run-up in sec                     | 125   125                |                          |                          |               |                          |                          |                          |                          |
| run-down in sec, braked           | 197   197                |                          |                          |               |                          |                          |                          |                          |
| temperature in °C <sup>1)</sup>   | +9   -9                  |                          |                          |               |                          |                          |                          |                          |

| capacity in ml                    | 2.6–3.4                             | 2.7–3         | 4–5.5         | 4.5–5         | 4.9           | 7.5–8.5       | 9–10          | 10            | 1.6–5         | 4–7           | 4–7           | 8             | 8.5–10        |
|-----------------------------------|-------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Ø x L in mm                       | 13 x 65                             | 11 x 66       | 15 x 75       | 11 x 92       | 13 x 90       | 15 x 92       | 16 x 92       | 15 x 102      | 13 x 75       | 13 x 100      | 16 x 75       | 16 x 125      | 16 x 100      |
| <b>Cat. No.</b>                   | <b>blood collection/urine tubes</b> |               |               |               |               |               |               |               |               |               |               |               |               |
| lid Cat. No. 5621                 |                                     |               |               |               |               |               |               |               |               |               |               |               |               |
| <b>carrier</b><br>Cat. No. 4547-B |                                     |               |               |               |               |               |               |               |               |               |               |               |               |
| <b>Cat. No.</b>                   | <b>4435</b>                         | <b>4433</b>   | <b>4434</b>   | <b>4433</b>   | <b>4435</b>   | <b>4434</b>   | <b>4434</b>   | <b>4434</b>   | <b>4435</b>   | <b>4435</b>   | <b>4435</b>   | <b>4434</b>   | <b>4434</b>   |
| boring Ø x L in mm                | 13.5 x 58                           | 13 x 58       | 17.5 x 53     | 13 x 58       | 13.5 x 58     | 17.5 x 53     | 17.5 x 53     | 17.5 x 53     | 13.5 x 58     | 13.5 x 58     | 16 x 75       | 17.5 x 53     | 17.5 x 53     |
| tubes per rotor                   | 126   84                            | 180   120     | 114   76      | 180   120     | 126   84      | 114   76      | 114   76      | 114   76      | 126   84      | 126   84      | 16 x 75       | 114   76      | 114   76      |
| max. RCF <sup>2)</sup>            | 5,841   5,026                       | 5,841   5,026 | 5,977   5,184 | 5,841   5,026 | 5,841   5,026 | 5,977   5,184 | 5,977   5,184 | 5,977   5,184 | 5,841   5,026 | 5,841   5,026 | 5,977   5,184 | 5,977   5,184 | 5,977   5,184 |
| radius in mm                      | 258   222                           | 258   222     | 264   229     | 258   222     | 258   222     | 264   229     | 264   229     | 264   229     | 258   222     | 258   222     | 264   229     | 264   229     | 264   229     |
| run-up in sec                     | 125   125                           |               |               |               |               |               |               |               |               |               |               |               |               |
| run-down in sec, braked           | 197   197                           |               |               |               |               |               |               |               |               |               |               |               |               |
| temperature in °C <sup>1)</sup>   | +9   -9                             |               |               |               |               |               |               |               |               |               |               |               |               |

<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be reached by reducing the speed.

<sup>2)</sup> Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote <sup>2)</sup> is 4,000.

<sup>2b)</sup> At temperatures of over + 40 °C and / or when not filled to capacity, bottles may warp during centrifugation.





rotor 4176, illustrated with carriers 4547-B and lids 5621

**Swing-out rotors 4176 / 4174**

|  |               |               |               |               |               |          |                           |                  |                           |                           |                           |
|--|---------------|---------------|---------------|---------------|---------------|----------|---------------------------|------------------|---------------------------|---------------------------|---------------------------|
| capacity in ml                           | 15            | 50            | 25            | 30            | 10            | 250      | 290                       | 650              | 750                       | 1,000                     |                           |
| Ø x L in mm                              | 17 x 120      | 29 x 115      | 25 x 90       | 25 x 110      | 16 x 80       | 61 x 122 | 62 x 137                  | 97 x 139         | 97 x 152                  | 96 x 176                  |                           |
| <b>Cat. No.</b>                          | <b>0509</b>   | <b>0513</b>   | -             | -             | -             | -        | <b>5127<sup>2B)</sup></b> | - <sup>2B)</sup> | <b>0554<sup>2B)</sup></b> | <b>0512<sup>2B)</sup></b> | <b>4239<sup>2B)</sup></b> |
| lid Cat. No. <b>5621</b>                 |               |               |               |               |               |          |                           |                  |                           |                           |                           |
| <b>carrier</b><br>Cat. No. <b>4547-B</b> |               |               |               |               |               |          |                           |                  |                           |                           |                           |
| <b>Cat. No.</b>                          | <b>4437</b>   | <b>4441</b>   | <b>4438</b>   | <b>4434</b>   | <b>4443</b>   | -        | -                         | -                | -                         | -                         |                           |
| boring Ø x L in mm                       | 17 x 88       | 30 x 87       | 26 x 72       | 17.5 x 53     | 62 x 92       | 98 x 141 | -                         | -                | -                         | -                         |                           |
| tubes per rotor                          | 72   48       | 30   20       | 42   28       | 114   76      | 6   4         | -        | -                         | -                | -                         | -                         |                           |
| max. RCF <sup>2)</sup>                   | 6,090   5,298 | 5,909   5,117 | 5,977   5,184 | 6,203   5,411 | 6,384   5,592 | -        | -                         | -                | -                         | -                         |                           |
| radius in mm                             | 269   234     | 261   226     | 264   229     | 274   239     | 282   247     | -        | -                         | -                | -                         | -                         |                           |
| run-up in sec                            | 125   125     |               |               |               |               |          |                           |                  |                           |                           |                           |
| run-down in sec, braked                  | 197   197     |               |               |               |               |          |                           |                  |                           |                           |                           |
| temperature in °C <sup>1)</sup>          | +9   -9       |               |               |               |               |          |                           |                  |                           |                           |                           |

|  |                |                 |              |                |                |          |
|--|----------------|-----------------|--------------|----------------|----------------|----------|
| capacity in ml                           | 175            | 175             | 200          | 225            | 250            | 500      |
| Ø x L in mm                              | 61 x 118       | 61 x 144        | 60 x 130     | 61 x 137       | 60 x 162       | 96 x 147 |
| <b>Cat. No.</b>                          | <b>Falcon®</b> | <b>Nalgene®</b> | <b>Nunc®</b> | <b>Falcon®</b> | <b>Corning</b> |          |
| lid Cat. No. <b>5621</b>                 |                |                 |              |                |                |          |
| <b>carrier</b><br>Cat. No. <b>4547-B</b> |                |                 |              |                |                |          |
| <b>Cat. No.</b>                          | <b>4440</b>    | <b>4430</b>     | <b>4440</b>  | <b>4430</b>    | <b>4449</b>    | -        |
| boring Ø x L in mm                       | -              |                 |              |                |                |          |
| tubes per rotor                          | 6   4          |                 |              |                |                |          |
| max. RCF <sup>2)</sup>                   | 6,384   5,592  |                 |              |                |                |          |
| radius in mm                             | 282   247      |                 |              |                |                |          |
| run-up in sec                            | 125   125      |                 |              |                |                |          |
| run-down in sec, braked                  | 197   197      |                 |              |                |                |          |
| temperature in °C <sup>1)</sup>          | +9   -9        |                 |              |                |                |          |

ROTO SILENTA 630 RS

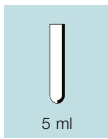
# Automatic Cell Washing System

AUTOMATIC CELL WASHING SYSTEM



ROTOLAVIT

# ROTOLAVIT



## Automatic cell washing system for serological testing.

The ROTOLAVIT cell washing system facilitates routine tasks in transfusion centre laboratories. Its fields of application are cross-matching as well as antibody search and differentiation.



### rotor, 12-place



**Cat. No. 1017-A**

Either for standard tubes 10 x 75 mm or 12 x 75 mm .

Cat. No. for 12 x 75 mm tubes: **0553**.

### rotor, 24-place




**Cat. No 1018-A**

The use of 10 x 75 mm tubes requires adapters No. **1019**.



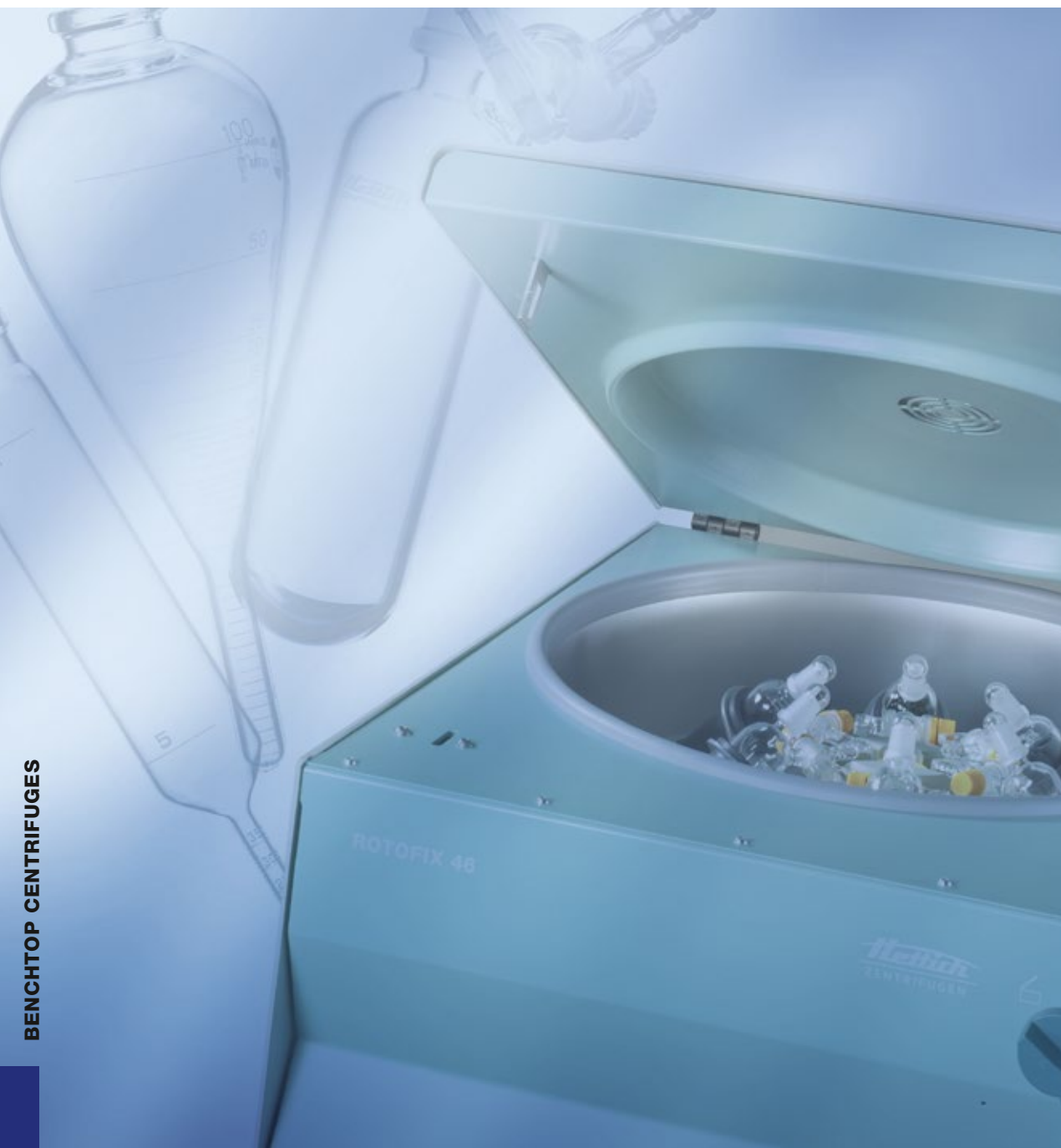
## TECHNOLOGY

## ROTOLAVIT

| Cell Washing System, without rotor  |  |  |                 |
|---|--|--|-----------------|
| Power supply <sup>*)</sup>  |  | 200 – 240 V 1 ~                              | 100 – 120 V 1 ~ |
| Frequency   |  | 50 – 60 Hz                                   |                 |
| Consumption   |  | 180 VA                                       |                 |
| Emission, Immunity  |  | EN / IEC 61326-1, class B                    | FCC class B     |
|  Max. capacity |  | 24 standard tubes (10 x 75 mm or 12 x 75 mm) |                 |
| Max. RPM (speed)  |  | 3,500 min <sup>-1</sup>                      |                 |
| Max. RCF  |  | 1,438  |                 |
| Radius (both rotors)  |  | 105 mm                                       |                 |
| Running time of the individual washing cycles   |  | 1 sec – 9 min : 59 sec                       |                 |
| Dimensions (HxWxD)  |  | 278 x 333 x 420 mm                           |                 |
| Weight  |  | approx. 24 kg                                |                 |
| <b>Cat. No.</b>   |  | <b>1006</b>                                  | <b>1006-01</b>  |

<sup>\*)</sup> Other voltages on request.

## Benchtop centrifuge for special applications



BENCHTOP CENTRIFUGES

ROTOFIX 46/46 H

# ROTOFIX 46/46 H



## Special applications require special solutions

The robust and highly adaptable ROTOFIX 46/46 H models have been specially developed for use in industrial and research laboratories. They are mainly used for standardized quality assurance procedures, but are also suited to special applications in research.



## TECHNOLOGY

| TECHNOLOGY   | ROTOFIX 46  |                 | ROTOFIX 46 H              |                 |
|--|---|-----------------|---------------------------|-----------------|
|  | classic   |                 | heated                    |                 |
| <b>Benchtop centrifuge, without rotor</b>  |   |                 |                           |                 |
| Power supply <sup>*)</sup>   | 200 – 240 V 1 ~   | 100 – 127 V 1 ~ | 200 – 240 V 1 ~           | 100 – 127 V 1 ~ |
| Frequency  | 50 – 60 Hz  |                 |                           |                 |
| Consumption  | 460 VA  | 500 VA          | 600 VA                    | 650 VA          |
| Emission, Immunity   | EN / IEC 61326-1, class B   | FCC class B     | EN / IEC 61326-1, class B | FCC class B     |
| Max. capacity  | 4 x 290 ml  |                 | 4 x 100 ml                |                 |
| Max. RPM (speed)   | 4.000 min <sup>-1</sup>   |                 | 2.000 min <sup>-1</sup>   |                 |
| Max. RCF   | 3,095   |                 | 984                       |                 |
| Running time   | 1 sec – 99 min : 59 sec, continuous run, short cycle mode (impulse key) |                 |                           |                 |
| Dimensions (HxWxD)   | 345 x 538 x 647 mm  |                 |                           |                 |
| Weight   | approx. 60 kg   |                 |                           |                 |
| <b>Heating</b>   |   |                 |                           |                 |
| Temperature setting, infinitely variable (dependent on the ambient temperature) <sup>33)</sup> | -   |                 | + 10 °C to + 90 °C        |                 |
| <b>Cat. No.</b>  | <b>4600</b>   | <b>4600-01</b>  | <b>4600-50</b>            | <b>4600-51</b>  |

<sup>\*)</sup> Other voltages on request.

<sup>33)</sup> With the heating switched-off, the temperature within the centrifuge will be above ambient temperature, depending on the speed, type of rotor and run time. Activation of the heating can cause this temperature to rise, but it cannot be reduced to a lower value.

The sulphuric acid content of chrome baths used in galvanizing facilities has to be checked regularly for quality assurance purposes. Measurements may be carried out using chrome bath tubes which can be centrifuged in the ROTOFIX 46.

Schlenk tubes – glass vessels widely used in organometallic and co-ordination chemistry - can be centrifuged in the 5616 rotor in the ROTOFIX 46. Substances that have been prepared in the Schlenk tubes can then be separated in the tubes through centrifugation, if necessary.

The ROTOFIX 46 H is equipped with heating. For standardized petroleum tests suitable sample tubes can be centrifuged at the required temperature.

More information is available free of charge from [info@hettichlab.com](mailto:info@hettichlab.com) or can be downloaded from our website [www.hettichlab.com](http://www.hettichlab.com).

Because of their assigned use, ROTOFIX 46/46 H centrifuges **are not classified as medical products.**



Swing-out rotor, 6-place,  
for chrome bath tubes  
 $n = 2.000 \text{ min}^{-1}$ , max. RCF = 917

**Cat. No. 4619**<sup>(34)</sup>

for use in the models ROTOFIX 46 / 46 H



Angle rotor, 6-place,  
for Schlenk tubes  
 $n = 2.000 \text{ min}^{-1}$ , max. RCF = 805

**Cat. No. 5616**<sup>(34)</sup>

for use in the models ROTOFIX 46 / 46 H



Swing-out rotor, 4-place,  
for ASTM tubes  
illustrated with carriers 4275  
 $n = 2.000 \text{ min}^{-1}$ , max. RCF = 984

**Cat. No. 4474** (without carriers)

for use in the models ROTOFIX 46 / 46 H



Swing-out rotor, 4-place  
illustrated with carriers 5051  
and lids 5053  
 $n = 4.000 \text{ min}^{-1}$ , max. RCF = 3.095

**Cat. No. 5694** (without carriers)

**only** for use in model ROTOFIX 46



ROTOFIX 46  
illustrated with  
rotor 5616

**Cat. No. 4600**

<sup>34)</sup> In heating model ROTOFIX 46 H, rotors 4619 and 5616 may only be used up to a maximum of + 40 °C.



## Special accessories



SPECIAL ACCESSORIES

**PRESSOMAT**

**HettInfo**

**Cyto accessories**

**LABOMODERNE**

[www.labomoderne.com](http://www.labomoderne.com) - [info@labomoderne.com](mailto:info@labomoderne.com)

Tél. 01 42 50 50 50

# PRESSOMAT

## A perfect team: ROTO SILENTA 630 RS and PRESSOMAT

The PRESSOMAT plasma separator was developed for the production of leucocyte-depleted plasma and leucocyte-depleted erythrocyte concentrate.

The ROTO SILENTA 630 RS with blood bag insert 4598-P and the PRESSOMAT plasma separator form a perfect combination. Centrifugation and separation take place in the same insert (= two-chamber insert 4598-P). Since it is not necessary to manipulate the blood bag system during transportation from the centrifuge to the separator, any disturbance of the erythrocytes is avoided.

Moreover, pressing two blood bags simultaneously saves valuable time.



PRESSOMAT

**Cat. No.** (without accessories) **1070**

## TECHNOLOGY

## PRESSOMAT

|                                 |                           |
|---------------------------------|---------------------------|
| Power supply                    | 100 – 240 V / 2.5 A       |
| Frequency                       | 50 – 60 Hz                |
| Emission, Immunity              | EN / IEC 61326-1, class B |
| Dimensions (HxWxD)              | 850 x 280 x 380 (450*)    |
| Weight                          | 16.5 kg                   |
| Pump capacity                   | 2 x 600 mbar              |
| Max. pressing speed (flow rate) | 6 ml / sec                |

## PRESSOMAT

## Two-chamber insert with Pneumatic Kit

|                 |             |               |
|-----------------|-------------|---------------|
| <b>Cat. No.</b> | <b>1070</b> | <b>4598-P</b> |
|-----------------|-------------|---------------|

## Accessories

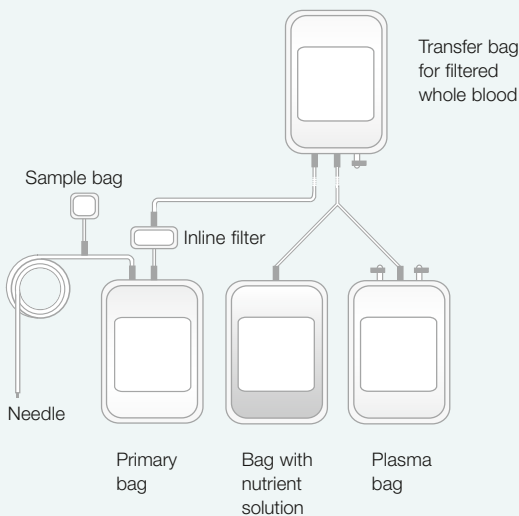
|                 |   |                    |                    |
|-----------------|---|--------------------|--------------------|
|                 | <b>HettControl (Basic Kit incl. software)</b> | <b>Barcode Kit</b> | <b>Taring rods</b> |
| <b>Cat. No.</b> | <b>1078</b>                                   | <b>1077</b>        | <b>On request</b>  |

\*) with extended sliding carriage

# The blood bag system

An increasing number of blood donation facilities are taking advantage of the benefits of whole blood inline filtration, as long as the buffy coat is not required for the preparation of platelet concentrates.

The PRESSOMAT was specially developed for pre-filtered whole blood in a 450–500 ml T&T blood bag system. Blood bag systems from all suppliers which fulfil the following configuration may be used:



## Benefits

- Simultaneous pressing of two blood bags
- Separation in the centrifuge insert for optimal product quality. Removing the bags prior to separation is no longer required
- Automatic feeding of the nutrient solution into the concentrated red cells
- Optimised process safety via optical and acoustic signals
- Maximum plasma recovery thanks to recognition of the erythrocytes at the tube
- Compressor not required
- **Over 50% time savings**

## Equipment

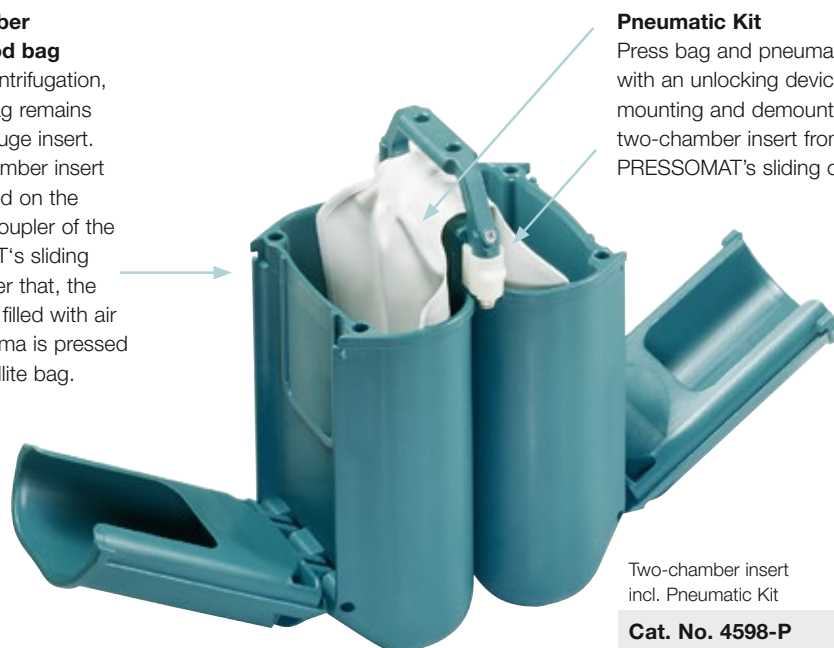
- Integrated, process-independent sealing module
- 2 calibration-compatible scales:
  - Record plasma weight
  - Record the volume of nutrient solution fed to the concentrated red cells
  - Weigh the concentrated red cells
- 2 optical sensors:
  - Secure recognition of the erythrocytes at the tube
  - Are automatically calibrated with each new pressing process
- Interfaces for barcode reader and PC
- Taring rods to balance eventual weight discrepancies during centrifugation

## Data documentation system

HettControl (optional)

**Main chamber for the blood bag**  
Following centrifugation, the blood bag remains in the centrifuge insert. The two-chamber insert is then placed on the pneumatic coupler of the PRESSOMAT's sliding carriage. After that, the press bag is filled with air and the plasma is pressed into the satellite bag.

**Side chamber for the satellite bags**  
The satellite bags can be easily removed for separation, without dispersing the sedimented erythrocytes in the main chamber.



# HettInfo

## HettInfo guarantees reliability, transparency and flexibility of data documentation.

Data documentation and traceability have to satisfy increasingly stringent requirements. As a consequence, more and more time has to be spent on documentation. With HettInfo transparency can be increased and at the same time processes can be streamlined and rationalized.



Packing room with external barcode unit



Barcode Kit ROTO SILENTA 630 RS



Centrifugation programs and the operator code can also be scanned-in by barcode.

### Data log

#### Minimum PC requirements

(available from specialist computer resellers)

|                   |  |
|-------------------|--|
| Processor         | Pentium  |
| Clock frequency   | 1 GHz  |
| RAM               | 2 GB   |
| Hard disk         | 20 GB  |
| Interface         | free RS 232                                    |
| VGA graphics card | 128 MB   |
| Resolution        | 1024 x 768 (16 bit)                            |
| Operating system  | Microsoft Windows XP®#<br>(SP 3) and Windows 7 |

#### Additional components: network adapter card

(available from specialist computer resellers)

The HettInfo data documentation system consists of combinable modules and can be easily adapted to the required number of centrifuges. Up to 29 centrifuges and 3 external barcode units can be integrated into the network, which is reliable and absolutely immune to disturbances.

HettInfo enables logging of all centrifugation data. The user can log the date, end of the centrifugation run, program number and the temperature, and can select and de-select additional optional parameters. If barcode kits are used, the barcodes of blood bags and users can also be logged. In addition, the result of each run is automatically stored with all logged data. This simplifies any search for incorrect centrifuge runs.

Modern data back-up mechanisms increase data integrity. To avoid duplication and to ensure that higher-level databases are kept up to date, all data acquired using HettInfo can be integrated into these databases. For this, the data is stored in CSV format at the desired storage location. Time-consuming and costly programming of the interface is not required.

| Program functions that can be connected:    | Basic Kits                        |                             |
|---|-----------------------------------|-----------------------------|
|   | HettInfo Light<br>Cat. No. 0910-L | HettInfo<br>Cat. No. 0910-F |
| 29 centrifuges                              | ●                                 | ●                           |
| 29 barcode kits                             | ●                                 | ●                           |
| 3 external barcode kits                     |                                   | ●                           |
| <b>Logging and storage of process data:</b> |                                   |                             |
| Daily run time data                         | ●                                 | ●                           |
| Overall run time data                       | ●                                 | ●                           |
| Barcode result data                         | ●                                 | ●                           |
| User barcodes and users                     |                                   | ●                           |
| Centrifuge fault tables                     | ●                                 | ●                           |
| <b>Database functions:</b>                  |                                   |                             |
| Delete table data                           | ●                                 | ●                           |
| Print centrifuge report table               |                                   | ●                           |
| Print centrifuge fault table                |                                   | ●                           |
| Print barcode report table                  |                                   | ●                           |
| Print barcode fault list                    |                                   | ●                           |
| Print duplicate barcodes                    |                                   | ●                           |
| Search barcodes                             |                                   | ●                           |
| Delete packing room data                    |                                   | ●                           |
| Password protection                         |                                   | ●                           |
| Packing room                                |                                   | ●                           |
| User administration                         |                                   | ●                           |

®# Microsoft, Windows and Windows XP are either registered trademarks or brand names of the Microsoft Corporation in the USA and/or in other countries.

## Participants

The data collected through HettlInfo by the participants is stored on a PC with a RS 232 interface. Participants are centrifuges with an online kit, an online kit plus a barcode kit, barcode kit ROTIXA 50 RS, external barcode units and additional distributors. A centrifuge fitted with a barcode kit always requires an online kit. In principle any centrifuge with an S or C control panel can be connected to HettlInfo through an online kit.

Barcodes can be captured and documented through the use of a barcode kit or an external barcode kit. In addition to barcodes on blood bags, user data can also be captured via barcodes. This ensures full traceability and saves time and labour.



Key to symbols:



Capture of centrifuge data





Scanning of barcodes

## Data distributors

With HettlInfo, up to 29 centrifuges can be controlled by a single PC.

Data distributors ordered with the centrifuges are pre-installed and conform with the number of participants. Robust optical cables for connecting the participants are included in delivery. Everything is provided for start-up.

ROTO SILENTA 630 RS and ROTIXA 50 RS centrifuges can be retrofitted for connection to HettlInfo at any time.

| Article   | Cat. No.                    | Scope of supply   |
|---|-----------------------------|---|
| <b>Basic Kit HettlInfo</b>  | <b>0910-F<sup>c)</sup></b>  | Software with all functions (full version), fibre-optic cable <sup>b)</sup> for connection to one participant or distributor, RS 232 cable, opto data box |
| <b>Basic Kit HettlInfo Light</b>  | <b>0910-L<sup>c)</sup></b>  | Software with limited functionality, fibre-optic cable <sup>b)</sup> for connection to one participant or distributor, RS 232 cable, opto data box        |
|  <b>Online Kit ROTO SILENTA 630 RS</b>   | <b>0951-10</b>              | Opto interface for a ROTO SILENTA 630 RS centrifuge   |
|  <b>Online Kit ROTIXA 50 RS</b>   | <b>0931-10</b>              | Opto interface for a ROTIXA 50 RS centrifuge  |
|  <b>Barcode Kit ROTO SILENTA 630 RS</b>  | <b>0950-10<sup>d)</sup></b> | Front panel for ROTO SILENTA 630 RS with barcode unit and barcode scanner   |
|  <b>Barcode Kit ROTIXA 50 RS</b>   | <b>0930-10<sup>d)</sup></b> | Front panel for ROTIXA 50 RS with barcode unit and barcode scanner  |
|  <b>Barcode Kit, external</b> for a packing room or for use on a centrifuge with C or S control panel and Online Kit | <b>0915-10<sup>d)</sup></b> | Barcode station with barcode scanner  |
| <b>Distributor, small</b>   | <b>0911-10</b>              | For connection of max. 8 participants   |
| <b>Distributor, large</b>   | <b>0912-10</b>              | For connection of max. 15 participants  |
| <b>Connection Kit</b>   | <b>0913-10</b>              | For connection of 1 participant, with fibre-optic cable <sup>a)</sup>   |

- a) Fibre-optic cable in standard length (10 metres). Other lengths on request.  
 b) Fibre-optic cable in standard length (20 metres). Other lengths on request.  
 c) 100 - 240 V version, 50 - 60 Hz  
 d) 230 V version. Other voltages on request.

# Cyto Accessories

## Cells – fundamental to life

Cytology makes a valuable contribution to medical diagnostics. High cell yield and good cell presentation are essential for the correct evaluation of cytological preparations.

The Hettich cyto system provides cytologists with a wide selection of accessories for preparing slides for the cytological examination of various body fluids.

## The assembly of a complete cyto insert is really easy



suspension 1660 for cyto chambers

suspension 1680 for angle chambers



two-tier adapter **5280** illustrated with slide carriers with fastening ring **1662** and cyto chamber **1663**

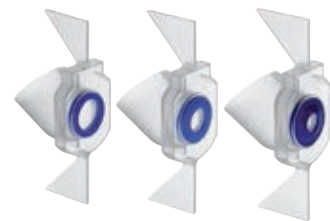
SPECIAL ACCESSORIES



filter cards



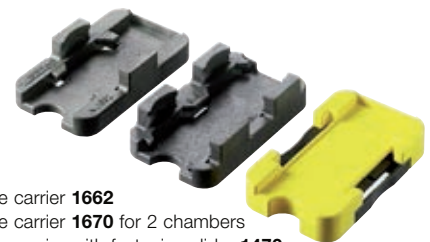
one-funnel chambers



angle chambers



multi-funnel chambers





slide carrier **1662**  
slide carrier **1670** for 2 chambers  
slide carrier with fastening slider **1470**



# Cyto Chambers








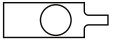
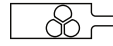
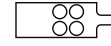
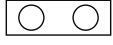


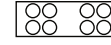
## cyto chambers for slide carrier 1470

fitting into suspensions 1660, 1452 and two-tier adapter 5280

| cyto chambers           |  |  |
|-------------------------|---|---|
| capacity in ml          | 8   | 2 x 8   |
| area in mm <sup>2</sup> | 240   | 2 x 240   |
| diameter in mm          | 17.5  | 2 x 17.5  |
| <b>Cat. No.</b>         | <b>1471</b>   | <b>1475</b>   |

## cyto chambers for slide carrier 1662 and slide carrier for 2 chambers 1670




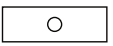


fitting into suspensions 1660, 1452 and two-tier adapter 5280

| cyto chambers                |  |    |  |    |    |    |
|------------------------------|---|---|---|---|--|---|
| capacity in ml               | 1   | 2   | 4   | 8   | 3 x 2  | 4 x 1   |
| area in mm <sup>2</sup>      | 30  | 60  | 120   | 240   | 3 x 60   | 4 x 30  |
| diameter in mm               | 6.2   | 8.7   | 12.4  | 17.5  | 3 x 8.7  | 4 x 6.2   |
| <b>Cat. No.</b>              | <b>1663</b>   | <b>1664</b>   | <b>1665</b>   | <b>1666</b>   | <b>1667</b>  | <b>1668</b>   |
| <b>filter cards for 1662</b> |   |  |   |  |  |  |
| <b>Cat. No.</b>              |   | <b>1675</b>   |   | <b>1676</b>   | <b>1677</b>  | <b>1678</b>   |
| <b>filter cards for 1670</b> |   |  |   |  |  |  |
| <b>Cat. No.</b>              |   | <b>1692</b>   |   | <b>1691</b>   | <b>1694</b>  | <b>1693</b>   |

# Angle Chambers

## angle chambers for slide carrier 1662

fitting into suspension 1680

| angle chambers          |  |  |  |
|-------------------------|---|---|---|
| area in mm <sup>2</sup> | 30  | 60  | 120   |
| diameter in mm          | 6.2   | 8.7   | 12.4  |
| <b>Cat. No.</b>         | <b>1671</b>   | <b>1672</b>   | <b>1673</b>   |
| <b>filter cards</b>     |  |  |  |
| <b>Cat. No.</b>         | <b>1696</b>   | <b>1697</b>   | <b>1698</b>   |

You can find out how to sediment **cerebrospinal fluid, urine, bronchial washing, pleural fluid** and **ascitic fluid** on slides, and which accessories to use for obtaining best preparations by consulting Hettich's cyto application notes. These notes can be ordered free of charge or downloaded from our homepage [www.hettichlab.com](http://www.hettichlab.com).

## slide carriers



slide carrier with fastening slider  
**Cat. No. 1470**



slide carrier with fastening ring  
**Cat. No. 1662**



slide carrier for 2 chambers  
**Cat. No. 1670**

## suspensions



lid  
**Cat. No. 1661**



suspension  
**Cat. No. 1660**



suspension  
**Cat. No. 1680**



suspension  
**Cat. No. 1452**

## two-tier adapter



**Cat. No. 5280**

## Use of cyto chambers

| slide carrier        |             | suspension/adapter   |      |       | rotor    |        | centrifuge                                 |
|----------------------|-------------|----------------------|------|-------|----------|--------|--|
| Cat. No.             | qty.        | Cat. No.             | lid  | qty.  | Cat. No. | places |  |
| 1470<br>1662<br>1670 | 4           | 1660                 | 1661 | 4     | 1624     | 4      | ROTOFIX 32 A<br>UNIVERSAL 320/320 R        |
|                      | 6           | 1660                 | 1661 | 6     | 1626     | 6      |  |
|                      | 4           | 1452                 | -    | 4     | 1494     | 4      | UNIVERSAL 320/320 R                        |
|                      | 6           | 1660                 | 1661 | 6     | 1726     | 6      | ROTINA 380/380 R                           |
|                      | 8           | 1660                 | 1661 | 8     | 1748     | 8      |  |
|                      | 8           | 5051 / 5280          | 5053 | 4/4   | 1798     | 4      |  |
|                      | 8           | 1660                 | 1661 | 8     | 4758     | 8      | ROTINA 420/420 R                           |
|                      | 4           | 1452                 | -    | 4     | 4754     | 4      |  |
|                      | 8           | 5051 / 5280          | 5053 | 4/4   | 4753     | 4      |  |
|                      | 16          | 5628 / 5220-A / 5280 | -    | 4/4/8 | 5699     | 4      |  |
|                      | 8           | 5051 / 5280          | 5053 | 4/4   | 5694     | 4      | ROTANTA 460/460 R<br>ROTANTA 460 RC/460 RF |
|                      | 12          | 5051 / 5280          | 5053 | 6/6   | 4446     | 6      | ROTIXA 50 S/50 RS                          |
| 12                   | 5051 / 5280 | 5053                 | 6/6  | 4296  | 6        |        |  |

## Use of angle chambers

| slide carrier |      | suspension/adapter |       |      | rotor    |        | centrifuge                          |
|---------------|------|--------------------|-------|------|----------|--------|-------------------------------------|
| Cat. No.      | qty. | Cat. No.           | lid   | qty. | Cat. No. | places |                                     |
| 1662          | 4    | 1680               | incl. | 4    | 1624     | 4      | ROTOFIX 32 A<br>UNIVERSAL 320/320 R |
|               | 6    |                    |       | 6    | 1626     | 6      |                                     |
|               | 8    |                    |       | 8    | 1648     | 8      |                                     |
|               | 6    |                    |       | 6    | 1726     | 6      | ROTINA 380/380 R                    |
|               | 8    |                    |       | 8    | 1748     | 8      | ROTINA 420/420 R                    |
|               | 8    |                    |       | 8    | 4758     | 8      |                                     |

Disposable Pasteur pipettes for removing the supernatant are available under Cat. No. **0552**.

Please note that RCF values in excess of 1,100 may lead to glass breakage.

**More for the lab**

We have applied our many years of experience in the field of lab technology to other quality products. For example:



**Hettich**

INCUBATOR

# HettCube

## Incubators and cooled incubators

Economical: Maximum utility and low-cost operation



**Space-saving, energy-saving and quiet in operation**

The incubators from Hettich bring benefits for you, the environment and of course your cultures. The growth conditions are optimum. The latest control technology provides a constant temperature at all times. These incubators have an energy consumption of < 0.05 kWh, and thus help to save valuable resources!

*Please ask for our detailed brochure.*

**LABOMODERNE**

www.labomoderne.com - info@labomoderne.com

Tél. 01 42 50 50 50

## HettCube Incubators and cooled incubators

All models at a glance



| MODEL   | HettCube 200 / 200 R  | HettCube 400 / 400 R  | HettCube 600 / 600 R  |
|---|---|---|---|
| Temperature range for incubators / cooled incubators                                  | 1 K above ambient temperature up to +65 °C / 0 °C to +65 °C | 1 K above ambient temperature up to +65 °C / 0 °C to +65 °C | 1 K above ambient temperature up to +65 °C / 0 °C to +65 °C |
| Exterior dimensions (incl. adjustable feet and bushing on rear panel) W x D x H in mm | 710 x 825 x 970   | 710 x 825 x 1425  | 710 x 825 x 1990  |
| Interior dimensions W x D x H in mm   | 535 x 690 x 420   | 535 x 690 x 850   | 535 x 690 x 1415  |
| Internal volume in litres   | 150   | 310   | 520   |
| Footprint in m <sup>2</sup>   | 0.6   | 0.6   | 0.6   |
| Weight in kg  | 83 / 94   | 110 / 121   | 160 / 171   |
| Number of shelves provided as standard  | 2   | 3   | 4   |
| Temperature fluctuation at +37 °C   | ± 0.1 K   | ± 0.1 K   | ± 0.1 K   |
| Temperature uniformity at +37 °C  | ± 0.2 K   | ± 0.2 K   | ± 0.2 K   |
| Temperature uniformity at +25 °C  | ± 0.1 K   | ± 0.1 K   | ± 0.1 K   |
| Recovery time after door has been opened for 30 s at +37 °C                           | ≤ 3 min   | ≤ 4.5 min   | ≤ 5.5 min   |
| Energy consumption at +37 °C  | 0.025 kWh   | 0.038 kWh   | 0.049 kWh   |
| Noise level   | ≤ 41 dB(A) / ≤ 44 dB(A)                                     | ≤ 41 dB(A) / ≤ 44 dB(A)                                     | ≤ 41 dB(A) / ≤ 44 dB(A)                                     |
| Power supply (other voltages on request)  | 200–240 V 1~  | 200–240 V 1~  | 200–240 V 1~  |
| Frequency   | 50–60 Hz  | 50–60 Hz  | 50–60 Hz  |
| <b>Cat. No.</b>   | <b>62000 / 62005</b>  | <b>64000 / 64005</b>  | <b>66000 / 66005</b>  |



All temperature values were ascertained at an ambient temperature of + 22 °C in accordance with DIN 12880:2007-5.  
The data apply for incubators with standard features.

# Hettich

INCUBATOR

Do you have any questions about Hettich incubators? In Germany, our customer service network will provide advice and technical support. In addition, you will find all the information you need about our HettCubes and other Hettich products on our Web site: [www.hettichlab.com](http://www.hettichlab.com)

## LABOMODERNE

[www.labomoderne.com](http://www.labomoderne.com) - [info@labomoderne.com](mailto:info@labomoderne.com)

Tél. 01 42 50 50 50

## Special accessories



SPECIAL ACCESSORIES

**PRESSOMAT**  
**HettInfo**  
**Cyto accessories**

# PRESSOMAT

## A perfect team: ROTO SILENTA 630 RS and PRESSOMAT

The PRESSOMAT plasma separator was developed for the production of leucocyte-depleted plasma and leucocyte-depleted erythrocyte concentrate.

The ROTO SILENTA 630 RS with blood bag insert 4598-P and the PRESSOMAT plasma separator form a perfect combination. Centrifugation and separation take place in the same insert (= two-chamber insert 4598-P). Since it is not necessary to manipulate the blood bag system during transportation from the centrifuge to the separator, any disturbance of the erythrocytes is avoided.

Moreover, pressing two blood bags simultaneously saves valuable time.



PRESSOMAT

**Cat. No.** (without accessories) **1070**

## TECHNOLOGY

## PRESSOMAT

|                                 |                           |
|---------------------------------|---------------------------|
| Power supply                    | 100 – 240 V / 2.5 A       |
| Frequency                       | 50 – 60 Hz                |
| Emission, Immunity              | EN / IEC 61326-1, class B |
| Dimensions (HxWxD)              | 850 x 280 x 380 (450*)    |
| Weight                          | 16.5 kg                   |
| Pump capacity                   | 2 x 600 mbar              |
| Max. pressing speed (flow rate) | 6 ml / sec                |

## PRESSOMAT

## Two-chamber insert with Pneumatic Kit

|                 |             |               |
|-----------------|-------------|---------------|
| <b>Cat. No.</b> | <b>1070</b> | <b>4598-P</b> |
|-----------------|-------------|---------------|

## Accessories

|                 |   |                    |                    |
|-----------------|---|--------------------|--------------------|
|                 | <b>HettControl (Basic Kit incl. software)</b> | <b>Barcode Kit</b> | <b>Taring rods</b> |
| <b>Cat. No.</b> | <b>1078</b>                                   | <b>1077</b>        | <b>On request</b>  |

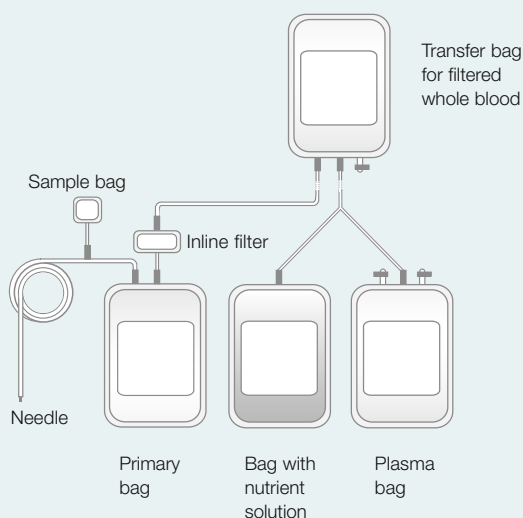
\*) with extended sliding carriage



## The blood bag system

An increasing number of blood donation facilities are taking advantage of the benefits of whole blood inline filtration, as long as the buffy coat is not required for the preparation of platelet concentrates.

The PRESSOMAT was specially developed for pre-filtered whole blood in a 450–500 ml T&T blood bag system. Blood bag systems from all suppliers which fulfil the following configuration may be used:



### Benefits

- Simultaneous pressing of two blood bags
- Separation in the centrifuge insert for optimal product quality. Removing the bags prior to separation is no longer required
- Automatic feeding of the nutrient solution into the concentrated red cells
- Optimised process safety via optical and acoustic signals
- Maximum plasma recovery thanks to recognition of the erythrocytes at the tube
- Compressor not required
- **Over 50% time savings**

### Equipment

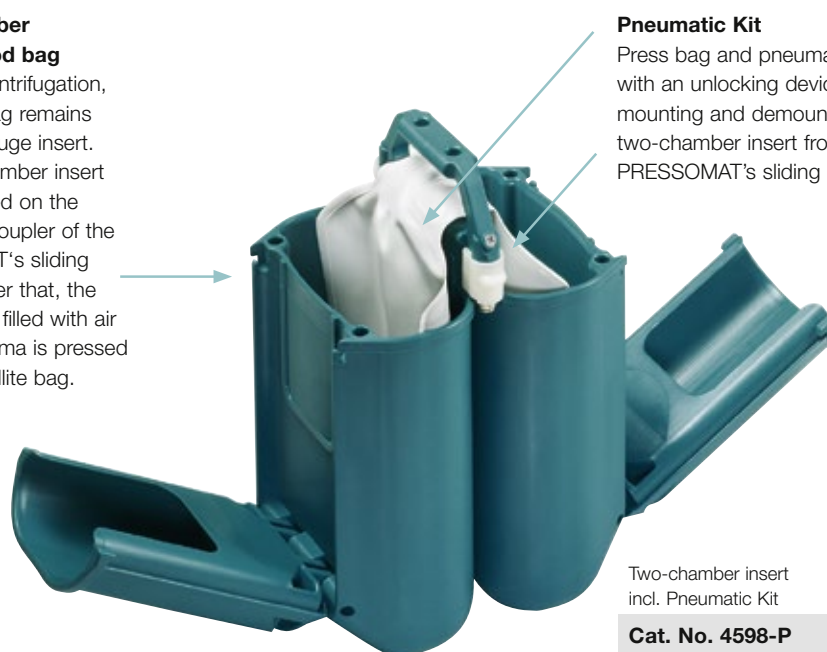
- Integrated, process-independent sealing module
- 2 calibration-compatible scales:
  - Record plasma weight
  - Record the volume of nutrient solution fed to the concentrated red cells
  - Weigh the concentrated red cells
- 2 optical sensors:
  - Secure recognition of the erythrocytes at the tube
  - Are automatically calibrated with each new pressing process
- Interfaces for barcode reader and PC
- Taring rods to balance eventual weight discrepancies during centrifugation

### Data documentation system

HettControl (optional)

**Main chamber for the blood bag**  
Following centrifugation, the blood bag remains in the centrifuge insert. The two-chamber insert is then placed on the pneumatic coupler of the PRESSOMAT's sliding carriage. After that, the press bag is filled with air and the plasma is pressed into the satellite bag.

**Side chamber for the satellite bags**  
The satellite bags can be easily removed for separation, without dispersing the sedimented erythrocytes in the main chamber.



**Pneumatic Kit**  
Press bag and pneumatic coupler with an unlocking device for easy mounting and demounting of the two-chamber insert from the PRESSOMAT's sliding carriage.

Two-chamber insert  
incl. Pneumatic Kit

**Cat. No. 4598-P**

# HettInfo

## HettInfo guarantees reliability, transparency and flexibility of data documentation.

Data documentation and traceability have to satisfy increasingly stringent requirements. As a consequence, more and more time has to be spent on documentation. With HettInfo transparency can be increased and at the same time processes can be streamlined and rationalized.



Packing room with external barcode unit



Barcode Kit ROTO SILENTA 630 RS



Centrifugation programs and the operator code can also be scanned-in by barcode.

### Data log

#### Minimum PC requirements

(available from specialist computer resellers)

|                   |   |
|-------------------|---|
| Processor         | Pentium   |
| Clock frequency   | 1 GHz   |
| RAM               | 2 GB  |
| Hard disk         | 20 GB   |
| Interface         | free RS 232   |
| VGA graphics card | 128 MB  |
| Resolution        | 1024 x 768 (16 bit)   |
| Operating system  | Microsoft Windows XP <sup>®</sup> #<br>(SP 3) and Windows 7 |

#### Additional components: network adapter card

(available from specialist computer resellers)

The HettInfo data documentation system consists of combinable modules and can be easily adapted to the required number of centrifuges. Up to 29 centrifuges and 3 external barcode units can be integrated into the network, which is reliable and absolutely immune to disturbances.

HettInfo enables logging of all centrifugation data. The user can log the date, end of the centrifugation run, program number and the temperature, and can select and de-select additional optional parameters. If barcode kits are used, the barcodes of blood bags and users can also be logged. In addition, the result of each run is automatically stored with all logged data. This simplifies any search for incorrect centrifuge runs.

Modern data back-up mechanisms increase data integrity. To avoid duplication and to ensure that higher-level databases are kept up to date, all data acquired using HettInfo can be integrated into these databases. For this, the data is stored in CSV format at the desired storage location. Time-consuming and costly programming of the interface is not required.

| Program functions that can be connected:    | Basic Kits                        |                             |
|---|-----------------------------------|-----------------------------|
|   | HettInfo Light<br>Cat. No. 0910-L | HettInfo<br>Cat. No. 0910-F |
| 29 centrifuges                              | ●                                 | ●                           |
| 29 barcode kits                             | ●                                 | ●                           |
| 3 external barcode kits                     |                                   | ●                           |
| <b>Logging and storage of process data:</b> |                                   |                             |
| Daily run time data                         | ●                                 | ●                           |
| Overall run time data                       | ●                                 | ●                           |
| Barcode result data                         | ●                                 | ●                           |
| User barcodes and users                     |                                   | ●                           |
| Centrifuge fault tables                     | ●                                 | ●                           |
| <b>Database functions:</b>                  |                                   |                             |
| Delete table data                           | ●                                 | ●                           |
| Print centrifuge report table               |                                   | ●                           |
| Print centrifuge fault table                |                                   | ●                           |
| Print barcode report table                  |                                   | ●                           |
| Print barcode fault list                    |                                   | ●                           |
| Print duplicate barcodes                    |                                   | ●                           |
| Search barcodes                             |                                   | ●                           |
| Delete packing room data                    |                                   | ●                           |
| Password protection                         |                                   | ●                           |
| Packing room                                |                                   | ●                           |
| User administration                         |                                   | ●                           |

<sup>®</sup># Microsoft, Windows and Windows XP are either registered trademarks or brand names of the Microsoft Corporation in the USA and/or in other countries.

## Participants

The data collected through HettlInfo by the participants is stored on a PC with a RS 232 interface. Participants are centrifuges with an online kit, an online kit plus a barcode kit, barcode kit ROTIXA 50 RS, external barcode units and additional distributors. A centrifuge fitted with a barcode kit always requires an online kit. In principle any centrifuge with an S or C control panel can be connected to HettlInfo through an online kit.

Barcodes can be captured and documented through the use of a barcode kit or an external barcode kit. In addition to barcodes on blood bags, user data can also be captured via barcodes. This ensures full traceability and saves time and labour.



Key to symbols:



Capture of centrifuge data



Scanning of barcodes






## Data distributors

With HettlInfo, up to 29 centrifuges can be controlled by a single PC.

Data distributors ordered with the centrifuges are pre-installed and conform with the number of participants. Robust optical cables for connecting the participants are included in delivery. Everything is provided for start-up.

ROTO SILENTA 630 RS and ROTIXA 50 RS centrifuges can be retrofitted for connection to HettlInfo at any time.

| Article                          | Cat. No.                   | Scope of supply   |
|----------------------------------|----------------------------|---|
| <b>Basic Kit HettlInfo</b>       | <b>0910-F<sup>c)</sup></b> | Software with all functions (full version), fibre-optic cable <sup>b)</sup> for connection to one participant or distributor, RS 232 cable, opto data box |
| <b>Basic Kit HettlInfo Light</b> | <b>0910-L<sup>c)</sup></b> | Software with limited functionality, fibre-optic cable <sup>b)</sup> for connection to one participant or distributor, RS 232 cable, opto data box        |

|   |   |                             |   |
|---|---|-----------------------------|---|
|    | <b>Online Kit ROTO SILENTA 630 RS</b>   | <b>0951-10</b>              | Opto interface for a ROTO SILENTA 630 RS centrifuge                       |
|    | <b>Online Kit ROTIXA 50 RS</b>  | <b>0931-10</b>              | Opto interface for a ROTIXA 50 RS centrifuge                              |
|  | <b>Barcode Kit ROTO SILENTA 630 RS</b>  | <b>0950-10<sup>d)</sup></b> | Front panel for ROTO SILENTA 630 RS with barcode unit and barcode scanner |
|  | <b>Barcode Kit ROTIXA 50 RS</b>   | <b>0930-10<sup>d)</sup></b> | Front panel for ROTIXA 50 RS with barcode unit and barcode scanner        |
|  | <b>Barcode Kit, external</b> for a packing room or for use on a centrifuge with C or S control panel and Online Kit | <b>0915-10<sup>d)</sup></b> | Barcode station with barcode scanner                                      |

|                           |                |   |
|---------------------------|----------------|---|
| <b>Distributor, small</b> | <b>0911-10</b> | For connection of max. 8 participants                                 |
| <b>Distributor, large</b> | <b>0912-10</b> | For connection of max. 15 participants                                |
| <b>Connection Kit</b>     | <b>0913-10</b> | For connection of 1 participant, with fibre-optic cable <sup>a)</sup> |

- a) Fibre-optic cable in standard length (10 metres). Other lengths on request.  
 b) Fibre-optic cable in standard length (20 metres). Other lengths on request.  
 c) 100 - 240 V version, 50 - 60 Hz  
 d) 230 V version. Other voltages on request.

# Cyto Accessories

## Cells – fundamental to life

Cytology makes a valuable contribution to medical diagnostics. High cell yield and good cell presentation are essential for the correct evaluation of cytological preparations.

The Hettich cyto system provides cytologists with a wide selection of accessories for preparing slides for the cytological examination of various body fluids.

The assembly of a complete cyto insert is really easy



suspension 1660 for cyto chambers

suspension 1680 for angle chambers



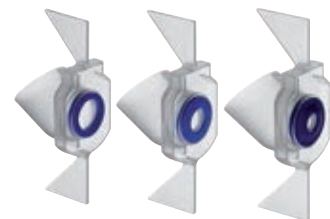
two-tier adapter **5280** illustrated with slide carriers with fastening ring **1662** and cyto chamber **1663**



filter cards



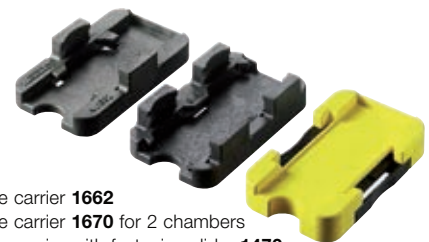
one-funnel chambers



angle chambers



multi-funnel chambers





slide carrier **1662**  
slide carrier **1670** for 2 chambers  
slide carrier with fastening slider **1470**

# Cyto Chambers








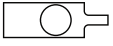
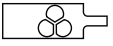
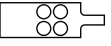
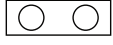

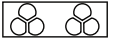
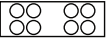
## cyto chambers for slide carrier 1470

fitting into suspensions 1660, 1452 and two-tier adapter 5280

| cyto chambers           |  |  |
|-------------------------|---|---|
| capacity in ml          | 8   | 2 x 8   |
| area in mm <sup>2</sup> | 240   | 2 x 240   |
| diameter in mm          | 17.5  | 2 x 17.5  |
| <b>Cat. No.</b>         | <b>1471</b>   | <b>1475</b>   |

## cyto chambers for slide carrier 1662 and slide carrier for 2 chambers 1670




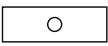


fitting into suspensions 1660, 1452 and two-tier adapter 5280

| cyto chambers                |    |  |    |  |    |    |
|------------------------------|---|---|---|---|--|---|
| capacity in ml               | 1   | 2   | 4   | 8   | 3 x 2  | 4 x 1   |
| area in mm <sup>2</sup>      | 30  | 60  | 120   | 240   | 3 x 60   | 4 x 30  |
| diameter in mm               | 6.2   | 8.7   | 12.4  | 17.5  | 3 x 8.7  | 4 x 6.2   |
| <b>Cat. No.</b>              | <b>1663</b>   | <b>1664</b>   | <b>1665</b>   | <b>1666</b>   | <b>1667</b>  | <b>1668</b>   |
| <b>filter cards for 1662</b> |  |   |  |   |  |  |
| <b>Cat. No.</b>              | <b>1675</b>   |   | <b>1676</b>   |   | <b>1677</b>  | <b>1678</b>   |
| <b>filter cards for 1670</b> |  |   |  |   |  |  |
| <b>Cat. No.</b>              | <b>1692</b>   |   | <b>1691</b>   |   | <b>1694</b>  | <b>1693</b>   |

# Angle Chambers

## angle chambers for slide carrier 1662

fitting into suspension 1680

| angle chambers          |  |  |  |
|-------------------------|---|---|---|
| area in mm <sup>2</sup> | 30  | 60  | 120   |
| diameter in mm          | 6.2   | 8.7   | 12.4  |
| <b>Cat. No.</b>         | <b>1671</b>   | <b>1672</b>   | <b>1673</b>   |
| <b>filter cards</b>     |  |  |  |
| <b>Cat. No.</b>         | <b>1696</b>   | <b>1697</b>   | <b>1698</b>   |

You can find out how to sediment **cerebrospinal fluid, urine, bronchial washing, pleural fluid** and **ascitic fluid** on slides, and which accessories to use for obtaining best preparations by consulting Hettich's cyto application notes. These notes can be ordered free of charge or downloaded from our homepage [www.hettichlab.com](http://www.hettichlab.com).

## slide carriers



slide carrier with fastening slider  
**Cat. No. 1470**



slide carrier with fastening ring  
**Cat. No. 1662**



slide carrier for 2 chambers  
**Cat. No. 1670**

## suspensions



lid  
**Cat. No. 1661**



suspension  
**Cat. No. 1660**



suspension  
**Cat. No. 1680**



suspension  
**Cat. No. 1452**

## two-tier adapter



**Cat. No. 5280**

## Use of cyto chambers

| slide carrier        |             | suspension/adapter   |      |       | rotor    |        | centrifuge                                 |
|----------------------|-------------|----------------------|------|-------|----------|--------|--|
| Cat. No.             | qty.        | Cat. No.             | lid  | qty.  | Cat. No. | places |  |
| 1470<br>1662<br>1670 | 4           | 1660                 | 1661 | 4     | 1624     | 4      | ROTOFIX 32 A<br>UNIVERSAL 320/320 R        |
|                      | 6           | 1660                 | 1661 | 6     | 1626     | 6      |  |
|                      | 4           | 1452                 | -    | 4     | 1494     | 4      | UNIVERSAL 320/320 R                        |
|                      | 6           | 1660                 | 1661 | 6     | 1726     | 6      | ROTINA 380/380 R                           |
|                      | 8           | 1660                 | 1661 | 8     | 1748     | 8      |  |
|                      | 8           | 5051 / 5280          | 5053 | 4/4   | 1798     | 4      |  |
|                      | 8           | 1660                 | 1661 | 8     | 4758     | 8      | ROTINA 420/420 R                           |
|                      | 4           | 1452                 | -    | 4     | 4754     | 4      |  |
|                      | 8           | 5051 / 5280          | 5053 | 4/4   | 4753     | 4      |  |
|                      | 16          | 5628 / 5220-A / 5280 | -    | 4/4/8 | 5699     | 4      |  |
|                      | 8           | 5051 / 5280          | 5053 | 4/4   | 5694     | 4      | ROTANTA 460/460 R<br>ROTANTA 460 RC/460 RF |
|                      | 12          | 5051 / 5280          | 5053 | 6/6   | 4446     | 6      | ROTIXA 50 S/50 RS                          |
| 12                   | 5051 / 5280 | 5053                 | 6/6  | 4296  | 6        |        |  |

## Use of angle chambers

| slide carrier |      | suspension/adapter |       |      | rotor    |        | centrifuge                          |
|---------------|------|--------------------|-------|------|----------|--------|-------------------------------------|
| Cat. No.      | qty. | Cat. No.           | lid   | qty. | Cat. No. | places |                                     |
| 1662          | 4    | 1680               | incl. | 4    | 1624     | 4      | ROTOFIX 32 A<br>UNIVERSAL 320/320 R |
|               | 6    |                    |       | 6    | 1626     | 6      |                                     |
|               | 8    |                    |       | 8    | 1648     | 8      |                                     |
|               | 6    |                    |       | 6    | 1726     | 6      | ROTINA 380/380 R                    |
|               | 8    |                    |       | 8    | 1748     | 8      | ROTINA 420/420 R                    |
|               | 8    |                    |       | 8    | 4758     | 8      |                                     |

Disposable Pasteur pipettes for removing the supernatant are available under Cat. No. **0552**.

Please note that RCF values in excess of 1,100 may lead to glass breakage.



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INCUBATOR

# HettCube

## Incubators and cooled incubators

Economical: Maximum utility and low-cost operation



**Space-saving, energy-saving and quiet in operation**

The incubators from Hettich bring benefits for you, the environment and of course your cultures. The growth conditions are optimum. The latest control technology provides a constant temperature at all times. These incubators have an energy consumption of < 0.05 kWh, and thus help to save valuable resources!

*Please ask for our detailed brochure.*

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## HettCube Incubators and cooled incubators

All models at a glance



| MODEL   | HettCube 200 / 200 R  | HettCube 400 / 400 R  | HettCube 600 / 600 R  |
|---|---|---|---|
| Temperature range for incubators / cooled incubators                                  | 1 K above ambient temperature up to +65 °C / 0 °C to +65 °C | 1 K above ambient temperature up to +65 °C / 0 °C to +65 °C | 1 K above ambient temperature up to +65 °C / 0 °C to +65 °C |
| Exterior dimensions (incl. adjustable feet and bushing on rear panel) W x D x H in mm | 710 x 825 x 970   | 710 x 825 x 1425  | 710 x 825 x 1990  |
| Interior dimensions W x D x H in mm   | 535 x 690 x 420   | 535 x 690 x 850   | 535 x 690 x 1415  |
| Internal volume in litres   | 150   | 310   | 520   |
| Footprint in m <sup>2</sup>   | 0.6   | 0.6   | 0.6   |
| Weight in kg  | 83 / 94   | 110 / 121   | 160 / 171   |
| Number of shelves provided as standard  | 2   | 3   | 4   |
| Temperature fluctuation at +37 °C   | ± 0.1 K   | ± 0.1 K   | ± 0.1 K   |
| Temperature uniformity at +37 °C  | ± 0,2 K   | ± 0.2 K   | ± 0.2 K   |
| Temperature uniformity at +25 °C  | ± 0.1 K   | ± 0.1 K   | ± 0.1 K   |
| Recovery time after door has been opened for 30 s at +37 °C                           | ≤ 3 min   | ≤ 4.5 min   | ≤ 5.5 min   |
| Energy consumption at +37 °C  | 0.025 kWh   | 0.038 kWh   | 0.049 kWh   |
| Noise level   | ≤ 41 dB(A) / ≤ 44 dB(A)                                     | ≤ 41 dB(A) / ≤ 44 dB(A)                                     | ≤ 41 dB(A) / ≤ 44 dB(A)                                     |
| Power supply (other voltages on request)  | 200–240 V 1~  | 200–240 V 1~  | 200–240 V 1~  |
| Frequency   | 50–60 Hz  | 50–60 Hz  | 50–60 Hz  |
| <b>Cat. No.</b>   | <b>62000 / 62005</b>  | <b>64000 / 64005</b>  | <b>66000 / 66005</b>  |



All temperature values were ascertained at an ambient temperature of + 22 °C in accordance with DIN 12880:2007-5.  
The data apply for incubators with standard features.

**Hettich**  
INCUBATOR

Do you have any questions about Hettich incubators? In Germany, our customer service network will provide advice and technical support. In addition, you will find all the information you need about our HettCubes and other Hettich products on our Web site: [www.hettichlab.com](http://www.hettichlab.com)

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# Symbols and Abbreviations

|  |   |   |                              |
|--|---|---|------------------------------|
|    | microlitre tubes up to 2.0 ml   |  | swing-out rotor              |
|    | cryo tubes  |  | angle rotor                  |
|    | PCR strips  |  | drum rotor                   |
|    | standard tubes  |  | hematocrit rotor, disk rotor |
|    | blood collection tubes<br>urine tubes   |   |                              |
|    | tubes with screw cap  |   |                              |
|   | bottles   |   |                              |
|  | plates<br>filter plates   |   |                              |
|  | racks   |   |                              |
|  | blood bags  |   |                              |
|  | special tubes   |   |                              |
|  | hematocrit capillaries  |   |                              |
|  | cyto accessories<br>For detailed information on the Hettich cyto system, please refer to the pages 156-158. |   |                              |

## ABBREVIATIONS

|     |   |                  |
|-----|---|------------------|
| CP  | = | Culture Plate    |
| DWP | = | Deep Well Plate  |
| MS  | = | Micronic System  |
| MTP | = | Microtitre Plate |
| QP  | = | Filter Plate     |
| PA  | = | polyamide        |
| PC  | = | polycarbonate    |
| PE  | = | polyethylene     |
| PP  | = | polypropylene    |

**C** C after the model name stands for **underbench centrifuge**.




**F** F after the model name stands for **floorstanding centrifuge**.











**R** R after the model name stands for **refrigerated centrifuge**.

**S** S after the model name stands for **S control panel** (except EBA 20 S).

✧ max. angle the rotor swings out to

## Available tubes

|  | Capacity in ml | Dimensions Ø x L in mm        | Description                          | Cat. No.    |
|--|----------------|-------------------------------|--------------------------------------|-------------|
|   | 1.5            | 11 x 38                       | microlitre tube                      | <b>2078</b> |
|  | 2.0            | 11 x 38                       |                                      | <b>0536</b> |
|    | 5              | 12 x 75                       | tube, glass, cylindrical             | <b>0553</b> |
|  | 6              | 12 x 82                       |                                      | <b>0501</b> |
|  | 7              | 12 x 100                      |                                      | <b>0578</b> |
|  | 9              | 14 x 100                      |                                      | <b>0500</b> |
|  | 10             | 17 x 70                       | tube, PP, with stopper, cyl.         | <b>2079</b> |
|  | 12             | 17 x 100                      | tube, glass, conical, calibrated     | <b>0503</b> |
|  | 17 x 100       | tube, glass, cylindrical      | <b>0507</b>                          |             |
|  |                | tube, glass, cyl., calibrated | <b>0518</b>                          |             |
|  | 15             | 17 x 103                      | tube, glass, conical                 | <b>0502</b> |
|  |                | 16.5 x 112                    | tube, glass, conical                 | <b>0515</b> |
|  |                |                               | tube, glass, conical, calibrated     | <b>0516</b> |
|  | 25             | 24 x 100                      | tube, glass, cylindrical             | <b>0519</b> |
|  | 50             | 34 x 100                      | tube, PP, cylindrical                | <b>0521</b> |
|  | 75             | 35 x 105                      |                                      | <b>0548</b> |
|  | 94             | 38 x 102                      |                                      | <b>0549</b> |
|  | 100            | 40 x 115                      | tube, glass, cylindrical             | <b>0523</b> |
|  | 100            | 44 x 100                      |                                      | <b>0526</b> |
| 250  | 56 x 147       | <b>0525</b>                   |                                      |             |
| 250  | 65 x 115       | <b>0530</b>                   |                                      |             |
|  | 30             | 26 x 95                       | tube with screw cap, PC, cylindrical | <b>0545</b> |
|  | 50             | 29 x 107                      |                                      | <b>0546</b> |
|  | 85             | 38 x 106                      |                                      | <b>0547</b> |
|  | 94             | 38 x 102                      | tube, PC, with screw thread          | <b>0538</b> |
|  |                | -                             | screw cap for 0538                   | <b>0539</b> |

|   | Capacity in ml | Dimensions Ø x L in mm | Description                                     | Cat. No.                                     |
|---|----------------|------------------------|---|--|
|    | 15             | 17 x 120               | tube with screw cap, PP, conical                | <b>0509</b>                                  |
|   | 50             | 29 x 115               |   | <b>0513</b>                                  |
|    | 250            | 61 x 122               | bottle, PP, with screw cap                      | <b>5127</b>                                  |
|   | 600            | 93 x 134               |   | <b>0551</b>                                  |
|   | 750            | 97 x 152               |   | <b>0512</b>                                  |
|   | 450            | 97 x 113               |   | <b>4447</b>                                  |
|    | 750            | 93 x 137               | bucket, PP                                      | <b>4234</b>                                  |
|   | 1,000          | 96 x 176               |   | bottle, PP, with screw cap                   |
|    | 1,000          | 98 x 138               | bucket, stainless steel, with screw cap         | <b>4255</b>                                  |
|   | 2,000          | 180x150x100 HxWxD      | bottle, PP, with screw cap                      | <b>0550</b>                                  |
|   | 30             | 24 x 151               | chrome bath tube with stopper                   | <b>0508</b>                                  |
|   |                |                        | chrome bath tube                                | <b>0529</b>                                  |
|  | 30             | 44 x 105               | chrome bath tube                                | <b>0534</b>                                  |
|   |                |                        | -   | rubber stopper for 0534                      |
|  | 25             | 24 x 146.5             | Schlenk tube                                    | <b>0532</b>                                  |
|   | 50             | 38 x 148.5             |   | <b>0533</b>                                  |
|  | 100            | 37 x 200               | ASTM tube (petroleum tester), glass, calibrated | <b>0531</b><br>conical                       |
|   | 100            | 58 x 161               |   | <b>0528</b><br>pear-shaped                   |
|  | -              | 1.4 x 75               | capillaries, heparinized                        | <b>1071</b><br>self-sealing and mylar-coated |
|   | -              | 1.4 x 75               |   | <b>2074</b>                                  |
|  | 3.3            | -                      | disposable Pasteur pipette, PE                  | <b>0552</b>                                  |

Please make sure not to exceed the tubes' max. permissible RCF.

The capacity of the vessels is given as the nominal volume according to the manufacturer. The filling volume can be different.

The chrome bath tubes 0508, 0529 and 0534 may not be centrifuged with the stopper. The stopper only serves to close the tube for agitating or mixing.

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The logo for Hettich, featuring the brand name in a bold, italicized, black sans-serif font. A thin black horizontal line is positioned above the letters 't' and 'i', and another thin black horizontal line is positioned below the letters 't' and 'i', creating a stylized underline effect.

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