



Sigma 3-30KS Sigma 3-30KHS



High Speed Centrifuge

- Refrigerated
- Refrigerated / heatable

With the new g-lock® rotor system

 SIGMA



Extraordinary in every regard



Sigma is a leading international manufacturer of laboratory centrifuges for diverse sectors, including biotechnology, pharmaceutical, medical and environment analysis. Laboratories, institutions and companies everywhere in the world have been relying on premium Sigma quality – Made in Germany – for more than 40 years. The company stands for innovative products and development of durable, energy-efficient and especially user-friendly devices.

As excellent refinements of previous models, the Sigma 3-30KS and Sigma 3-30KHS incorporate many decades of experience in high-speed laboratory centrifuges. Positioned between the laboratory

centrifuge and ultracentrifuge segments, these refrigerated benchtop centrifuges feature outstanding performance characteristics and excellent value for money.

The high RCF of more than 70,000 x g enables fast separation, even of microscopic particles and cell fragments. That makes the 3-30 centrifuge series especially suitable for high-speed applications in fields such as cellular biology, molecular biology, diagnostics and clinical biology, nanotechnology, research and genetics. The heatable version Sigma 3-30KHS is used in particular with specimens whose viscosity needs to be reduced during centrifugation.

Top ranking

Smooth running even at maximum speed

The Sigma 3-30KS and Sigma 3-30KHS centrifuges represent a unique combination of performance, versatility, and ease of use. With their high RCF, well-conceived controller and extensive range of accessories, they are suitable for even the most demanding applications in research and industry.

Thanks to the patented one-knob controller, automatic rotor recognition and imbalance detection, as well as capacity for 60 programs, these centrifuges are remarkably easy to use and highly versatile.

Even at maximum speed, the proven drive concept of the 3-30 series is very smooth and quiet in operation, with a low noise level of less than 57 dB(A) at more than 70,000 x g. High speeds and RCF values are barely perceptible, and the noise level is always pleasantly low.

These premium centrifuges additionally feature exceptionally long life and outstanding safety.

Sigma 3-30KS

- High-speed benchtop centrifuge
- Speed range up to 30,000 rpm
- Maximum RCF 70,121 x g
- User-friendly Spincontrol S controller
- Extra large TFT display
- 60 programs
- Compact, space-saving unit
- High-performance cooling
- Temperature setting range: -20 °C to +40 °C
- Pre-cooling function "Rapid Temp"
- Rotor cooling also possible at standstill
- Low noise level
- Automatic rotor identification
- Zero-maintenance induction motor
- Motorised lid lock
- Automatic imbalance monitoring
- Rotor life monitoring for high safety
- Easily cleaned stainless steel chamber
- Window in lid for external speed monitoring
- Manufactured according to the latest national and international standards (e.g. EN 61010-2-020)

Sigma 3-30KHS

All features of the Sigma 3-30KS, plus:

- Heatable refrigerated centrifuge
- Standstill cooling or heating
- Temperature setting range: -20 °C to +60 °C



Revolutionary simplicity

g-lock® rotor exchange without tools or buttons

The innovative g-lock rotor system from Sigma enables rotor exchange with no need for any tools or button pushing. Mounting and exchanging rotors could hardly be easier. The rotor is locked in place by centrifugal force after the centrifuge starts running, eliminating the need for screw mounting.

The new g-lock system makes rotor exchange effortless and is ideally suited to application scenarios that require working with more than one rotor. It minimises non-productive time and saves time and money.

Along with simplified and efficient handling, the system features exceptionally high safety. Improper or incorrect use is also prevented by the rotor identification system.

Furthermore, the g-lock system enables easy cleaning of the stainless steel chamber to help minimise contamination risks.

g-lock



With the g-lock system, no tools or buttons at all are necessary for rotor exchange.



More on the
Web!

View our video to learn
more about g-lock.
Scan the QR code or go
directly to the web page:
[www.sigma-zentrifugen.de/
en/g-lock](http://www.sigma-zentrifugen.de/en/g-lock)



Rotors and accessories

Many potential combinations for high flexibility

The special drive system of the Sigma 3-30 series is specifically designed for use at very high speeds. This concept allows the high speed device series to achieve RCF values above 70,000 x g with microliter tubes. Even 15 ml and 50 ml culture tubes can be centrifuged at more than 40,000 x g.

A total of 20 rotors are available, along with a wide range of accessories. The tube capacity extends from 0.2 ml to 94 ml in fixed-angle rotors or 0.2 ml to 100 ml in swing-out rotors. Microtiter and deep-well plates can also be centrifuged. Thanks to the extensive acces-

sories, the centrifuges can be flexibly adapted to new or enhanced requirements. All compatible rotors can be autoclaved for 30 minutes at +121°C.

As a special feature, Sigma can produce custom accessories upon request. The rotors and accessories are made from certified high-grade materials to withstand the most severe stresses.

The centrifuges can be supplied with the g-lock system or with the previous conventional rotor mounting system.

Swing-out rotors starting on page 9

Swing-out rotor 11171

- Max. capacity: 4 x 100 ml
- Max. speed (3-30KS / 3-30KHS): 5,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 3,969 x g
- Angle: 90°



► p. 9

Swing-out rotor 11134

- Max. capacity: 4 x 10 ml
- Max. speed (3-30KS / 3-30KHS): 10,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 10,956 x g
- Angle: 90°



► p. 11

Drum rotor 11136

- Max. capacity: 60 x 2 ml
- Max. speed (3-30KS / 3-30KHS): 16,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 20,035 x g
- Angle: 90°



► p. 12

MTP swing-out rotor 11222

- Max. capacity: 6 microtiter plates
- Max. speed (3-30KS / 3-30KHS): 3,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 1,218 x g
- Angle: 90°



► p. 12

Fixed-angle rotors starting on page 13


Fixed-angle rotor 12115 for PCR strips

- Max. capacity: 96 x 0.2 ml conical
- Max. speed (3-30KS / 3-30KHS): 16,400 rpm
- Max. RCF (3-30KS / 3-30KHS): 29,468 x g
- Angle: 45° (both rows)



► p. 13

Fixed-angle rotor 12110

- Max. capacity: 12 x 2 ml
- Max. speed (3-30KS / 3-30KHS): 30,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 65,403 x g
- Angle: 45°
- **NEW:** g-lock rotor 91355 



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Fixed-angle rotors starting on page 14

► p. 14

Fixed-angle rotor 12154

- Max. capacity: 24 x 2 ml
- Max. speed (3-30KS / 3-30KHS): 26,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 61,973 x g
- Angle: 45°
- **NEW:** g-lock rotor 91123 [🔗](#)



► p. 14

Fixed-angle rotor 12131

- Max. capacity: 30 x 2 ml
- Max. speed (3-30KS / 3-30KHS): 20,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 44,720 x g
- Angle: 45°



► p. 15

Fixed-angle rotor 12370

- Max. capacity: 36 x 2 ml
- Max. speed (3-30KS / 3-30KHS): 28,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 70,121 x g
- Angle (upper / lower row): 30° / 50°
- **NEW:** g-lock rotor 91371 [🔗](#)



► p. 15

Fixed-angle rotor 12349

- Max. capacity: 48 x 2 ml
- Max. speed (3-30KS / 3-30KHS): 15,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 25,155 x g
- Angle (upper / lower row): 25° / 53°
- **NEW:** g-lock rotor 91520 [🔗](#)



► p. 16

Fixed-angle rotor 12182

- Max. capacity: 12 x 5 ml conical
- Max. speed (3-30KS / 3-30KHS): 20,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 37,565 x g
- Angle: 40°



► p. 16

Fixed-angle rotor 12111

- Max. capacity: 10 x 10 ml round-bottom
- Max. speed (3-30KS / 3-30KHS): 26,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 57,438 x g
- Angle: 35°
- **NEW:** g-lock rotor 91527 [🔗](#)



► p. 17

Fixed-angle rotor 12157

- Max. capacity: 20 x 10 ml round-bottom
- Max. speed (3-30KS / 3-30KHS): 16,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 28,048 x g
- Angle: 25°



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Fixed-angle rotor 12311

- Max. capacity: 12 x 15 ml conical
- Max. speed (3-30KS / 3-30KHS): 15,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 24,903 x g
- Biosafe with aluminium lid 17935 [🔗](#)
- Angle: 25°
- **NEW:** g-lock rotor 91534 [🔗](#)



► p. 18

Fixed-angle rotor 12158

- Max. capacity: 6 x 30 ml round-bottom
- Max. speed (3-30KS / 3-30KHS): 26,200 rpm
- Max. RCF (3-30KS / 3-30KHS): 60,628 x g
- Angle: 29°
- **NEW:** g-lock rotor 91365 [🔗](#)



► p. 18

Fixed-angle rotor 12150

- Max. capacity: 6 x 50 ml round-bottom
- Max. speed (3-30KS / 3-30KHS): 21,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 41,415 x g
- Angle: 25°
- **NEW:** g-lock rotor 91375 [🔗](#)



► p. 19

Fixed-angle rotor 12310

- Max. capacity: 6 x 50 ml conical
- Max. speed (3-30KS / 3-30KHS): 15,500 rpm
- Max. RCF (3-30KS / 3-30KHS): 25,248 x g
- Biosafe with aluminium lid 17934 [🔗](#)
- Angle: 25°
- **NEW:** g-lock rotor 91377 [🔗](#)



► p. 19

Fixed-angle rotor 12156

- Max. capacity: 8 x 50 ml round-bottom
- Max. speed (3-30KS / 3-30KHS): 16,500 rpm
- Max. RCF (3-30KS / 3-30KHS): 29,220 x g
- Angle: 25°



► p. 20

Fixed-angle rotor 12155

- Max. capacity: 4 x 94 ml round-bottom
- Max. speed (3-30KS / 3-30KHS): 20,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 40,695 x g
- Angle: 26°
- **NEW:** g-lock rotor 91532 [🔗](#)



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Fixed-angle rotor 12159

- Max. capacity: 6 x 94 ml round-bottom
- Max. speed (3-30KS / 3-30KHS): 15,500 rpm
- Max. RCF (3-30KS / 3-30KHS): 26,323 x g
- Angle: 25°
- **NEW:** g-lock rotor 91119 [🔗](#)




































Swing-out rotor 11171

Round bucket 13299

- Max. capacity: 4 x 100 ml
- Max. speed (3-30KS / 3-30KHS): 5,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 3,969 x g
- Max. tube length in middle of bucket without / with cap: 126 / 117 mm
- Hermetically closable with cap 17299
- Angle: 90°



| Tube |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|
| Rated capacity (filling volume) [ml] | 1.5 | 2 | 5 | 5 | 6 (5) | 7 | 10 | 10 | 10 | 10 |
| Diameter x length [mm] | 10.7 x 42 | 10.7 x 42 | 17 x 60 | 12 x 75 | 12 x 100 | 12 x 100 | 16.1 x 81.1 | 16.1 x 81.1 | 16.1 x 81.1 | 16 x 100 |
| Tube material | PP | PP | PPCO | PS | Glass | Glass | PF | PC | PPCO | Glass |
| Item no. | 15008 | 15040 | — | 15060 | 15007 | 15027 | 15000 | 15010 | 15039 | 15015 |
| Adapter |  | | | | | | | | | |
| Bore diameter x length [mm] |  | |  | |  | |  | | | |
| | 11.1 x 35 | | 17 x 52 | | 13.5 x 52 | | 16.5 x 56 | | | |
| Tubes per adapter / rotor | 4 / 16 | | 3 / 12 | | 5 / 20 | | 4 / 16 | | | |
| Centrifuging radius [mm] | 137 | | 139 | | 139 | | 138 | | | |
| Item no. | 14301 | | 14309 | | 14302 | | 14303 | | | |

| Tube |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|---|---|---|---|--|---|---|---|---|---|
| Rated capacity (filling volume) [ml] | 10 | 14 | 14 | 15 (13) | 15 | 25 | 25 | 25 | 30 (26) | 30 (26) |
| Diameter x length [mm] | 16 x 100 | 17 x 100 | 17 x 100 | 17 x 110 | 16.5 x 120 | 25 x 90 | 24 x 100 | 24 x 100 | 25.3 x 98 | 25.3 x 98 |
| Tube material | Glass | PS | PP | Glass | PP | PP | Glass | Glass | PF | PPCO |
| Item no. | 15024 | 15020 | 15023 | 15022 | 15115 | — | 15025 | 15026 | 15029 | 15032 |
| Adapter |  | | | | | | | | | |
| Bore diameter x length [mm] |  |  | |  |  |  | | | | |
| | 16.5 x 56 | 17.5 x 67.5 | | 17 x 76 | 25.5 x 56 | 25.5 x 58 | | | | |
| Tubes per adapter / rotor | 4 / 16 | 3 / 12 | | 2 / 8 | 1 / 4 | 1 / 4 | | | | |
| Centrifuging radius [mm] | 138 | 140 | | 126 | 138 | 140 | | | | |
| Item no. | 14303 | 14307 | | 14300* | 14308 | 14304 | | | | |


















* Only possible without cap 17299




Swing-out rotor 11171



Round bucket 13299

- Max. capacity: 4 x 100 ml
- Max. speed (3-30KS / 3-30KHS): 5,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 3,969 x g
- Max. tube length in middle of bucket without / with cap: 126 / 117 mm
- Hermetically closable with cap 17299
- Angle: 90°



| Tube |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|
| Rated capacity (filling volume) [ml] | 30 (28) | 30 | 30 | 50 | 50 | 50 | 50 | 50 | 50 | 100 (75) |
| Diameter x length [mm] | 25.3 x 98 | 24 x 105 | 25 x 107 | 34 x 100 | 34 x 100 | 35 x 100 | 34 x 100 | 29 x 117 | 29 x 117 | 44 x 100 |
| Tube material | PC | Glass | PP | Glass | Glass | Glass | PC | PP | PP | Glass |
| Item no. | 15030 | 15033 | – | 15045 | 15050 | 15056 | 15049 | – | 15151 | 15078 |
| Adapter | | | | | | | | | | |
| for round bucket 13299 |  |  |  |  | | |  |  |  | |
| Bore diameter x length [mm] | 25.5 x 58 | | 25.5 x 56 | 35.5 x 58 | | | 29.5 x 67 | 29.6 x 90 | 45.1 x 98.5 | |
| Tubes per adapter / rotor | 1 / 4 | | 1 / 4 | 1 / 4 | | | 1 / 4 | 1 / 4 | 1 / 4 | |
| Centrifuging radius [mm] | 140 | | 138 | 140 | | | 139 | 142 | 139 | |
| Item no. | 14304 | | 14308 | 14305 | | | 14310* | 14299 | 16051 | |

| Tube |  |  |  |
|--------------------------------------|---|---|---|
| Rated capacity (filling volume) [ml] | 100 (90) | 100 | 100 |
| Diameter x length [mm] | 44 x 100 | 44 x 100 | 45 x 100 |
| Tube material | Glass | Glass | PC |
| Item no. | 15106 | 15100 | 15103 |

| Adapter |  |  |
|-----------------------------|---|---|
| for round bucket 13299 | | |
| Bore diameter x length [mm] | | 45.1 x 98.5 |
| Tubes per adapter / rotor | | 1 / 4 |
| Centrifuging radius [mm] | | 139 |
| Item no. | | 16051 |

Swing-out rotor 11171

Round bucket 13299

- Max. capacity: 4 x 100 ml
- Max. speed (3-30KS / 3-30KHS): 5,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 3,969 x g
- Max. tube length in middle of bucket without / with cap: 126 / 117 mm
- Hermetically closable with cap 17299
- Angle: 90°



Swing-out rotor 11134

with four round buckets 13134

- Max. capacity: 4 x 10 ml
- Max. speed (3-30KS / 3-30KHS): 10,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 10,956 x g
- Angle: 90°



Blood and urine tubes

| | | | | | | | | |
|--------------------------------------|---------|-------------|-------------|-------------|-------------|----------|----------|----------|
| | | | | | | | | |
| Rated capacity (filling volume) [ml] | 1.1–1.4 | 2.7–5 | 1.6–6 | 1.8–7 | 4–8.5 | 6–10 | 10 | 8–9 |
| Diameter x length with lid [mm] | 8 x 82 | 11 x 82–108 | 13 x 81–106 | 13 x 81–107 | 15 x 91–108 | 16 x 107 | 15 x 118 | 16 x 108 |
| Tube material | PP | PP | PP | PP | PP | PP | PP | PP |
| Item no. | – | – | – | – | – | – | – | – |

Adapter

for round bucket 13299



| | | | | | |
|-----------------------------|-----------|-----------|-----------|-----------|-------------|
| | | | | | |
| Bore diameter x length [mm] | 13.5 x 52 | 16.5 x 56 | 16.5 x 56 | 16.5 x 56 | 17.5 x 67.5 |
| Tubes per adapter / rotor | 5 / 20 | 4 / 16 | 4 / 16 | 4 / 16 | 3 / 12 |
| Centrifuging radius [mm] | 139 | 138 | 138 | 138 | 140 |
| Item no. | 14302 | 14303 | 14303* | 14303* | 14307 |

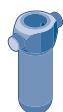
Tube



| | | | |
|--------------------------------------|-------------|-------------|-------------|
| | | | |
| Rated capacity (filling volume) [ml] | 10 | 10 | 10 |
| Diameter x length [mm] | 16.1 x 81.1 | 16.1 x 81.1 | 16.1 x 81.1 |
| Tube material | PF | PC | PPCO |
| Item no. | 15000 | 15010 | 15039 |

Adapter

for round bucket 13134




| | |
|-----------------------------|-----------|
| | |
| Bore diameter x length [mm] | 16.3 x 71 |
| Tubes per adapter / rotor | – / 4 |
| Centrifuging radius [mm] | 95 |
| Item no. | – |

Drum rotor 11136

with aluminium lid 17898


- Max. capacity: 60 x 2 ml
- Max. speed (3-30KS / 3-30KHS): 16,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 20,035 x g
- Hermetically closable with aluminium lid 17878
- Angle: 90°



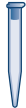
















Swing-out rotor 11122

with 1 set (quantity 2) rectangular buckets 13222

- Max. plate height: 56 mm
- Max. speed (3-30KS / 3-30KHS): 3,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 1,218 x g
- Max. load per carrier: 337 g
- Angle: 90°



| Tube |  |  |  |  |  |  |
|--------------------------------------|---|---|---|---|---|---|
| Rated capacity (filling volume) [ml] | 0.2 | 0.2 | 0.4 | 0.5 | 1.5 | 2 |
| Diameter x length [mm] | 5.8 x 20 | – | 5.8 x 47 | 7.9 x 28 | 10.7 x 42 | 10.7 x 42 |
| Tube material | PP | – | PE | PP | PP | PP |
| Item no. | 15042 | PCR strips | 15014 | 15005 | 15008 | 15040 |
| Adapter |  |  |  |  |  |  |
| for drum rotor 11136 | | | | | | |
| Bore diameter x length [mm] | 6.2 x 17 | 6.2 x 17 | 6 x 46 | 8.1 x 21 | 11.2 x 39 | |
| Tubes per adapter / rotor | 32 / 192 | 4 x 8 / 24 x 8 | 20 / 120 | 10 / 60 | 10 / 60 | |
| Centrifuging radius [mm] | 48 | 48 | 70 | 52 | 70 | |
| Item no. | 14021 | 14021 | 14000 | 14020 | 14002 | |

| Tube |  |  |  |  |
|------------------------------|---|---|---|---|
| Description | MTP (without lid) | MTP (with lid) | DWP | PCR plate 96-fold |
| W x D x H [mm] | 128 x 86 x 15 | 128 x 86 x 17.5 | 128 x 86 x 44.5 | 128 x 86 x 20 |
| Adapter |  | | | |
| for rectangular bucket 13222 | | | | |
| Bore diameter x length [mm] | – | | | |
| Plates per rotor | 6 | 6 | 2 | 4 |
| Centrifuging radius [mm] | 121 | | | |
| Item no. | – | | | |

* Only possible without cap 17299

Fixed-angle rotor 12115


with aluminium lid 17875

- Max. capacity: 96 x 0.2 ml conical
- Max. speed (3-30KS / 3-30KHS): 16,400 rpm
- Max. RCF outer row (3-30KS / 3-30KHS): 29,468 x g
- Max. RCF inner row (3-30KS / 3-30KHS): 24,958 x g
- Hermetically closable with aluminium lid 17875
- Angle: 45° (both rows)





Fixed-angle rotor 12110

with aluminium lid 17834

- Max. capacity: 12 x 2 ml
- Max. speed (3-30KS / 3-30KHS): 30,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 65,403 x g
- Hermetically closable with aluminium lid 17834
- Angle: 45°
- NEW:** g-lock rotor 91355 

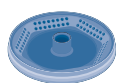




Tube

| |  |  |
|--------------------------------------|---|---|
| Rated capacity (filling volume) [ml] | 0.2 | 0.2 |
| Diameter x length [mm] | 5.8 x 20 | — |
| Tube material | PP | — |
| Item no. | 15042 | PCR strips |






Adapter

for
fixed-angle rotor
12115



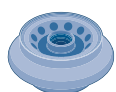
| |  |  |
|--|---|---|
| Bore diameter x length [mm] | 6.3 x 15.5 | 6.3 x 16.5 |
| Tubes per adapter / rotor | 96 | 12 x 8 |
| Centrifuging radius outer / inner row [mm] | 98 / 83 | 98 / 83 |
| Item no. | — | — |






Tube

| |  |  |  |  |  |
|--------------------------------------|---|---|---|---|---|
| Rated capacity (filling volume) [ml] | 0.2 | 0.4 | 0.5 | 1.5 | 2 |
| Diameter x length [mm] | 5.8 x 20 | 5.8 x 47 | 7.9 x 28 | 10.7 x 42 | 10.7 x 42 |
| Tube material | PP | PE | PP | PP | PP |
| Item no. | 15042 | 15014 | 15005 | 15008 | 15040 |

Adapter

for
fixed-angle rotor
12110





| |  |  |  |  |  |
|-----------------------------|---|---|---|---|---|
| Bore diameter x length [mm] | 6.3 x 18.5 | 6 x 45 | 8 x 45 | 11.1 x 37.5 | 11.1 x 38.5 |
| Tubes per adapter / rotor | 1 / 12 | 1 / 12 | 1 / 12 | 1 / 12 | — / 12 |
| Centrifuging radius [mm] | 61 | 63 | 63 | 64 | 65 |
| Item no. | 13021 | 13000 | 13002 | 13003* | — |

* Recommended for RCF > 30,000 x g

Fixed-angle rotor 12154

with aluminium lid 17829


- Max. capacity: 24 x 2 ml
- Max. speed (3-30KS / 3-30KHS): 26,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 61,973 x g
- Hermetically closable with aluminium lid 17829
- Angle: 45°
- NEW:** g-lock rotor 91123 























Fixed-angle rotor 12131

with aluminium lid 17848

- Max. capacity: 30 x 2 ml
- Max. speed (3-30KS / 3-30KHS): 20,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 44,720 x g
- Hermetically closable with aluminium lid 17848
- Angle: 45°



| Tube |  |  |  |  |  |
|--------------------------------------|---|---|---|---|---|
| Rated capacity (filling volume) [ml] | 0.2 | 0.4 | 0.5 | 1.5 | 2 |
| Diameter x length [mm] | 5.8 x 20 | 5.8 x 47 | 7.9 x 28 | 10.7 x 42 | 10.7 x 42 |
| Tube material | PP | PE | PP | PP | PP |
| Item no. | 15042 | 15014 | 15005 | 15008 | 15040 |
| Adapter |  | | | | |
| for fixed-angle rotor 12154 |  |  |  |  | |
| Bore diameter x length [mm] | 6.3 x 18.5 | 6 x 45 | 8 x 45 | 11.1 x 37.5 | 11.1 x 38.5 |
| Tubes per adapter / rotor | 1 / 24 | 1 / 24 | 1 / 24 | 1 / 24 | – / 24 |
| Centrifuging radius [mm] | 78 | 80 | 80 | 81 | 82 |
| Item no. | 13021 | 13000 | 13002 | 13003* | – |

| Tube |  |  |  |  |  |
|--------------------------------------|---|---|---|---|---|
| Rated capacity (filling volume) [ml] | 0.2 | 0.4 | 0.5 | 1.5 | 2 |
| Diameter x length [mm] | 5.8 x 20 | 5.8 x 47 | 7.9 x 28 | 10.7 x 42 | 10.7 x 42 |
| Tube material | PP | PE | PP | PP | PP |
| Item no. | 15042 | 15014 | 15005 | 15008 | 15040 |
| Adapter |  | | | | |
| for fixed-angle rotor 12131 |  |  |  |  | |
| Bore diameter x length [mm] | 6.3 x 18.5 | 6 x 45 | 8 x 45 | 11.1 x 37.5 | 11.1 x 38.5 |
| Tubes per adapter / rotor | 1 / 30 | 1 / 30 | 1 / 30 | 1 / 30 | – / 30 |
| Centrifuging radius [mm] | 96 | 98 | 98 | 99 | 100 |
| Item no. | 13021 | 13000 | 13002 | 13003* | – |

* Recommended for RCF > 30,000 x g

Fixed-angle rotor 12370

with 36 adapters 13003 and aluminium lids 17618

- Max. capacity: 36 x 2 ml
- Max. speed (3-30KS / 3-30KHS): 28,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 70,121 x g
- Hermetically closable with aluminium lid 17618
- Angle (upper / lower row): 30° / 50°
- **NEW:** g-lock rotor 91371 [A](#)








Fixed-angle rotor 12349

with aluminium lid 17349

- Max. capacity: 48 x 2 ml
- Max. speed (3-30KS / 3-30KHS): 15,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 25,155 x g
- Hermetically closable with aluminium lid 17349
- Angle (upper / lower row): 25° / 53°
- **NEW:** g-lock rotor 91520 [A](#)

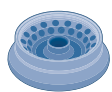






Tube

| |  |  |  |  |  |
|--------------------------------------|---|---|---|---|---|
| Rated capacity (filling volume) [ml] | 0.2 | 0.4 | 0.5 | 1.5 | 2 |
| Diameter x length [mm] | 5.8 x 20 | 5.8 x 47 | 7.9 x 28 | 10.7 x 42 | 10.7 x 42 |
| Tube material | PP | PE | PP | PP | PP |
| Item no. | 15042 | 15014 | 15005 | 15008 | 15040 |






Adapter

for
fixed-angle rotor
12370



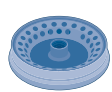
| |  |  |  |  | |
|--|---|---|---|---|-------------|
| Bore diameter x length [mm] | 6.3 x 18.5 | 6 x 45 | 8 x 45 | 11.1 x 37.5 | 11.1 x 38.5 |
| Tubes per adapter / rotor | 1 / 36 | 1 / 36 | 1 / 36 | 1 / 36 | — / 36 |
| Centrifuging radius inner / outer row [mm] | 76 / 76 | 78 / 78 | 78 / 78 | 79 / 79 | 80 / 80 |
| Item no. | 13021 | 13000 | 13002 | 13003* | — |





Tube

| |  |  |  |  |  |
|--------------------------------------|---|---|---|---|---|
| Rated capacity (filling volume) [ml] | 0.2 | 0.4 | 0.5 | 1.5 | 2 |
| Diameter x length [mm] | 5.8 x 20 | 5.8 x 47 | 7.9 x 28 | 10.7 x 42 | 10.7 x 42 |
| Tube material | PP | PE | PP | PP | PP |
| Item no. | 15042 | 15014 | 15005 | 15008 | 15040 |

Adapter

for
fixed-angle rotor
12349




| |  |  |  |  | |
|--|---|---|---|---|-------------|
| Bore diameter x length [mm] | 6.3 x 18.5 | 6 x 45 | 8 x 45 | 11.1 x 37.5 | 11.1 x 38.5 |
| Tubes per adapter / rotor | 1 / 48 | 1 / 48 | 1 / 48 | 1 / 48 | — / 48 |
| Centrifuging radius inner / outer row [mm] | 96 / 96 | 98 / 98 | 98 / 98 | 99 / 99 | 100 / 100 |
| Item no. | 13021 | 13000 | 13002 | 13003* | — |

* Recommended for RCF > 30,000 x g

Fixed-angle rotor 12182


with aluminium lid 17182


- Max. capacity: 12 x 5 ml conical
- Max. speed (3-30KS / 3-30KHS): 20,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 37,565 x g
- Hermetically closable with aluminium lid 17182
- Angle: 40°












Fixed-angle rotor 12111


with aluminium lid 17835

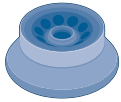
- Max. capacity: 10 x 10 ml round-bottom
- Max. speed (3-30KS / 3-30KHS): 26,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 57,438 x g
- Hermetically closable with aluminium lid 17835
- Angle: 35°
- NEW:** g-lock rotor 91527 



| Tube |  |  |  |  |  |
|--------------------------------------|---|---|---|---|---|
| Rated capacity (filling volume) [ml] | 1.5 | 1.5–1.8 | 1.5 | 2 | 5 |
| Diameter x length [mm] | 11.7 x 34 | 12.3 x 49 | 10.7 x 42 | 10.7 x 42 | 17 x 60 |
| Tube material | Glass | PP | PP | PP | PPCO |
| Item no. | HPLC | Cryo tube | 15008 | 15040 | – |

| Adapter |  |  |  |  | |
|-----------------------------|---|---|---|---|--|
| for fixed-angle rotor 12182 | | | | | |
| Bore diameter x length [mm] | 12.5 x 28 | 12.7 x 32 | 11.1 x 38.5 | 17 x 52 | |
| Tubes per adapter / rotor | 1 / 12 | 1 / 12 | 1 / 12 | – / 12 | |
| Centrifuging radius [mm] | 57 | 61 | 69 | 84 | |
| Item no. | 14081 | 14080* | 14082 | – | |

| Tube |  | | |
|--------------------------------------|---|-------------|-------------|
| Rated capacity (filling volume) [ml] | 10 | 10 | 10 |
| Diameter x length [mm] | 16.1 x 81.1 | 16.1 x 81.1 | 16.1 x 81.1 |
| Tube material | PF | PC | PPCO |
| Item no. | 15000 | 15010 | 15039 |

| Adapter |  | |
|-----------------------------|---|--|
| for fixed-angle rotor 12111 | | |
| Bore diameter x length [mm] | 16.3 x 69 | |
| Tubes per adapter / rotor | 1 / 10 | |
| Centrifuging radius [mm] | 76 | |
| Item no. | – | |

** Only possible without lid 17182

Fixed-angle rotor 12157



with aluminium lid 17841

- Max. capacity: 20 x 10 ml round-bottom
- Max. speed (3-30KS / 3-30KHS): 16,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 28,048 x g
- Hermetically closable with aluminium lid 17841
- Angle: 25°



Fixed-angle rotor 12311

with aluminium lid 17935

- Max. capacity: 12 x 15 ml conical
- Max. speed (3-30KS / 3-30KHS): 15,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 24,903 x g
- Biosafe with aluminium lid 17935 
- Optimised for premium tubes (BD, Corning, etc.)
- Angle: 25°
- **NEW:** g-lock rotor 91534 



Tube



| Rated capacity (filling volume) [ml] | 10 | 10 | 10 |
|--------------------------------------|-------------|-------------|-------------|
| Diameter x length [mm] | 16.1 x 81.1 | 16.1 x 81.1 | 16.1 x 81.1 |
| Tube material | PF | PC | PPCO |
| Item no. | 15000 | 15010 | 15039 |

Adapter

for
fixed-angle rotor
12157



| Bore diameter x length [mm] | 16.3 x 69 |
|-----------------------------|-----------|
| Tubes per adapter / rotor | – / 20 |
| Centrifuging radius [mm] | 98 |
| Item no. | – |

Tube



| Rated capacity (filling volume) [ml] | 15 |
|--------------------------------------|------------|
| Diameter x length [mm] | 16.5 x 120 |
| Tube material | PP |
| Item no. | 15115 |

Adapter

for
fixed-angle rotor
12311



| Bore diameter x length [mm] | 17.5 x 106 |
|-----------------------------|------------|
| Tubes per adapter / rotor | – / 12 |
| Centrifuging radius [mm] | 99 |
| Item no. | – |

Cleanroom

Robust and resistant




An extremely resistant cleanroom coating is available from Sigma for all aluminium buckets and rotors. This coating provides reliable corrosion protection for accessories, especially where aggressive chemicals


are used. The cleanroom coating can even withstand exposure to sodium hydroxide and hydrochloric acid. The surfaces are also food-grade (FDA certified) and can easily be cleaned without residues.

**Cleanroom
coating**
Available for all
accessories

Fixed-angle rotor 12158


with aluminium lid 17842


- Max. capacity: 6 x 30 ml round-bottom
- Max. speed (3-30KS / 3-30KHS): 26,200 rpm
- Max. RCF (3-30KS / 3-30KHS): 60,628 x g
- Hermetically closable with aluminium lid 17842
- Angle: 29°
- NEW:** g-lock rotor 91365 























Fixed-angle rotor 12150

with aluminium lid 17837

- Max. capacity: 6 x 50 ml round-bottom
- Max. speed (3-30KS / 3-30KHS): 21,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 41,415 x g
- Hermetically closable with aluminium lid 17837
- Angle: 25°
- NEW:** g-lock rotor 91375 



| | | | | | | | | | |
|---|---|---|--|---|---|-------------|-----------|-----------|-----------|
| Tube |  | | |  | | | | | |
| | Rated capacity (filling volume) [ml] | | | 10 | 10 | 10 | 30 (26) | 30 (26) | 30 (28) |
| | Diameter x length [mm] | | | 16.1 x 81.1 | 16.1 x 81.1 | 16.1 x 81.1 | 25.3 x 98 | 25.3 x 98 | 25.3 x 98 |
| | Tube material | | | PF | PC | PPCO | PF | PPCO | PC |
| | Item no. | | | 15000 | 15010 | 15039 | 15029 | 15032 | 15030 |
| Adapter | | | | | | | | | |
| for fixed-angle rotor 12158 | | | | | | | | | |
|  | |  | | |  | | | | |
| Bore diameter x length [mm] | | 16.5 x 70 | | | 25.7 x 82.5 | | | | |
| Tubes per adapter / rotor | | 1 / 6 | | | – / 6 | | | | |
| Centrifuging radius [mm] | | 69 | | | 79 | | | | |
| Item no. | | 13059 | | | – | | | | |

| | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|------------|-----------------|
| Tube |  | |  |  |  | |  |  |  |  | | |
| | Rated capacity (filling volume) [ml] | | 10 | 10 | 14 | 15 | 30 (26) | 30 (28) | 30 | 50 (38) | 50 (43) | 50 |
| | Diameter x length [mm] | | 16.1 x 81.1 | 16.1 x 81.1 | 17 x 100 | 17.5 x 106 | 25.3 x 98 | 25.3 x 98 | 23.6 x 106 | 28.8 x 107 | 28.5 x 107 | 28.5 x 101.5 |
| | Tube material | | PF | PPCO | PP | HS glass | PPCO | PC | HS glass | PPCO | PF | Stainless steel |
| | Item no. | | 15000 | 15039 | 15023 | 15085 | 15032 | 15030 | 15086 | 15052 | 15051 | 13055 |
| Adapter | | | | | | | | | | | | |
| for fixed-angle rotor 12150 | |  | |  |  |  |  | |  |  | | |
| Bore diameter x length [mm] | | 16.2 x 65 | | 17 x 88 | 18 x 90 | 25.6 x 75 | | 24.5 x 93 | 29 x 98 | | | |
| Tubes per adapter / rotor | | 1 / 6 | | 1 / 6 | 1 / 6 | 1 / 6 | | 1 / 6 | – / 6 | | | |
| Centrifuging radius [mm] | | 52 | | 79 | 79 | 69 | | 82 | 84 | | | |
| Item no. | | 13087 | | 13062 | 16018 | 13086 | | 16030 | – | | | |

Fixed-angle rotor 12310

with aluminium lid 17934

- Max. capacity: 6 x 50 ml conical
- Max. speed (3-30KS / 3-30KHS): 15,500 rpm
- Max. RCF (3-30KS / 3-30KHS): 25,248 x g
- Biosafe with aluminium lid 17934 [↗](#)
- Optimised for premium tubes (BD, Corning, etc.)
- Angle: 25°
- NEW:** g-lock rotor 91375 [↗](#)









Fixed-angle rotor 12156

with aluminium lid 17840

- Max. capacity: 8 x 50 ml round-bottom
- Max. speed (3-30KS / 3-30KHS): 16,500 rpm
- Max. RCF (3-30KS / 3-30KHS): 29,220 x g
- Hermetically closable with aluminium lid 17840
- Angle: 25°







Tube

| |  |  |  |  |  |  |
|--------------------------------------|---|---|---|---|---|--|
| Rated capacity (filling volume) [ml] | 15 | 25 | 30 | 50 (38) | 50 (43) | 50 |
| Diameter x length [mm] | 16.5 x 120 | 25 x 90 | 25 x 107 | 28.8 x 107 | 28.5 x 107 | 29 x 117 |
| Tube material | PP | PP | PP | PPCO | PF | PP |
| Item no. | 15115 | — | — | 15052 | 15051 | 15151 |









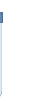

Adapter

for
fixed-angle rotor
12310



| |  |  |  |  |
|-----------------------------|---|---|---|--|
| Bore diameter x length [mm] | 17 x 107 | 25.5 x 71 | 30 x 91 | 30 x 101 |
| Tubes per adapter / rotor | 1 / 6 | 1 / 6 | 1 / 6 | — / 6 |
| Centrifuging radius [mm] | 93 | 71 | 84 | 94 |
| Item no. | 13060 | 13064 | 13079 | — |







Tube

| |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|
| Rated capacity (filling volume) [ml] | 10 | 10 | 14 | 15 | 30 (26) | 30 (28) | 30 | 50 (38) | 50 (43) | 50 |
| Diameter x length [mm] | 16.1 x 81.1 | 16.1 x 81.1 | 17 x 100 | 17.5 x 106 | 25.3 x 98 | 25.3 x 98 | 23.6 x 106 | 28.8 x 107 | 28.5 x 107 | 28.5 x 101.5 |
| Tube material | PF | PPCO | PP | HS glass | PPCO | PC | HS glass | PPCO | PF | Stainless steel |
| Item no. | 15000 | 15039 | 15023 | 15085 | 15032 | 15030 | 15086 | 15052 | 15051 | 13055 |

Adapter


for
fixed-angle rotor
12156




| |  |  |  |  |  |  |
|-----------------------------|---|---|---|---|---|---|
| Bore diameter x length [mm] | 16.2 x 65 | 17 x 88 | 18 x 90 | 25.6 x 75 | 24.5 x 93 | 29 x 98 |
| Tubes per adapter / rotor | 1 / 8 | 1 / 8 | 1 / 8 | 1 / 8 | 1 / 8 | — / 8 |
| Centrifuging radius [mm] | 64 | 91 | 91 | 81 | 94 | 96 |
| Item no. | 13087 | 13062 | 16018 | 13086 | 16030 | — |

Fixed-angle rotor 12155

with aluminium lid 17839

- Max. capacity: 4 x 94 ml round-bottom
- Max. speed (3-30KS / 3-30KHS): 20,000 rpm
- Max. RCF (3-30KS / 3-30KHS): 40,695 x g
- Hermetically closable with aluminium lid 17839
- Angle: 26°
- NEW:** g-lock rotor 91532 








Tube

| | | | | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|------------|----------|-----------|-----------|
| | | | | | | | | | | |
| Rated capacity (filling volume) [ml] | 10 | 10 | 10 | 14 | 14 | 15 | 15 | 25 | 30 (26) | 30 (26) |
| Diameter x length [mm] | 16.1 x 81.1 | 16.1 x 81.1 | 16.1 x 81.1 | 17 x 100 | 17 x 100 | 17.5 x 106 | 16.5 x 120 | 24 x 100 | 25.3 x 98 | 25.3 x 98 |
| Tube material | PF | PC | PPCO | PS | PP | HS glass | PP | Glass | PF | PPCO |
| Item no. | 15000 | 15010 | 15039 | 15020 | 15023 | 15085 | 15115 | 15025 | 15029 | 15032 |







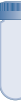
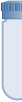


Adapter

for
fixed-angle rotor
12155



| | | | | | |
|-----------------------------|---|---|---|---|---|
| |  |  |  |  |  |
| Bore diameter x length [mm] | 16.2 x 71 | 18 x 87 | 17 x 107 | 24.5 x 88 | 26 x 83 |
| Tubes per adapter / rotor | 2 / 8 | 1 / 4 | 1 / 4 | 1 / 4 | 1 / 4 |
| Centrifuging radius [mm] | 62 | 83 | 90 | 84 | 74 |
| Item no. | 13084 | 16019 | 13081* | 16031 | 13083 |






Tube

| | | | | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|
| |  |  |  |  |  |  |  |  |  |  |
| Rated capacity (filling volume) [ml] | 30 (28) | 30 | 50 (38) | 50 (43) | 50 | 50 | 85 (73) | 85 (76) | 94 (85) | 94 |
| Diameter x length [mm] | 25.3 x 98 | 23.6 x 106 | 28.8 x 107 | 28.5 x 107 | 28.5 x 101.5 | 29.5 x 117 | 38 x 112 | 38 x 112 | 38 x 103 | 38 x 110 |
| Tube material | PC | HS glass | PPCO | PF | Stainless steel | PP | PF | PPCO | Stainless steel | PC |
| Item no. | 15030 | 15086 | 15052 | 15051 | 13055 | 15151 | 15080 | 15076 | 13085 | 15094 |

Adapter

for
fixed-angle rotor
12155




| | | | | | |
|-----------------------------|---|---|---|---|---|
| |  |  |  |  |  |
| Bore diameter x length [mm] | 26 x 83 | 24.5 x 88 | 29 x 97 | 30 x 100 | 38.3 x 91 |
| Tubes per adapter / rotor | 1 / 4 | 1 / 4 | 1 / 4 | 1 / 4 | – / 4 |
| Centrifuging radius [mm] | 74 | 84 | 88 | 91 | 91 |
| Item no. | 13083 | 16031 | 13082 | 13080* | – |







* Only possible without rotor lid 17839

Fixed-angle rotor 12159

with aluminium lid 17843

- Max. capacity: 6 x 94 ml round-bottom
- Max. speed (3-30KS / 3-30KHS): 15,500 rpm
- Max. RCF (3-30KS / 3-30KHS): 26,323 x g
- Hermetically closable with aluminium lid 17843
- Angle: 25°
- NEW:** g-lock rotor 91119 


















| Tube |  | | |  | |  |  |  |  | |
|--------------------------------------|---|-------------|-------------|---|----------|---|---|---|---|-----------|
| Rated capacity (filling volume) [ml] | 10 | 10 | 10 | 14 | 14 | 15 | 15 | 25 | 30 (26) | 30 (26) |
| Diameter x length [mm] | 16.1 x 81.1 | 16.1 x 81.1 | 16.1 x 81.1 | 17 x 100 | 17 x 100 | 17.5 x 106 | 16.5 x 120 | 24 x 100 | 25.3 x 98 | 25.3 x 98 |
| Tube material | PF | PC | PPCO | PS | PP | HS glass | PP | Glass | PF | PPCO |
| Item no. | 15000 | 15010 | 15039 | 15020 | 15023 | 15085 | 15115 | 15025 | 15029 | 15032 |

Adapter

for
fixed-angle rotor
12159








| |  | | |  | |  |  |  | |
|-----------------------------|---|--|--|---|--|---|---|---|--|
| Bore diameter x length [mm] | 16.2 x 71 | | | 18 x 87 | | 17 x 107 | 24.5 x 88 | 26 x 83 | |
| Tubes per adapter / rotor | 2 / 12 | | | 1 / 6 | | 1 / 6 | 1 / 6 | 1 / 6 | |
| Centrifuging radius [mm] | 69 | | | 90 | | 97 | 91 | 81 | |
| Item no. | 13084 | | | 16019 | | 13081 | 16031 | 13083 | |

| Tube |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|
| Rated capacity (filling volume) [ml] | 30 (28) | 30 | 50 (38) | 50 (43) | 50 | 50 | 85 (73) | 85 (76) | 94 (85) | 94 |
| Diameter x length [mm] | 25.3 x 98 | 23.6 x 106 | 28.8 x 107 | 28.5 x 107 | 28.5 x 101.5 | 29.5 x 117 | 38 x 112 | 38 x 112 | 38 x 103 | 38 x 110 |
| Tube material | PC | HS glass | PPCO | PF | Stainless steel | PP | PF | PPCO | Stainless steel | PC |
| Item no. | 15030 | 15086 | 15052 | 15051 | 13055 | 15151 | 15080 | 15076 | 13085 | 15094 |

Adapter

for
fixed-angle rotor
12159



| |  |  |  | |  |  | | | |
|-----------------------------|---|---|---|--|--|---|--|--|--|
| Bore diameter x length [mm] | 26 x 83 | 24.5 x 88 | 29 x 97 | | 30 x 100 | 38.3 x 91 | | | |
| Tubes per adapter / rotor | 1 / 6 | 1 / 6 | 1 / 6 | | 1 / 6 | – / 6 | | | |
| Centrifuging radius [mm] | 81 | 91 | 95 | | 98 | 98 | | | |
| Item no. | 13083 | 16031 | 13082 | | 13080 | – | | | |

Material properties

Guideline for optimal tube selection

Due to the many factors that influence material properties, this overview is only intended as a general recommendation. There is no guarantee of the stated properties. Users should therefore carefully

test materials for suitability under specific application conditions. Tubes should be discarded as soon as they show any sign of material fatigue.

| | Polycarbonate (PC) | Polyvinyl fluoride (PF) | Polystyrene (PS) | Polyethylene (PE) | Polypropylene (PP) |
|------------------------------------|--|---|------------------|-------------------|--------------------|
| Autoclave resistant | Yes | Yes | No | No | Yes |
| Elasticity | Not elastic | Not elastic | Not elastic | Good | Not elastic |
| Transparency | Transparent | Translucent | Transparent | Translucent | Translucent |
| Recommended temperature range [°C] | | | | | |
| Embrittlement temperature [°C] | -20 | -20 | -10 | -20 | -20 |
| Max. working temperature [°C] | +125 | +125 | +80 | +90 | +125 |
| Microwave resistant | Moderate | Yes | No | Limited | Moderate |
| Chemical resistance | | | | | |
| Weak acids | Yes | Yes | Yes | Yes | Yes |
| Strong acids | No | Yes | Limited | Yes | Yes |
| Alcohols and alkalis | No | Yes | Yes | Yes | Yes |
| Salts | Limited | Yes | Limited | Yes | Yes |
| Note: | Frequent autoclaving leads to loss of strength | Tubes should be completely filled and closed for use at maximum RCF | | | |

| | PP copolymer (PPCO) | Glass | High-speed glass (HS glass) | Stainless steel |
|------------------------------------|---------------------|--|--|-----------------|
| Autoclave resistant | Yes | Yes | Yes | Yes |
| Elasticity | Moderate | Not elastic | Not elastic | Not elastic |
| Transparency | Translucent | Transparent | Transparent | Opaque |
| Recommended temperature range [°C] | | | | |
| Embrittlement temperature [°C] | -20 | -20 | -20 | -20 |
| Max. working temperature [°C] | +125 | +200 | +200 | +200 |
| Microwave resistant | Moderate | Yes | Yes | No |
| Chemical resistance | | | | |
| Weak acids | Yes | Yes | Yes | Limited |
| Strong acids | Yes | Yes | Yes | Limited |
| Alcohols and alkalis | Yes | Yes | Yes | Yes |
| Salts | Yes | Yes | Yes | Limited |
| Note: | | Max. RCF for all glass tubes approx. 4,000 x g | High-speed glass for maximum RCF of 13,100 x g | |

Spincontrol S controller

Intuitive operation and many options

The patented one-knob Spincontrol S controller sets standards in control technology for laboratory centrifuges. All parameters, such as speed, RCF or temperature, are set using the multifunction knob and can even be altered during operation. Illuminated buttons for starting, stopping and lid opening facilitate access to these functions.

Along with manual parameter configuration, previously entered programs can be selected via shortcuts. These programs can be assigned alphanumeric names to enhance process reliability and simplify operation. Another practical feature is the progress bar that visualises program status and can be seen at a distance. All setpoint and actual values are constantly shown on the clearly organised display.

The countless features leave nothing to be desired: time after target speed reached, capacity for 60 programs, password protection to prevent unintentional alteration of operating parameters, and the rotor cycle counter are just a few of the highlights that make the Spincontrol S controller a highly versatile system that is ready to meet the laboratory requirements of the future.

This premium controller from Sigma supports internal quality management functions as well as external communication with a laboratory information management system (LIMS). That way the Spincontrol S supports traceable professional reporting.



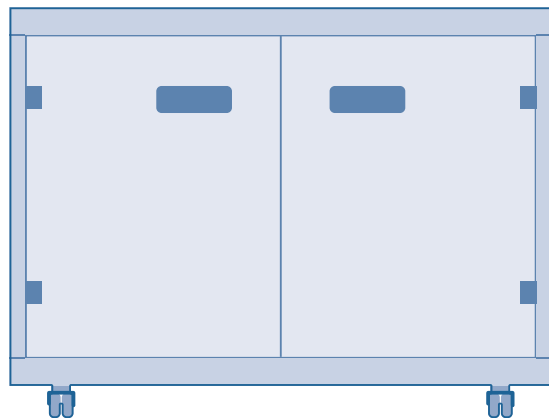
Spincontrol S
Get more information.
View our video:
www.sigma-zentrifugen.de/en/v/spincontrol

| | |
|---|--|
| Display | TFT |
| Message window | + |
| Constant display of setpoints and actual values | + |
| Languages | DE, GB, PT, FR, ES, RU, HU, IT, SE, CN |
| Timer (s; h:min) | 10 – 99:59 |
| Timer tracks time after setpoint speed is reached; switchable | +, + |
| Time increment [s] | 60; 1 |
| Short run, Continuous run | +, + |
| Speed increment [rpm] | 100; 1 |
| Temperature increment [°C] | 1 |
| RCF increment [x g] | 10; 1 |
| Progress bar | + |
| Programs | 60 |
| User-definable program name (alphanumeric) | + |
| Program list, preview of all parameters | +, + |
| Linear acceleration curves | 10 |
| Quadratic acceleration curves | 10 |
| User-definable acceleration curves | 10 |
| Linear braking curves | 10 |
| Quadratic braking curves | 10 |
| User-definable braking curves | 10 |
| Free run-out | + |
| Automatic lid opening at end of run, switchable | +, + |
| Start delay (clotting time) adjustable/switchable | +, + |
| Standstill cooling; switchable | +, + |
| Standstill heating; switchable* | +, + |
| Pre-cooling function "Rapid Temp" | + |
| Temperature deviation monitoring, settable | + |
| Audible signal, switchable | +, + |
| Visual standstill indication | + |
| Centrifuge cycle count | + |
| Rotor cycle monitoring | + |
| Rotor end-of-life warning | + |
| Configurable for liquids > 1.2 g/cm ³ | + |
| Lockable controller with password protection | + |
| Microprocessor control | + |

* Only for 3-30KHS

Centrifuge tables

Sigma centrifuge tables are available in six different sizes. Matched to the corresponding centrifuge dimensions, they combine convenient work height with an optimally calculated footprint. The tables are made from coated sheet steel and are equipped with a storage compartment (with two doors) and a convenient pull-out shelf. Lockable castors allow the centrifuge tables to be easily moved and positioned in the laboratory.



Centrifuge table 17920

For Sigma 2-16KL

W x H x D [mm]: 600 x 501 x 550

Centrifuge table 17921

For Sigma 6-16KS

W x H x D [mm]: 790 x 515 x 684

Centrifuge table 17922

For Sigma 6-16S

W x H x D [mm]: 581 x 481 x 684

Centrifuge table 17923

For Sigma 3-30KS

W x H x D [mm]: 570 x 481 x 616

Centrifuge table 17926

For Sigma 3-16KL, 3-18KS, 4-16KS

W x H x D [mm]: 650 x 501 x 647

Centrifuge table 17927

For Sigma 3-16L, 4-5L, 4-16S




W x H x D [mm]: 490 x 497 x 647

Product portfolio




Sigma offers a broad product portfolio with more than 25 laboratory centrifuges. They can be combined with an extensive range of fixed-angle and swing-out rotors and a large variety of accessories to obtain the right device configuration for every application.






Microcentrifuge
Sigma 1-16

-  36 x 2 ml
-  15,000 rpm
-  20,627 x g




Floor-standing centrifuge
Sigma 8KS




-  12 x 1,000 ml
-  5,100 rpm
-  8,578 x g

-  6 x 1,000 ml
-  10,500 rpm
-  20,461 x g






Benchtop centrifuge
Sigma 2-7




-  4 x 100 ml
-  4,000 rpm
-  2,540 x g

-  30 x 15 ml
-  4,000 rpm
-  2,486 x g






Benchtop centrifuge
Sigma 3-30KS

-  4 x 100 ml
-  5,000 rpm
-  3,969 x g




-  6 x 94 ml
-  30,000 rpm
-  70,121 x g





Robot centrifuge
Sigma 4-5KRL

-  100 x 15 ml
-  4,700 rpm
-  4,470 x g

Legend

-  Max. capacity
-  Max. speed
-  Max. RCF

-  Swing-out rotor
-  Fixed-angle rotor

Premium quality

Made in Germany

The Sigma 3-30KS and Sigma 3-30KHS meet the highest technical requirements of laboratory standards. Developed and produced at our facility in Osterode, Germany, they are high-performance, durable and energy-efficient quality products and conform to the latest safety, emissions and environmental standards. Sigma guarantees the availability of spare parts and wearing parts for at least

10 years. Furthermore, you benefit from our extensive services portfolio, including commissioning, maintenance, device calibration and more. Our qualified service technicians are ready to provide professional maintenance and repair as well as loaner devices if necessary. All support services are designed to ensure reliability and optimise system availability.

| | Sigma 3-30KS | Sigma 3-30KHS |
|--|-----------------|-----------------|
| Max. capacity [ml] | | |
| Swing-out rotor | 4 x 100 | 4 x 100 |
| Fixed-angle rotor | 6 x 94 | 6 x 94 |
| Max. RCF | 70,121 | 70,121 |
| Maximum speed [rpm] | 30,000 | 30,000 |
| Minimum speed [rpm] | 100 | 100 |
| Noise level at maximum speed (approx) [dB(A)] | | |
| Fixed-angle rotor 12370 | ≤ 57 | ≤ 57 |
| Swing-out rotor 11171 with bucket 13299 and cap | ≤ 53 | ≤ 53 |
| Max. acceleration time [s] | | |
| Fixed-angle rotor 12370 | ≤ 45 | ≤ 45 |
| Swing-out rotor 11171 with bucket 13299 and cap | ≤ 19 | ≤ 19 |
| Max. braking time [s] | | |
| Fixed-angle rotor 12370 | ≤ 53 | ≤ 53 |
| Swing-out rotor 11171 with bucket 13299 and cap | ≤ 13 | ≤ 13 |
| Temperature adjustment range [°C] | -20 – +40 | -20 – +60 |
| Power consumption [W] | 1,800 | 1,800 |
| Height x width x depth [mm] | 464 x 570 x 643 | 464 x 570 x 643 |
| Height with open lid [mm] | 890 | 890 |
| Weight without rotor [kg] | 100 | 100 |

Sigma Service

For maintenance and repairs please contact our Service department at www.sigma-zentrifugen.de/en/service

Calibration

Documented proof of compliance with essential technical parameters.

Speed or run time (item no. 17713)
 Speed and run time (item no. 17714)
 Speed, run time, temperature (Item no. 17715)

Device qualification (IQOQ)

This comprehensive device qualification includes installation qualification and metrological checking of all functional parameters with a rotor.

IQOQ package for:

Unrefrigerated centrifuges (item no. 17710)
 Refrigerated centrifuges (Item no. 17711)
 An additional rotor (item no. 17712)

Sigma 3-30KS centrifuge

220 – 240 V, 50 Hz (item no. 10375)
 220 – 240 V, 60 Hz (item no. 10376)
 208 V, 60 Hz (item no. 10377)
 200 V, 50/60 Hz (item no. 10378)

Sigma 3-30KHS centrifuge

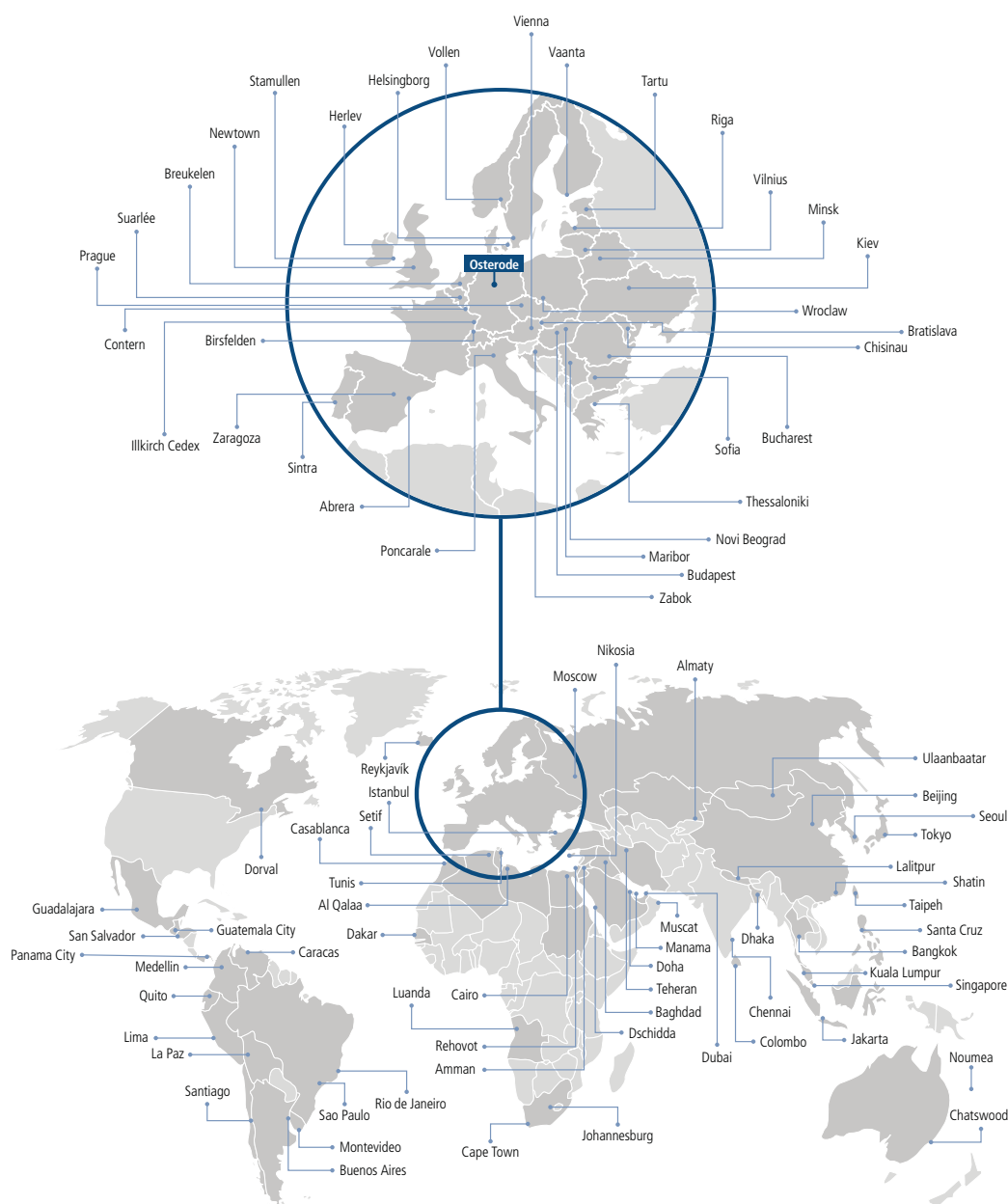
230 V, 50 Hz (item no. 10379)



Global service

For local product security

Our trained service partners in over 100 countries ensure consistently high quality in accordance with national regulations. Our specialists can also be engaged quickly around the world, either remotely or on site in person.



Selected locations of our representatives.

An overview of all representatives with detailed contact information can be found at www.sigma-zentrifugen.de/vertriebspartner



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