

## Sigma 8KS



Floor-standing centrifuge  
• Refrigerated



# Top performer for universal deployment



**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.**

The Sigma 8KS is a refrigerated floor-standing centrifuge that is ideal for universal deployment in the industrial and research sectors. This high-performance centrifuge features impressive capacity of up to 12 x 1,000 ml in a swing-out rotor or 6 x 1,000 ml in a fixed-

angle rotor. With a maximum RCF of 20,461 x g, even demanding separation processes can be handled efficiently. Particularly thanks to the ability to use large-volume fixed-angle rotors with high RCF, the Sigma 8KS covers a distinctly broader spectrum of applications compared to competitive units.

For the sedimentation of relatively large quantities of liquids, the Sigma 8KS delivers reliably reproducible results together with impressively smooth running. Intuitive operation and the ergonomic loading height of just 88 cm simplify daily work in the lab and make the Sigma 8KS one of the most popular large-volume floor-standing centrifuges on the market.

# High throughput in the laboratory

## Result-oriented, convenient and robust

Along with excellent specifications, the updated Sigma 8KS offers scores with intuitive operation and advanced features. The intuitive single-knob Spincontrol S controller, automatic rotor identification and lid opening to the side ensure comfortable and ergonomic operation. With run time and speed monitoring, password-protected access to the controller and secure program storage, the centrifuge offers uncompromising safety and security.

Along with the large-volume fixed-angle rotors, many users appreciate the ability to use a swing-out rotor with or without a windshield at their discretion. A rotor without a windshield has advantages for

handling, while the versions with windshields are distinctly more energy efficient. The lower drag enables energy savings of more than 60 %.

The Sigma 8KS has a fast, finely adjustable cooling system with a temperature range from -20 °C to +40 °C. The Rapid Temp function allows the centrifuge chamber and accessories to be cooled to a defined temperature. In the other direction, fast heating is also possible.

The Sigma 8KS is optionally available as a GMP or inert gas version. Additional custom solutions can also be implemented upon request.

### Sigma 8KS

- Compact refrigerated standard centrifuge
- Maximum RCF: 20,461 x g
- Maximum capacity: 12 x 1,000 ml
- High energy efficiency
- Ergonomic 88 cm loading height
- User-friendly Spincontrol S controller
- Extra large TFT display
- 60 programs
- High-performance cooling
- Temperature setting range: -20 °C to +40 °C
- Rapid Temp program
- Rotor cooling also possible at standstill
- Low noise level
- Automatic rotor identification
- Zero-maintenance induction motor
- 30 pairs of braking and acceleration profiles
- Motorised lid locks
- 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)



### Options

- Water cooling for superior cooling efficiency and minimum noise level
- GMP version with water-cooled compressor and special housing
- Inert gas version with inert gas injection system



# Rotors and accessories

## Diverse options with a multitude of choices

The Sigma 8KS offers a broad portfolio of fixed-angle and swing-out rotors, making it suitable for a very wide range of applications. The numerous buckets and adapters can accommodate tubes and bottles from 1.5 ml to 1,500 ml, as well as microtiter plates and deep-well plates.

Standard 1,000 ml and 1,500 ml flat-bottom bottles can be inserted in both six-place swing-out rotors. In the version with a windshield, RCF up to 8,578 x g can be achieved with a maximum capacity of 6 x 1,500 ml. In the version without a windshield, the total capacity is an impressive 12 x 1,000 ml.

The swing-out and fixed-angle rotors can both handle standard 1,000 ml USP VI bottles without using adapters. That makes them ideal for sensitive applications with biological substrates, such as isolation of bacteria or yeast cultures. If necessary, large quantities of liquids can also be centrifuged in the available rotors with RCF up to 20,461 x g.

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.

### Swing-out rotor 11805 with round bucket 13850

- Max. capacity: 6 x 1,500 ml
- Max. speed: 5,000 rpm
- Max. RCF: 8,578 x g
- Angle: 90°

► p. 9



### Swing-out rotor 11805 with MTP bucket 13845

- Max. capacity: 48 microtiter plates
- Max. speed: 5,100 rpm
- Max. RCF: 7,328 x g
- Angle: 90°

► p. 14



### Swing-out rotor 11806 with round bucket 13850

- Max. capacity: 6 x 1,500 ml
- Max. speed: 3,700 rpm
- Max. RCF: 4,515 x g
- Angle: 90°

► p. 9



### Swing-out rotor 11806 with MTP bucket 13845

- Max. capacity: 48 microtiter plates
- Max. speed: 3,700 rpm
- Max. RCF: 3,857 x g
- Angle: 90°

► p. 14



### Swing-out rotor 11806 with dual bucket 13855

- Max. capacity: 12 x 1,000 ml
- Max. speed: 3,300 rpm
- Max. RCF: 3,579 x g
- Angle: 90°

► p. 15



### Fixed-angle rotor 12505

- Max. capacity: 6 x 500 ml
- Max. speed: 10,500 rpm
- Max. RCF: 20,461 x g
- Angle: 30°

► p. 19



### Fixed-angle rotor 12510

- Max. capacity: 6 x 1,000 ml
- Max. speed: 7,000 rpm
- Max. RCF: 11,285 x g
- Angle: 25°

► p. 21







## Swing-out rotor 11805

### Round bucket 13850 (1 set = 6 pcs)

- Max. capacity: 6 x 1,500 ml
- Max. speed: 5,100 rpm
- Max. RCF: 8,578 x g
- Max. tube length, mid-bucket, without / with cap: 219 / 193 mm
- Hermetically closable with cap 17175
- Tmin at maximum speed: <4°C
- Angle: 90°

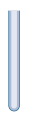
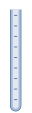


## Swing-out rotor 11806

### Round bucket 13850 (1 set = 6 pcs)

- Max. capacity: 6 x 1,500 ml
- Max. speed: 3,700 rpm
- Max. RCF: 4,515 x g
- Max. tube length, mid-bucket, without / with cap: 219 / 193 mm
- Hermetically closable with cap 17175
- Tmin at maximum speed: <4°C
- Angle: 90°



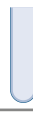
| Tube                                 |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 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                                                                         | 12 x 75                                                                           | 17 x 60                                                                           | 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                                                                                | PS                                                                                | PPCO                                                                              | Glass                                                                             | Glass                                                                              | PF                                                                                  | PC                                                                                  | PPCO                                                                                | Glass                                                                               |
| Item no.                             | 15008                                                                             | 15040                                                                             | 15060                                                                             | —                                                                                 | 15007                                                                             | 15027                                                                              | 15000                                                                               | 15010                                                                               | 15039                                                                               | 15015                                                                               |

### Adapter

for round bucket 13850



|                             |  |  |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Bore diameter x length [mm] | 11.1 x 38.5                                                                         | 12.8 x 52                                                                           | 17 x 52                                                                             | 12.8 x 74                                                                           | 16.5 x 55                                                                             | 17.5 x 55                                                                             |
| Tubes per adapter / rotor   | 26 / 156                                                                            | 37 / 222                                                                            | 12 / 72                                                                             | 31 / 192                                                                            | 20 / 120                                                                              | 19 / 114                                                                              |
| Centrifuging radius [mm]    | 288                                                                                 | 287                                                                                 | 292                                                                                 | 289                                                                                 | 290                                                                                   | 290                                                                                   |
| Item no.                    | 17653*                                                                              | 17652*                                                                              | 17211*                                                                              | 17654*                                                                              | 17655*                                                                                | 17658*                                                                                |

| Tube                                 |  |  |  |  |  |  |  |  |
|--------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Rated capacity (filling volume) [ml] | 10                                                                                  | 14                                                                                  | 14                                                                                  | 15 (13)                                                                             | 15                                                                                   | 25                                                                                    | 25                                                                                    | 25                                                                                    |
| 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                                                                              |
| Tube material                        | Glass                                                                               | PS                                                                                  | PP                                                                                  | Glass                                                                               | PP                                                                                   | PP                                                                                    | Glass                                                                                 | Glass                                                                                 |
| Item no.                             | 15024                                                                               | 15020                                                                               | 15023                                                                               | 15022                                                                               | 15115                                                                                | —                                                                                     | 15025                                                                                 | 15026                                                                                 |

### Adapter

for round bucket 13850



|                             |  |  |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Bore diameter x length [mm] | 17.5 x 55                                                                           | 17 x 78.5                                                                           | 17 x 77.5                                                                            | 17 x 80                                                                               | 25.5 x 70                                                                             | 25.5 x 77                                                                             |
| Tubes per adapter / rotor   | 19 / 114                                                                            | 12 / 72                                                                             | 15 / 90                                                                              | 19 / 114                                                                              | 7 / 42                                                                                | 8 / 48                                                                                |
| Centrifuging radius [mm]    | 290                                                                                 | 293                                                                                 | 292                                                                                  | 290                                                                                   | 285                                                                                   | 292                                                                                   |
| Item no.                    | 17658*                                                                              | 17659*                                                                              | 17660*,**                                                                            | 17775                                                                                 | 17662*                                                                                | 17670*                                                                                |

\* Adapter 13851 additionally required for reduction; \*\* Max. diameter of cap for culture tubes is 22 mm

## Swing-out rotor 11805

## Round bucket 13850 (1 set = 6 pcs)

- Max. capacity: 6 x 1,500 ml
- Max. speed: 5,100 rpm
- Max. RCF: 8,578 x g
- Max. tube length, mid-bucket, without / with cap: 219 / 193 mm
- Hermetically closable with cap 17175
- Tmin at maximum speed: <4°C
- Angle: 90°



## Swing-out rotor 11806

## Round bucket 13850 (1 set = 6 pcs)

- Max. capacity: 6 x 1,500 ml
- Max. speed: 3,700 rpm
- Max. RCF: 4,515 x g
- Max. tube length, mid-bucket, without / with cap: 219 / 193 mm
- Hermetically closable with cap 17175
- Tmin at maximum speed: <4°C
- Angle: 90°



## Tube

|                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |          |          |
|--------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------|----------|
|                                      |  |  |  |  |  |  |  |  |          |          |
| Rated capacity (filling volume) [ml] | 30 (26)                                                                           | 30 (26)                                                                           | 30 (28)                                                                           | 30                                                                                | 30                                                                                  | 50 (38)                                                                             | 50 (43)                                                                             | 50                                                                                  | 50       | 50       |
| Diameter x length [mm]               | 25.3 x 98                                                                         | 25.3 x 98                                                                         | 25.3 x 98                                                                         | 24 x 105                                                                          | 25 x 107                                                                            | 28.8 x 107                                                                          | 28.5 x 107                                                                          | 28.5 x 101.5                                                                        | 29 x 117 | 29 x 117 |
| Tube material                        | PF                                                                                | PPCO                                                                              | PC                                                                                | Glass                                                                             | PP                                                                                  | PPCO                                                                                | PF                                                                                  | Stainless steel                                                                     | PP       | PP       |
| Item no.                             | 15029                                                                             | 15032                                                                             | 15030                                                                             | 15033                                                                             | —                                                                                   | 15052                                                                               | 15051                                                                               | 13055                                                                               | —        | 15151    |

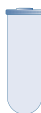
## Adapter

for round bucket 13850



|                             |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                             |  |  |  |  |  |
| Bore diameter x length [mm] | 25.5 x 77                                                                           | 25.5 x 70                                                                           | 29.5 x 77                                                                             | 29.5 x 74                                                                             | 29.5 x 78.5                                                                           |
| Tubes per adapter / rotor   | 8 / 48                                                                              | 7 / 42                                                                              | 7 / 42                                                                                | 5 / 30                                                                                | 5 / 30                                                                                |
| Centrifuging radius [mm]    | 292                                                                                 | 285                                                                                 | 292                                                                                   | 289                                                                                   | 293                                                                                   |
| Item no.                    | 17670*                                                                              | 17662*                                                                              | 17676*                                                                                | 17678*                                                                                | 17677*                                                                                |

## Tube

|                                      |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
|--------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                      |  |  |  |  |  |  |  |  |  |  |
| Rated capacity (filling volume) [ml] | 50                                                                                  | 50                                                                                  | 50                                                                                  | 50                                                                                  | 50                                                                                  | 85 (73)                                                                             | 85 (76)                                                                               | 94 (85)                                                                               | 94                                                                                    | 100 (75)                                                                              |
| Diameter x length [mm]               | 29 x 117                                                                            | 34 x 100                                                                            | 34 x 100                                                                            | 34 x 100                                                                            | 35 x 100                                                                            | 38 x 112                                                                            | 38 x 112                                                                              | 38 x 103                                                                              | 38 x 110                                                                              | 44 x 100                                                                              |
| Tube material                        | PP                                                                                  | Glass                                                                               | Glass                                                                               | PC                                                                                  | Glass                                                                               | PF                                                                                  | PPCO                                                                                  | Stainless steel                                                                       | PC                                                                                    | Glass                                                                                 |
| Item no.                             | 15151                                                                               | 15045                                                                               | 15050                                                                               | 15049                                                                               | 15056                                                                               | 15080                                                                               | 15076                                                                                 | 13085                                                                                 | 15094                                                                                 | 15087                                                                                 |

## Adapter

for round bucket 13850



|                             |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                             |  |  |  |  |
| Bore diameter x length [mm] | 29.5 x 80                                                                           | 35.5 x 77.5                                                                         | 38.5 x 77                                                                             | 45.5 x 77                                                                             |
| Tubes per adapter / rotor   | 8 / 48                                                                              | 4 / 24                                                                              | 3 / 18                                                                                | 2 / 12                                                                                |
| Centrifuging radius [mm]    | 290                                                                                 | 292                                                                                 | 292                                                                                   | 292                                                                                   |
| Item no.                    | 17777                                                                               | 17675*                                                                              | 17685*                                                                                | 17690***                                                                              |

## Swing-out rotor 11805

### Round bucket 13850 (1 set = 6 pcs)

- Max. capacity: 6 x 1,500 ml
- Max. speed: 5,100 rpm
- Max. RCF: 8,578 x g
- Max. tube length, mid-bucket, without / with cap: 219 / 193 mm
- Hermetically closable with cap 17175
- Tmin at maximum speed: <4°C
- Angle: 90°



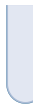
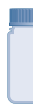
## Swing-out rotor 11806

### Round bucket 13850 (1 set = 6 pcs)

- Max. capacity: 6 x 1,500 ml
- Max. speed: 3,700 rpm
- Max. RCF: 4,515 x g
- Max. tube length, mid-bucket, without / with cap: 219 / 193 mm
- Hermetically closable with cap 17175
- Tmin at maximum speed: <4°C
- Angle: 90°



#### Tube

|                                      |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Rated capacity (filling volume) [ml] | 100 (90)                                                                          | 100                                                                               | 100                                                                               | 150                                                                               | 150                                                                               | 175                                                                               | 175                                                                                 | 200 (168)                                                                           | 200 (170)                                                                           | 200                                                                                 |
| Diameter x length [mm]               | 44 x 100                                                                          | 44 x 100                                                                          | 45 x 100                                                                          | 51 x 99                                                                           | 56 x 113                                                                          | 61 x 118                                                                          | 62 x 139.2                                                                          | 56 x 112                                                                            | 56 x 112                                                                            | 56 x 135                                                                            |
| Tube material                        | Glass                                                                             | Glass                                                                             | PC                                                                                | PP                                                                                | Glass                                                                             | PP                                                                                | PP                                                                                  | PPCO                                                                                | Glass                                                                               | Glass                                                                               |
| Item no.                             | 15106                                                                             | 15100                                                                             | 15103                                                                             | 15125                                                                             | 15206                                                                             | —                                                                                 | 15175                                                                               | 15202                                                                               | 15201                                                                               | 15254                                                                               |

#### Adapter

for round bucket 13850



|                             |  |  |  |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Bore diameter x length [mm] | 45.5 x 77                                                                           | 51.5 x 77                                                                           | 58 x 110                                                                            | 61 x 100                                                                            | 62.5 x 110                                                                            | 57.5 x 77                                                                             | 58 x 110                                                                              |
| Tubes per adapter / rotor   | 2 / 12                                                                              | 1 / 6                                                                               | 1 / 6                                                                               | 1 / 6                                                                               | 1 / 6                                                                                 | 1 / 6                                                                                 | 1 / 6                                                                                 |
| Centrifuging radius [mm]    | 292                                                                                 | 292                                                                                 | 290                                                                                 | 295                                                                                 | 295                                                                                   | 292                                                                                   | 290                                                                                   |
| Item no.                    | 17690**,**                                                                          | 17692*                                                                              | 17695***                                                                            | 17694*                                                                              | 17693*                                                                                | 17696*                                                                                | 17695***                                                                              |

#### Tube

|                                      |  |  |  |  |  |  |  |  |  |
|--------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Rated capacity (filling volume) [ml] | 200                                                                                 | 225                                                                                 | 230 (220)                                                                           | 250 (232)                                                                           | 250 (232)                                                                           | 250                                                                                 | 250                                                                                   | 250                                                                                   | 400                                                                                   |
| Diameter x length [mm]               | 61 x 130                                                                            | 61 x 137                                                                            | 56 x 134                                                                            | 61.4 x 122                                                                          | 61.4 x 122                                                                          | 61.4 x 125                                                                          | 61 x 145                                                                              | 59.7 x 171.2                                                                          | 85 x 118                                                                              |
| Tube material                        | PP                                                                                  | PP                                                                                  | Glass                                                                               | PPCO                                                                                | PF                                                                                  | Stainless steel                                                                     | PP                                                                                    | PP                                                                                    | PPCO                                                                                  |
| Item no.                             | 15174                                                                               | —                                                                                   | 15250                                                                               | 15249                                                                               | 15247                                                                               | 13255                                                                               | —                                                                                     | —                                                                                     | 15401                                                                                 |

#### Adapter

for round bucket 13850



|                             |  |  |  |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Bore diameter x length [mm] | 62.5 x 110                                                                          | 61 x 100                                                                            | 58 x 110                                                                            | 62.5 x 77                                                                           | 62.5 x 110                                                                            | 86 x 107                                                                              | 70 x 110                                                                              |
| Tubes per adapter / rotor   | 1 / 6                                                                               | 1 / 6                                                                               | 1 / 6                                                                               | 1 / 6                                                                               | 1 / 6                                                                                 | 1 / 6                                                                                 | 1 / 6                                                                                 |
| Centrifuging radius [mm]    | 295                                                                                 | 295                                                                                 | 290                                                                                 | 292                                                                                 | 295                                                                                   | 292                                                                                   | 295                                                                                   |
| Item no.                    | 17693*                                                                              | 17694*                                                                              | 17695***                                                                            | 17698*                                                                              | 17693*                                                                                | 13654*                                                                                | 13655                                                                                 |

## Swing-out rotor 11805

## Round bucket 13850 (1 set = 6 pcs)

- Max. capacity: 6 x 1,500 ml
- Max. speed: 5,100 rpm
- Max. RCF: 8,578 x g
- Max. tube length, mid-bucket, without / with cap: 219 / 193 mm
- Hermetically closable with cap 17175
- Tmin at maximum speed: <4°C
- Angle: 90°



## Swing-out rotor 11806

## Round bucket 13850 (1 set = 6 pcs)

- Max. capacity: 6 x 1,500 ml
- Max. speed: 3,700 rpm
- Max. RCF: 4,515 x g
- Max. tube length, mid-bucket, without / with cap: 219 / 193 mm
- Hermetically closable with cap 17175
- Tmin at maximum speed: <4°C
- Angle: 90°



## Tube

|                                      |           |                 |          |            |           |                |           |             |              |
|--------------------------------------|-----------|-----------------|----------|------------|-----------|----------------|-----------|-------------|--------------|
|                                      |           |                 |          |            |           |                |           |             |              |
| Rated capacity (filling volume) [ml] | 500 (435) | 500             | 500      | 500        | 600       | 750 (eff. 680) | 750       | 1,000 (885) | 1,000        |
| Diameter x length [mm]               | 69 x 165  | 69.5 x 152      | 85 x 135 | 95.5 x 147 | 100 x 183 | 85 x 173       | 100 x 127 | 97 x 175    | 97.5 x 195.3 |
| Tube material                        | PPCO      | Stainless steel | PPCO     | PP         | PP        | PPCO           | PPCO      | PPCO        | PPCO         |
| Item no.                             | 15508     | 13507           | 15501    | —          | —         | 15751          | 15917     | 15921       | —            |

## Adapter

for round bucket 13850



|                             |          |          |            |            |          |          |             |              |
|-----------------------------|----------|----------|------------|------------|----------|----------|-------------|--------------|
|                             |          |          |            |            |          |          |             |              |
| Bore diameter x length [mm] | 70 x 110 | 86 x 107 | 96.3 x 100 | 96.3 x 100 | 99 x 110 | 86 x 107 | 101 x 123.4 | 97.8 x 141.7 |
| Tubes per adapter / rotor   | 1 / 6    | 1 / 6    | 1 / 6      | 1 / 6      | 1/6      | 1 / 6    | 1 / 6       | 1 / 6        |
| Centrifuging radius [mm]    | 292      | 292      | 295        | 295        | 289      | 292      | 293         | 292          |
| Item no.                    | 13655*   | 13654*   | 17682*     | 17780      | 17650    | 13654*   | 13851       | 13511*       |

## Tube

|                                      |                 |           |                 |           |
|--------------------------------------|-----------------|-----------|-----------------|-----------|
|                                      |                 |           |                 |           |
| Rated capacity (filling volume) [ml] | 1,000           | 1,000     | 1,300           | 1,500     |
| Diameter x length [mm]               | 100 x 167       | 100 x 185 | 115 x 165       | 115 x 180 |
| Tube material                        | Stainless steel | PPCO      | Stainless steel | PP        |
| Item no.                             | 13510           | 15924     | 13840           | 15931     |

## Adapter

for round bucket 13850



|                             |             |             |           |
|-----------------------------|-------------|-------------|-----------|
|                             |             |             |           |
| Bore diameter x length [mm] | 101 x 123.4 | 101 x 123.4 | 116 x 152 |
| Tubes per adapter / rotor   | 1 / 6       | 1 / 6       | — / 6     |
| Centrifuging radius [mm]    | 293         | 293         | 295       |
| Item no.                    | 13851       | 13851       | —         |

## Swing-out rotor 11805

### Round bucket 13850 (1 set = 6 pcs)

- Max. capacity: 6 x 1,500 ml
- Max. speed: 5,100 rpm
- Max. RCF: 8,578 x g
- Max. tube length, mid-bucket, without / with cap: 219 / 193 mm
- Hermetically closable with cap 17175
- Tmin at maximum speed: <4°C
- Angle: 90°



## Swing-out rotor 11806

### Round bucket 13850 (1 set = 6 pcs)

- Max. capacity: 6 x 1,500 ml
- Max. speed: 3,700 rpm
- Max. RCF: 4,515 x g
- Max. tube length, mid-bucket, without / with cap: 219 / 193 mm
- Hermetically closable with cap 17175
- Tmin at maximum speed: <4°C
- Angle: 90°



### Blood and urine tubes

|                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|--------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                                      |  |  |  |  |  |  |  |  |  |  |
| Rated capacity (filling volume) [ml] | 1.1 – 1.4                                                                         | 2.7 – 5                                                                           | 1.6 – 6                                                                           | 4 – 6                                                                             | 1.8 – 7                                                                           | 4 – 10                                                                             | 9.5 – 10                                                                            | 6 – 10                                                                              | 9 – 10                                                                              | 8                                                                                   |
| Diameter x length with closure [mm]  | 8 x 82                                                                            | 11 x 82 – 108                                                                     | 13 x 81 – 106                                                                     | 13 x 81 – 106                                                                     | 13 x 81 – 107                                                                     | 15 x 91 – 118                                                                      | 15 x 106                                                                            | 16 x 106 – 107                                                                      | 16 x 108                                                                            | 16 x 131                                                                            |
| Tube material                        | PP                                                                                | PP                                                                                | PP                                                                                | PET                                                                               | PET                                                                               | PP                                                                                 | PET                                                                                 | PET                                                                                 | PP                                                                                  | Glass                                                                               |
| Item no.                             | –                                                                                 | –                                                                                 | –                                                                                 | –                                                                                 | –                                                                                 | –                                                                                  | –                                                                                   | –                                                                                   | –                                                                                   | –                                                                                   |

### Adapter

for round bucket 13850



|                             |           |           |           |           |
|-----------------------------|-----------|-----------|-----------|-----------|
| Bore diameter x length [mm] | 12.8 x 52 | 13.8 x 54 | 16.5 x 55 | 17.5 x 55 |
| Tubes per adapter / rotor   | 37 / 222  | 23 / 138  | 20 / 120  | 19 / 114  |
| Centrifuging radius [mm]    | 287       | 289       | 290       | 290       |
| Item no.                    | 17652*    | 17656*    | 17655*    | 17658*    |

# 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

\* Adapter 13851 additionally required for reduction

Swing-out rotor 11805

**Rectangular bucket 13845 (1 set = 6 pcs), each with plate holder 17981 and cap 17122**

- Max. plate height without / with cap: 131 / 108 mm
- Max. speed: 5,100 rpm
- Max. RCF: 7,328 x g
- Max. load per carrier: 700 g
- Hermetically closable with cap 17122
- Tmin at maximum speed: <4°C
- Angle: 90°

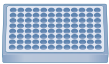
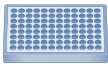


Swing-out rotor 11806

**Rectangular bucket 13845 (1 set = 6 pcs), each with plate holder 17981 and cap 17122**

- Max. plate height without / with cap: 131 / 108 mm
- Max. speed: 3,700 rpm
- Max. RCF: 3,857 x g
- Max. load per carrier: 700 g
- Hermetically closable with cap 17122
- Tmin at maximum speed: <4°C
- Angle: 90°



| Plate                                 |    |  |  |  |  |
|---------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Description                           | MTP (without lid)                                                                   | MTP (with lid)                                                                    | DWP                                                                               | Filter plate                                                                      | 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 60                                                                     | 128 x 86 x 20                                                                      |
| <b>Adapter</b>                        |                                                                                     |                                                                                   |                                                                                   |                                                                                   |                                                                                    |
| for rectangular bucket 13845          |  |                                                                                   |                                                                                   |                                                                                   |                                                                                    |
| Bore diameter x length [mm]           | —                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |
| Plates per rotor (without / with cap) | 48 / 42                                                                             | 42 / 36                                                                           | 12 / 12                                                                           | 12 / 6                                                                            | 36 / 30                                                                            |
| Centrifuging radius [mm]              | 252                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                    |
| Item no.                              | 17981                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                    |

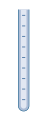


## Swing-out rotor 11806

### Double bucket 13855 (1 set = 6 pcs)

- Max. capacity: 12 x 1,000 ml
- Max. speed: 3,300 rpm
- Max. RCF: 3,579 x g
- Max. tube length mid-bucket: 215 mm
- Tmin at maximum speed: <4°C
- Angle: 90°



| Tube                                 |  |  |  |  |  |  |  |  |  |
|--------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Rated capacity (filling volume) [ml] | 1.5                                                                               | 2                                                                                 | 5                                                                                 | 5                                                                                 | 6 (5)                                                                             | 7                                                                                 | 10                                                                                  | 10                                                                                  | 10                                                                                  |
| Diameter x length [mm]               | 10.7 x 42                                                                         | 10.7 x 42                                                                         | 12 x 75                                                                           | 17 x 60                                                                           | 12 x 100                                                                          | 12 x 100                                                                          | 16.1 x 81.1                                                                         | 16.1 x 81.1                                                                         | 16.1 x 81.1                                                                         |
| Tube material                        | PP                                                                                | PP                                                                                | PS                                                                                | PPCO                                                                              | Glass                                                                             | Glass                                                                             | PF                                                                                  | PC                                                                                  | PPCO                                                                                |
| Item no.                             | 15008                                                                             | 15040                                                                             | 15060                                                                             | —                                                                                 | 15007                                                                             | 15027                                                                             | 15000                                                                               | 15010                                                                               | 15039                                                                               |

### Adapter

for double bucket 13855



|                             |  |  |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Bore diameter x length [mm] | 11.1 x 38.5                                                                         | 12.8 x 52                                                                           | 17 x 52                                                                             | 12.8 x 74                                                                           | 16.5 x 55                                                                             | 17.5 x 55                                                                             |
| Tubes per adapter / rotor   | 26 / 312                                                                            | 37 / 444                                                                            | 12 / 144                                                                            | 32 / 264                                                                            | 20 / 240                                                                              | 19 / 228                                                                              |
| Centrifuging radius [mm]    | 287                                                                                 | 286                                                                                 | 291                                                                                 | 288                                                                                 | 289                                                                                   | 289                                                                                   |
| Item no.                    | 17653                                                                               | 17652                                                                               | 17211                                                                               | 17654                                                                               | 17655                                                                                 | 17658                                                                                 |

| Tube                                 |  |  |  |  |  |  |  |  |  |
|--------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Rated capacity (filling volume) [ml] | 10                                                                                  | 14                                                                                  | 14                                                                                  | 15 (13)                                                                             | 15                                                                                  | 25                                                                                  | 25                                                                                    | 25                                                                                    | 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                                                                             |
| Tube material                        | Glass                                                                               | PS                                                                                  | PP                                                                                  | Glass                                                                               | PP                                                                                  | PP                                                                                  | Glass                                                                                 | Glass                                                                                 | PF                                                                                    |
| Item no.                             | 15024                                                                               | 15020                                                                               | 15023                                                                               | 15022                                                                               | 15115                                                                               | —                                                                                   | 15025                                                                                 | 15026                                                                                 | 15029                                                                                 |

### Adapter

for double bucket 13855



|                             |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Bore diameter x length [mm] | 17.5 x 55                                                                           | 17 x 78.5                                                                           | 25.5 x 70                                                                            | 25.5 x 77                                                                             |
| Tubes per adapter / rotor   | 19 / 228                                                                            | 12 / 144                                                                            | 7 / 84                                                                               | 8 / 96                                                                                |
| Centrifuging radius [mm]    | 289                                                                                 | 292                                                                                 | 284                                                                                  | 291                                                                                   |
| Item no.                    | 17658                                                                               | 17659                                                                               | 17662                                                                                | 17670                                                                                 |

## Swing-out rotor 11806

### Double bucket 13855 (1 set = 6 pcs)

- Max. capacity: 12 x 1,000 ml
- Max. speed: 3,300 rpm
- Max. RCF: 3,579 x g
- Max. tube length mid-bucket: 215 mm
- Tmin at maximum speed: <4°C
- Angle: 90°



#### Tube

|                                      |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Rated capacity (filling volume) [ml] | 30 (28)                                                                           | 30                                                                                | 30                                                                                | 50 (38)                                                                           | 50 (43)                                                                           | 50                                                                                | 50                                                                                  | 50                                                                                  | 50                                                                                  | 50                                                                                  |
| Diameter x length [mm]               | 25.3 x 98                                                                         | 24 x 105                                                                          | 25 x 107                                                                          | 28.8 x 107                                                                        | 28.5 x 107                                                                        | 28.5 x 101.5                                                                      | 34 x 100                                                                            | 34 x 100                                                                            | 34 x 100                                                                            | 35 x 100                                                                            |
| Tube material                        | PC                                                                                | Glass                                                                             | PP                                                                                | PPCO                                                                              | PF                                                                                | Stainless steel                                                                   | Glass                                                                               | Glass                                                                               | PC                                                                                  | Glass                                                                               |
| Item no.                             | 15030                                                                             | 15033                                                                             | —                                                                                 | 15052                                                                             | 15051                                                                             | 13055                                                                             | 15045                                                                               | 15050                                                                               | 15049                                                                               | 15056                                                                               |

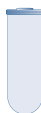
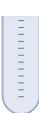
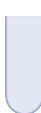
#### Adapter

for double bucket 13855



|                             |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Bore diameter x length [mm] | 25.5 x 77                                                                           | 25.5 x 70                                                                           | 29.5 x 77                                                                           | 35.5 x 77.5                                                                           |
| Tubes per adapter / rotor   | 8 / 96                                                                              | 7 / 84                                                                              | 7 / 84                                                                              | 4 / 48                                                                                |
| Centrifuging radius [mm]    | 291                                                                                 | 284                                                                                 | 291                                                                                 | 291                                                                                   |
| Item no.                    | 17670                                                                               | 17662                                                                               | 17676                                                                               | 17675                                                                                 |

#### Tube

|                                      |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Rated capacity (filling volume) [ml] | 50                                                                                  | 50                                                                                  | 85 (73)                                                                             | 85 (76)                                                                             | 94 (85)                                                                             | 94                                                                                  | 100 (75)                                                                              | 100 (90)                                                                              | 100                                                                                   | 100                                                                                   |
| Diameter x length [mm]               | 29 x 117                                                                            | 29 x 117                                                                            | 38 x 112                                                                            | 38 x 112                                                                            | 38 x 103                                                                            | 38 x 110                                                                            | 44 x 100                                                                              | 44 x 100                                                                              | 44 x 100                                                                              | 45 x 100                                                                              |
| Tube material                        | PP                                                                                  | PP                                                                                  | PF                                                                                  | PPCO                                                                                | Stainless steel                                                                     | PC                                                                                  | Glass                                                                                 | Glass                                                                                 | Glass                                                                                 | PC                                                                                    |
| Item no.                             | —                                                                                   | 15151                                                                               | 15080                                                                               | 15076                                                                               | 13085                                                                               | 15094                                                                               | 15078                                                                                 | 15106                                                                                 | 15100                                                                                 | 15103                                                                                 |

#### Adapter

for double bucket 13855



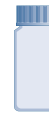
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|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Bore diameter x length [mm] | 29.5 x 74                                                                           | 29.5 x 78.5                                                                         | 38.5 x 77                                                                           | 45.5 x 77                                                                             |
| Tubes per adapter / rotor   | 5 / 60                                                                              | 5 / 60                                                                              | 3 / 36                                                                              | 2 / 24                                                                                |
| Centrifuging radius [mm]    | 288                                                                                 | 292                                                                                 | 291                                                                                 | 291                                                                                   |
| Item no.                    | 17678                                                                               | 17677                                                                               | 17685                                                                               | 17690*                                                                                |

## Swing-out rotor 11806

### Double bucket 13855 (1 set = 6 pcs)

- Max. capacity: 12 x 1,000 ml
- Max. speed: 3,300 rpm
- Max. RCF: 3,579 x g
- Max. tube length mid-bucket: 215 mm
- Tmin at maximum speed: <4°C
- Angle: 90°



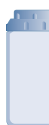
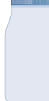
| Tube                                 |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Rated capacity (filling volume) [ml] | 150                                                                               | 150                                                                               | 175                                                                               | 175                                                                               | 200 (168)                                                                         | 200 (170)                                                                         | 200                                                                                 | 200                                                                                 | 225                                                                                 | 230 (220)                                                                           |
| Diameter x length [mm]               | 51 x 99                                                                           | 56 x 113                                                                          | 61 x 118                                                                          | 62 x 139.2                                                                        | 56 x 112                                                                          | 56 x 112                                                                          | 56 x 135                                                                            | 61 x 130                                                                            | 61 x 137                                                                            | 56 x 134                                                                            |
| Tube material                        | PP                                                                                | Glass                                                                             | PP                                                                                | PP                                                                                | PPCO                                                                              | Glass                                                                             | Glass                                                                               | PP                                                                                  | PP                                                                                  | Glass                                                                               |
| Item no.                             | 15125                                                                             | 15206                                                                             | —                                                                                 | 15175                                                                             | 15202                                                                             | 15201                                                                             | 15254                                                                               | 15174                                                                               | —                                                                                   | 15250                                                                               |

### Adapter

for double bucket 13855



|                             |  |  |  |  |  |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Bore diameter x length [mm] | 51.5 x 77                                                                           | 58 x 110                                                                            | 61 x 100                                                                            | 62.5 x 110                                                                          | 57.5 x 77                                                                           | 58 x 110                                                                              | 62.5 x 110                                                                            | 61 x 100                                                                              | 58 x 110                                                                              |
| Tubes per adapter / rotor   | 1 / 12                                                                              | 1 / 12                                                                              | 1 / 12                                                                              | 1 / 12                                                                              | 1 / 12                                                                              | 1 / 12                                                                                | 1 / 12                                                                                | 1 / 12                                                                                | 1 / 12                                                                                |
| Centrifuging radius [mm]    | 291                                                                                 | 289                                                                                 | 294                                                                                 | 295                                                                                 | 291                                                                                 | 289                                                                                   | 295                                                                                   | 294                                                                                   | 289                                                                                   |
| Item no.                    | 17692                                                                               | 17695*                                                                              | 17694                                                                               | 17693                                                                               | 17696                                                                               | 17695*                                                                                | 17693                                                                                 | 17694                                                                                 | 17695*                                                                                |

| Tube                                 |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Rated capacity (filling volume) [ml] | 250 (232)                                                                           | 250 (232)                                                                           | 250                                                                                 | 250                                                                                 | 250                                                                                 | 400                                                                                   | 500 (435)                                                                             | 500 (435)                                                                             | 500                                                                                   | 500                                                                                   |
| Diameter x length [mm]               | 61.4 x 122                                                                          | 61.4 x 122                                                                          | 61.4 x 125                                                                          | 61 x 145                                                                            | 59.7 x 171.2                                                                        | 85 x 118                                                                              | 69 x 165                                                                              | 69 x 165                                                                              | 69.5 x 152                                                                            | 85 x 135                                                                              |
| Tube material                        | PPCO                                                                                | PF                                                                                  | Stainless steel                                                                     | PP                                                                                  | PP                                                                                  | PPCO                                                                                  | PF                                                                                    | PPCO                                                                                  | Stainless steel                                                                       | PPCO                                                                                  |
| Item no.                             | 15249                                                                               | 15247                                                                               | 13255                                                                               | —                                                                                   | —                                                                                   | 15401                                                                                 | 15507                                                                                 | 15508                                                                                 | 13507                                                                                 | 15501                                                                                 |

### Adapter

for double bucket 13855



|                             |  |  |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Bore diameter x length [mm] | 62.5 x 77                                                                           | 62.5 x 77                                                                           | 62.5 x 110                                                                          | 86 x 107                                                                             | 70 x 110                                                                              | 86 x 107                                                                              |
| Tubes per adapter / rotor   | 1 / 12                                                                              | 1 / 12                                                                              | 1 / 12                                                                              | 1 / 12                                                                               | 1 / 12                                                                                | 1 / 12                                                                                |
| Centrifuging radius [mm]    | 291                                                                                 | 291                                                                                 | 294                                                                                 | 291                                                                                  | 294                                                                                   | 291                                                                                   |
| Item no.                    | 17698                                                                               | 17698                                                                               | 17693                                                                               | 13654                                                                                | 13655                                                                                 | 13654                                                                                 |

\* Including rubber cushion 16250

## Swing-out rotor 11806

### Double bucket 13855 (1 set = 6 pcs)

- Max. capacity: 12 x 1,000 ml
- Max. speed: 3,300 rpm
- Max. RCF: 3,579 x g
- Max. tube length mid-bucket: 215 mm
- Tmin at maximum speed: <4°C
- Angle: 90°



### Tube

|                                      |  |  |  |  |  |  |
|--------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Rated capacity (filling volume) [ml] | 500                                                                               | 750 (680)                                                                         | 750                                                                               | 1000 (885)                                                                        | 1000                                                                              | 1000                                                                              |
| Diameter x length [mm]               | 95.5 x 147                                                                        | 85 x 173                                                                          | 100 x 127                                                                         | 97 x 175                                                                          | 100 x 167                                                                         | 100 x 185                                                                         |
| Tube material                        | PP                                                                                | PPCO                                                                              | PPCO                                                                              | PPCO                                                                              | Stainless steel                                                                   | PPCO                                                                              |
| Item no.                             | —                                                                                 | 15751                                                                             | 15917                                                                             | 15921                                                                             | 13510                                                                             | 15924                                                                             |

### Adapter

for double bucket 13855



|                             |  |  |  |  |           |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------|
| Bore diameter x length [mm] | 96.3 x 110                                                                          | 86 x 107                                                                            | 101 x 146                                                                           | 97.8 x 143                                                                          | 101 x 146 |
| Tubes per adapter / rotor   | 1 / 12                                                                              | 1 / 12                                                                              | — / 12                                                                              | 1 / 12                                                                              | — / 12    |
| Centrifuging radius [mm]    | 294                                                                                 | 291                                                                                 | 294                                                                                 | 293                                                                                 | 294       |
| Item no.                    | 17682                                                                               | 13654                                                                               | —                                                                                   | 13511                                                                               | —         |

### Blood and urine tubes

|                                      |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Rated capacity (filling volume) [ml] | 1.1 – 1.4                                                                           | 2.7 – 5                                                                             | 1.6 – 6                                                                             | 4 – 6                                                                               | 1.8 – 7                                                                             | 4 – 10                                                                              | 9.5 – 10                                                                              | 6 – 10                                                                                | 9 – 10                                                                                | 8                                                                                     |
| Diameter x length with closure [mm]  | 8 x 82                                                                              | 11 x 82–108                                                                         | 13 x 81–106                                                                         | 13 x 81–106                                                                         | 13 x 81–107                                                                         | 15 x 91–118                                                                         | 15 x 106                                                                              | 16 x 106–107                                                                          | 16 x 108                                                                              | 16 x 131                                                                              |
| Tube material                        | PP                                                                                  | PP                                                                                  | PP                                                                                  | PET                                                                                 | PET                                                                                 | PP                                                                                  | PET                                                                                   | PET                                                                                   | PP                                                                                    | Glass                                                                                 |
| Item no.                             | —                                                                                   | —                                                                                   | —                                                                                   | —                                                                                   | —                                                                                   | —                                                                                   | —                                                                                     | —                                                                                     | —                                                                                     | —                                                                                     |

### Adapter

for double bucket 13855



|                             |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Bore diameter x length [mm] | 12.8 x 52                                                                           | 13.8 x 54                                                                           | 16.5 x 55                                                                             | 17.5 x 55                                                                             |
| Tubes per adapter / rotor   | 37 / 444                                                                            | 23 / 276                                                                            | 20 / 240                                                                              | 19 / 228                                                                              |
| Centrifuging radius [mm]    | 286                                                                                 | 288                                                                                 | 289                                                                                   | 289                                                                                   |
| Item no.                    | 17652                                                                               | 17656                                                                               | 17655                                                                                 | 17658                                                                                 |

## Fixed-angle rotor 12505

- Max. capacity: 6 x 500 ml
- Max. speed: 10,500 rpm
- Max. RCF: 20,461 x g
- Hermetically closable with aluminium lid 17891
- Tmin at maximum speed: <4°C
- Angle: 30°



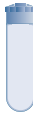
| Tube                                 |  |  |  |  |  |  |  |  |  |
|--------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Rated capacity (filling volume) [ml] | 1.5                                                                               | 2                                                                                 | 10                                                                                | 10                                                                                | 10                                                                                | 15                                                                                  | 30 (26)                                                                             | 30 (26)                                                                             | 30 (28)                                                                             |
| Diameter x length [mm]               | 10.7 x 42                                                                         | 10.7 x 42                                                                         | 16.1 x 81.1                                                                       | 16.1 x 81.1                                                                       | 16.1 x 81.1                                                                       | 16.5 x 120                                                                          | 25.3 x 98                                                                           | 25.3 x 98                                                                           | 25.3 x 98                                                                           |
| Tube material                        | PP                                                                                | PP                                                                                | PF                                                                                | PC                                                                                | PPCO                                                                              | PP                                                                                  | PF                                                                                  | PPCO                                                                                | PC                                                                                  |
| Item no.                             | 15008                                                                             | 15040                                                                             | 15000                                                                             | 15010                                                                             | 15039                                                                             | 15115                                                                               | 15029                                                                               | 15032                                                                               | 15030                                                                               |

### Adapter

for fixed-angle rotor 12505



| Adapter                     |  |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Bore diameter x length [mm] | 11.1 x 38.5                                                                         | 16.5 x 69                                                                           | 29.5 x 102                                                                           | 17.7 x 107                                                                            | 26 x 83                                                                               |
| Tubes per adapter / rotor   | 12 / 72                                                                             | 8 / 48                                                                              | 2 / 12                                                                               | 5 / 30                                                                                | 3 / 18                                                                                |
| Centrifuging radius [mm]    | 128                                                                                 | 159                                                                                 | 130                                                                                  | 163                                                                                   | 147                                                                                   |
| Item no.                    | 14151                                                                               | 14144                                                                               | 14148*                                                                               | 14149                                                                                 | 14146                                                                                 |

| Tube                                 |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Rated capacity (filling volume) [ml] | 50 (38)                                                                             | 50 (43)                                                                             | 50                                                                                  | 50                                                                                  | 85 (73)                                                                             | 85 (76)                                                                             | 94 (85)                                                                               | 94                                                                                    | 175                                                                                   | 200                                                                                   |
| Diameter x length [mm]               | 28.8 x 107                                                                          | 28.5 x 107                                                                          | 28.5 x 101.5                                                                        | 29 x 117                                                                            | 38 x 112                                                                            | 38 x 112                                                                            | 38 x 103                                                                              | 38 x 110                                                                              | 61.5 x 139.2                                                                          | 61 x 130                                                                              |
| Tube material                        | PPCO                                                                                | PF                                                                                  | Stainless steel                                                                     | PP                                                                                  | PF                                                                                  | PPCO                                                                                | Stainless steel                                                                       | PC                                                                                    | PP                                                                                    | PP                                                                                    |
| Item no.                             | 15052                                                                               | 15051                                                                               | 13055                                                                               | 15151                                                                               | 15080                                                                               | 15076                                                                               | 13085                                                                                 | 15094                                                                                 | 15175                                                                                 | 15174                                                                                 |

### Adapter

for fixed-angle rotor 12505



| Adapter                     |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Bore diameter x length [mm] | 29.5 x 97                                                                           | 29.5 x 102                                                                          | 38.5 x 99                                                                             | 62 x 127                                                                              |
| Tubes per adapter / rotor   | 2 / 12                                                                              | 2 / 12                                                                              | 1 / 6                                                                                 | 1 / 6                                                                                 |
| Centrifuging radius [mm]    | 161                                                                                 | 125                                                                                 | 163                                                                                   | 166                                                                                   |
| Item no.                    | 14150                                                                               | 14148*                                                                              | 14153                                                                                 | 14157                                                                                 |

\* Combo adapter for 2 x 15 ml and 2 x 50 ml culture tubes

Fixed-angle rotor 12505

- Max. capacity: 6 x 500 ml
- Max. speed: 10,500 rpm
- Max. RCF: 20,461 x g
- Hermetically closable with aluminium lid 17891
- Tmin at maximum speed: <4°C
- Angle: 30°



Tube

| Tube                                 |  |  |  |  |  |  |           |                 |
|--------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------|-----------------|
| Rated capacity (filling volume) [ml] | 250 (232)                                                                         | 250 (232)                                                                         | 250                                                                               | 250                                                                               | 250                                                                                | 500 (435)                                                                           | 500 (435) | 500             |
| Diameter x length [mm]               | 61.4 x 122                                                                        | 61.4 x 122                                                                        | 61.4 x 125                                                                        | 59.7 x 171.2                                                                      | 61 x 145                                                                           | 69 x 165                                                                            | 69 x 165  | 69.5 x 152      |
| Tube material                        | PF                                                                                | PPCO                                                                              | Stainless steel                                                                   | PP                                                                                | PP                                                                                 | PF                                                                                  | PPCO      | Stainless steel |
| Item no.                             | 15247                                                                             | 15249                                                                             | 13255                                                                             | —                                                                                 | —                                                                                  | 15507                                                                               | 15508     | 13507           |

Adapter

for fixed-angle  
rotor  
12505



|                             |                                                                                     |                                                                                     |                                                                                      |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|                             |  |  |  |
| Bore diameter x length [mm] | 62 x 115                                                                            | 62 x 127                                                                            | 69.9 x 142                                                                           |
| Tubes per adapter / rotor   | 1 / 6                                                                               | 1 / 6                                                                               | 1 / 6                                                                                |
| Centrifuging radius [mm]    | 156                                                                                 | 166                                                                                 | 166                                                                                  |
| Item no.                    | 14155                                                                               | 14157                                                                               | —                                                                                    |



## Fixed-angle rotor 12510

### with 6 stainless steel adapters 13511

- Max. capacity: 6 x 1,000 ml
- Max. speed: 7,000 rpm
- Max. RCF: 11,285 x g
- Hermetically closable with aluminium lid 17892
- Tmin at maximum speed: <4°C
- Angle: 25°



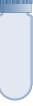
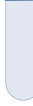
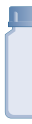
| Tube                                 |  |  |  |  |  |  |  |  |  |
|--------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Rated capacity (filling volume) [ml] | 1.5                                                                               | 2                                                                                 | 10                                                                                | 10                                                                                | 10                                                                                | 15                                                                                 | 30 (26)                                                                             | 30 (26)                                                                             | 50 (38)                                                                             |
| Diameter x length [mm]               | 10.7 x 42                                                                         | 10.7 x 42                                                                         | 16.1 x 81.1                                                                       | 16.1 x 81.1                                                                       | 16.1 x 81.1                                                                       | 16.5 x 120                                                                         | 25.3 x 98                                                                           | 25.3 x 98                                                                           | 28.8 x 107                                                                          |
| Tube material                        | PP                                                                                | PP                                                                                | PF                                                                                | PC                                                                                | PPCO                                                                              | PP                                                                                 | PF                                                                                  | PPCO                                                                                | PPCO                                                                                |
| Item no.                             | 15008                                                                             | 15040                                                                             | 15000                                                                             | 15010                                                                             | 15039                                                                             | 15115                                                                              | 15029                                                                               | 15032                                                                               | 15052                                                                               |

### Adapter

for fixed-angle rotor 12510



|                             |             |           |          |         |           |
|-----------------------------|-------------|-----------|----------|---------|-----------|
| Bore diameter x length [mm] | 11.1 x 38.5 | 16.5 x 69 | 17 x 107 | 26 x 83 | 29.5 x 98 |
| Tubes per adapter / rotor   | 26 / 156    | 9 / 54    | 12 / 72  | 8 / 48  | 7 / 42    |
| Centrifuging radius [mm]    | 185         | 195       | 203      | 194     | 199       |
| Item no.                    | 14162       | 14164     | 14165    | 14167   | 14169     |

| Tube                                 |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Rated capacity (filling volume) [ml] | 50 (43)                                                                             | 50                                                                                  | 50                                                                                  | 85 (73)                                                                             | 85 (76)                                                                             | 94 (85)                                                                             | 94                                                                                    | 175                                                                                   | 200                                                                                   | 250 (232)                                                                             |
| Diameter x length [mm]               | 28.5 x 107                                                                          | 28.5 x 101.5                                                                        | 29 x 117                                                                            | 38 x 112                                                                            | 38 x 112                                                                            | 38 x 103                                                                            | 38 x 110                                                                              | 61.5 x 139.2                                                                          | 61 x 130                                                                              | 61.4 x 122                                                                            |
| Tube material                        | PF                                                                                  | Stainless steel                                                                     | PP                                                                                  | PF                                                                                  | PPCO                                                                                | Stainless steel                                                                     | PC                                                                                    | PP                                                                                    | PP                                                                                    | PPCO                                                                                  |
| Item no.                             | 15051                                                                               | 13055                                                                               | 15151                                                                               | 15080                                                                               | 15076                                                                               | 13085                                                                               | 15094                                                                                 | 15175                                                                                 | 15174                                                                                 | 15249                                                                                 |

### Adapter

for fixed-angle rotor 12510



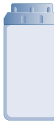
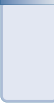
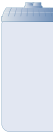
|                             |           |            |           |          |            |
|-----------------------------|-----------|------------|-----------|----------|------------|
| Bore diameter x length [mm] | 29.5 x 98 | 29.5 x 102 | 38.5 x 99 | 62 x 130 | 62.5 x 106 |
| Tubes per adapter / rotor   | 7 / 42    | 5 / 30     | 3 / 18    | 1 / 6    | 1 / 6      |
| Centrifuging radius [mm]    | 199       | 198        | 195       | 206      | 202        |
| Item no.                    | 14169     | 14171      | 14174     | 14177    | 14178      |

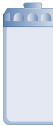
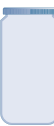
Fixed-angle rotor 12510

with 6 stainless steel adapters 13511

- Max. capacity: 6 x 1,000 ml
- Max. speed: 7,000 rpm
- Max. RCF: 11,285 x g
- Hermetically closable with aluminium lid 17892
- Tmin at maximum speed: <4°C
- Angle: 25°



| Tube                                 |    |    |    |      |      |    |  |  |  |  |
|--------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Rated capacity (filling volume) [ml] | 250 (232)                                                                           | 250                                                                                 | 250                                                                                 | 250                                                                                   | 500 (435)                                                                             | 500 (435)                                                                             | 500                                                                                 | 500                                                                                 | 1,000 (885)                                                                         | 1,000                                                                               |
| Diameter x length [mm]               | 61.4 x 122                                                                          | 61.4 x 125                                                                          | 59.7 x 171.2                                                                        | 61 x 145                                                                              | 69 x 165                                                                              | 69 x 165                                                                              | 69.5 x 152                                                                          | 95.5 x 147                                                                          | 97 x 175                                                                            | 97.5 x 195.3                                                                        |
| Tube material                        | PF                                                                                  | Stainless steel                                                                     | PP                                                                                  | PP                                                                                    | PF                                                                                    | PPCO                                                                                  | Stainless steel                                                                     | PP                                                                                  | PPCO                                                                                | PPCO                                                                                |
| Item no.                             | 15247                                                                               | 13255                                                                               | —                                                                                   | —                                                                                     | 15507                                                                                 | 15508                                                                                 | 13507                                                                               | —                                                                                   | 15921                                                                               | —                                                                                   |
| Adapter                              |  |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| for fixed-angle rotor 12510          |  |  |  |  |  |  |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Bore diameter x length [mm]          | 62.5 x 106                                                                          | 62 x 130                                                                            | 70 x 140                                                                            | 96.3 x 110                                                                            | 97.8 x 143                                                                            | 97.8 x 143                                                                            |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Tubes per adapter / rotor            | 1 / 6                                                                               | 1 / 6                                                                               | 1 / 6                                                                               | 1 / 6                                                                                 | 1 / 6                                                                                 | 1 / 6                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Centrifuging radius [mm]             | 202                                                                                 | 205                                                                                 | 206                                                                                 | 206                                                                                   | 205                                                                                   | 205                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Item no.                             | 14178                                                                               | 14177                                                                               | 14180                                                                               | 14182                                                                                 | 13511                                                                                 | 13511*                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

| Tube                                 |  |  |
|--------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Rated capacity (filling volume) [ml] | 1,000                                                                               | 1,000                                                                               |
| Diameter x length [mm]               | 100 x 185                                                                           | 100 x 167                                                                           |
| Tube material                        | PPCO                                                                                | Stainless steel                                                                     |
| Item no.                             | 15924                                                                               | 13510                                                                               |
| Adapter                              |  |                                                                                     |
| for fixed-angle rotor 12510          |  |                                                                                     |
| Bore diameter x length [mm]          | 101 x 155                                                                           |                                                                                     |
| Tubes per adapter / rotor            | — / 6                                                                               |                                                                                     |
| Centrifuging radius [mm]             | 206                                                                                 |                                                                                     |
| Item no.                             | —                                                                                   |                                                                                     |

\*\* Only possible without lid 17892

# 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        |
| 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          |
| 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: timer after setpoint speed reached, capacity for 60 programs, password protection against unintentional alteration of run parameters, rotor cycle counter. Those are just a few of the highlights that make the Spincontrol S controller a highly versatile system that will help you 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.

|                                                               |                                        |
|---------------------------------------------------------------|----------------------------------------|
| 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 indicator                                            | +                                      |
| 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                                | +, +                                   |
| Pre-cooling program                                           | +                                      |
| 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 <sup>3</sup>              | +                                      |
| Lockable controller with password protection                  | +                                      |
| Microprocessor control                                        | +                                      |

### Spincontrol S

Get more information.  
View our video:  
[www.sigma-zentrifugen.de/en/v/spincontrol](http://www.sigma-zentrifugen.de/en/v/spincontrol)



# Premium quality

## Made in Germany

The Sigma 8KS meets the highest technical requirements for laboratory centrifuges. Developed and produced at our facility in Osterode, Germany, it is a high-performance, durable and energy-efficient quality product and conforms 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 8KS

|                                                                   |                 |
|-------------------------------------------------------------------|-----------------|
| <b>Max. capacity [ml]</b>                                         |                 |
| Swing-out rotor                                                   | 12 x 1,000      |
| Fixed-angle rotor                                                 | 6 x 1,000       |
| <b>Max. RCF</b>                                                   | 20,461          |
| <b>Maximum speed [rpm]</b>                                        | 10,500          |
| <b>Minimum speed [rpm]</b>                                        | 100             |
| <b>Noise level at maximum speed (approximate) [dB(A)]</b>         |                 |
| Swing-out rotor 11805 with bucket 13850 in item no. 10631 / 10633 | ≤ 57 / 55       |
| Fixed-angle rotor 12510 with lid 17892 in item no. 10631 / 10633  | ≤ 67 / 54       |
| <b>Max. acceleration time [s]</b>                                 |                 |
| Swing-out rotor 11805 with bucket 13850                           | ≤ 59            |
| Fixed-angle rotor 12510 with lid 17892                            | ≤ 82            |
| <b>Max. braking time [s]</b>                                      |                 |
| Swing-out rotor 11805 with bucket 13850                           | ≤ 83            |
| Fixed-angle rotor 12510 with lid 17892                            | ≤ 93            |
| <b>Temperature adjustment range [°C]</b>                          | -20 – +40       |
| <b>Power consumption [W]</b>                                      | 6,500           |
| <b>Height x width x depth [mm]</b>                                | 980 x 810 x 910 |
| <b>Height with open lid [mm]</b>                                  | 1,690           |
| <b>Weight without rotor [kg]</b>                                  | 450             |
| <b>Refrigerant</b>                                                | R452A           |
| Filling quantity [kg] / Max. permissible pressure [bar]           | 2.280 / 28      |
| CO <sub>2</sub> equivalent [t]                                    | 4.879           |

### Sigma Service

For maintenance and repairs please contact our Service department at [www.sigma-zentrifugen.de/en/service](http://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 documents (item no. 170000)

IQOQ on site (upon request)

### Sigma 8KS centrifuge

3 x 400 V, 50 Hz, air-cooled compressor (item no. 10631)

3 x 400 V, 50 Hz, water-cooled compressor (item no. 10633)

### Sigma 8KS GMP

3 x 400 V, 50 Hz, water-cooling (item no. 91300)

### Sigma 8KS inert gas

3 x 400 V, 50 Hz, inert gas injection system (item no. 91301)



# 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

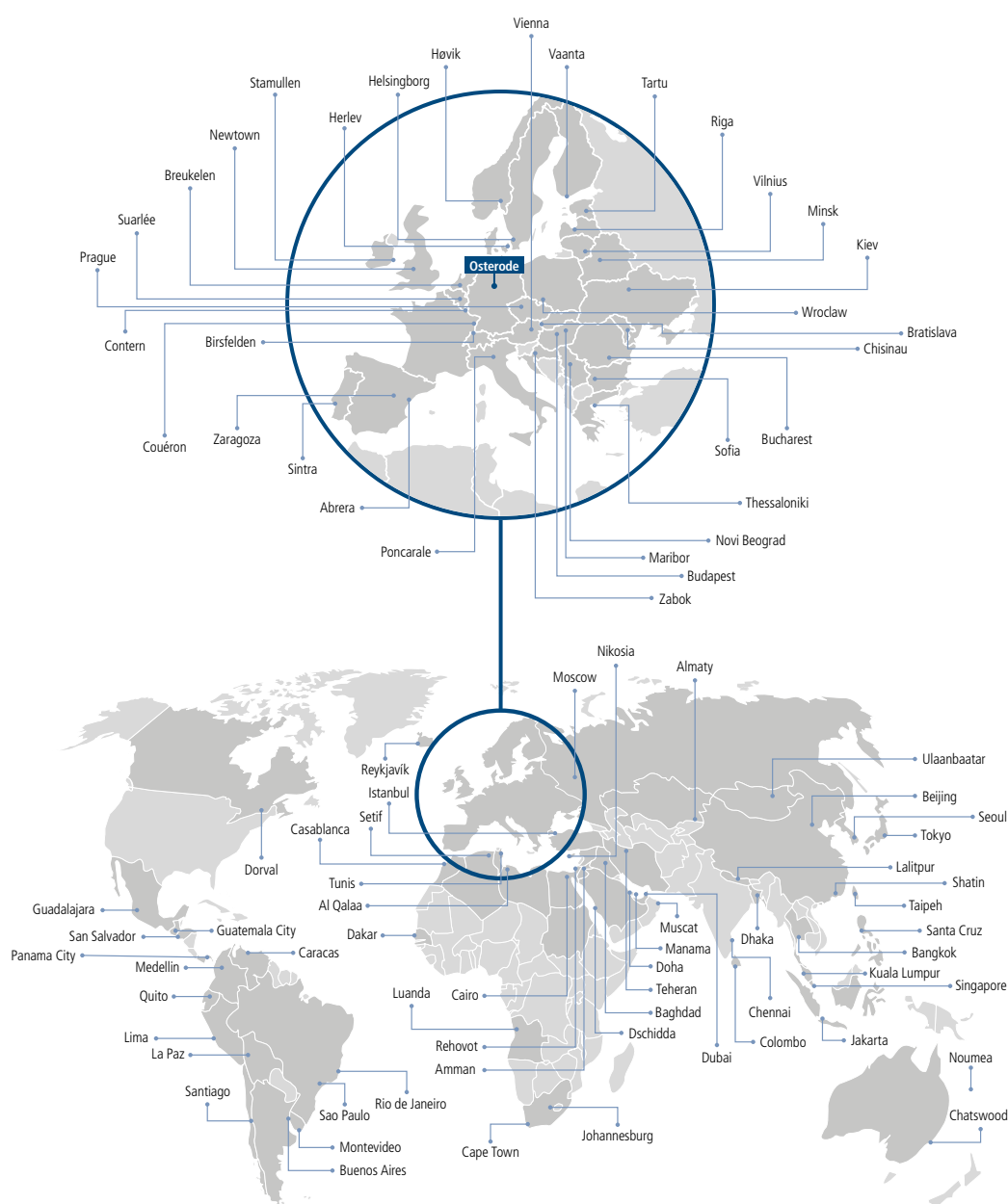
**Legend**

- Max. capacity
- Max. speed
- Max. RCF
- Swing-out rotor
- Fixed-angle rotor

# 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/en/sales-partners/](http://www.sigma-zentrifugen.de/en/sales-partners/)



**Sigma Laborzentrifugen GmbH**

An der Unteren Söse 50

37520 Osterode am Harz

Tel. +49 (0) 55 22 / 50 07-0

Fax +49 (0) 55 22 / 50 07-12

[info@sigma-zentrifugen.de](mailto:info@sigma-zentrifugen.de)

[www.sigma-zentrifugen.de](http://www.sigma-zentrifugen.de)