turns more than heads

Sigma 6-16S
Sigma 6-16HS
Sigma 6-16KS
Sigma 6-16KHS

Benchtop centrifuge

- Unrefrigerated
- Heatable
- Refrigerated
- Refrigerated/ heatable

www.sigma-zentrifugen.de

High performance and versatility

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.

Designed for universal deployment, the Sigma 6-16 series of centrifuges is suitable for a wide variety of routine and research applications. Along with high throughput with fixed-angle and swing-out rotors, they feature impressive RCF values up to 25,419 x g. Laboratory staff and scientists around the world appreciate the high versatility, advanced user interface and outstanding reliability.

Particularly due to the ability to use large-volume fixed-angle rotors with high RCF, the centrifuges cover a distinctly broader range of applications compared to competitive units. A unique feature is the maximum capacity of up to 6 x 500 ml in a fixed-angle rotor with RCF up to 17,207 x g.

In addition to the unrefrigerated Sigma 6-16S and the refrigerated Sigma 6-16KS, a heated version (Sigma 6-16HS) is available with precisely adjustable temperature in the range of 0 °C to +70 °C. This model is specifically optimised for the determination of water content in crude petroleum and derivative products in accordance with the ASTM method. The portfolio is rounded out by the refrigerable and heatable model 6-16KHS, which is especially suitable for applications where the viscosity of the specimens must be reduced.

Multitalent for the most demanding expectations

Intuitive, powerful and safe

The Sigma 6-16 series of centrifuges is designed for research tasks as well as routine procedures in laboratory operations. They are frequently used in microbiology, molecular biology, pharmacology, genetics, bioproduction, cell culture, clinical diagnostics, and transfusion facilities.
Along with impressive performance specifications, this series of devices features intuitive operation and well-considered features. The patented one-knob Spincontrol S controller provides superior operating convenience, safety and versatility. Thanks to the intuitive user interface and clearly organised menu structure, operating parameters can be entered and adjusted quickly. The acceleration and braking curves (30 each) facilitate optimisation of separation runs and results. Routine procedures can be stored with user-defined names and quickly retrieved from the integrated process library. With automatic rotor identification, run time and speed monitoring, password-protected access to the controller and secure program storage, the centrifuges stand for uncompromising safety.

Sigma 6-16S
- Universal benchtop centrifuge
- Speed range up to 13,500 rpm
- Maximum capacity: 4 x 1,000 ml
- User-friendly Spincontrol S controller
- Extra large TFT display
- 60 programs
- Compact, space-saving unit
- Low noise level
- Automatic rotor identification
- Zero-maintenance induction motor
- Motorised lid lock
- Automatic imbalance monitoring
- Rotor life monitoring for high safety
- Easily cleaned stainless steel chamber
- Window in lid for external speed monitoring
- Manufactured according to the latest national and international standards (e.g. EN 61010-2-020)

Sigma 6-16HS
All features of the Sigma 6-16S, plus:
- Heatable, non-refrigerated centrifuge
- Temperature setting range: 0°C to +70°C
- Optimised for measurement of water content in crude petroleum and derivative products (per ASTM)

Sigma 6-16KS
All features of the Sigma 6-16S, plus:
- Speed range up to 15,000 rpm
- High-performance cooling
- Temperature setting range: -20 °C to +40 °C
- Pre-cooling program
- Rotor cooling also possible at standstill

Options
- GMP version with water-cooled compressor and special housing
- Inert gas version with inert gas injection system

Sigma 6-16KHS
All features of the Sigma 6-16KS, plus:
- Heatable refrigerated centrifuge
- Standstill cooling or heating
- Temperature setting range: -20 °C to +60 °C

Option
- Inert gas version with inert gas injection system

Rotors and accessories

Large selection and a multitude of applications

The compact Sigma 6-16 series devices are available with numerous swing-out and fixed-angle rotors, various buckets and adapters. A total of 12 fixed-angle and 6 swing-out rotors are available. The extensive accessories accept tubes from 0.2 ml to 1,000 ml as well as blood bags, petroleum tubes, microtiter plates and deep-well plates.

The swing-out rotors can hold up to 4 litre (4 x 1,000 ml) or (for example) up to 96 conical 15 ml tubes or 40 conical 50 ml tubes. In many cases the configurations achieve best-in-class RCF for this centrifuge segment. Unique in the domain of fixed-angle rotors are the 6 x 500 ml rotor with a maximum RCF of 17,207 x g and the 6 x 250 ml fixed-angle rotor with a maximum RCF of more than 20,300 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 rotors starting on page 9

▸ p.9

Swing-out rotor 11660 / 11650*

- Max. capacity: 4 x 1,000 ml
- Max. speed (6-16S / 6-16KS): 4,200 / 5,100 rpm
- Max. RCF (6-16S / 6-16KS): 4,181 / 5,467 x g
- Accessories in part with biosafe closure
- Angle: 90°

* Rotor 11650 in 6-16KS; max. 4,700 rpm and 5,236 x g

▸ p.19

Swing-out rotor 11150

- Max. capacity: 4 x 750 ml
- Max. speed (6-16S / 6-16KS): 4,500 / 5,100 rpm
- Max. RCF (6-16S / 6-16KS): 4,845 / 5,525 x g
- Angle: 90°

▸ p.31

Swing-out rotor 11156

- Max. capacity: 6 x 200 ml
- Max. speed (6-16S / 6-16KS): 4,500 / 5,100 rpm
- Max. RCF (6-16S / 6-16KS): 4,324 / 5,554 x g
- Angle: 90°

▸ p.35

Swing-out rotor 11165 for ASTM tubes

- Max. capacity: 4 x 100 ml
- Max. speed (6-16S / 6-16KS): 3,000 rpm
- Max. RCF (6-16S / 6-16KS): 1,922 x g
- Angle: 90°

▸ p.34

Swing-out rotor 11148

- Max. capacity: 32 x 2 ml
- Max. speed (6-16S / 6-16KS): 12,000 / 13,200 rpm
- Max. RCF (6-16S / 6-16KS): 13,523 / 16,363 x g
- Angle: 90°

▸ p.36

MTP swing-out rotor 11150

- Max. capacity: 20 microtiter plates
- Max. speed (6-16S / 6-16KS): 4,500 / 5,100 rpm
- Max. RCF (6-16S / 6-16KS): 3,622 / 4,653 x g
- Angle: 90°

▸ p.37

MTP swing-out rotor 11118

- Max. capacity: 10 microtiter plates
- Max. speed (6-16S / 6-16KS): 5,700 rpm
- Max. RCF (6-16S / 6-16KS): 5,485 x g
- Biosafe with cap 17108 ☣
- Angle: 90°

▸ p.37

MTP swing-out rotor 11650 / 11660

- Max. capacity: 20 microtiter plates
- Max. speed (6-16S / 6-16KS): 4,200 / 5,100 rpm
- Max. RCF (6-16S / 6-16KS): 3,589 / 4,565 x g
- Angle: 90°

Fixed-angle rotors starting on page 38

▸ p. 38

Fixed-angle rotor 12449

- Max. capacity: 48 x 2 ml
- Max. speed (6-16S / 6-16KS): 13,500 / 15,000 rpm
- Max. RCF (6-16S / 6-16KS): 20,376 / 25,155 x g
- Biosafe with aluminium lid 17612 ☣
- Angle (outer / inner row): 25° / 53°

▸ p. 39

Fixed-angle rotor 12201

- Max. capacity: 100 x 2 ml
- Max. speed (6-16S / 6-16KS): 9,000 / 9,600 rpm
- Max. RCF (6-16S / 6-16KS): 14,761 / 16,795 x g
- Angle (both rows): 45°

▸ p. 39

Fixed-angle rotor 12450

- Max. capacity: 24 x 5 ml conical
- Max. speed (6-16S / 6-16KS): 13,000 / 14,000 rpm
- Max. RCF (6-16S / 6-16KS): 21,917 / 25,419 x g
- Biosafe with aluminium lid 17614 ☣
- Angle: 40°

▸ p. 40

Fixed-angle rotor 12168

- Max. capacity: 20 x 10 ml
- Max. speed (6-16S / 6-16KS): 12,500 / 14,000 rpm
- Max. RCF (6-16S / 6-16KS): 17,119 / 21,475 x g
- Angle (both rows): 25°

▸ p. 40

Fixed-angle rotor 12170

- Max. capacity: 12 x 15 ml conical
- Max. speed (6-16S / 6-16KS): 12,500 / 13,500 rpm
- Max. RCF (6-16S / 6-16KS): 17,469 / 20,376 x g
- Angle (both rows): 25°

▸ p. 41

Fixed-angle rotor 12174

- Max. capacity: 24 x 15 ml conical
- Max. speed (6-16S / 6-16KS): 10,500 / 12,000 rpm
- Max. RCF (6-16S / 6-16KS): 15,531 / 20,285 x g
- Angle (outer / inner row): 30° / 40°

▸ p. 41

Fixed-angle rotor 12172

- Max. capacity: 12 x 30 ml round-bottom
- Max. speed (6-16S / 6-16KS): 12,500 / 14,000 rpm
- Max. RCF (6-16S / 6-16KS): 19,216 / 24,104 x g
- Angle: 30°

▸ p. 42

Fixed-angle rotor 12266

- Max. capacity: 8 x 50 ml round-bottom
- Max. speed (6-16S / 6-16KS): 12,500 / 14,000 rpm
- Max. RCF (6-16S / 6-16KS): 17,469 / 21,913 x g
- Biosafe with aluminium lid 17605 ☣
- Angle: 25°

▸ p. 42

Fixed-angle rotor 12269

- Max. capacity: 8 x 50 ml conical
- Max. speed (6-16S / 6-16KS): 12,500 / 13,500 rpm
- Max. RCF (6-16S / 6-16KS): 18,168 / 21,191 x g
- Biosafe with aluminium lid 17604 ☣
- Angle: 25°

▸ p. 43

Fixed-angle rotor 12265

- Max. capacity: 6 x 94 ml round-bottom
- Max. speed (6-16S / 6-16KS): 12,500 / 14,000 rpm
- Max. RCF (6-16S / 6-16KS): 18,517 / 23,228 x g
- Biosafe with aluminium lid 17607 ☣
- Angle: 25°

▸ p. 44

Fixed-angle rotor 12356

- Max. capacity: 6 x 250 ml
- Max. speed (6-16S / 6-16KS): 9,000 / 11,200 rpm
- Max. RCF (6-16S / 6-16KS): 13,131 / 20,335 x g
- Biosafe with aluminium lid 17603 ☣
- Angle: 30°

▸ p. 45

Fixed-angle rotor 12600

- Max. capacity: 6 x 500 ml
- Max. speed (6-16S / 6-16KS): 8,000 / 9,600 rpm
- Max. RCF (6-16S / 6-16KS): 11,949 / 17,207 x g
- Biosafe with aluminium lid 17600 ☣
- Angle: 30°

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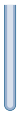
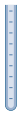
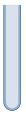
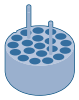
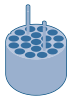
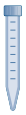
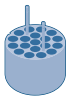
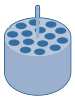
Swing-out rotor 11650 / 11660

Round bucket 13650 (1 set = 2 pcs.)

- Max. capacity: 4 x 1,000 ml
- Max. speed (6-16S / 6-16KS): 4,200 / 4,700 rpm
- Max. RCF (6-16S / 6-16KS): 4,181 / 5,236 x g
- Max. tube length, mid-bucket, without / with cap: 174 / 165 mm
- Biosafe with cap 17170
- Tmin at maximum speed: <4°C*
- Angle: 90°

*Max. speed for 4°C of rotor 11650: 4.500 min^{-1}

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 13650									
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 / 104		37 / 148	12 / 48	32 / 128		20 / 80			19 / 76
Centrifuging radius [mm]	205		204	209	206		207			207
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 round bucket 13650								
Bore diameter x length [mm]	17.5 x 55			17 x 78.5	17 x 78.5	25.5 x 70	25.5 x 77	
Tubes per adapter / rotor	19 / 76			12 / 48	15 / 60	7 / 28	8 / 32	
Centrifuging radius [mm]	207			210	209	202	209	
Item no.	17658			17659	17660*	17662	17670	

* Max. cap diameter for culture tubes 22 mm

Swing-out rotor 11650 / 11660

Round bucket 13650 (1 set = 2 pcs.)

- Max. capacity: 4 x 1,000 ml
- Max. speed (6-16S / 6-16KS): 4,200 / 4,700 rpm
- Max. RCF (6-16S / 6-16KS): 4,181 / 5,236 x g
- Max. tube length, mid-bucket, without / with cap: 174 / 165 mm
- Biosafe with cap 17170
- Tmin at maximum speed: <4°C*
- Angle: 90°

*Max. speed for 4°C of rotor 11650: 4.500 min^{-1}

Tube										
Rated capacity (filling volume) [ml]	30 (26)	30 (28)	30	30	50 (38)	50 (43)	50	50	50	50
Diameter x length [mm]	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	34 x 100	34 x 100	34 x 100
Tube material	PPCO	PC	Glass	PP	PPCO	PF	Stainless steel	Glass	Glass	PC
Item no.	15032	15030	15033	–	15052	15051	13055	15045	15050	15049

Adapter for round bucket 13650				
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 / 32	7 / 28	7 / 28	4 / 16
Centrifuging radius [mm]	209	202	209	209
Item no.	17670	17662	17676	17675

Tube									
Rated capacity (filling volume) [ml]	50	50	50	85 (73)	85 (76)	94 (85)	94	100 (75)	100 (90)
Diameter x length [mm]	35 x 100	29 x 117	29 x 117	38 x 112	38 x 112	38 x 103	38 x 110	44 x 100	44 x 100
Tube material	Glass	PP	PP	PF	PPCO	Stainless steel	PC	Glass	Glass
Item no.	15056	–	15151	15080	15076	13085	15094	15078	15106

Adapter for round bucket 13650						
Bore diameter x length [mm]	35.5 x 77.5	29.5 x 74	29.5 x 78.5	29.5 x 78	38.5 x 77	45.5 x 77
Tubes per adapter / rotor	4 / 16	5 / 20	5 / 20	7 / 28	3 / 12	2 / 8
Centrifuging radius [mm]	209	206	210	197	209	209
Item no.	17675	17678	17677	17679*	17685	17690**

* Only possible without cap 17170; ** Including rubber cushion 16051

Swing-out rotor 11650 / 11660

Round bucket 13650 (1 set = 2 pcs.)

- Max. capacity: 4 x 1,000 ml
- Max. speed (6-16S / 6-16KS): 4,200 / 4,700 rpm
- Max. RCF (6-16S / 6-16KS): 4,181 / 5,236 x g
- Max. tube length, mid-bucket, without / with cap: 174 / 165 mm
- Biosafe with cap 17170
- Tmin at maximum speed: <4°C*
- Angle: 90°

*Max. speed for 4°C of rotor 11650: 4.500 min^{-1}

Tube										
Rated capacity (filling volume) [ml]	100	100	150	150	175	175	200 (168)	200 (170)	200	200
Diameter x length [mm]	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	61 x 130	56 x 135
Tube material	Glass	PC	PP	Glass	PP	PP	PPCO	Glass	PP	Glass
Item no.	15100	15103	15125	15206	–	15175	15202	15201	15174	15254
Adapter for round bucket 13650									
Bore diameter x length [mm]	45.5 x 77	58 x 110	58 x 100	61 x 100	62.5 x 110	57.5 x 77	58 x 110	62.5 x 110	58 x 110	
Tubes per adapter / rotor	2 / 8	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4	
Centrifuging radius [mm]	209	209	207	212	212	209	207	212	207	
Item no.	17690*	17692	17695**	17694	17693	17696	17695**	17693	17695**	

Tube									
Rated capacity (filling volume) [ml]	225	230 (220)	250 (232)	250 (232)	250	250	250	400	500 (435)	500 (435)
Diameter x length [mm]	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	69 x 165	69 x 165
Tube material	PP	Glass	PF	PPCO	Stainless steel	PP	PP	PPCO	PF	PPCO
Item no.	–	15250	15247	15249	13255	–	–	15401	15507	15508
Adapter for round bucket 13650									
Bore diameter x length [mm]	61 x 100	58 x 110	62.5 x 77			62.5 x 110	62.5 x 110	86 x 107	70 x 110	
Tubes per adapter / rotor	1 / 4	1 / 4	1 / 4			1 / 4	1 / 4	1 / 4	1 / 4	
Centrifuging radius [mm]	212	207	209			212	212	212	212	
Item no.	17694	17695**	17698			17693	17693***	13654	13655	

* Including rubber cushion 16051; ** Including rubber cushion 16250; *** Only possible without cap 17170

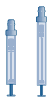
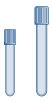
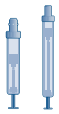
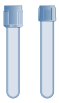
Swing-out rotor 11650 / 11660

Round bucket 13650 (1 set = 2 pcs.)

- Max. capacity: 4 x 1,000 ml
- Max. speed (6-16S / 6-16KS): 4,200 / 4,700 rpm
- Max. RCF (6-16S / 6-16KS): 4,181 / 5,236 x g
- Max. tube length, mid-bucket, without / with cap: 174 / 165 mm
- Biosafe with cap 17170
- Tmin at maximum speed: <4°C*
- Angle: 90°

*Max. speed for 4°C of rotor 11650: 4.500 min^{-1}

Tube						
Rated capacity (filling volume) [ml]	500	500	500	750 (680)	750	1.000 (950)
Diameter x length [mm]	69.5 x 152	85 x 135	95.5 x 147	85 x 173	100 x 127	100 x 155.5
Tube material	Stainless steel	PPCO	PP	PPCO	PPCO	PPCO
Item no.	13507	15501	–	15751	15917	15918*
Adapter for round bucket 13650						
Bore diameter x length [mm]	70 x 110	86 x 107	96.3 x 110	86 x 107	101 x 126	
Tubes per adapter / rotor	1 / 4	1 / 4	1 / 4	1 / 4	– / 4	
Centrifuging radius [mm]	212	209	212	209	212	
Item no.	13655	13654	17682	13654**	–	

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 13650										
Bore diameter x length [mm]	12.8 x 52	13.8 x 54			16.5 x 55			17.5 x 75		
Tubes per adapter / rotor	37 / 148	23 / 92			20 / 80			19 / 76		
Centrifuging radius [mm]	204	206			207			207		
Item no.	17652	17656			17655			17658		

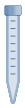
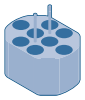
* Max. load 1,000 g at 4,700 rpm or 1.120 g at 4,300 rpm, ** Only possible without cap 17170

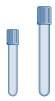
Swing-out rotor 11650 / 11660

Bucket 13635 (1 set = 2 pcs.)

- Max. capacity: 40 x 50 ml
- Max. speed (6-16S / 6-16KS): 4,200 / 4,700 rpm
- Max. RCF (6-16S / 6-16KS): 3,846 / 4,816 x g
- Max. tube length mid-bucket: 155 mm
- Max. speed for 4°C: 4.600 min^{-1}*
- Angle: 90°

*Max. speed for 4°C of rotor 11650: 4.500 min^{-1}

Tube			
Rated capacity (filling volume) [ml]	15	50	50
Diameter x length [mm]	16.5 x 120	28 x 115	29.5 x 117
Tube material	PP	PP	PP
Item no.	15115	–	15151
Adapter			
for bucket 13635			
Bore diameter x length [mm]	17 x 79	29.5 x 72	29.5 x 78.5
Tubes per adapter / rotor	24 / 96	8 / 32	10 / 40
Centrifuging radius [mm]	194	187	193
Item no.	18605	18607	18606

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	Glas
Item no.	–	–	–	–	–	–	–	–	–	–
Adapter										
for bucket 13635										
Bore diameter x length [mm]	13.5 x 53					17 x 73			17.5 x 50	17.5 x 50
Tubes per adapter / rotor	42 / 168					36 / 144			32 / 128	18 / 72
Centrifuging radius [mm]	188					188			188	188
Item no.	18609					18608			18610	18610*

* Observe loading

Swing-out rotor 11650 / 11660

Bucket 13625 (1 set = 2 pcs.)
with plastic insert 13627

- Max. capacity: 4 x 600 ml blood bag systems
- Max. speed (6-16S / 6-16KS): 4,200 / 4,700 rpm
- Max. RCF (6-16S / 6-16KS): 4,142 / 5,186 x g
- Max. speed for 4°C: 4.600 min^{-1}*
- Angle: 90°

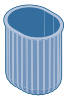
*Max. speed for 4°C of rotor 11650: 4.500 min^{-1}

Tube

Capacity [ml]	450	500	600
Blood bag	Triple	Dual	Single
Item no.	–	–	–

Adapter

for bucket 13625



Blood bag systems per rotor	4
Nominal capacity [ml]	1,000
Centrifuging radius [mm]	210
Item no.	13627

Swing-out rotor 11650

Round bucket 13450 (1 set = 2 pcs.)

- Max. capacity: 4 x 750 ml
- Max. speed (6-16S / 6-16KS): 4,200 / 4,700 rpm
- Max. RCF (6-16S / 6-16KS): 3,708 / 4,643 x g
- Max. tube length, mid-bucket, without / with cap: 148 / 137 mm
- Biosafe with cap 17170
- Tmin at maximum speed: <4°C
- Angle: 90°

Swing-out rotor 11660

Round bucket 13450 (1 set = 2 pcs.)

- Max. capacity: 4 x 750 ml
- Max. speed (6-16S / 6-16KS): 4,200 / 5,100 rpm
- Max. RCF (6-16S / 6-16KS): 3,708 / 5,467 x g
- Max. tube length, mid-bucket, without / with cap: 153 / 137 mm
- Biosafe with cap 17170
- 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 13450										
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 / 104		37 / 148	12 / 48	32 / 128		20 / 80			19 / 76
Centrifuging radius [mm]	181		180	185	182		183			183
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 round bucket 13450									
Bore diameter x length [mm]	17.5 x 55				17 x 78.5	17 x 78.5	25.5 x 70	25.5 x 77	
Tubes per adapter / rotor	19 / 76				12 / 48	15 / 60	7 / 28	8 / 32	
Centrifuging radius [mm]	183				187	187	175	185	
Item no.	17658				17659	17660*	17662	17670	

* Only possible without cap 17170

Swing-out rotor 11650

Round bucket 13450 (1 set = 2 pcs.)

- Max. capacity: 4 x 750 ml
- Max. speed (6-16S / 6-16KS): 4,200 / 4,700 rpm
- Max. RCF (6-16S / 6-16KS): 3,708 / 4,643 x g
- Max. tube length, mid-bucket, without / with cap: 148 / 137 mm
- Biosafe with cap 17170
- Tmin at maximum speed: <4°C
- Angle: 90°

Swing-out rotor 11660

Round bucket 13450 (1 set = 2 pcs.)

- Max. capacity: 4 x 750 ml
- Max. speed (6-16S / 6-16KS): 4,200 / 5,100 rpm
- Max. RCF (6-16S / 6-16KS): 3,708 / 5,467 x g
- Max. tube length, mid-bucket, without / with cap: 153 / 137 mm
- Biosafe with cap 17170
- Tmin at maximum speed: <4°C
- Angle: 90°

Tube										
Rated capacity (filling volume) [ml]	30 (26)	30 (28)	30	30	50 (38)	50 (43)	50	50	50	50
Diameter x length [mm]	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	34 x 100	34 x 100	34 x 100
Tube material	PPCO	PC	Glass	PP	PPCO	PF	Stainless steel	Glass	Glass	PC
Item no.	15032	15030	15033	–	15052	15051	13055	15045	15050	15049

Adapter for round bucket 13450				
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 / 32	7 / 28	7 / 28	4 / 16
Centrifuging radius [mm]	185	175	185	185
Item no.	17670	17662	17676	17675

Tube									
Rated capacity (filling volume) [ml]	50	50	50	85 (73)	85 (76)	94 (85)	94	100 (75)	100 (90)
Diameter x length [mm]	35 x 100	29 x 117	29 x 117	38 x 112	38 x 112	38 x 103	38 x 110	44 x 100	44 x 100
Tube material	Glass	PP	PP	PF	PPCO	Stainless steel	PC	Glass	Glass
Item no.	15056	–	15151	15080	15076	13085	15094	15078	15106

Adapter for round bucket 13450						
Bore diameter x length [mm]	35.5 x 77.5	29.5 x 74	29.5 x 78.5	29.5 x 78	38.5 x 77	45.5 x 77
Tubes per adapter / rotor	4 / 16	5 / 20	5 / 20	7 / 28	3 / 12	2 / 8
Centrifuging radius [mm]	185	182	186	186	185	185
Item no.	17675	17678	17677	17649*	17685	17690**

* Only possible without cap 17170; ** Including rubber cushion 16051

Swing-out rotor 11650

Round bucket 13450 (1 set = 2 pcs.)

- Max. capacity: 4 x 750 ml
- Max. speed (6-16S / 6-16KS): 4,200 / 4,700 rpm
- Max. RCF (6-16S / 6-16KS): 3,708 / 4,643 x g
- Max. tube length, mid-bucket, without / with cap: 148 / 137 mm
- Biosafe with cap 17170
- Tmin at maximum speed: <4°C
- Angle: 90°

Swing-out rotor 11660

Round bucket 13450 (1 set = 2 pcs.)

- Max. capacity: 4 x 750 ml
- Max. speed (6-16S / 6-16KS): 4,200 / 5,100 rpm
- Max. RCF (6-16S / 6-16KS): 3,708 / 5,467 x g
- Max. tube length, mid-bucket, without / with cap: 153 / 137 mm
- Biosafe with cap 17170
- Tmin at maximum speed: <4°C
- Angle: 90°

Tube										
Rated capacity (filling volume) [ml]	100	100	150	175	175	200 (168)	200	225	250 (232)	250 (232)
Diameter x length [mm]	44 x 100	45 x 100	51 x 99	61 x 118	62 x 139.2	56 x 112	61 x 130	61 x 137	61.4 x 122	61.4 x 122
Tube material	Glass	PC	PP	PP	PP	PPCO	PP	PP	PF	PPCO
Item no.	15100	15103	15125	–	15175	15202	15174	–	15247	15249
Adapter for round bucket 13450										
Bore diameter x length [mm]	45.5 x 77		51.5 x 77	61 x 100	62.5 x 110	57.5 x 77	62.5 x 110	61 x 100	62.5 x 77	
Tubes per adapter / rotor	2 / 8		1 / 4	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4	
Centrifuging radius [mm]	185		185	188	188	185	188	188	185	
Item no.	17690*		17692	17694	17693	17696	17693	17694	17698	

Tube							
Rated capacity (filling volume) [ml]	250	250	400	500	500	650	750
Diameter x length [mm]	61.4 x 125	61 x 145	85 x 118	85 x 135	95.5 x 147	100 x 111	100 x 127
Tube material	Stainless steel	PP	PPCO	PPCO	PP	PP	PPCO
Item no.	13255	–	15401	15501	–	13456	15917***
Adapter for round bucket 13450					
Bore diameter x length [mm]	62.5 x 77	62.5 x 110	86 x 107	96.3 x 110	101 x 102		
Tubes per adapter / rotor	1 / 4	1 / 4	1 / 4	1 / 4	– / 4		
Centrifuging radius [mm]	185	188	185	188	188		
Item no.	17698	17693**	13654	17682**	–		

* Including rubber cushion 16051; ** Only possible without cap 17170; *** Max. load 1,000 g at 4,800 rpm or 900 g at 5,100 rpm

Swing-out rotor 11650

Round bucket 13450 (1 set = 2 pcs.)

- Max. capacity: 4 x 750 ml
- Max. speed (6-16S / 6-16KS): 4,200 / 4,700 rpm
- Max. RCF (6-16S / 6-16KS): 3,708 / 4,643 x g
- Max. tube length, mid-bucket, without / with cap: 148 / 137 mm
- Biosafe with cap 17170
- Tmin at maximum speed: <4°C
- Angle: 90°

Swing-out rotor 11660

Round bucket 13450 (1 set = 2 pcs.)

- Max. capacity: 4 x 750 ml
- Max. speed (6-16S / 6-16KS): 4,200 / 5,100 rpm
- Max. RCF (6-16S / 6-16KS): 3,708 / 5,467 x g
- Max. tube length, mid-bucket, without / with cap: 153 / 137 mm
- Biosafe with cap 17170
- Tmin at maximum speed: <4°C
- Angle: 90°

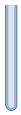
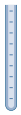
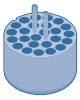
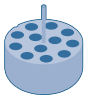
Blood and urine tubes										
Rated capacity (filling volume) [ml]	1.1 – 1.4	2.7 – 5	1.6 – 6	4 – 6	1.8 – 7	4 – 10	9.5 – 10	6 – 10	9 – 10	8
Diameter x length with closure [mm]	8 x 82	11 x 82 – 108	13 x 81 – 106	13 x 81 – 106	13 x 81 – 107	15 x 91 – 118	15 x 106	16 x 106 – 107	16 x 108	16 x 131
Tube material	PP	PP	PP	PET	PET	PP	PET	PET	PP	Glass
Item no.	–	–	–	–	–	–	–	–	–	–
Adapter for round bucket 13450										
Bore diameter x length [mm]	12.8 x 52		13.8 x 54			16.5 x 55			17.5 x 55	17.5 x 55
Tubes per adapter / rotor	37 / 148		23 / 92			20 / 80			19 / 76	7 / 28
Centrifuging radius [mm]	180		182			183			183	183
Item no.	17652		17656			17655			17658	17658*

* Observe loading

Swing-out rotor 11150

Round bucket 13550 (1 set = 2 pcs.)

- Max. capacity: 4 x 750 ml
- Max. speed (6-16S / 6-16KS): 4,500 / 4,700 rpm
- Max. RCF (6-16S / 6-16KS): 4,845 / 5,285 x g
- Max. tube length, mid-bucket, without / with cap: 174 / 165 mm
- Hermetically closable with aluminium cap 17134 or polysulphone cap 17135
- Max. speed for 4°C: 4.500 min^{-1}
- Angle: 90°

Tube										
Rated capacity (filling volume) [ml]	0.2	0.4	0.5	0.5	1.5	2	5	5	6 (5)	7
Diameter x length [mm]	5.8 x 20	5.8 x 47	10.8 x 46.5	7.9 x 28	10.7 x 42	10.7 x 42	12 x 75	17 x 60	12 x 100	12 x 100
Tube material	PP	PE	PP	PP	PP	PP	PS	PPCO	Glass	Glass
Item no.	15042	15014	Paediatrics	15005	15008	15040	15060	–	15007	15027
Adapter for round bucket 13550									
Bore diameter x length [mm]	6.3 x 18.5	6 x 45	11 x 32	8.1 x 29	11.1 x 38.5		12.8 x 57	17 x 52	12.8 x 77.5	
Tubes per adapter / rotor	20 / 80	20 / 80	16 / 64	24 / 96	20 / 80		25 / 100	10 / 40	16 / 64	
Centrifuging radius [mm]	207	209	206	210	212		211	211	211	
Item no.	17353 & 13021	17353 & 13000	17361	17350	17353		17352	17210	17354	

Tube									
Rated capacity (filling volume) [ml]	10	10	10	10	10	14	14	15 (13)	15
Diameter x length [mm]	16.1 x 81.1	16.1 x 81.1	16.1 x 81.1	16 x 100	16 x 100	17 x 100	17 x 100	17 x 110	16.5 x 120
Tube material	PF	PC	PPCO	Glass	Glass	PS	PP	Glass	PP
Item no.	15000	15010	15039	15015	15024	15020	15023	15022	15115
Adapter for round bucket 13550									
Bore diameter x length [mm]	16.5 x 58			17.5 x 58				17 x 78.5	17 x 78.5
Tubes per adapter / rotor	12 / 48			12 / 48				5 / 20	9 / 36
Centrifuging radius [mm]	212			212				212	212
Item no.	17355			17358				17345	17359

Swing-out rotor 11150

Round bucket 13550 (1 set = 2 pcs.)

- Max. capacity: 4 x 750 ml
- Max. speed (6-16S / 6-16KS): 4,500 / 4,700 rpm
- Max. RCF (6-16S / 6-16KS): 4,845 / 5,285 x g
- Max. tube length, mid-bucket, without / with cap: 174 / 165 mm
- Hermetically closable with aluminium cap 17134 or polysulphone cap 17135
- Max. speed for 4°C: 4.500 min^{-1}
- Angle: 90°

Tube										
Rated capacity (filling volume) [ml]	15	25	25	25	30 (26)	30 (26)	30 (28)	30	30	50 (38)
Diameter x length [mm]	16.5 x 120	25 x 90	24 x 100	24 x 100	25.3 x 98	25.3 x 98	25.3 x 98	24 x 105	25 x 107	28.8 x 107
Tube material	PP	PP	Glass	Glass	PF	PPCO	PC	Glass	PP	PPCO
Item no.	15115	–	15025	15026	15029	15032	15030	15033	–	15052
Adapter for round bucket 13550									
Bore diameter x length [mm]	17 x 78.5	25.5 x 56	25.5 x 77.5						25.5 x 56	29.5 x 77.5
Tubes per adapter / rotor	10 / 40	5 / 20	5 / 20						5 / 20	4 / 16
Centrifuging radius [mm]	212	210	211						210	211
Item no.	17360*	17362	17370						17362	17376

Tube								
Rated capacity (filling volume) [ml]	50 (43)	50	50	50	50	50	50	50
Diameter x length [mm]	28.5 x 107	28.5 x 101.5	34 x 100	34 x 100	34 x 100	35 x 100	29 x 117	29 x 117
Tube material	PF	Stainless steel	Glass	Glass	PC	Glass	PP	PP
Item no.	15051	13055	15045	15050	15049	15056	–	15151
Adapter for round bucket 13550										
Bore diameter x length [mm]	29.5 x 77.5	35.5 x 77.5					29.5 x 77	29.5 x 74	29.5 x 78.5	29.5 x 78.5
Tubes per adapter / rotor	4 / 16	3 / 12					3 / 12	4 / 16	3 / 12	4 / 16
Centrifuging radius [mm]	211	211					211	208	212	212
Item no.	17376	17375					17344	17378	17346	17377

* For culture tubes with cap diameter 22 mm

Swing-out rotor 11150

Round bucket 13550 (1 set = 2 pcs.)

- Max. capacity: 4 x 750 ml
- Max. speed (6-16S / 6-16KS): 4,500 / 4,700 rpm
- Max. RCF (6-16S / 6-16KS): 4,845 / 5,285 x g
- Max. tube length, mid-bucket, without / with cap: 174 / 165 mm
- Hermetically closable with aluminium cap 17134 or polysulphone cap 17135
- Max. speed for 4°C: 4.500 min^{-1}
- Angle: 90°

Tube										
Rated capacity (filling volume) [ml]	85 (73)	85 (76)	94 (85)	94	100 (75)	100 (90)	100	100	150	150
Diameter x length [mm]	38 x 112	38 x 112	38 x 103	38 x 110	44 x 100	44 x 100	44 x 100	45 x 100	51 x 99	56 x 113
Tube material	PF	PPCO	Stainless steel	PC	Glass	Glass	Glass	PC	PP	Glass
Item no.	15080	15076	13085	15094	15078	15106	15100	15103	15125	15206
Adapter for round bucket 13550									
Bore diameter x length [mm]	38.5 x 77				45.5 x 77.5				51.5 x 77	58 x 75
Tubes per adapter / rotor	1 / 4				1 / 4				1 / 4	1 / 4
Centrifuging radius [mm]	211				211				211	209
Item no.	17385				17390*				17395	17401**

Tube										
Rated capacity (filling volume) [ml]	175	175	200 (168)	200 (170)	200	200	225	230 (220)	250 (232)	250 (232)
Diameter x length [mm]	62 x 139.2	61 x 118	56 x 112	56 x 112	56 x 135	61 x 130	61 x 137	56 x 134	61.4 x 122	61.4 x 122
Tube material	PP	PP	PPCO	Glass	Glass	PP	PP	Glass	PF	PPCO
Item no.	15175	–	15202	15201	15254	15174	–	15250	15247	15249
Adapter for round bucket 13550									
Bore diameter x length [mm]	62.5 x 105	61x 104	57.5 x 77	58 x 75		62.5 x 105	61 x 104	58 x 75	62.5 x 80	
Tubes per adapter / rotor	1 / 4	1 / 4	1 / 4	1 / 4		1 / 4	1 / 4	1 / 4	1 / 4	
Centrifuging radius [mm]	214	214	211	209		214	214	209	214	
Item no.	17393	17402	17400	17401**		17393	17402	17401**	17347	

* Including rubber cushion 16051; ** Including rubber cushion 16250

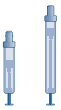
Swing-out rotor 11150

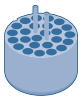
Round bucket 13550 (1 set = 2 pcs.)

- Max. capacity: 4 x 750 ml
- Max. speed (6-16S / 6-16KS): 4,500 / 4,700 rpm
- Max. RCF (6-16S / 6-16KS): 4,845 / 5,285 x g
- Max. tube length, mid-bucket, without / with cap: 174 / 165 mm
- Hermetically closable with aluminium cap 17134 or polysulphone cap 17135
- Max. speed for 4°C: 4.500 min^{-1}
- Angle: 90°

Tube									
Rated capacity (filling volume) [ml]	250	250	250	400	430 (390)	500 (435)	500 (435)	500	750 (680)
Diameter x length [mm]	61.4 x 125	61 x 145	59.7 x 171.2	85 x 118	75 x 140	69 x 165	69 x 165	85 x 135	85 x 173
Tube material	Stainless steel	PP	PP	PPCO	Glass	PF	PPCO	PPCO	PPCO
Item no.	13255	–	–	15401	15430	15507	15508	15501	15751

Adapter for round bucket 13550						
Bore diameter x length [mm]	62.5 x 80	62,5 x 105	86 x 113	76.6 x 117	69.9 x 115	86 x 113
Tubes per adapter / rotor	1 / 4	1 / 4	– / 4	1 / 4	1 / 4	– / 4
Centrifuging radius [mm]	214	214	214	211	214	214
Item no.	17347	17393	–	17404*	13555	–

Blood and urine tubes										
Rated capacity (filling volume) [ml]	1.1 – 1.4	2.7 – 5	4 – 6	1.8 – 7	1.6 – 6	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 – 107	13 x 81 – 106	15 x 91 – 118	15 x 106	16 x 106 – 107	16 x 108	16 x 131
Tube material	PP	PP	PET	PET	PP	PP	PET	PET	PP	Glass
Item no.	–	–	–	–	–	–	–	–	–	–

Adapter for round bucket 13550			
Bore diameter x length [mm]	12.8 x 57	13.8 x 57	17.5 x 58
Tubes per adapter / rotor	25 / 100	17 / 68	12 / 48
Centrifuging radius [mm]	211	211	212
Item no.	17352	17356	17358

* Including rubber cushion 16430

Swing-out rotor 11150

Rectangular bucket 13215 (1 set = 2 pcs.)

- Max. capacity: 4 x 200 ml
- Max. speed (6-16S / 6-16KS): 4,500 / 5,100 rpm
- Max. RCF (6-16S / 6-16KS): 4,120 / 5,292 x g
- Max. tube length, mid-bucket, without / with cap: 141 / 123 mm
- Hermetically closable with cap 17112
- Tmin at maximum speed: <4°C
- Angle: 90°

Tube										
Rated capacity (filling volume) [ml]	0.2	0.4	0.5	1.5	2	5	5	6 (5)	7	10
Diameter x length [mm]	5.8 x 20	5.8 x 47	7.9 x 28	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
Tube material	PP	PE	PP	PP	PP	PS	PPCO	Glass	Glass	PF
Item no.	15042	15014	15005	15008	15040	15060	–	15007	15027	15000
Adapter for rectangular bucket 13215										
Bore diameter x length [mm]	6.3 x 18.5	6 x 45	8 x 45	11.1 x 38		12.5 x 51	17 x 52	12.5 x 72		17.2 x 46
Tubes per adapter / rotor	20 / 80	20 / 80	20 / 80	20 / 80		20 / 80	6 / 24	20 / 80		12 / 48
Centrifuging radius [mm]	167	169	169	170		166	168	166		166
Item no.	18002 & 13021	18002 & 13000	18002 & 13002	18002		18005*	18006	18007*		18010*

Tube									
Rated capacity (filling volume) [ml]	10	10	10	10	14	14	15 (13)	15	25
Diameter x length [mm]	16.1 x 81.1	16.1 x 81.1	16 x 100	16 x 100	17 x 100	17 x 100	17 x 110	16.5 x 120	25 x 90
Tube material	PC	PPCO	Glass	Glass	PS	PP	Glass	PP	PP
Item no.	15010	15039	15015	15024	15020	15023	15022	15115	–
Adapter for rectangular bucket 13215									
Bore diameter x length [mm]	17.2 x 46		17.2 x 72					17 x 72.5	17 x 72.5	25.5 x 61
Tubes per adapter / rotor	12 / 48		12 / 48					4 / 16	7 / 28	4 / 16
Centrifuging radius [mm]	166		166					170	170	167
Item no.	18010*		18015*					18016	18018**	18022

* Including rubber cushion 16909; ** Only possible without cap 17112

Swing-out rotor 11150

Rectangular bucket 13215 (1 set = 2 pcs.)

- Max. capacity: 4 x 200 ml
- Max. speed (6-16S / 6-16KS): 4,500 / 5,100 rpm
- Max. RCF (6-16S / 6-16KS): 4,120 / 5,292 x g
- Max. tube length, mid-bucket, without / with cap: 141 / 123 mm
- Hermetically closable with cap 17112
- Tmin at maximum speed: <4°C
- Angle: 90°

Tube										
Rated capacity (filling volume) [ml]	25	25	30 (26)	30 (26)	30 (28)	30	30	50 (38)	50 (43)	50
Diameter x length [mm]	24 x 100	24 x 100	25.3 x 98	25.3 x 98	25.3 x 98	24 x 105	25 x 107	28.5 x 107	28.8 x 107	28.5 x 101.5
Tube material	Glass	Glass	PF	PPCO	PC	Glass	PP	PPCO	PF	Stainless steel
Item no.	15025	15026	15029	15032	15030	15033	–	15052	15051	13055
Adapter for rectangular bucket 13215										
Bore diameter x length [mm]	24.5 x 70		25.5 x 71			24.5 x 70	25.5 x 61	29.5 x 71		
Tubes per adapter / rotor	5 / 20		5 / 20			5 / 20	4 / 16	2 / 8		
Centrifuging radius [mm]	166		168			166	167	168		
Item no.	18025*		18030			18025*	18022	18051		

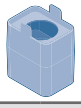
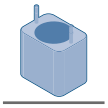
Tube										
Rated capacity (filling volume) [ml]	50	50	50	50	50	50	85 (73)	85 (76)	94 (85)	94
Diameter x length [mm]	34 x 100	34 x 100	35 x 100	34 x 100	29 x 117	29 x 117	38 x 112	38 x 112	38 x 103	38 x 110
Tube material	Glass	Glass	Glass	PC	PP	PP	PF	PPCO	Stainless steel	PC
Item no.	15045	15050	15056	15049	–	15151	15080	15076	13085	15094
Adapter for rectangular bucket 13215										
Bore diameter x length [mm]	35.5 x 68				30 x 74	29.5 x 72.5	38.5 x 72			
Tubes per adapter / rotor	2 / 8				2 / 8	2 / 8	1 / 4			
Centrifuging radius [mm]	162				171	170	169			
Item no.	18050**				18053	18052	18085			

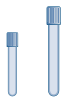
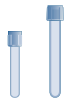
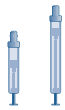
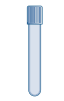
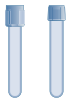
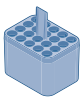
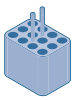
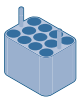
* Including rubber cushion 16906; ** Including rubber cushion 16907

Swing-out rotor 11150

Rectangular bucket 13215 (1 set = 2 pcs.)

- Max. capacity: 4 x 200 ml
- Max. speed (6-16S / 6-16KS): 4,500 / 5,100 rpm
- Max. RCF (6-16S / 6-16KS): 4,120 / 5,292 x g
- Max. tube length, mid-bucket, without / with cap: 141 / 123 mm
- Hermetically closable with cap 17112
- Tmin at maximum speed: <4°C
- Angle: 90°

Tube								
Rated capacity (filling volume) [ml]	100 (75)	100 (90)	100	100	150	150	200 (168)	200 (170)
Diameter x length [mm]	44 x 100	44 x 100	44 x 100	45 x 100	51 x 99	56 x 113	56 x 112	56 x 112
Tube material	Glass	Glass	Glass	PC	PP	Glass	PPCO	Glass
Item no.	15078	15106	15100	15103	15125	15206	15202	15201
Adapter for rectangular bucket 13215							
Bore diameter x length [mm]	46 x 65.5				51.5 x 71	57 x 62	57 x 34	57 x 62
Tubes per adapter / rotor	1 / 4				1 / 4	1 / 4	1 / 4	1 / 4
Centrifuging radius [mm]	165				168	167	166	167
Item no.	18100*				18125	18250**	18200	18250**

Blood and urine tubes										
Rated capacity (filling volume) [ml]	1.1 – 1.4	2.7 – 5	4 – 6	1.8 – 7	1.6 – 6	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 – 107	13 x 81 – 106	15 x 91 – 118	15 x 106	16 x 106 – 107	16 x 108	16 x 131
Tube material	PP	PP	PET	PET	PP	PP	PET	PET	PP	Glass
Item no.	–	–	–	–	–	–	–	–	–	–
Adapter for rectangular bucket 13215									
Bore diameter x length [mm]	12.5 x 51		14 x 58			17.2 x 46			17.5 x 57	17.5 x 71
Tubes per adapter / rotor	20 / 80		12 / 48			12 / 48			11 / 44	6 / 24
Centrifuging radius [mm]	166		164			166			168	168
Item no.	18005**		18012			18010**			18020	18017***

* Including rubber cushion 16908; ** Including rubber cushion 16051; *** Observe loading

Swing-out rotor 11150

Dual rectangular bucket 13420 (1 set = 4 pcs.)

- Max. capacity: 8 x 230 ml
- Max. speed (6-16S / 6-16KS): 4,200 / 4,700 rpm
- Max. RCF (6-16S / 6-16KS): 3,806 / 4,766 x g
- Max. tube length, mid-bucket, without / with cap: 151 / 143 mm
- Hermetically closable with cap 17114
- Max. speed for 4°C: 4.500 min^{-1}
- Angle: 90°

Tube										
Rated capacity (filling volume) [ml]	0.2	0.4	0.5	1.5	2	5	5	6 (5)	7	10
Diameter x length [mm]	5.8 x 20	5.8 x 47	7.9 x 28	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
Tube material	PP	PE	PP	PP	PP	PS	PPCO	Glass	Glass	PF
Item no.	15042	15014	15005	15008	15040	15060	–	15007	15027	15000
Adapter for rectangular bucket 13420										
Bore diameter x length [mm]	6.3 x 18.5	6 x 45	8 x 45	11.1 x 38		12.5 x 51	17 x 52	12.5 x 72		17.2 x 46
Tubes per adapter / rotor	20 / 160	20 / 160	20 / 160	20 / 160		20 / 160	6 / 48	20 / 160		12 / 96
Centrifuging radius [mm]	167	169	169	170		166	168	166		166
Item no.	18002 & 13021	18002 & 13000	18002 & 13002	18002		18005*	18006	18007*		18010*

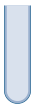
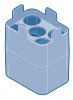
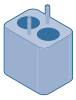
Gefäß								
Nennvolumen (Füllvolumen) [ml]	10	10	10	10	14	14	15 (13)	15
Ø x Länge [mm]	16.1 x 81.1	16.1 x 81.1	16 x 100	16 x 100	17 x 100	17 x 100	17 x 110	16.5 x 120
Gefäß-Material	PC	PPCO	Glass	Glass	PS	PP	Glass	PP
Art.-Nr.	15010	15039	15015	15024	15020	15023	15022	15115
Adapter für Rechteck-becher 13420								
Bohrung Ø x Länge [mm]	17.2 x 46		17.2 x 72				17 x 72.5	17.5 x 71
Gefäße pro Adapter / Rotor [Stk.]	12 / 96		12 / 96				4 / 32	7 / 56
Zentrifugierradius [mm]	166		166				170	170
Art.-Nr.	18010*		18015*				18016	18018**

* Including rubber cushion 16909; ** Only possible without cap 17114

Swing-out rotor 11150

Dual rectangular bucket 13420 (1 set = 4 pcs.)

- Max. capacity: 8 x 230 ml
- Max. speed (6-16S / 6-16KS): 4,200 / 4,700 rpm
- Max. RCF (6-16S / 6-16KS): 3,806 / 4,766 x g
- Max. tube length, mid-bucket, without / with cap: 151 / 143 mm
- Hermetically closable with cap 17114
- Max. speed for 4°C: 4.500 min^{-1}
- Angle: 90°

Tube										
Rated capacity (filling volume) [ml]	25	25	25	30 (26)	30 (26)	30 (28)	30	30	50 (38)	50 (43)
Diameter x length [mm]	25 x 90	24 x 100	24 x 100	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
Tube material	PP	Glass	Glass	PF	PPCO	PC	Glass	PP	PPCO	PF
Item no.	–	15025	15026	15029	15032	15030	15033	–	15052	15051
Adapter for rectangular bucket 13420										
Bore diameter x length [mm]	25.5 x 61	24.5 x 70		25.5 x 71			24.5 x 70	25.5 x 61	29.5 x 71	
Tubes per adapter / rotor	4 / 32	5 / 40		5 / 40			5 / 40	4 / 32	2 / 16	
Centrifuging radius [mm]	167	166		168			166	167	168	
Item no.	18022	18025*		18030			18025*	18022	18051	

Tube									
Rated capacity (filling volume) [ml]	50	50	50	50	50	50	50	85 (73)	85 (76)
Diameter x length [mm]	28.5 x 101.5	34 x 100	34 x 100	34 x 100	35 x 100	29 x 117	29 x 117	38 x 112	38 x 112
Tube material	Stainless steel	Glass	Glass	PC	Glass	PP	PP	PF	PPCO
Item no.	13055	15045	15050	15049	15056	–	15151	15080	15076
Adapter for rectangular bucket 13420									
Bore diameter x length [mm]	29.5 x 71	35.5 x 68				30 x 74	29.5 x 72.5	29.5 x 78.5	38.5 x 72
Tubes per adapter / rotor	2 / 16	2 / 16				2 / 16	2 / 16	6 / 24	1 / 8
Centrifuging radius [mm]	168	162				171	170	170	169
Item no.	18051	18050**				18053	18052	18650	18085

* Including rubber cushion 16906; ** Including rubber cushion 16907

Swing-out rotor 11150

Dual rectangular bucket 13420 (1 set = 4 pcs.)

- Max. capacity: 8 x 230 ml
- Max. speed (6-16S / 6-16KS): 4,200 / 4,700 rpm
- Max. RCF (6-16S / 6-16KS): 3,806 / 4,766 x g
- Max. tube length, mid-bucket, without / with cap: 151 / 143 mm
- Hermetically closable with cap 17114
- Max. speed for 4°C: 4.500 min^{-1}
- Angle: 90°

Tube										
Rated capacity (filling volume) [ml]	94 (85)	94	100 (75)	100 (90)	100	100	150	150	200 (168)	200 (170)
Diameter x length [mm]	38 x 103	38 x 110	44 x 100	44 x 100	44 x 100	45 x 100	51 x 99	56 x 113	56 x 112	56 x 112
Tube material	Stainless steel	PC	Glass	Glass	Glass	PC	PP	Glass	PPCO	Glass
Item no.	13085	15094	15078	15106	15100	15103	15125	15206	15202	15201
Adapter										
for rectangular bucket 13420										
Bore diameter x length [mm]	38.5 x 72		46 x 65.5				51.5 x 71	57 x 62	57 x 34	57 x 62
Tubes per adapter / rotor	1 / 8		1 / 8				1 / 8	1 / 8	1 / 8	1 / 8
Centrifuging radius [mm]	169		165				168	168	166	168
Item no.	18085		18100*				18125	18250**	18200	18250**

Tube		
Rated capacity (filling volume) [ml]	200	230 (220)
Diameter x length [mm]	56 x 135	56 x 134
Tube material	Glass	Glass
Item no.	15254	15250
Adapter		
for rectangular bucket 13420		
Bore diameter x length [mm]	57 x 62	
Tubes per adapter / rotor	1 / 8	
Centrifuging radius [mm]	168	
Item no.	18250**	

* Including rubber cushion 16908; ** Including rubber cushion 16051

Swing-out rotor 11150

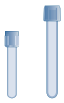
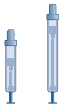
Dual rectangular bucket 13420 (1 set = 4 pcs.)

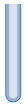
- Max. capacity: 8 x 230 ml
- Max. speed (6-16S / 6-16KS): 4,200 / 4,700 rpm
- Max. RCF (6-16S / 6-16KS): 3,806 / 4,766 x g
- Max. tube length, mid-bucket, without / with cap: 151 / 143 mm
- Hermetically closable with cap 17114
- Max. speed for 4°C: 4.500 min^{-1}
- Angle: 90°

Swing-out rotor 11150

Bucket 13233 (1 set = 2 pcs.)

- Max. capacity: 200 x 5 ml
- Max. speed (6-16S / 6-16KS): 4,500 / 5,100 rpm
- Max. RCF (6-16S / 6-16KS): 3,668 / 4,711 x g
- Max. tube length mid-bucket: 80 mm
- Tmin at maximum speed: <4°C
- Angle: 90°

Blood and urine tubes										
Rated capacity (filling volume) [ml]	1.1 – 1.4	2.7 – 5	4 – 6	1.8 – 7	1.6 – 6	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 – 107	13 x 81 – 106	15 x 91 – 118	15 x 106	16 x 106 – 107	16 x 108	16 x 131
Tube material	PP	PP	PET	PET	PP	PP	PET	PET	PP	Glass
Item no.	–	–	–	–	–	–	–	–	–	–
Adapter										
for rectangular bucket 13420									
Bore diameter x length [mm]	12.5 x 51		14 x 58			17.2 x 46			17.5 x 57	17.5 x 57
Tubes per adapter / rotor	20 / 160		12 / 96			12 / 96			11 / 88	8 / 64
Centrifuging radius [mm]	166		164			166			168	168
Item no.	18005*		18012			18010*			18020	18010**

Tube	
Rated capacity (filling volume) [ml]	5
Diameter x length [mm]	12 x 75
Tube material	PS
Item no.	15060
Adapter	
for bucket 13233	
Bore diameter x length [mm]	13 x 66
Tubes per adapter / rotor	50 / 200
Centrifuging radius [mm]	162
Item no.	–

* Including rubber cushion 16909; ** Observe loading; only possible without cap 17114

Swing-out rotor 11150

Bucket 13234 (1 set = 2 pcs) with rubber cushion 16051

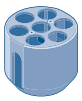
- Max. capacity: 16 x 100 ml round-bottom
- Max. speed (6-16S / 6-16KS): 4,300 rpm
- Max. RCF (6-16S / 6-16KS): 3,680 x g
- Max. tube length mid-bucket: 118 mm
- Tmin at maximum speed: <4°C
- Angle: 90°

Tube				
Rated capacity (filling volume) [ml]	100 (75)	100 (90)	100	100
Diameter x length [mm]	44 x 100	44 x 100	44 x 100	45 x 100
Tube material	Glass	Glass	Glass	PC
Item no.	15078	15106	15100	15103
Adapter for bucket 13234				
Bore diameter x length [mm]	45.5 x 98			
Tubes per adapter / rotor	4 / 16			
Centrifuging radius [mm]	174			
Item no.	16051			

Swing-out rotor 11150

Bucket 13235 (1 set = 2 pcs)

- Max. capacity: 28 x 50 ml conical
- Max. speed (6-16S / 6-16KS): 4,500 / 5,100 rpm
- Max. RCF (6-16S / 6-16KS): 4,302 / 5,525 x g
- Max. tube length mid-bucket: 128 mm
- Tmin at maximum speed: <4°C
- Angle: 90°

Tube				
Rated capacity (filling volume) [ml]	15	25	30	50
Diameter x length [mm]	16.5 x 120	25 x 90	25 x 107	29 x 117
Tube material	PP	PP	PP	PP
Item no.	15115	–	–	15151
Adapter for bucket 13235 				
Bore diameter x length [mm]	17 x 107	25.5 x 71		29.5 x 97
Tubes per adapter / rotor	7 / 28	7 / 28		7 / 28
Centrifuging radius [mm]	189	167		190
Item no.	13060	13064		–

Swing-out rotor 11150

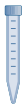
Bucket 13236 (1 set = 2 pcs.)

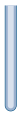
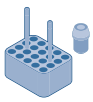
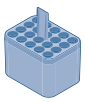
- Max. capacity: 48 x 15 ml conical
- Max. speed (6-16S / 6-16KS): 4,500 / 5,100 rpm
- Max. RCF (6-16S / 6-16KS): 4,256 / 5,467 x g
- Max. tube length mid-bucket: 124 mm
- Tmin at maximum speed: <4°C
- Angle: 90°

Swing-out rotor 11156

Rectangular bucket 13127 (1 set = 2 pcs.)

- Max. capacity: 6 x 200 ml
- Max. speed (6-16S / 6-16KS): 4,500 / 5,100 rpm
- Max. RCF (6-16S / 6-16KS): 4,324 / 5,554 x g
- Max. tube length, mid-bucket, without / with cap: 140 / 124 mm
- Hermetically closable with cap 17112
- Max. speed for 4°C: 4.500 min^{-1}
- Angle: 90°

Tube	
Rated capacity (filling volume) [ml]	15
Diameter x length [mm]	16.5 x 120
Tube material	PP
Item no.	15115
Adapter for bucket 13236	
Bore diameter x length [mm]	17 x 92
Tubes per adapter / rotor	12 / 48
Centrifuging radius [mm]	188
Item no.	–

Tube										
Rated capacity (filling volume) [ml]	0.2	0.4	0.5	1.5	2	5	5	6 (5)	7	10
Diameter x length [mm]	5.8 x 20	5.8 x 47	7.9 x 28	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
Tube material	PP	PE	PP	PP	PP	PS	PPCO	Glass	Glass	PF
Item no.	15042	15014	15005	15008	15040	15060	–	15007	15027	15000
Adapter for rectangular bucket 13127								
Bore diameter x length [mm]	6.3 x 18.5	6 x 45	8 x 45	11.1 x 38	12.5 x 51	17 x 52	12.5 x 72	17.2 x 46
Tubes per adapter / rotor	20 / 120	20 / 120	20 / 120	20 / 120	20 / 120	6 / 36	20 / 120	12 / 72
Centrifuging radius [mm]	187	189	189	190	186	188	186	186
Item no.	18002 & 13021	18002 & 13000	18002 & 13002	18002	18005*	18006	18007*	18010*

* Including rubber cushion 16909

Swing-out rotor 11156

Rectangular bucket 13127 (1 set = 2 pcs.)

- Max. capacity: 6 x 200 ml
- Max. speed (6-16S / 6-16KS): 4,500 / 5,100 rpm
- Max. RCF (6-16S / 6-16KS): 4,324 / 5,554 x g
- Max. tube length, mid-bucket, without / with cap: 140 / 124 mm
- Hermetically closable with cap 17112
- Max. speed for 4°C: 4.500 min^{-1}
- Angle: 90°

Tube									
Rated capacity (filling volume) [ml]	10	10	10	10	14	14	15 (13)	15	25
Diameter x length [mm]	16.1 x 81.1	16.1 x 81.1	16 x 100	16 x 100	17 x 100	17 x 100	17 x 110	16.5 x 120	25 x 90
Tube material	PC	PPCO	Glass	Glass	PS	PP	Glass	PP	PP
Item no.	15010	15039	15015	15024	15020	15023	15022	15115	–

Adapter for rectangular bucket 13127					
Bore diameter x length [mm]	17.2 x 46	17.2 x 75	17 x 72.5	17 x 72.5	25.5 x 61
Tubes per adapter / rotor	12 / 72	12 / 72	4 / 24	7 / 42	4 / 24
Centrifuging radius [mm]	186	186	189	189	187
Item no.	18010*	18015*	18016	18018**	18022

Tube										
Rated capacity (filling volume) [ml]	25	25	30 (26)	30 (26)	30 (28)	30	30	50 (38)	50 (43)	50
Diameter x length [mm]	24 x 100	24 x 100	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
Tube material	Glass	Glass	PF	PPCO	PC	Glass	PP	PPCO	PF	Stainless steel
Item no.	15025	15026	15029	15032	15030	15033	–	15052	15051	13055

Adapter for rectangular bucket 13127					
Bore diameter x length [mm]	24.5 x 70	25.5 x 71	24.5 x 70	25.5 x 61	29.5 x 71
Tubes per adapter / rotor	5 / 30	5 / 30	5 / 30	4 / 24	2 / 12
Centrifuging radius [mm]	186	188	186	187	188
Item no.	18025***	18030	18025***	18022	18051

* Including rubber cushion 16909; ** Only possible without cap 17112; *** Including rubber cushion 16906

Swing-out rotor 11156

Rectangular bucket 13127 (1 set = 2 pcs.)

- Max. capacity: 6 x 200 ml
- Max. speed (6-16S / 6-16KS): 4,500 / 5,100 rpm
- Max. RCF (6-16S / 6-16KS): 4,324 / 5,554 x g
- Max. tube length, mid-bucket, without / with cap: 140 / 124 mm
- Hermetically closable with cap 17112
- Max. speed for 4°C: 4.500 min^{-1}
- Angle: 90°

Tube										
Rated capacity (filling volume) [ml]	50	50	50	50	50	50	85 (73)	85 (76)	94 (85)	94
Diameter x length [mm]	34 x 100	34 x 100	35 x 100	34 x 100	29 x 117	29 x 117	38 x 112	38 x 112	38 x 103	38 x 110
Tube material	Glass	Glass	Glass	PC	PP	PP	PF	PPCO	Stainless steel	PC
Item no.	15045	15050	15056	15049	–	15151	15080	15076	13085	15094
Adapter for rectangular bucket 13127										
Bore diameter x length [mm]	35.5 x 68				30 x 74	29.5 x 72.5	38.5 x 72			
Tubes per adapter / rotor	2 / 12				2 / 12	2 / 12	1 / 6			
Centrifuging radius [mm]	182				191	189	189			
Item no.	18050*				18053	18052	18085			

Tube								
Rated capacity (filling volume) [ml]	100 (75)	100 (90)	100	100	150	150	200 (168)	200 (170)
Diameter x length [mm]	44 x 100	44 x 100	44 x 100	45 x 100	51 x 99	56 x 113	56 x 112	56 x 112
Tube material	Glass	Glass	Glass	PC	PP	Glass	PPCO	Glass
Item no.	15078	15106	15100	15103	15125	15206	15202	15201
Adapter for rectangular bucket 13127								
Bore diameter x length [mm]	46 x 65.5				51.5 x 71	57 x 62	57 x 34	57 x 62
Tubes per adapter / rotor	1 / 6				1 / 6	1 / 6	1 / 6	1 / 6
Centrifuging radius [mm]	185				188	187	186	187
Item no.	18100**				18125	18250***	18200	18250***

* Including rubber cushion 16907; ** Including rubber cushion 16908; *** Including rubber cushion 16051

Swing-out rotor 11156

Rectangular bucket 13127 (1 set = 2 pcs.)

- Max. capacity: 6 x 200 ml
- Max. speed (6-16S / 6-16KS): 4,500 / 5,100 rpm
- Max. RCF (6-16S / 6-16KS): 4,324 / 5,554 x g
- Max. tube length, mid-bucket, without / with cap: 140 / 124 mm
- Hermetically closable with cap 17112
- Max. speed for 4°C: 4.500 min^{-1}
- Angle: 90°

Swing-out rotor 11148

with 8 carrier buckets 13124 and aluminium lid 17880

- Max. capacity: 32 x 2 ml
- Max. speed (6-16S / 6-16KS): 12,000 / 13,200 rpm
- Max. RCF (6-16S / 6-16KS): 13,523 / 16,363 x g
- Hermetically closable with aluminium lid 17880
- Tmin at maximum speed: <4°C
- Angle: 90°

Blood and urine tubes										
Rated capacity (filling volume) [ml]	1.1 – 1.4	2.7 – 5	4 – 6	1.8 – 7	1.6 – 6	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 – 107	13 x 81 – 106	15 x 91 – 118	15 x 106	16 x 106 – 107	16 x 108	16 x 131
Tube material	PP	PP	PET	PET	PP	PP	PET	PET	PP	Glass
Item no.	–	–	–	–	–	–	–	–	–	–
Adapter for rectangular bucket 13127										
Bore diameter x length [mm]	12.5 x 51		14 x 58			17.2 x 46			17.5 x 57	17.5 x 57
Tubes per adapter / rotor	20 / 120		12 / 72			12 / 72			11 / 66	3 / 18
Centrifuging radius [mm]	186		184			186			188	188
Item no.	18005*		18012			18010*			18020	18020**

Tube		
Rated capacity (filling volume) [ml]	1.5	2
Diameter x length [mm]	10.7 x 42	10.7 x 42
Tube material	PP	PP
Item no.	15008	15040
Adapter for bucket 13124		
Bore diameter x length [mm]	11.1 x 38.5	
Tubes per adapter / rotor	4 / 32	
Centrifuging radius [mm]	84	
Item no.	–	

* Including rubber cushion 16909; ** Observe loading

Swing-out rotor 11165

Bucket 13113 for 100 ml 8" petroleum tubes according to ASTM D 91/96, with adapter 16103 and rubber cushion 16021

- Max. capacity: 4 x 100 ml
- Max. speed (6-16S / 6-16KS): 3,000 rpm
- Max. RCF (6-16S / 6-16KS): 2,143 x g
- Hermetically closable with cap 17107
- Angle: 90°

Tube

Rated capacity (filling volume) [ml]	100
Diameter x length [mm]	37 x 200
Tube material	Glass
Item no.	15130*

Adapter

for bucket 13113

Bore diameter x length [mm]	–
Tubes per adapter / rotor	1 / 4
Centrifuging radius [mm]	213
Item no.	16103**

Swing-out rotor 11165

Bucket 13114 for 100 ml 6" petroleum tubes according to ASTM D 96, with rubber cushion 16104

- Max. capacity: 4 x 100 ml
- Max. speed (6-16S / 6-16KS): 3,000 rpm
- Max. RCF (6-16S / 6-16KS): 1,922 x g
- Angle: 90°

Tube

Rated capacity (filling volume) [ml]	100
Diameter x length [mm]	44 x 165
Tube material	Glass
Item no.	15132*

Adapter

for bucket 13114

Bore diameter x length [mm]	–
Tubes per adapter / rotor	1 / 4
Centrifuging radius [mm]	191
Item no.	16104

Swing-out rotor 11165

Bucket 13116 for 100 ml petroleum tubes tubes according to ASTM D 96, with rubber cushion 16106

- Max. capacity: 4 x 100 ml
- Max. speed (6-16S / 6-16KS): 3,000 rpm
- Max. RCF (6-16S / 6-16KS): 1,741 x g
- Angle: 90°

Tube

Rated capacity (filling volume) [ml]	100
Diameter x length [mm]	59 x 160
Tube material	Glass
Item no.	15131*

Adapter

for bucket 13116

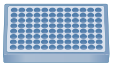
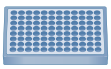
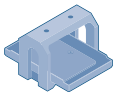
Bore diameter x length [mm]	–
Tubes per adapter / rotor	1 / 4
Centrifuging radius [mm]	173
Item no.	16106

* Max. RCF 700 x g; ** Including rubber cushion 16021

Swing-out rotor 11150

Rectangular bucket 13220 (1 set = 2 pcs)

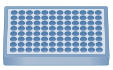
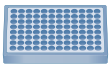
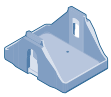
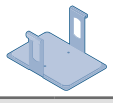
- Max. plate height: 51 mm
- Max. speed (6-16S / 6-16KS): 4,100 rpm
- Max. RCF (6-16S / 6-16KS): 3,007 x g
- Max. load per carrier: 300 g
- Tmin at maximum speed: <4°C
- Angle: 90°

Plate				
Description	MTP (without lid)	MTP (with lid)	DWP	PCR plate 96-fold
W x D x H [mm]	128 x 86 x 15	128 x 86 x 17.5	128 x 86 x 44.5	128 x 86 x 20
Adapter				
for rectangular bucket 13220 				
Bore diameter x length [mm]	–			
Plates per rotor	12	8	4	8
Centrifuging radius [mm]	160			
Item no.	–			

Swing-out rotor 11150

Rectangular bucket 13221 (1 set = 2 pcs) with plate holder 17979

- Max. plate height: 56 mm
- Max. speed (6-16S / 6-16KS): 4,500 / 5,100 rpm
- Max. RCF (6-16S / 6-16KS): 3,622 / 4,653 x g
- Max. load per carrier: 450 g
- Tmin at maximum speed: <4°C
- Angle: 90°

Plate				
Description	MTP (without lid)	MTP (with lid)	DWP	PCR plate 96-fold
W x D x H [mm]	128 x 86 x 15	128 x 86 x 17.5	128 x 86 x 44.5	128 x 86 x 20
Adapter				
for rectangular bucket 13221 				
Bore diameter x length [mm]	–			
Plates per rotor	12	12	4	8
Centrifuging radius [mm]	160			
Item no.	17979			

Swing-out rotor 11118

with 1 set (qty 2) rectangular buckets 13218, caps 17108 and plate holder 17978

- Max. plate height without / with cap: 93 / 80 mm
- Max. speed (6-16S / 6-16KS): 5,700 rpm
- Max. RCF (6-16S / 6-16KS): 5,485 x g
- Max. load per carrier: 520 g
- Biosafe with cap 17108
- Tmin at maximum speed: <4°C
- Angle: 90°

Swing-out rotor 11660 / 11650*

Rectangular bucket 13421 (1 set = 4 pcs) with plate holder 17979

- Max. plate height: 61 mm
- Max. speed (6-16S / 6-16KS): 4,200 / 5,100 rpm
- Max. RCF (6-16S / 6-16KS): 3,096 / 4,565 x g
- Max. load per carrier: 500 g
- Tmin at maximum speed: <4°C
- Angle: 90°

*Max. speed with rotor 11650 in 6-16KS: 4,700 rpm, max. RCF: 3,877 x g

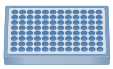
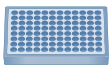
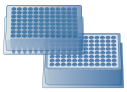
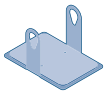
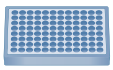
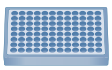
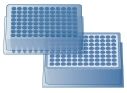
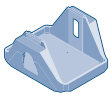
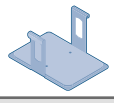
Plate					
Description	MTP (without lid)	MTP (with lid)	DWP	PCR plate 96-fold	Filter plate
W x D x H [mm]	128 x 86 x 15	128 x 86 x 17.5	128 x 86 x 44.5	128 x 86 x 20	128 x 86 x 60
Adapter					
for rectangular bucket 13218					
Bore diameter x length [mm]	–				
Plates per rotor (without / with cap)	12 / 10	10 / 8	4 / 2	8 / 8	2 / 2
Centrifuging radius [mm]	151				
Item no.	17978				

Plate					
Description	MTP (without lid)	MTP (with lid)	DWP	PCR plate 96-fold	Filter plate
W x D x H [mm]	128 x 86 x 15	128 x 86 x 17.5	128 x 86 x 44.5	128 x 86 x 20	128 x 86 x 60
Adapter					
for rectangular bucket 13421 					
Bore diameter x length [mm]	–				
Plates per rotor	16	12	4	12	4
Centrifuging radius [mm]	157				
Item no.	17979				

Swing-out rotor 11660 / 11650

Rectangular bucket 13621 (1 set = 4 pcs)
with plate holder 17980

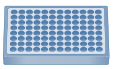
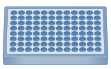
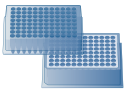
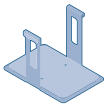
- Max. plate height: 86 mm
- Max. speed (6-16S / 6-16KS): 4,200 / 4,700 rpm
- Max. RCF (6-16S / 6-16KS): 3,589 / 4,495 x g
- Max. load per carrier: 600 g
- Tmin at maximum speed: <4°C*
- Angle: 90°

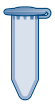
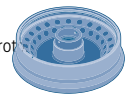
* Max. speed for 4 °C of rotor 11660: 4.600 min^{-1}

Fixed-angle rotor 12449

with aluminium lid 17612

- Max. capacity: 48 x 2 ml
- Max. speed (6-16S / 6-16KS): 13,500 / 15,000 rpm
- Max. RCF (6-16S / 6-16KS): 20,376 / 25,155 x g
- Biosafe with aluminium lid 17612 ☣
- Max. speed for 4°C: 14.900 min^{-1}
- Angle (outer / inner row): 25° / 53°

Plate					
Description	MTP (without lid)	MTP (with lid)	DWP	PCR plate 96-fold	Filter plate
W x D x H [mm]	128 x 86 x 15	128 x 86 x 17.5	128 x 86 x 44.5	128 x 86 x 20	128 x 86 x 60
Adapter					
for rectangular bucket 13621					
Bore diameter x length [mm]	–				
Plates per rotor	20	16	4	16	4
Centrifuging radius [mm]	182				
Item no.	17980				

Tube					
Rated capacity (filling volume) [ml]	0.2	0.4	0.5	1.5	2
Diameter x length [mm]	5.85 x 20	5.8 x 47	7.9 x 28	10.7 x 42	10.7 x 42
Tube material	PP	PE	PP	PP	PP
Item no.	15042	15014	15005	15008	15040
Adapter					
for fixed-angle rotor 12449 					
Bore diameter x length [mm]	6.3 x 18.5	6 x 45	8 x 45	11.1 x 38.5	
Tubes per adapter / rotor	1 / 48	1 / 48	1 / 48	– / 48	
Centrifuging radius (outer / inner row) [mm]	96 / 96	98 / 98	98 / 98	100 / 100	
Item no.	13021	13000	13002	–	

Fixed-angle rotor 12201

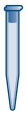
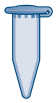
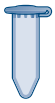
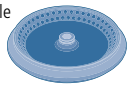
with aluminium lid 17896

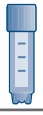
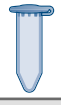
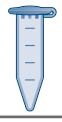
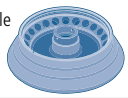
- Max. capacity: 100 x 2 ml
- Max. speed (6-16S / 6-16KS): 9,000 / 9,600 rpm
- Max. RCF outer row (6-16S / 6-16KS): 14,761 / 16,795 x g
- Max. RCF inner row (6-16S / 6-16KS): 12,406 / 14,116 x g
- Hermetically closable with aluminium lid 17896
- Max. speed for 4°C: 9.000 min^{-1}
- Angle (both rows): 45°

Fixed-angle rotor 12450

with aluminium lid 17614

- Max. capacity: 24 x 5 ml conical
- Max. speed (6-16S / 6-16KS): 13,000 / 14,000 rpm
- Max. RCF (6-16S / 6-16KS): 21,917 / 25,419 x g
- Biosafe with aluminium lid 17614
- Max. speed for 4°C: 13.400 min^{-1}
- Angle: 40°

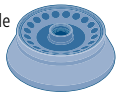
Tube					
Rated capacity (filling volume) [ml]	0.2	0.4	0.5	1.5	2
Diameter x length [mm]	5.85 x 20	5.8 x 47	7.9 x 28	10.7 x 42	10.7 x 42
Tube material	PP	PE	PP	PP	PP
Item no.	15042	15014	15005	15008	15040
Adapter					
for fixed-angle rotor 12201 					
Bore diameter x length [mm]	6.3 x 18.5	6 x 45	8 x 45	11.1 x 38.5	
Tubes per adapter / rotor	1 / 100	1 / 100	1 / 100	– / 100	
Centrifuging radius (outer / inner row) [mm]	159 / 133	161 / 135	161 / 135	163 / 151	
Item no.	13021	13000	13002	–	

Tube					
Rated capacity (filling volume) [ml]	1.5	1.5 – 1.8	1.5	2	5
Diameter x length [mm]	11.7 x 34	12.3 x 49	10.7 x 42	10.7 x 42	17 x 60
Tube material	Glass	PP	PP	PP	PPCO
Item no.	HPLC	Cryo tube	15008	15040	–
Adapter					
for fixed-angle rotor 12450 					
Bore diameter x length [mm]	12.5 x 28	12.7 x 32	11.1 x 38.5		17 x 52
Tubes per adapter / rotor	1 / 24	1 / 24	1 / 24		– / 24
Centrifuging radius [mm]	89	93	99		116
Item no.	14081	14080	14082		–

Fixed-angle rotor 12168

with aluminium lid 17846

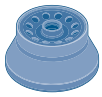
- Max. capacity: 20 x 10 ml
- Max. speed (6-16S / 6-16KS): 12,500 / 14,000 rpm
- Max. RCF (6-16S / 6-16KS): 17,119 / 21,475 x g
- Hermetically closable with aluminium lid 17846
- Tmin at maximum speed: <4°C
- Angle: 25°

Tube			
Rated capacity (filling volume) [ml]	10	10	10
Diameter x length [mm]	16.1 x 81.1	16.1 x 81.1	16.1 x 81.1
Tube material	PF	PC	PPCO
Item no.	15000	15010	15039
Adapter			
for fixed-angle rotor 12168 			
Bore diameter x length [mm]	16.3 x 69		
Tubes per adapter / rotor	– / 20		
Centrifuging radius [mm]	98		
Item no.	–		

Fixed-angle rotor 12170

with aluminium lid 17859

- Max. capacity: 12 x 15 ml conical
- Max. speed (6-16S / 6-16KS): 12,500 / 13,500 rpm
- Max. RCF (6-16S / 6-16KS): 17,469 / 20,376 x g
- Hermetically closable with aluminium lid 17859
- Tmin at maximum speed: <4°C
- Angle: 25°

Tube	
Rated capacity (filling volume) [ml]	15
Diameter x length [mm]	16.5 x 120
Tube material	PP
Item no.	15115
Adapter	
for fixed-angle rotor 12170 	
Bore diameter x length [mm]	17.5 x 107
Tubes per adapter / rotor	– / 12
Centrifuging radius [mm]	100
Item no.	–

Cleanroom

Robust and resistant

Cleanroom coating
Available for all accessories

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.

Fixed-angle rotor 12174

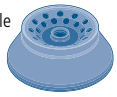
with aluminium lid 17883

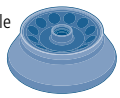
- Max. capacity: 24 x 15 ml conical
- Max. speed (6-16S / 6-16KS): 10,500 / 12,000 rpm
- Max. RCF (6-16S / 6-16KS): 15,531 / 20,285 x g
- Hermetically closable with aluminium lid 17883
- Tmin at maximum speed: <4°C
- Angle (outer / inner row): 30° / 40°

Fixed-angle rotor 12172

with aluminium lid 17845

- Max. capacity: 12 x 30 ml round-bottom
- Max. speed (6-16S / 6-16KS): 12,500 / 14,000 rpm
- Max. RCF (6-16S / 6-16KS): 19,216 / 24,104 x g
- Hermetically closable with aluminium lid 17845
- Tmin at maximum speed: <4°C
- Angle: 30°

Tube	
Rated capacity (filling volume) [ml]	15
Diameter x length [mm]	16.5 x 120
Tube material	PP
Item no.	15115
Adapter for fixed-angle rotor 12174 	
Bore diameter x length [mm]	17 x 107
Tubes per adapter / rotor	– / 24
Centrifuging radius (outer / inner row) [mm]	126 / 126
Item no.	–

Tube						
Rated capacity (filling volume) [ml]	10	10	10	30 (26)	30 (26)	30 (28)
Diameter x length [mm]	16.1 x 81.1	16.1 x 81.1	16.1 x 81.1	25.3 x 98	25.3 x 98	25.3 x 98
Tube material	PF	PC	PPCO	PF	PPCO	PC
Item no.	15000	15010	15039	15029	15032	15030
Adapter for fixed-angle rotor 12172 						
Bore diameter x length [mm]	16.5 x 70			26 x 83		
Tubes per adapter / rotor	1 / 12			– / 12		
Centrifuging radius [mm]	100			110		
Item no.	13059			–		

Fixed-angle rotor 12269

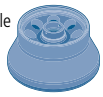
with aluminium lid 17604

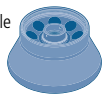
- Max. capacity: 8 x 50 ml conical
- Max. speed (6-16S / 6-16KS): 12,500 / 13,500 rpm
- Max. RCF (6-16S / 6-16KS): 18,168 / 21,191 x g
- Biosafe with aluminium lid 17604
- Tmin at maximum speed: <4°C
- Angle: 25°

Fixed-angle rotor 12266

with aluminium lid 17605

- Max. capacity: 8 x 50 ml round-bottom
- Max. speed (6-16S / 6-16KS): 12,500 / 14,000 rpm
- Max. RCF (6-16S / 6-16KS): 17,469 / 21,913 x g
- Biosafe with aluminium lid 17605
- Tmin at maximum speed: <4°C
- Angle: 25°

Tube						
Rated capacity (filling volume) [ml]	15	25	30	50 (38)	50 (43)	50
Diameter x length [mm]	16.5 x 120	25 x 90	25 x 107	28.8 x 107	28.5 x 107	29 x 117
Tube material	PP	PP	PP	PPCO	PF	PP
Item no.	15115	–	–	15052	15051	15151
Adapter						
for fixed-angle rotor 12269 						
Bore diameter x length [mm]	17 x 107	25.5 x 71	30 x 91	29.5 x 102		
Tubes per adapter / rotor	1 / 8	1 / 8	1 / 8	– / 8		
Centrifuging radius [mm]	103	81	94	104		
Item no.	13060	13064	13079	–		

Tube										
Rated capacity (filling volume) [ml]	10	10	10	14	14	15	30 (26)	30 (26)	30 (28)	30
Diameter x length [mm]	16.1 x 81.1	16.1 x 81.1	16.1 x 81.1	17 x 100	17 x 100	17.5 x 106	25.3 x 98	25.3 x 98	25.3 x 98	23.6 x 106
Tube material	PF	PC	PPCO	PS	PP	HS glass	PF	PPCO	PC	HS glass
Item no.	15000	15010	15039	15020	15023	15085	15029	15032	15030	15086
Adapter										
for fixed-angle rotor 12266 										
Bore diameter x length [mm]	16.2 x 65			18 x 90			25.6 x 75			24.5 x 93
Tubes per adapter / rotor	1 / 8			1 / 8			1 / 8			1 / 8
Centrifuging radius [mm]	72			99			89			102
Item no.	13087			16018			13086			16030

Fixed-angle rotor 12266

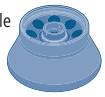
with aluminium lid 17605

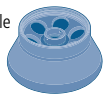
- Max. capacity: 8 x 50 ml round-bottom
- Max. speed (6-16S / 6-16KS): 12,500 / 14,000 rpm
- Max. RCF (6-16S / 6-16KS): 17,469 / 21,913 x g
- Biosafe with aluminium lid 17605
- Tmin at maximum speed: <4°C
- Angle: 25°

Fixed-angle rotor 12265

with aluminium lid 17607

- Max. capacity: 6 x 94 ml round-bottom
- Max. speed (6-16S / 6-16KS): 12,500 / 14,000 rpm
- Max. RCF (6-16S / 6-16KS): 18,517 / 23,228 x g
- Biosafe with aluminium lid 17607
- Max. speed for 4°C: 13,900 min^{-1}
- Angle: 25°

Tube			
Rated capacity (filling volume) [ml]	50 (38)	50 (43)	50
Diameter x length [mm]	28.8 x 107	28.5 x 107	28.5 x 101.5
Tube material	PPCO	PF	Stainless steel
Item no.	15052	15051	13055
Adapter for fixed-angle rotor 12266 			
Bore diameter x length [mm]	29 x 97		
Tubes per adapter / rotor	– / 8		
Centrifuging radius [mm]	104		
Item no.	–		

Tube										
Rated capacity (filling volume) [ml]	10	10	10	14	14	15	15	30 (26)	30 (26)	30 (28)
Diameter x length [mm]	16.1 x 81.1	16.1 x 81.1	16.1 x 81.1	17 x 100	17 x 100	17.5 x 106	16.5 x 120	25.3 x 98	25.3 x 98	25.3 x 98
Tube material	PF	PC	PPCO	PS	PP	HS glass	PP	PF	PPCO	PC
Item no.	15000	15010	15039	15020	15023	15085	15115	15029	15032	15030
Adapter for fixed-angle rotor 12265 										
Bore diameter x length [mm]	16.2 x 71			18 x 87			17 x 107	26 x 83		
Tubes per adapter / rotor	2 / 12			1 / 6			1 / 6	1 / 6		
Centrifuging radius [mm]	77			98			105	89		
Item no.	13084			16019			13081*	13083		

* max. RCF 20,000 x g

Fixed-angle rotor 12265

with aluminium lid 17607

- Max. capacity: 6 x 94 ml round-bottom
- Max. speed (6-16S / 6-16KS): 12,500 / 14,000 rpm
- Max. RCF (6-16S / 6-16KS): 18,517 / 23,228 x g
- Biosafe with aluminium lid 17607 ☣
- Max. speed for 4°C: 13,900 min^{-1}
- Angle: 25°

Fixed-angle rotor 12356*

with aluminium lid 17603

- Max. capacity: 6 x 250 ml
- Max. speed (6-16S / 6-16KS): 9,000 / 11,200 rpm
- Max. RCF (6-16S / 6-16KS): 13,131 / 20,335 x g
- Biosafe with aluminium lid 17603 ☣
- Max. speed for 4°C: 9,900 min^{-1}
- Angle: 30°

* 6-16HS / 6-16KHS: Max. temperature adjustment range 50°C

Tube									
Rated capacity (filling volume) [ml]	30	50 (38)	50 (43)	50	50	85 (73)	85 (76)	94 (85)	94
Diameter x length [mm]	23.6 x 106	28.8 x 107	28.5 x 107	28.5 x 101.5	29.5 x 117	38 x 112	38 x 112	38 x 103	38 x 110
Tube material	HS glass	PPCO	PF	Stainless steel	PP	PF	PPCO	Stainless steel	PC
Item no.	15086	15052	15051	13055	15151	15080	15076	13085	15094
Adapter for fixed-angle rotor 12265									
Bore diameter x length [mm]	24.5 x 88	29 x 97			30 x 100	38.3 x 99			
Tubes per adapter / rotor	1 / 6	1 / 6			1 / 6	– / 6			
Centrifuging radius [mm]	99	103			106	106			
Item no.	16031	13082			13080*	–			

Tube										
Rated capacity (filling volume) [ml]	1.5	2	10	10	10	15	30 (26)	30 (26)	30 (28)	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	25.3 x 98	28.8 x 107
Tube material	PP	PP	PF	PC	PPCO	PP	PF	PPCO	PC	PPCO
Item no.	15008	15040	15000	15010	15039	15115	15029	15032	15030	15052
Adapter for fixed-angle rotor 12356										
Bore diameter x length [mm]	11.1 x 38.5		16.5 x 69			17 x 105	26 x 82.5			29.5 x 98
Tubes per adapter / rotor	9 / 54		6 / 36			4 / 24	2 / 12			1 / 6
Centrifuging radius [mm]	128		141			144	141			137
Item no.	14122		14124			14125	14127			14129

* max. RCF 20,000 x g

Fixed-angle rotor 12356*

with aluminium lid 17603

- Max. capacity: 6 x 250 ml
- Max. speed (6-16S / 6-16KS): 9,000 / 11,200 rpm
- Max. RCF (6-16S / 6-16KS): 13,131 / 20,335 x g
- Biosafe with aluminium lid 17603
- Max. speed for 4°C: 9,900 min^{-1}
- Angle: 30°

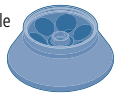
* 6-16HS / 6-16KHS: Max. temperature adjustment range 50°C

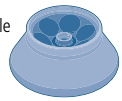
Fixed-angle rotor 12600*

with aluminium lid 17600 and torque wrench kit 17060

- Max. capacity: 6 x 500 ml
- Max. speed (6-16S / 6-16KS): 8,000 / 9,600 rpm
- Max. RCF (6-16S / 6-16KS): 11,949 / 17,207 x g
- Biosafe with aluminium lid 17600
- Max. speed for 4°C: 8,400 min^{-1}
- Angle: 30°

* 6-16HS / 6-16KHS: Max. temperature adjustment range 50°C

Tube										
Rated capacity (filling volume) [ml]	50 (43)	50	50	85 (73)	85 (76)	94 (85)	94	250 (232)	250 (232)	250
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	61.4 x 122	61.4 x 122	61.4 x 125
Tube material	PF	Stainless steel	PP	PF	PPCO	Stainless steel	PC	PF	PPCO	Stainless steel
Item no.	15051	13055	15151	15080	15076	13085	15094	15247	15249	13255
Adapter for fixed-angle rotor 12356 										
Bore diameter x length [mm]	29.5 x 98	30 x 102	38.5 x 99					61.8 x 111		
Tubes per adapter / rotor	1 / 6	1 / 6	1 / 6					– / 6		
Centrifuging radius [mm]	137	141	138					145		
Item no.	14129	14131	14134					–		

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 12600 									
Bore diameter x length [mm]	12 x 38.5	16.5 x 69				17.7 x 107	17.7 x 107	26 x 83	
Tubes per adapter / rotor	12 / 72	8 / 48				2 / 12*	5 / 30	3 / 18	
Centrifuging radius [mm]	129	160				126	164	148	
Item no.	14151	14144				14148*	14149	14146	

* Adapters for 2 x 15 ml and 2 x 50 ml culture tubes

Fixed-angle rotor 12600*

with aluminium lid 17600 and torque wrench kit 17060

- Max. capacity: 6 x 500 ml
- Max. speed (6-16S / 6-16KS): 8,000 / 9,600 rpm
- Max. RCF (6-16S / 6-16KS): 11,949 / 17,207 x g
- Biosafe with aluminium lid 17600
- Max. speed for 4°C: 8,400 min^{-1}
- Angle: 30°

* 6-16HS / 6-16KHS: Max. temperature adjustment range 50°C

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 12600				
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]	162	126	164	167
Item no.	14150	14148*	14153	14157

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 12600			
Bore diameter x length [mm]	62 x 115	62 x 127	69.9 x 142
Tubes per adapter / rotor	1 / 6	1 / 6	– / 6
Centrifuging radius [mm]	157	167	167
Item no.	14155	14157	–

* Adapters for 2 x 15 ml and 2 x 50 ml culture tubes

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 been 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	+ , +*
Standstill heating; 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^3	+
Lockable controller with password protection	+
Microprocessor control	+

* Only for Sigma 6-16KS and Sigma 6-16KHS; ** Only Sigma 6-16HS and Sigma 6-16KHS, *** Only Sigma 6-16HS, 6-16KS and 6-16KHS

Premium quality

Made in Germany

The Sigma 6-16 series meets the highest technical requirements of laboratory standards. Developed and produced at our facility in Osterode, Germany, they are high-performance, durable and energy-efficient quality products and conform to the latest safety, emissions and environmental standards. Sigma guarantees the availability of spare parts and wearing parts for at least 10 years. Furthermore, you benefit from our extensive services portfolio, including commissioning, maintenance, device calibration and more. Our qualified service technicians are ready to provide professional maintenance and repair as well as loaner devices if necessary. All support services are designed to maintain reliability and optimise system availability.

	Sigma 6-16S / 6-16HS	Sigma 6-16KS / 6-16KHS
Max. capacity [ml]		
Swing-out rotor	4 x 1,000	4 x 1,000
Fixed-angle rotor	6 x 500	6 x 500
Max. RCF	21,917	25,419
Maximum speed [rpm]	13,500	15,000
Minimum speed [rpm]	100	100
Noise level at maximum speed (approximate) [dB(A)]		
Swing-out rotor 11660 and 13450	≤ 71	≤ 57
Fixed-angle rotor 12449	≤ 63	≤ 66
Max. acceleration time [s]		
Swing-out rotor 11660 and 13450	≤ 29	≤ 34
Fixed-angle rotor 12449	≤ 26	≤ 28
Max. braking time [s]		
Swing-out rotor 11660 and 13450	≤ 28	≤ 34
Fixed-angle rotor 12449	≤ 40	≤ 43
Temperature adjustment range [°C]	– / 0 – +70	-20 – +40 / -20 – +60
Power consumption [W]	1,300 / 2,000	2,000
Height x width x depth [mm]	483 x 581 x 711	485 x 790 x 711
Height with open lid [mm]	990	990
Weight without rotor [kg]	116	158
Refrigerant		R452A
Filling quantity [kg] / Max. permissible pressure [bar]		0.590 / 28
CO_2 equivalent [t]		1.263

Service Sigma
For maintenance and repairs please contact our Service department at:

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)

WEEE reg. no. DE 76714077

Sigma 6-16S centrifuge
220 – 240 V, 50 Hz (item no. 10390)
208 V, 60 Hz (item no. 10391)
200 V, 50/60 Hz (item no. 10392)

Sigma 6-16HS centrifuge
220 – 240 V, 50/60 Hz (item no. 10393)

Sigma 6-16KS centrifuge
220 – 240 V, 50 Hz (item no. 10395)
220 – 240 V, 60 Hz (item no. 10396)
208 V, 50/60 Hz (item no. 10397)
200 V, 50/60 Hz (item no. 10398)

Sigma 6-16KHS centrifuge
220 – 240 V, 50 Hz (item no. 10399)
220 – 240 V, 60 Hz (item no. 10400)

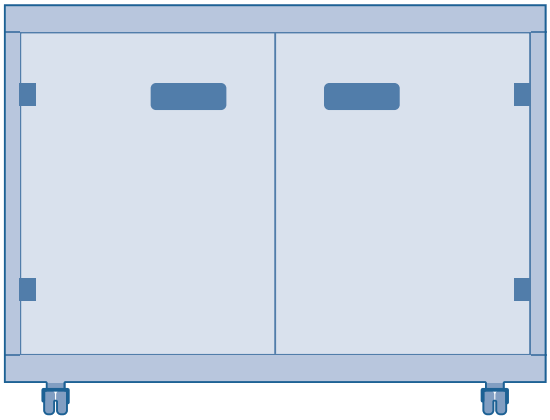
Sigma 6-16KS centrifuge, GMP water-cooled compressor
220 – 240 V, 50 Hz (item no. 91401)

Sigma 6-16KS, inert gas
220 – 240 V, 50/60 Hz (item no. 90905)

Sigma 6-16KHS, inert gas
220 – 240 V, 50/60 Hz (item no. 91025)

Centrifuge tables

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



Centrifuge table 17920
For Sigma 2-16KL
W x H x D [mm]: 600 x 501 x 550

Centrifuge table 17921
For Sigma 6-16KS
W x H x D [mm]: 790 x 515 x 684

Centrifuge table 17922
For Sigma 6-16S
W x H x D [mm]: 581 x 481 x 684

Centrifuge table 17923
For Sigma 3-30KS
W x H x D [mm]: 570 x 481 x 616

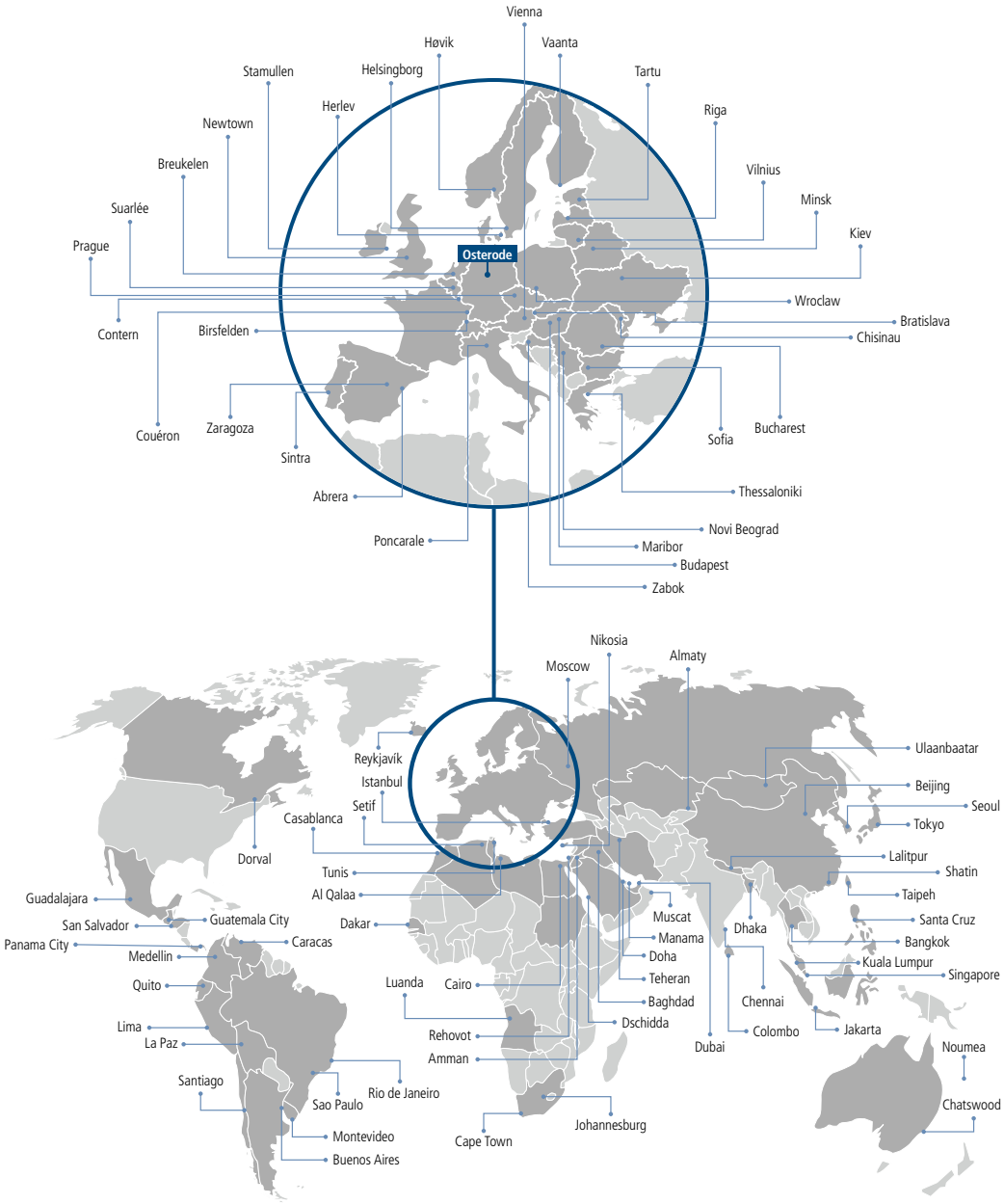
Centrifuge table 17926
For Sigma 3-16KL, 3-18KS, 4-16KS
W x H x D [mm]: 650 x 501 x 647

Centrifuge table 17927
For Sigma 3-16L, 4-5L, 4-16S
W x H x D [mm]: 490 x 497 x 647

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/

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