turns more than heads

Sigma 3-18KS
Sigma 3-18KHS

Benchtop centrifuge
- Refrigerated
- Refrigerated/heatable

www.sigma-zentrifugen.de

SIGMA

Multitalent for high demands

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

The Sigma 3-18 product series is the perfect choice for all users who set stringent demands on refrigerated benchtop centrifuges and prefer a wide variety of operating options.
Both the refrigerated version Sigma 3-18KS and the refrigerable and heatable version Sigma 3-18KHS enable RCF exceeding 30,000 x g and are very convenient to use thanks to the patented one-knob controller. Combined with the extensive portfolio of rotors and accessories, these universal centrifuges set standards for versatility and performance.

Equal to every challenge

Fast acceleration and short braking times

The Sigma 3-18KS and Sigma 3-18KHS centrifuges are designed for research tasks and routine procedures in laboratory operations. They are often used in hospitals, universities, industrial laboratories, and in the biotechnology and pharmaceutical sectors.

The refrigerated or actively heatable version Sigma 3-18KHS is popular amongst users for sedimentation of liquid media at relatively high temperatures, among other applications. Overall the Sigma 3-18KS and Sigma 3-18KHS offer many options that allow work processes in laboratory operations to be made more efficient, safer and more convenient. Thanks to their unique versatility and a broad range of fixed-angle and swing-out rotors, they also appeal to demanding users. With RCF above 30,000 x g for fixed-angle rotors and very short acceleration and braking times, they offer a perfect combination of performance and productivity.

They also score with well-conceived features: Intuitive one-knob Spincontrol S controller and effective operation with illuminated buttons for start, stop and lid opening. Cycle counting, rotor identification, lid opening assisted by gas springs, and easy, effortless lid closing simplify everyday laboratory work and provide maximum safety.
Microcontroller based, speed up to 18,000 rpm, suitability for low-speed operation, choice of ten languages, and a comprehensive portfolio of accessories are just a few of the reasons for choosing the Sigma 3-18KS and Sigma 3-18KHS centrifuges.

Sigma 3-18KS
- Universal benchtop centrifuge
- Speed range up to 18,000 rpm
- Maximum capacity: 4 x 400 ml
- User-friendly Spincontrol S controller
- Extra large TFT display
- 60 programs
- Progress indicator
- High-performance cooling
- Temperature setting range: -20 °C to +40°C
- Pre-cooling function "Rapid Temp"
- Rotor cooling also possible at standstill
- Low noise level
- Automatic rotor identification
- Zero-maintenance induction motor
- Motorised lid lock
- Automatic imbalance monitoring
- Rotor life monitoring for a high degree of safety
- Easily cleaned stainless steel drum
- Window in lid for external speed monitoring
- Produced in compliance with the latest national and international standards (e.g. EN 61010-2-020)

Sigma 3-18KHS
All features of the Sigma 3-18KS, 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

With an excellent balance of features and a large range of fixed-angle and swing-out rotors, the Sigma 3-18KS and Sigma 3-18KHS can be used for a wide variety of applications.
The extensive Sigma rotor portfolio also offers extremely high versatility. Particularly thanks to the high RCF capability with fixed-angle rotors, the centrifuges excel in high speed performance, resulting in a distinctly broader spectrum of applications compared to other centrifuge models of similar capacity.
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 11180

- Max. capacity: 4 x 400 ml
- Max. speed (3-18KS / 3-18KHS): 4,700 rpm
- Max. RCF (3-18KS / 3-18KHS): 4,248 x g
- Accessories in part with biosafe closure ☣
- Angle: 90°

▸ p. 16

Swing-out rotor 11133

- Max. capacity: 4 x 200 ml
- Max. speed (3-18KS / 3-18KHS): 5,500 rpm
- Max. RCF (3-18KS / 3-18KHS): 5,242 x g
- Angle: 90°

▸ p. 20

Swing-out rotor 11135

- Max. capacity: 24 x 2 ml
- Max. speed (3-18KS / 3-18KHS): 14,000 rpm
- Max. RCF (3-18KS / 3-18KHS): 16,215 x g
- Angle: 90°

▸ p. 20

Drum rotor 11136

- Max. capacity: 60 x 2 ml
- Max. speed (3-18KS / 3-18KHS): 14,500 rpm
- Max. RCF (3-18KS / 3-18KHS): 16,454 x g
- Angle: 90°

MTP swing-out rotors on page 18

▸ p. 19

Swing-out rotor 11222

- Max. capacity: 6 microtiter plates
- Max. speed (3-18KS / 3-18KHS): 3,000 rpm
- Max. RCF (3-18KS / 3-18KHS): 1,218 x g
- Angle: 90°

▸ p. 19

Swing-out rotor 11241

- Max. capacity: 8 microtiter plates
- Max. speed (3-18KS / 3-18KHS): 4,700 rpm
- Max. RCF (3-18KS / 3-18KHS): 3,285 x g
- Biosafe with cap 17108 ☣
- Angle: 90°

Fixed-angle rotors starting on page 21

▸ p. 21

Fixed-angle rotor 12115

- Max. capacity: 96 x 0.2 ml conical
- Max. speed (3-18KS / 3-18KHS): 16,400 rpm
- Max. RCF (3-18KS / 3-18KHS): 29,468 x g
- Angle: 45° (both rows)

▸ p. 21

Fixed-angle rotor 12154

- Max. capacity: 24 x 2 ml
- Max. speed (3-18KS / 3-18KHS): 18,000 rpm
- Max. RCF (3-18KS / 3-18KHS): 29,703 x g
- Angle: 45°

▸ p. 22

Fixed-angle rotor 12131

- Max. capacity: 30 x 2 ml
- Max. speed (3-18KS / 3-18KHS): 16,400 rpm
- Max. RCF (3-18KS / 3-18KHS): 30,070 x g
- Angle: 45°

▸ p. 22

Fixed-angle rotor 12349

- Max. capacity: 48 x 2 ml
- Max. speed (3-18KS / 3-18KHS): 15,000 rpm
- Max. RCF (3-18KS / 3-18KHS): 25,155 x g
- Angle (upper / lower row): 25° / 53°

▸ p. 23

Fixed-angle rotor 12182

- Max. capacity: 12 x 5 ml conical
- Max. speed (3-18KS / 3-18KHS): 17,500 rpm
- Max. RCF (3-18KS / 3-18KHS): 28,761 x g
- Biosafe with aluminium lid 17182 ☣
- Angle: 40°

▸ p. 23

Fixed-angle rotor 12111

- Max. capacity: 10 x 10 ml round-bottom
- Max. speed (3-18KS / 3-18KHS): 18,000 rpm
- Max. RCF (3-18KS / 3-18KHS): 27,530 x g
- Angle: 35°

▸ p. 24

Fixed-angle rotor 12157

- Max. capacity: 20 x 10 ml round-bottom
- Max. speed (3-18KS / 3-18KHS): 10,000 rpm
- Max. RCF (3-18KS / 3-18KHS): 10,956 x g
- Angle: 25°

▸ p. 24

Fixed-angle rotor 12311

- Max. capacity: 12 x 15 ml conical
- Max. speed (3-18KS / 3-18KHS): 13,500 rpm
- Max. RCF (3-18KS / 3-18KHS): 20,172 x g
- Biosafe with aluminium lid 17935 ☣
- Angle: 25°

▸ p. 25

Fixed-angle rotor 12158

- Max. capacity: 6 x 30 ml round-bottom
- Max. speed (3-18KS / 3-18KHS): 18,000 rpm
- Max. RCF (3-18KS / 3-18KHS): 28,616 x g
- Angle: 29°

▸ p. 25

Fixed-angle rotor 12150

- Max. capacity: 6 x 50 ml round-bottom
- Max. speed (3-18KS / 3-18KHS): 14,600 rpm
- Max. RCF (3-18KS / 3-18KHS): 20,018 x g
- Angle: 25°

▸ p. 26

Fixed-angle rotor 12310

- Max. capacity: 6 x 50 ml conical
- Max. speed (3-18KS / 3-18KHS): 14,500 rpm
- Max. RCF (3-18KS / 3-18KHS): 22,096 x g
- Biosafe with aluminium lid 17934 ☣
- Angle: 25°

▸ p. 26

Fixed-angle rotor 12156

- Max. capacity: 8 x 50 ml round-bottom
- Max. speed (3-18KS / 3-18KHS): 13,800 rpm
- Max. RCF (3-18KS / 3-18KHS): 20,440 x g
- Angle: 25°

▸ p. 27

Fixed-angle rotor 12155

- Max. capacity: 4 x 94 ml round-bottom
- Max. speed (3-18KS / 3-18KHS): 14,500 rpm
- Max. RCF (3-18KS / 3-18KHS): 21,390 x g
- Angle: 26°

▸ p. 28

Fixed-angle rotor 12159

- Max. capacity: 6 x 94 ml round-bottom
- Max. speed (3-18KS / 3-18KHS): 11,400 rpm
- Max. RCF (3-18KS / 3-18KHS): 14,239 x g
- Angle: 25°

Swing-out rotor 11180

Round bucket 13190 (1 set = 2 pcs.)

- Max. capacity: 4 x 400 ml
- Max. speed (3-18KS / 3-18KHS): 4,700 rpm
- Max. RCF (3-18KS / 3-18KHS): 4,248 x g
- Max. tube length in middle of bucket without / with cap: 142 / 125 mm
- Biosafe with cap 17190
- Tmin at maximum speed: <4°C
- 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 13190										
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]	166	168	164	168	171		169	169	170	
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 13190									
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]	170			170				171	171
Item no.	17355			17358				17345	17359*

* Only possible without cap 17190

Swing-out rotor 11180

Round bucket 13190 (1 set = 2 pcs.)

- Max. capacity: 4 x 400 ml
- Max. speed (3-18KS / 3-18KHS): 4,700 rpm
- Max. RCF (3-18KS / 3-18KHS): 4,248 x g
- Max. tube length in middle of bucket without / with cap: 142 / 125 mm
- Biosafe with cap 17190
- Tmin at maximum speed: <4°C
- 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 round bucket 13190										
Bore diameter x length [mm]	25.5 x 56	25.5 x 77.5						25.5 x 56	29.5 x 77.5	
Tubes per adapter / rotor	5 / 20	5 / 20						5 / 20	4 / 16	
Centrifuging radius [mm]	168	170						168	170	
Item no.	17362	17370						17362	17376	

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	PC	Glass	Glass	PPCO	PP	PF	PPCO
Item no.	13055	15045	15049	15050	15056	–	15151	15080	15076
Adapter for round bucket 13190									
Bore diameter x length [mm]	29.5 x 77.5	35.5 x 77.5				29.5 x 77	29.5 x 78.5	29.5 x 78.5	38.5 x 77
Tubes per adapter / rotor	4 / 16	3 / 12				3 / 12	3 / 12	4 / 16	1 / 4
Centrifuging radius [mm]	170	170				169	171	171	169
Item no.	17376	17375				17344	17346	17377*	17385

* Only possible without cap 17190

Swing-out rotor 11180

Round bucket 13190 (1 set = 2 pcs.)

- Max. capacity: 4 x 400 ml
- Max. speed (3-18KS / 3-18KHS): 4,700 rpm
- Max. RCF (3-18KS / 3-18KHS): 4,248 x g
- Max. tube length in middle of bucket without / with cap: 142 / 125 mm
- Biosafe with cap 17190
- Tmin at maximum speed: <4°C
- Angle: 90°

Tube										
Rated capacity (filling volume) [ml]	94 (85)	94	100 (75)	100 (90)	100	100	150	150	175	175
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	62 x 139.2	61 x 118
Tube material	Stainless steel	PC	Glass	Glass	Glass	PC	PP	Glass	PP	PP
Item no.	13085	15094	15078	15106	15100	15103	15125	15206	15175	–

Adapter for round bucket 13190						
Bore diameter x length [mm]	38.5 x 77	45.5 x 77.5	51.5 x 77	58 x 75	62.5 x 105	61 x 104
Tubes per adapter / rotor	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4
Centrifuging radius [mm]	169	170	169	167	172	172
Item no.	17385	17390*	17395	17401**	17393***	17402***

Tube							
Rated capacity (filling volume) [ml]	200 (168)	200 (170)	200	225	250 (232)	250 (232)	400
Diameter x length [mm]	56 x 112	56 x 112	61 x 130	61 x 137	61.4 x 122	61.4 x 122	85 x 118
Tube material	PPCO	Glass	PP	PP	PF	PPCO	PPCO
Item no.	15202	15201	15174	–	15247	15249	15401

Adapter for round bucket 13190						
Bore diameter x length [mm]	57.5 x 77	58 x 75	62.5 x 105	61 x 104	62.5 x 80	86 x 97
Tubes per adapter / rotor	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4	– / 4
Centrifuging radius [mm]	169	167	172	172	172	172
Item no.	17400	17401**	17393***	17402***	17347	–

* Including rubber cushion 16051; ** Including rubber cushion 16250; *** Only possible without cap 17190

Swing-out rotor 11180

Round bucket 13190 (1 set = 2 pcs.)

- Max. capacity: 4 x 400 ml
- Max. speed (3-18KS / 3-18KHS): 4,700 rpm
- Max. RCF (3-18KS / 3-18KHS): 4,248 x g
- Max. tube length in middle of bucket without / with cap: 142 / 125 mm
- Biosafe with cap 17190
- Tmin at maximum speed: <4°C
- Angle: 90°

Swing-out rotor 11180

Carrier bucket 13194 (1 set = 2 pcs.)

- Max. capacity: 16 x 50 ml
- Max. speed (3-18KS / 3-18KHS): 4,700 rpm
- Max. RCF (3-18KS / 3-18KHS): 4,149 x g
- Max. tube length in middle of bucket: 139 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 lid [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 13190				
Bore diameter x length [mm]	12.8 x 57	13.8 x 57	17.5 x 58	17.5 x 58
Tubes per adapter / rotor	25 / 100	17 / 68	12 / 48	3 / 12
Centrifuging radius [mm]	169	169	170	170
Item no.	17352	17356	17358	17358*

Tube					
Rated capacity (filling volume) [ml]	15	25	30	50	50
Diameter x length [mm]	16.5 x 120	25 x 90	25 x 107	29 x 117	29 x 117
Tube material	PP	PP	PP	PP	PP
Item no.	15115	–	–	15151	–

Adapter for hexagonal bucket 13194				
Bore diameter x length [mm]	17 x 79	25.5 x 70	29.5 x 78.5	29.5 x 80
Tubes per adapter / rotor	10 / 40	4 / 16	4 / 16	4 / 16
Centrifuging radius [mm]	167	158	167	168
Item no.	18311	18313	18310	18309

* Observe loading, only possible without cap 17190

Swing-out rotor 11180

Rectangular bucket 13180 (1 set = 2 pcs.)

- Max. capacity: 4 x 200 ml
- Max. speed (3-18KS / 3-18KHS): 4,700 rpm
- Max. RCF (3-18KS / 3-18KHS): 4,223 x g
- Max. tube length in middle of bucket without / with cap: 141 / 124 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 13180										
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]	166	168	168	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 13180									
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 / 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 11180

Rectangular bucket 13180 (1 set = 2 pcs.)

- Max. capacity: 4 x 200 ml
- Max. speed (3-18KS / 3-18KHS): 4,700 rpm
- Max. RCF (3-18KS / 3-18KHS): 4,223 x g
- Max. tube length in middle of bucket without / with cap: 141 / 124 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 13180										
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 13180										
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	169.5	169			
Item no.	18050**				18053	18052	18085			

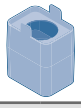
* Including rubber cushion 16906; ** Including rubber cushion 16907

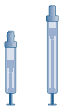
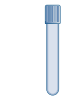
Swing-out rotor 11180

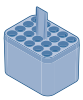
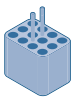
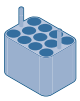
Rectangular bucket 13180 (1 set = 2 pcs.)

- Max. capacity: 4 x 200 ml
- Max. speed (3-18KS / 3-18KHS): 4,700 rpm
- Max. RCF (3-18KS / 3-18KHS): 4,223 x g
- Max. tube length in middle of bucket without / with cap: 141 / 124 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	200 (168)
Diameter x length [mm]	44 x 100	44 x 100	44 x 100	45 x 100	51 x 99	56 x 112
Tube material	Glass	Glass	Glass	PC	PP	PPCO
Item no.	15078	15106	15100	15103	15125	15202

Adapter for rectangular bucket 13180			
Bore diameter x length [mm]	46 x 65.5	51.5 x 71	57 x 34
Tubes per adapter / rotor	1 / 4	1 / 4	1 / 4
Centrifuging radius [mm]	165	168	166
Item no.	18100*	18125	18200

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
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
Tube material	PP	PP	PET	PET	PP	PP	PET	PET	PP
Item no.	–	–	–	–	–	–	–	–	–

Adapter for rectangular bucket 13180				
Bore diameter x length [mm]	12.5 x 51	14 x 58	17.2 x 46	17.5 x 57
Tubes per adapter / rotor	20 / 80	12 / 48	12 / 48	11 / 44
Centrifuging radius [mm]	166	164	166	168
Item no.	18005**	18012	18010**	18020

* Including rubber cushion 16908; ** Including rubber cushion 16909

Swing-out rotor 11133

Round bucket 13104 (1 set = 2 pcs.)

- Max. capacity: 4 x 200 ml
- Max. speed (3-18KS / 3-18KHS): 5,500 rpm
- Max. RCF (3-18KS / 3-18KHS): 5,242 x g
- Max. tube length in middle of bucket without / with cap: 126 / 118 mm
- Hermetically closable with aluminium cap 17109 or polysulphone cap 17111
- Tmin at maximum speed: <4°C
- Angle: 90°

Tube										
Rated capacity (filling volume) [ml]	0.2	0.4	0.5	1.5	2	5	6 (5)	7	10	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	12 x 100	12 x 100	16.1 x 81.1	16.1 x 81.1
Tube material	PP	PE	PP	PP	PP	PS	Glass	Glass	PF	PC
Item no.	15042	15014	15005	15008	15040	15060	15007	15027	15000	15010
Adapter for round bucket 13104										
Bore diameter x length [mm]	6.3 x 18.5	6 x 45	8 x 45	11.1 x 38.5		12.5 x 51	12.5 x 80		17 x 50.3	
Tubes per adapter / rotor	12 / 48	12 / 48	12 / 48	12 / 48		12 / 48	12 / 48		6 / 24	
Centrifuging radius [mm]	146	148	148	153		150	150		150	
Item no.	17008 & 13021	17008 & 13000	17008 & 13002	17008		17006	17007		17012	

Tube										
Rated capacity (filling volume) [ml]	10	10	10	14	14	15	25	25	25	30
Diameter x length [mm]	16.1 x 81.1	16 x 100	16 x 100	17 x 100	17 x 100	16.5 x 120	25 x 90	24 x 100	24 x 100	24 x 105
Tube material	PPCO	Glass	Glass	PP	PS	PP	PP	Glass	Glass	Glass
Item no.	15039	15015	15024	15023	15020	15115	–	15025	15026	15033
Adapter for round bucket 13104										
Bore diameter x length [mm]	17 x 50.3	17 x 79.7				17 x 78.5	25.5 x 58	24.5 x 79.6		
Tubes per adapter / rotor	6 / 24	7 / 28				3 / 12	1 / 4	2 / 8		
Centrifuging radius [mm]	150	150				154	153	150		
Item no.	17012	17015				17019*	17032	17025		

* Only possible without cap 17109 or 17111

Swing-out rotor 11133

Round bucket 13104 (1 set = 2 pcs.)

- Max. capacity: 4 x 200 ml
- Max. speed (3-18KS / 3-18KHS): 5,500 rpm
- Max. RCF (3-18KS / 3-18KHS): 5,242 x g
- Max. tube length in middle of bucket without / with cap: 126 / 118 mm
- Hermetically closable with aluminium cap 17109 or polysulphone cap 17111
- Tmin at maximum speed: <4°C
- Angle: 90°

Tube										
Rated capacity (filling volume) [ml]	30 (26)	30 (26)	30 (28)	30	50 (38)	50 (43)	50	50	50	50
Diameter x length [mm]	25.3 x 98	25.3 x 98	25.3 x 98	25 x 107	28.5 x 107	28.8 x 107	28.5 x 101.5	34 x 100	34 x 100	35 x 100
Tube material	PF	PPCO	PC	PP	PPCO	PF	Stainless steel	Glass	Glass	Glass
Item no.	15029	15032	15030	–	15052	15051	13055	15045	15050	15056

Adapter for round bucket 13104					
Bore diameter x length [mm]	25.5 x 78	25.5 x 58	30 x 77.3	35.5 x 80
Tubes per adapter / rotor	2 / 8	1 / 4	1 / 4	1 / 4
Centrifuging radius [mm]	153	153	152	150
Item no.	17030	17032	17052	17050*

Tube										
Rated capacity (filling volume) [ml]	50	50	50	85 (73)	85 (76)	94 (85)	94	100 (75)	100 (90)	100
Diameter x length [mm]	34 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	44 x 100
Tube material	PC	PP	PP	PPCO	PF	Stainless steel	PC	Glass	Glass	Glass
Item no.	15049	–	15151	15076	15080	13085	15094	15078	15106	15100

Adapter for round bucket 13104					
Bore diameter x length [mm]	35.5 x 80	29.5 x 80	29.5 x 78.5	39 x 76.6	46 x 76.6
Tubes per adapter / rotor	1 / 4	1 / 4	1 / 4	1 / 4	1 / 4
Centrifuging radius [mm]	150	155	154	147	147
Item no.	17050*	17048	17049	17085*	17100*

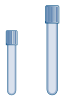
* Including rubber cushion 16911

Swing-out rotor 11133

Round bucket 13104 (1 set = 2 pcs.)

- Max. capacity: 4 x 200 ml
- Max. speed (3-18KS / 3-18KHS): 5,500 rpm
- Max. RCF (3-18KS / 3-18KHS): 5,242 x g
- Max. tube length in middle of bucket without / with cap: 126 / 118 mm
- Hermetically closable with aluminium cap 17109 or polysulphone cap 17111
- Tmin at maximum speed: <4°C
- Angle: 90°

Tube			
Rated capacity (filling volume) [ml]	100	150	200 (168)
Diameter x length [mm]	45 x 100	51 x 99	56 x 112
Tube material	PC	PP	PPCO
Item no.	15103	15125	15202
Adapter for round bucket 13104			
Bore diameter x length [mm]	46 x 76.6	51.4 x 80	57 x 98
Tubes per adapter / rotor	1 / 4	1 / 4	– / 4
Centrifuging radius [mm]	147	155	155
Item no.	17100*	17125	–

Blood and urine tubes										
Rated capacity (filling volume) [ml]	1.1 – 1.4	2.7 – 5	4 – 6	1.8 – 7	1.6 – 6	7.5 – 10	6 – 10	4 – 5.5	9 – 10	10
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 106 – 108	16 x 106 – 107	15 x 91	16 x 108	15 x 118
Tube material	PP	PP	PET	PET	PP	PP	PET	PET	PP	PP
Item no.	–	–	–	–	–	–	–	–	–	–
Adapter for round bucket 13104										
Bore diameter x length [mm]	12.5 x 51	13.8 x 57				17 x 79.7		17 x 50.3		17.2 x 81.5
Tubes per adapter / rotor	12 / 48	7 / 28				7 / 28		6 / 24		4 / 16
Centrifuging radius [mm]	150	152				150		150		150
Item no.	17006	17027				17015		17012		17018

* Including rubber cushion 16911

Swing-out rotor 11222

with 1 set (quantity 2) rectangular buckets 13222

- Max. plate height: 56 mm
- Max. speed (3-18KS / 3-18KHS): 3,000 rpm
- Max. RCF (3-18KS / 3-18KHS): 1,218 x g
- Max. load per carrier: 337 g
- Tmin at maximum speed: <4°C
- Angle: 90°

Swing-out rotor 11241

with 1 set (quantity 2) rectangular buckets 13241, caps 17108 and plate holder 17982

- Max. plate height without / with cap: 66 / 55 mm
- Max. speed (3-18KS / 3-18KHS): 4,700 rpm
- Max. RCF (3-18KS / 3-18KHS): 3,285 x g
- Max. load per carrier: 320 g
- Biosafe with cap 17108
- Tmin at maximum speed: <4°C
- Angle: 90°

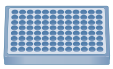
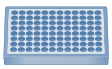
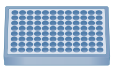
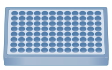
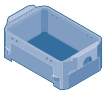
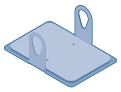
Plate				
Description	MTP (without lid)	MTP (with lid)	DWP	PCR plate 96-fold
W x D x H [mm]	128 x 86 x 15	128 x 86 x 17.5	128 x 86 x 44.5	128 x 86 x 20
Adapter				
for rectangular bucket 13222				
Bore diameter x length [mm]	–			
Plates per rotor	6	6	2	4
Centrifuging radius [mm]	121			
Item no.	–			

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 13241 				
Bore diameter x length [mm]	–			
Plates per rotor (without / with cap)	8 / 6	6 / 6	2 / 2	6 / 4
Centrifuging radius [mm]	133			
Item no.	17982			

Swing-out rotor 11135

with 3 sets (quantity 6) carrier bucket 13124 and aluminium lid 17879

- Max. capacity: 24 x 2 ml
- Max. speed (3-18KS / 3-18KHS): 14,000 rpm
- Max. RCF (3-18KS / 3-18KHS): 16,215 x g
- Hermetically closable with aluminium lid 17879
- Tmin at maximum speed: <4°C
- Angle: 90°

Drum rotor 11136

with aluminium lid 17898

- Max. capacity: 60 x 2 ml
- Max. speed (3-18KS / 3-18KHS): 14,500 rpm
- Max. RCF (3-18KS / 3-18KHS): 16,454 x g
- Hermetically closable with aluminium lid 17898
- Max. speed for 4°C: 14,200 rpm
- Angle: 90°

Tube						
Rated capacity (filling volume) [ml]	0.2	0.4	0.5	0.5	1.5	2
Diameter x length [mm]	5.8 x 20	5.8 x 47	7.9 x 28	10.8 x 47.6	10.7 x 42	10.7 x 42
Tube material	PP	PE	PP	PP	PP	PP
Item no.	15042	15014	15005	Paediatrics	15008	15040
Adapter for carrier bucket 13124						
Bore diameter x length [mm]	6.3 x 18.5	6 x 45	8 x 45	11.1 x 29.5	11.1 x 38.5	
Tubes per adapter / rotor	1 / 24	1 / 24	1 / 24	1 / 12*	– / 24	
Centrifuging radius [mm]	70	72	72	65	74	
Item no.	13021	13000	13002	13074	–	

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

* Observe loading

Fixed-angle rotor 12115

with aluminium lid 17875

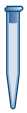
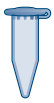
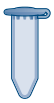
- Max. capacity: 96 x 0.2 ml conical
- Max. speed (3-18KS / 3-18KHS): 16,400 rpm
- Max. RCF outer row (3-18KS / 3-18KHS): 29,468 x g
- Max. RCF inner row (3-18KS / 3-18KHS): 24,958 x g
- Hermetically closable with aluminium lid 17875
- Max. speed for 4 °C: 13,400 rpm
- Angle: 45° (both rows)

Fixed-angle rotor 12154

with aluminium lid 17829

- Max. capacity: 24 x 2 ml
- Max. speed (3-18KS / 3-18KHS): 18,000 rpm
- Max. RCF (3-18KS / 3-18KHS): 29,703 x g
- Hermetically closable with aluminium lid 17829
- Max. speed for 4°C: 17,000 rpm
- Angle: 45°

Tube		
Rated capacity (filling volume) [ml]	0.2	0.2
Diameter x length [mm]	5.8 x 20	–
Tube material	PP	–
Item no.	15042	PCR strips
Adapter for fixed-angle rotor 12115		
Bore diameter x length [mm]	6.3 x 15.5	6.3 x 16.5
Tubes per adapter / rotor	96	12 x 8
Centrifuging radius outer / inner row [mm]	98 / 83	98 / 83
Item no.	–	–

Tube						
Rated capacity (filling volume) [ml]	0.2	0.4	0.5	0.5	1.5	2
Diameter x length [mm]	5.8 x 20	5.8 x 47	7.9 x 28	10.8 x 47.6	10.7 x 42	10.7 x 42
Tube material	PP	PE	PP	PP	PP	PP
Item no.	15042	15014	15005	Paediatrics	15008	15040
Adapter for fixed-angle rotor 12154						
Bore diameter x length [mm]	6.3 x 18.5	6 x 45	8 x 45	11.1 x 29.5	11.1 x 38.5	
Tubes per adapter / rotor	1 / 24	1 / 24	1 / 24	1 / 24	– / 24	
Centrifuging radius [mm]	78	80	80	73	82	
Item no.	13021	13000	13002	13074*	–	

* Only partial loading possible in some cases, depending on choice of paediatric tubes

Fixed-angle rotor 12131

with aluminium lid 17848

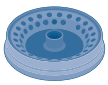
- Max. capacity: 30 x 2 ml
- Max. speed (3-18KS / 3-18KHS): 16,400 rpm
- Max. RCF (3-18KS / 3-18KHS): 30,070 x g
- Hermetically closable with aluminium lid 17848
- Max. speed for 4°C: 13,500 rpm
- Angle: 45°

Fixed-angle rotor 12349

with aluminium lid 17349

- Max. capacity: 48 x 2 ml
- Max. speed (3-18KS / 3-18KHS): 15,000 rpm
- Max. RCF (3-18KS / 3-18KHS): 25,155 x g
- Hermetically closable with aluminium lid 17349
- Max. speed for 4°C: 13,000 rpm
- Angle (outer / inner row): 25° / 53°

Tube						
Rated capacity (filling volume) [ml]	0.2	0.4	0.5	0.5	1.5	2
Diameter x length [mm]	5.8 x 20	5.8 x 47	7.9 x 28	10.8 x 47.6	10.7 x 42	10.7 x 42
Tube material	PP	PE	PP	PP	PP	PP
Item no.	15042	15014	15005	Paediatrics	15008	15040
Adapter for fixed-angle rotor 12131						
Bore diameter x length [mm]	6.3 x 18.5	6 x 45	8 x 45	11.1 x 29.5	11.1 x 38.5	
Tubes per adapter / rotor	1 / 30	1 / 30	1 / 30	1 / 30	– / 30	
Centrifuging radius [mm]	96	98	98	91	100	
Item no.	13021	13000	13002	13074*	–	

Tube						
Rated capacity (filling volume) [ml]	0.2	0.4	0.5	0.5	1.5	2
Diameter x length [mm]	5.8 x 20	5.8 x 47	7.9 x 28	10.8 x 47.6	10.7 x 42	10.7 x 42
Tube material	PP	PE	PP	PP	PP	PP
Item no.	15042	15014	15005	Paediatrics	15008	15040
Adapter for fixed-angle rotor 12349 						
Bore diameter x length [mm]	6.3 x 18.5	6 x 45	8 x 45	11.1 x 29.5	11.1 x 38.5	
Tubes per adapter / rotor	1 / 48	1 / 48	1 / 48	1 / 48	– / 48	
Centrifuging radius outer / inner row [mm]	96 / 96	98 / 98	98 / 98	91 / 91	100 / 100	
Item no.	13021	13000	13002	13074*	–	

* Only partial loading possible in some cases, depending on choice of paediatric tubes

Fixed-angle rotor 12182

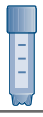
with aluminium lid 17182

- Max. capacity: 12 x 5 ml conical
- Max. speed (3-18KS / 3-18KHS): 17,500 rpm
- Max. RCF (3-18KS / 3-18KHS): 28,761 x g
- Biosafe with aluminium lid 17182
- Max. speed for 4°C: 16,500 rpm
- Angle: 40°

Fixed-angle rotor 12111

with aluminium lid 17835

- Max. capacity: 10 x 10 ml round-bottom
- Max. speed (3-18KS / 3-18KHS): 18,000 rpm
- Max. RCF (3-18KS / 3-18KHS): 27,530 x g
- Hermetically closable with aluminium lid 17835
- Tmin at maximum speed: <4°C
- Angle: 35°

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

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

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

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

* Only possible without rotor lid 17182

Fixed-angle rotor 12157

with aluminium lid 17841

- Max. capacity: 20 x 10 ml round-bottom
- Max. speed (3-18KS / 3-18KHS): 10,000 rpm
- Max. RCF (3-18KS / 3-18KHS): 10,956 x g
- Hermetically closable with aluminium lid 17841
- Tmin at maximum speed: <4°C
- Angle: 25°

Fixed-angle rotor 12311

with aluminium lid 17935

- Max. capacity: 12 x 15 ml conical
- Max. speed (3-18KS / 3-18KHS): 13,500 rpm
- Max. RCF (3-18KS / 3-18KHS): 20,172 x g
- Biosafe with aluminium lid 17935 ☣
- Max. speed for 4°C: 13,200 rpm
- 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 12157			
Bore diameter x length [mm]	16.3 x 69		
Tubes per adapter / rotor	– / 20		
Centrifuging radius [mm]	98		
Item no.	–		

Tube	
Rated capacity (filling volume) [ml]	15
Diameter x length [mm]	16.5 x 120
Tube material	PP
Item no.	15115
Adapter for fixed-angle rotor 12311	
Bore diameter x length [mm]	17.5 x 106
Tubes per adapter / rotor	– / 12
Centrifuging radius [mm]	99
Item no.	–

Cleanroom

Robust and resistant

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 12158

with aluminium lid 17842

- Max. capacity: 6 x 30 ml round-bottom
- Max. speed (3-18KS / 3-18KHS): 18,000 rpm
- Max. RCF (3-18KS / 3-18KHS): 28,616 x g
- Hermetically closable with aluminium lid 17842
- Max. speed for 4°C: 17,300 rpm
- Angle: 29°

Fixed-angle rotor 12150

with aluminium lid 17837

- Max. capacity: 6 x 50 ml round-bottom
- Max. speed (3-18KS / 3-18KHS): 14,600 rpm
- Max. RCF (3-18KS / 3-18KHS): 20,018 x g
- Hermetically closable with aluminium lid 17837
- Tmin at maximum speed: <4°C
- Angle: 25°

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

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

Fixed-angle rotor 12310

with aluminium lid 17934

- Max. capacity: 6 x 50 ml conical
- Max. speed (3-18KS / 3-18KHS): 14,500 rpm
- Max. RCF (3-18KS / 3-18KHS): 22,096 x g
- Biosafe with aluminium lid 17934
- Max. speed for 4°C: 14,200 rpm
- Angle: 25°

Fixed-angle rotor 12156

with aluminium lid 17840

- Max. capacity: 8 x 50 ml round-bottom
- Max. speed (3-18KS / 3-18KHS): 13,800 rpm
- Max. RCF (3-18KS / 3-18KHS): 20,440 x g
- Hermetically closable with aluminium lid 17840
- 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 12310				
Bore diameter x length [mm]	17 x 107	25.5 x 71	30 x 91	30 x 101
Tubes per adapter / rotor	1 / 6	1 / 6	1 / 6	– / 6
Centrifuging radius [mm]	93	71	84	94
Item no.	13060	13064	13079	–

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

Adapter for fixed-angle rotor 12156						
Bore diameter x length [mm]	16.2 x 65	17 x 88	18 x 90	25.6 x 75	24.5 x 93	29 x 98
Tubes per adapter / rotor	1 / 8	1 / 8	1 / 8	1 / 8	1 / 8	– / 8
Centrifuging radius [mm]	64	91	91	81	94	96
Item no.	13087	13062	16018	13086	16030	–

Fixed-angle rotor 12155

with aluminium lid 17839

- Max. capacity: 4 x 94 ml round-bottom
- Max. speed (3-18KS / 3-18KHS): 14,500 rpm
- Max. RCF (3-18KS / 3-18KHS): 21,390 x g
- Hermetically closable with aluminium lid 17839
- Tmin at maximum speed: <4°C
- Angle: 26°

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

Adapter for fixed-angle rotor 12155					
Bore diameter x length [mm]	16.2 x 71	18 x 87	17 x 107	24.5 x 88	26 x 83
Tubes per adapter / rotor	2 / 8	1 / 4	1 / 4	1 / 4	1 / 4
Centrifuging radius [mm]	62	83	90	84	74
Item no.	13084	16019	13081*	16031	13083

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

Adapter for fixed-angle rotor 12155					
Bore diameter x length [mm]	26 x 83	24.5 x 88	29 x 97	30 x 100	38.3 x 91
Tubes per adapter / rotor	1 / 4	1 / 4	1 / 4	1 / 4	– / 4
Centrifuging radius [mm]	74	84	88	91	91
Item no.	13083	16031	13082	13080*	–

* Only possible without rotor lid 17839, max. RCF 20,000 x g

Fixed-angle rotor 12159

with aluminium lid 17843

- Max. capacity: 6 x 94 ml round-bottom
- Max. speed (3-18KS / 3-18KHS): 11,400 rpm
- Max. RCF (3-18KS / 3-18KHS): 14,239 x g
- Hermetically closable with aluminium lid 17843
- Tmin at maximum speed: <4°C
- Angle: 25°

Tube									
Rated capacity (filling volume) [ml]	10	10	10	14	14	15	15	30 (26)	30 (26)
Diameter x length [mm]	16.1 x 81.1	16.1 x 81.1	16.1 x 81.1	17 x 100	17 x 100	17.5 x 106	16.5 x 120	25.3 x 98	25.3 x 98
Tube material	PF	PC	PPCO	PS	PP	HS glass	PP	PF	PPCO
Item no.	15000	15010	15039	15020	15023	15085	15115	15029	15032
Adapter for fixed-angle rotor 12159									
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]	69			90			97	81	
Item no.	13084			16019			13081	13083	

Tube										
Rated capacity (filling volume) [ml]	30 (28)	30	50 (38)	50 (43)	50	50	85 (73)	85 (76)	94 (85)	94
Diameter x length [mm]	25.3 x 98	23.6 x 106	28.8 x 107	28.5 x 107	28.5 x 101.5	29.5 x 117	38 x 112	38 x 112	38 x 103	38 x 110
Tube material	PC	HS glass	PPCO	PF	Stainless steel	PP	PF	PPCO	Stainless steel	PC
Item no.	15030	15086	15052	15051	13055	15151	15080	15076	13085	15094
Adapter for fixed-angle rotor 12159									
Bore diameter x length [mm]	26 x 83	24.5 x 88	29 x 97			30 x 100	38.3 x 91			
Tubes per adapter / rotor	1 / 6	1 / 6	1 / 6			1 / 6	– / 6			
Centrifuging radius [mm]	81	91	95			98	98			
Item no.	13083	16031	13082			13080	–			

Material properties

Guideline for optimal tube selection

Due to the many factors that influence material properties, this overview is only intended as a general recommendation. There is no guarantee of the stated properties. Users should therefore carefully test materials for suitability under specific application conditions. Tubes should be discarded as soon as they show any sign of material fatigue.

	Polycarbonate (PC)	Polyvinyl fluoride (PF)	Polystyrene (PS)	Polyethylene (PE)	Polypropylene (PP)
Autoclave resistant	Yes	Yes	No	No	Yes
Elasticity	Not elastic	Not elastic	Not elastic	Good	Not elastic
Transparency	Transparent	Translucent	Transparent	Translucent	Translucent
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	

SIGMA
Speed
13744
14500
(max)
min⁻¹
RCF
19852
22096
(max)
*g
Rotor
Progr.
Select the speed
12310
Temperature
19
21
°C
Runtime
0:05:00
4:02
m:s
19%

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: time after target speed reached, capacity for 60 programs, password protection to prevent unintentional alteration of operating parameters, and the rotor cycle counter are just a few of the highlights that make the Spincontrol S controller a highly versatile system that is ready to meet the laboratory requirements of the future.

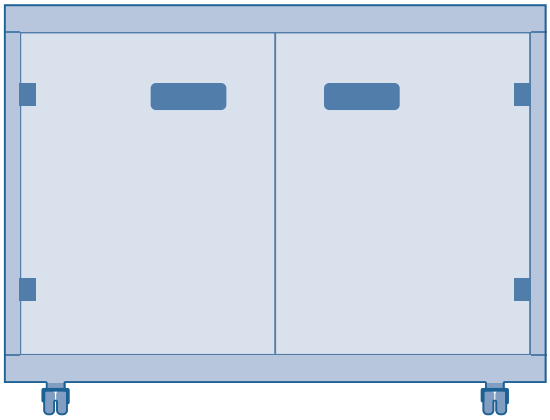
This premium controller from Sigma supports internal quality management functions as well as external communication with a laboratory information management system (LIMS). That way the Spincontrol S supports traceable professional reporting.

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

* Only for Sigma 3-18KHS

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 17001
Für Sigma 4-5KL
B x H x T [mm]: 605 x 581 x 635

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

Premium quality

Made in Germany

The Sigma 3-18KS and Sigma 3-18KHS meet the highest technical requirements of laboratory standards. Developed and produced at our facility in Osterode, Germany, they are high-performance, durable and energy-efficient quality products and conform to the latest safety, emissions and environmental standards. Sigma guarantees the availability of spare parts and wearing parts for at least 10 years. Furthermore, you benefit from our extensive services portfolio, including commissioning, maintenance, device calibration and more. Our qualified service technicians are ready to provide professional maintenance and repair as well as loaner devices if necessary. All support services are designed to ensure reliability and optimise system availability.

	Sigma 3-18KS*	Sigma 3-18KHS*
Max. capacity [ml]		
Swing-out rotor	4 x 400	4 x 400
Fixed-angle rotor	6 x 94	6 x 94
Max. RCF	30,070	30,070
Maximum speed [rpm]	18,000	18,000
Minimum speed [rpm]	100	100
Noise level at maximum speed (approx) [dB(A)]		
Fixed-angle rotor 12154	≤ 55	≤ 55
Swing-out rotor 11180 with bucket 13190	≤ 60	≤ 60
Max. acceleration time [s]		
Fixed-angle rotor 12154	≤ 29	≤ 29
Swing-out rotor 11180 with bucket 13190	≤ 18	≤ 18
Max. braking time [s]		
Fixed-angle rotor 12154	≤ 47	≤ 47
Swing-out rotor 11180 with bucket 13190	≤ 21	≤ 21
Temperature adjustment range [°C]	-20 – +40	-20 – +60
Power consumption [W]	1,010	1,010
Height x width x depth [mm]	355 x 630 x 600	355 x 630 x 600
Height with open lid [mm]	785	785
Weight without rotor [kg]	78	78
Refrigerant	R513a	R513a
Filling quantity [kg] / Max. permissible pressure [bar]	0.405 / 23	0.405 / 23
CO_2 equivalent [t]	0.256	0.256

* Contains fluorinated greenhouse gases in a hermetically sealed refrigeration system. (EU) 2024/2729; 2028-DEC-31

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)

Sigma 3-18KS centrifuge
220 – 240 V, 50/60 Hz (item no. 10370)
208 V, 60 Hz (item no. 10371)
200 V, 50/60 Hz (item no. 10372)
120 V, 60 Hz (item no. 10373)

Sigma 3-18KHS centrifuge
220 – 240 V, 50/60 Hz (item no. 10374)

Sigma 3-18KS centrifuge, inert gas
on request

WEEE-Reg.-No. DE 76714077

Product portfolio

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

Microcentrifuge
Sigma 1-16

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

Floor-standing centrifuge
Sigma 8KS

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

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

Benchtop centrifuge
Sigma 2-7

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

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

Benchtop centrifuge
Sigma 3-30KS

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

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

Robot centrifuge
Sigma 4-5KRL

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

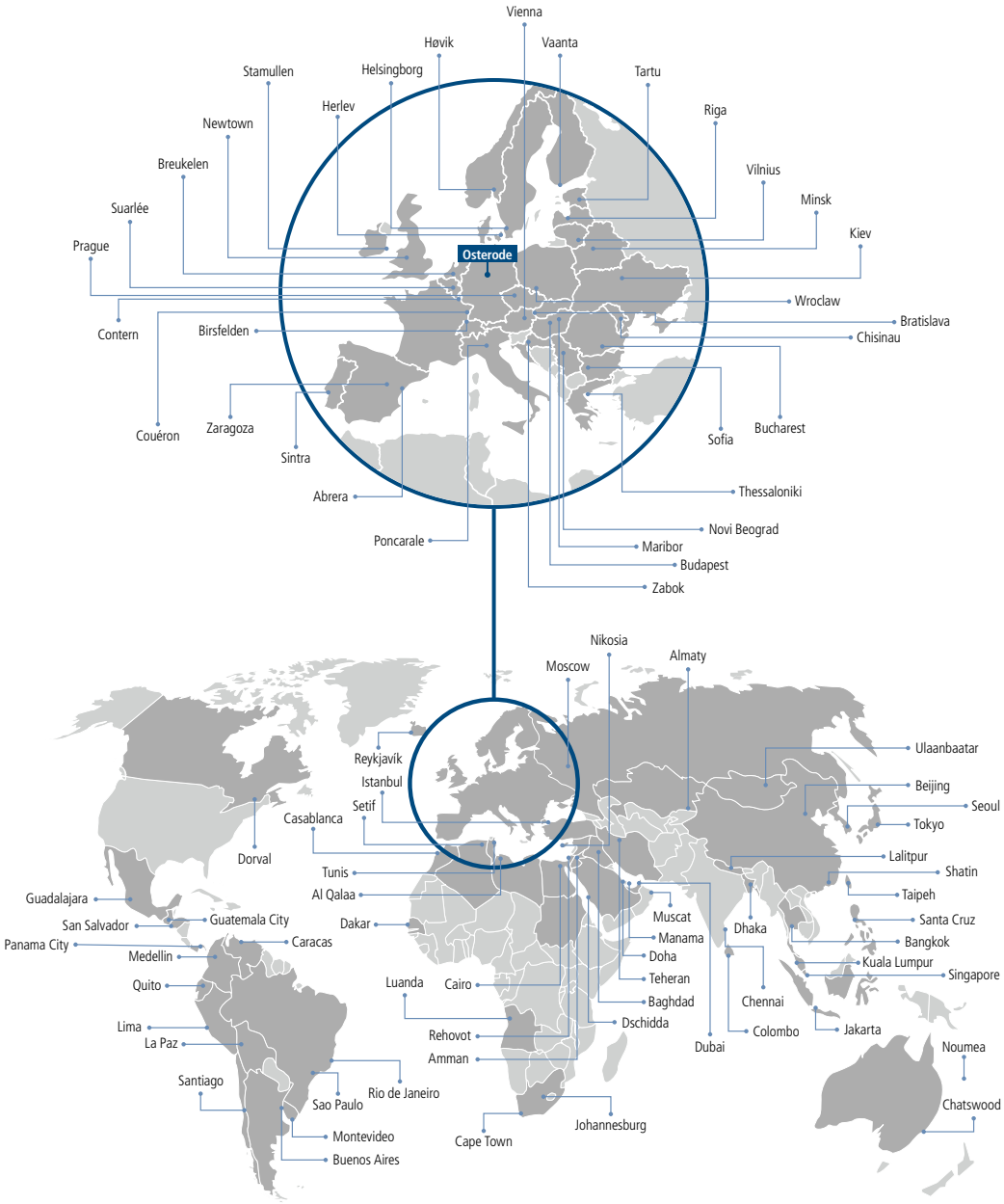
Legend

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

Global service

For local product security

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



Selected locations of our representatives.

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

Sigma Laborzentrifugen GmbH
An der Unteren Söse 50
37520 Osterode am Harz
Tel. +49 (0) 55 22 / 50 07-0
Fax +49 (0) 55 22 / 50 07-12
info@sigma-zentrifugen.de
www.sigma-zentrifugen.de

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