

turns more than heads



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



Benchtop centrifuge

- Unrefrigerated
- Heatable
- Refrigerated
- Refrigerated/heatable





Powerful and versatile



Sigma is one of the leading international manufacturers of laboratory centrifuges for biotechnology, pharmacy, medicine, environmental analysis and other industries. For over for 40 years, laboratories, institutes and companies from around the world rely on the premium quality of Sigma – made in Germany. The company stands for product innovation and the development of long-lasting, energy-efficient equipment That is particularly easy to use.

With its all-purpose design, the Sigma 6-16 centrifuge series is suitable for a wide variety of routine and research applications. Along with high throughput with fixed-angle and swing-out rotors, it easily achieves RCF values up to 25,419 x g. Laboratory technicians and scientists around the world appreciate its high versatility, modern user interface and outstanding reliability. Particularly thanks to their ability to use fixed-angle, large-volume

rotors with high RCF, the centrifuges cover a distinctly broader spectrum of applications compared to competitive units. A unique selling point is the maximum capacity of up to 6 x 500 ml in the angle rotor at up to 17,207 x g.

In addition to the unrefrigerated Sigma 6-16S and the refrigerated Sigma 6-16KS, the 6-16HS is also available as a heatable model with a finely adjustable temperature range from 0 °C to +70 °C. It is specifically optimised for measuring the moisture content of crude oil and products made from crude oil (in accordance with ASTM standards). The portfolio is rounded off by the refrigerated, heatable 6-16KHS, which is particularly suitable for applications in which the viscosity of the samples needs to be reduced.

All-rounder for the toughest of requirements

Intuitive, powerful and safe

The powerful Sigma 6-16 centrifuge series is designed for research tasks as well as routine procedures in laboratory operations. It is widely used in microbiology and molecular biology, pharmaceuticals, genomics, bioproduction, cell culture labs, clinical diagnostics and transfusion facilities.

In addition to its impressive performance data, the series offers intuitive operation and sophisticated features. The patented one-knob Spincontrol S controller provides superior operating convenience, safety and versatility. Thanks to the intuitive user interface and

the 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 ensure 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
- Capacity for 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 level of safety
- Easily cleaned stainless steel chamber
- Window in lid for external speed monitoring
- Manufactured according to the latest national and international standards Directives (e.g. EN 61010-2-020)

Sigma 6-16HS

All features of the Sigma 6-16S, plus:

- Heated, unrefrigerated centrifuge
- Temperature setting range: 0 °C to +70 °C
- Optimised for measuring the moisture content of crude oil and products made from crude oil (in accordance with ASTM standards)

Sigma 6-16KS

All features of the Sigma 6-16S, plus:

- Speed range up to 13,500 rpm
- High-performance cooling
- Temperature setting range: -20 °C to +40 °C
- Rapid Temp 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 connection

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 connection



Rotors and accessories

Large selection and a multitude of applications

The compact Sigma 6-16 series is available with numerous swing-out and fixed-angle rotors, buckets and adapters. A total of 12 fixed-angle rotors and 6 swing-out rotors are available. The extensive range of accessories can accommodate tubes from 0.2 ml to 1,000 ml in size as well as blood pouches, petroleum tubes or micro titration 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. 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 over 20,300 x g are unique selling points in the fixed-angle rotor sector.

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 8

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.8



Swing-out rotor 11150

- 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°

▶ p.14



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.18



Swing-out rotor 11165 for ASTM vessels

- 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.21



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.22



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.22



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°


▶ p.23



Fixed-angle rotors starting on page 24

▶ p. 24

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°




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. 24

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. 25


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. 25


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. 26


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. 27


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. 28


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. 29


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°


















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 at 4 °C of rotor 11650: 4,500 rpm




Vessel										
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 [pcs.]	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	

Vessel									
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 [pcs.]	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. diameter of cap for 15 ml culture tubes is 22 mm















Swing-out rotor 11650 / 11660




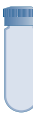











Round bucket 13650 (1 set = 2 pcs)

- 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: <math><4\text{ }^{\circ}\text{C}</math>*
- Angle: 90°

*Max. speed at 4 °C of rotor 11650: 4,500 rpm




Vessel										
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 [pcs.]	8 / 32		7 / 28	7 / 28			4 / 16			
Centrifuging radius [mm]	209		202	209			209			
Item no.	17670		17662	17676			17675			

Vessel									
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 [pcs.]	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; ** With 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: <math>< 4\text{ }^{\circ}\text{C}</math>*
- Angle: 90°









*Max. speed at 4 °C of rotor 11650: 4,500 rpm



Vessel										
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 137	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										
Bore diameter x length [mm]	45.5 x 77	58 x 110	58 x 110	61 x 100	62.5 x 110	57.5 x 77	58 x 110	62.5 x 110	58 x 110	58 x 110
Tubes per adapter / rotor [pcs.]	2 / 8	1 / 4	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	212	207
Item no.	17690*	17692	17695**	17694	17693	17696	17695**	17693	17695**	17695**


Vessel										
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								
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 [pcs.]	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	

* With rubber cushion 16051, ** With 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: <math><4\text{ }^{\circ}\text{C}</math>*
- Angle: 90°

*Max. speed at 4 °C of rotor 11650: 4,500 rpm








Vessel

						
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*






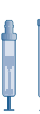




Adapter

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 [pcs.]	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 [pcs.]	37 / 148	23 / 92	20 / 80	19 / 76
Centrifuging radius [mm]	204	206	207	207
Item no.	17652	17656	17655	17658

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 rpm*

*Max. speed at 4 °C of rotor 11650: 4,500 rpm







Vessel






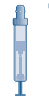




			
Rated capacity (filling volume) [ml]	15	50	50
Diameter x length [mm]	16.5 x 120	28 x 115	29.5 x 117
Tube material	PP	PP	PP
Item no.	15115	–	15151

Adapter

for
bucket
13635






				
Bore diameter x length [mm]	17 x 79	29.5 x 72	29.5 x 72	29.5 x 78.5
Tubes per adapter / rotor [pcs.]	24 / 96	8 / 32	8 / 32	10 / 40
Centrifuging radius [mm]	194	187	187	193
Item no.	18605	18607	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	Glass
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 [pcs.]		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 pouch 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 rpm*
- Angle: 90°

*Max. speed at 4 °C of rotor 11650: 4,500 rpm



Vessel



Volume [ml]	450	500	600
Blood pouch	Triple	Dual	Single
Item no.	–	–	–

Adapter

for bucket
13625



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



Swing-out rotor 11150

Double 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 rpm
- Angle: 90°



Vessel										
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	12.5 x 72	17.2 x 46
Tubes per adapter / rotor [pcs.]	20 / 160	20 / 160	20 / 160	20 / 160	20 / 160	6 / 48	20 / 160	12 / 96	20 / 160	12 / 96
Centrifuging radius [mm]	167	169	169	170	166	168	166	166	166	166
Item no.	18002 & 13021	18002 & 13000	18002 & 13002	18002	18005*	18006	18007*	18010*	18007*	18010*

Vessel									
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 13420									
Bore diameter x length [mm]	17.2 x 46	17.2 x 46	17.2 x 46	17.2 x 46	17.2 x 72	17.2 x 72	17 x 72.5	17.5 x 71	25.5 x 61
Tubes per adapter / rotor [pcs.]	12 / 96	12 / 96	12 / 96	12 / 96	12 / 96	12 / 96	4 / 32	7 / 56	4 / 32
Centrifuging radius [mm]	166	166	166	166	166	166	170	170	167
Item no.	18010*	18010*	18010*	18010*	18015*	18015*	18016	18018**	18022





















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





















Swing-out rotor 11150

Double 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 rpm
- Angle: 90°



Vessel										
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 13420										
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		29.5 x 71	
Tubes per adapter / rotor [pcs.]	5 / 40		5 / 40		5 / 40	4 / 32	2 / 16		2 / 16	
Centrifuging radius [mm]	166		168		166	167	168		168	
Item no.	18025*		18030		18025*	18022	18051		18051	

Vessel										
Rated capacity (filling volume) [ml]	50	50	50	50	50	50	50	85 (73)	85 (76)	94 (85)
Diameter x length [mm]	34 x 100	34 x 100	34 x 100	35 x 100	29 x 117	29 x 117	29 x 117	38 x 112	38 x 112	38 x 103
Tube material	Glass	Glass	PC	Glass	PP	PP	PP	PF	PPCO	Stainless steel
Item no.	15045	15050	15049	15056	–	15151	15151	15080	15076	13085
Adapter										
for rectangular bucket 13420										
Bore diameter x length [mm]	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 [pcs.]	2 / 16			2 / 16	2 / 16	6 / 24		1 / 8		
Centrifuging radius [mm]	162			171	170	170		169		
Item no.	18050**			18053	18052	18650		18085		

Swing-out rotor 11150

Double 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 rpm
- Angle: 90°



Vessel

Rated capacity (filling volume) [ml]	94	100 (75)	100 (90)	100	100	150	150	200 (168)	200 (170)	230 (220)
Diameter x length [mm]	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	56 x 134
Tube material	PC	Glass	Glass	Glass	PC	PP	Glass	PPCO	Glass	Glass
Item no.	15094	15078	15106	15100	15103	15125	15206	15202	15201	15250

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	57 x 62
Tubes per adapter / rotor [pcs.]	1 / 8	1 / 8	1 / 8	1 / 8	1 / 8	1 / 8	1 / 8
Centrifuging radius [mm]	169	165	168	168	166	168	168
Item no.	18085	18100*	18125	18250**	18200	18250**	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 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 [pcs.]	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****

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°

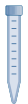








Swing-out rotor 11150


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°



Vessel				
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 [pcs.]	7 / 28	7 / 28	7 / 28
Centrifuging radius [mm]	189	167	190
Item no.	13060	13064	–

Vessel	
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 [pcs.]	12 / 48
Centrifuging radius [mm]	188
Item no.	–











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 rpm
- Angle: 90°

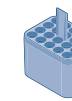
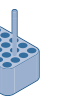


Vessel

										
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 [pcs.]	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*

Vessel

									
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	17.2 x 75	25.5 x 61	
Tubes per adapter / rotor [pcs.]	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

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

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 rpm
- Angle: 90°



Vessel

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 [pcs.]	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	

Vessel

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 [pcs.]	2 / 12		2 / 12		2 / 12		1 / 6			
Centrifuging radius [mm]	182		191		189		189			
Item no.	18050**		18053		18052		18085			









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 rpm
- Angle: 90°



Vessel

								
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 [pcs.]		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**

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 [pcs.]		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****

Swing-out rotor 11165

Bucket 13113 for 100 ml 8" petroleum jars according to former 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°



Vessel

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 [pcs.]	1 / 4
Centrifuging radius [mm]	213
Item no.	16103**

Swing-out rotor 11165

Bucket 13114 for 100 ml 6" petroleum jars according to former ASTM D 91/96, with adapter 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°



Vessel

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 [pcs.]	1 / 4
Centrifuging radius [mm]	191
Item no.	16104

Swing-out rotor 11165

Bucket 13116 for 100 ml petroleum jars according to former ASTM D 91/96, 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°



Vessel

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 [pcs.]	1 / 4
Centrifuging radius [mm]	173
Item no.	16106

* Max. RCF 700 x g, ** With rubber cushion 16021



Swing-out rotor 11118

with 1 set (2 pcs) rectangular buckets 13218, caps 17108 and extractor 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 11150

Rectangular bucket 13221 (1 set = 2 pcs) with extractor 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°



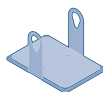
Plate



Description	MTP (without lid)	MTP (with lid)	DWP	PCR plate 96-fold	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				

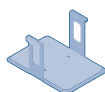
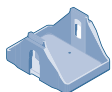
Plate



Description	MTP (without lid)	MTP (with lid)	DWP	PCR plate 96-fold
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 11660 / 11650*

Rectangular bucket 13421 (1 set = 4 pcs) with extractor 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



Swing-out rotor 11660 / 11650

Rectangular bucket 13621 (1 set = 4 pcs) with extractor 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 at 4 °C of rotor 11660: 4,600 rpm



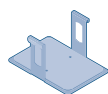
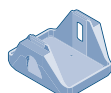
Plate



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				

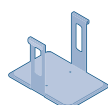
Plate



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				

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 rpm
- Angle (outer / inner row): 25° / 53°







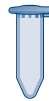
Fixed-angle rotor 12450

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 rpm
- Angle: 40°

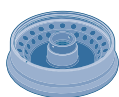






Vessel

					
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




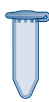

Adapter

for
fixed-angle rotor
12449



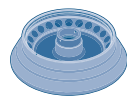
				
Bore diameter x length [mm]	6.3 x 18.5	6 x 45	8 x 45	11.1 x 38.5
Tubes per adapter / rotor [pcs.]	1 / 48	1 / 48	1 / 48	- / 48
Centrifuging radius (outer / inner row) [mm]	96 / 96	98 / 98	98 / 98	100 / 100
Item no.	13021	13000	13002	-




Vessel

					
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
Tubes per adapter / rotor [pcs.]	1 / 24	1 / 24	1 / 24
Centrifuging radius [mm]	89	93	99
Item no.	14081	14080	14082

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 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°



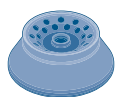
Vessel



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 [pcs.]	- / 24
Centrifuging radius (outer / inner row) [mm]	126 / 126
Item no.	-

Vessel



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 [pcs.]	1 / 8	1 / 8		1 / 8		- / 8
Centrifuging radius [mm]	103	81		94		104
Item no.	13060	13064		13079		-






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°



Vessel										
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 [pcs.]		1 / 8		1 / 8		1 / 8		1 / 8
Centrifuging radius [mm]		72		99		89		102
Item no.		13087		16018		13086		16030

Vessel			
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 [pcs.]	- / 8
Centrifuging radius [mm]	104
Item no.	-










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 rpm
- Angle: 25°

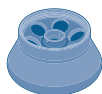






Vessel

										
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



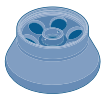
				
Bore diameter x length [mm]	16.2 x 71	18 x 87	17 x 107	26 x 83
Tubes per adapter / rotor [pcs.]	2 / 12	1 / 6	1 / 6	1 / 6
Centrifuging radius [mm]	77	98	105	89
Item no.	13084	16019	13081*	13083





Vessel

										
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 [pcs.]	1 / 6	1 / 6	1 / 6	- / 6
Centrifuging radius [mm]	99	103	106	106
Item no.	16031	13082	13080*	-

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 rpm
- Angle: 30°

* 6-16HS / 6-16KHS: Temperature setting range maximum 50 °C









Vessel











										
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 [pcs.]	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

Vessel

										
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 [pcs.]	1 / 6	1 / 6		1 / 6	- / 6
Centrifuging radius [mm]	137	141		138	145
Item no.	14129	14131		14134	-

Fixed-angle rotor 12600*










With aluminium cover 17600 and torque wrench set 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 rpm
- Angle: 30°

* 6-16HS / 6-16KHS: Temperature setting range maximum 50 °C









Vessel










									
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 [pcs.]	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

Vessel

										
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 137
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 [pcs.]		2 / 12	2 / 12*	1 / 6	1 / 6
Centrifuging radius [mm]		162	126	164	167
Item no.		14150	14148*	14153	14157

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

Fixed-angle rotor 12600*







With aluminium cover 17600 and torque wrench set 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 rpm
- Angle: 30°

* 6-16HS / 6-16KHS: Temperature setting range maximum 50 °C







Vessel

								
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 [pcs.]		1 / 6	1 / 6	– / 6
Centrifuging radius [mm]		157	167	167
Item no.		14155	14157	–

Cleanroom

Robust and resistant



An extremely resistant cleanroom coating is available from Sigma for all aluminium buckets and rotors. This coating provides reliable corrosion protection for accessories, especially where aggressive chemicals are used. The cleanroom coating can even withstand exposure to

sodium hydroxide and hydrochloric acid. The surfaces are also food-grade (FDA certified) and can easily be cleaned without residues.

Cleanroom coating
Available for all accessories

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)	Polyfluorine (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 approximately 4,000 x g	High-speed glass for max. RCF 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 settings, previously entered programs can be selected using a shortcut. These programs can be assigned alphanumeric names to enhance process reliability and simplify operation. An extremely practical feature is the large program status display, visible from a distance, with a progress bar. 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	+, +**
Rapid Temp pre-cooling program	+
Temperature deviation monitoring, adjustable	+ ***
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	+

* For Sigma 6-16KS and Sigma 6-16KHS only, ** For Sigma 6-16HS and 6-16KHS only, *** For Sigma 6-16HS, 6-16KS and 6-16KHS only

Premium quality

Made in Germany

The Sigma 6-16 series meets the highest technical requirements and laboratory standards. Manufactured at the Osterode site in Germany, they are high-performance, durable, energy-efficient products of high quality, and meet the latest safety, emissions and environmental criteria.

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. With our three service locations (South, West and North/East), we can provide comprehensive support and short response times.

	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
ACR max.	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 with 13450	≤ 71	≤ 57
Fixed-angle rotor 12449	≤ 63	≤ 66
Max. acceleration time [s]		
Swing-out rotor 11660 with 13450	≤ 29	≤ 34
Fixed-angle rotor 12449	≤ 26	≤ 28
Max. braking time [s]		
Swing-out rotor 11660 with 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 / 25
CO ₂ equivalent [t]		1.263

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

Sigma Service
For maintenance and
repairs, please
contact our
Service:



Calibration

Documented proof of compliance with essential technical parameters.

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

Device qualification (IQOQ)

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

IQOQ documents (Item no. 170000)
IQOQ on site (on request)



WEEE registration
number
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 6-16KS 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 6-16KS centrifuge, GMP with water cooling

220 -- 240 V, 50 Hz (Item no. 91401)

Sigma 6-16KS, inert gas

220–240 V, 50/60 Hz on request

Sigma 6-16HS centrifuge

220–240 V, 50/60 Hz (Item no. 10393)

Sigma 6-16KHS centrifuge

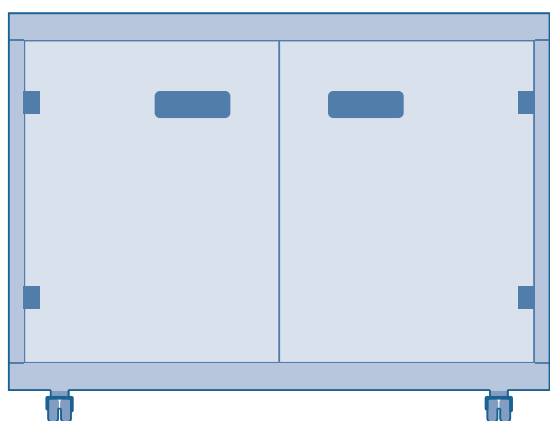
220–240 V, 50 Hz (Item no. 10399)
220–240 V, 60 Hz (Item no. 10400)

Sigma 6-16KS, inert gas

220–240 V, 50/60 Hz on request

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 of coated sheet steel and are equipped with two doors, an ample storage compartment 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 170001

for Sigma 4-5KL

W x H x D [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

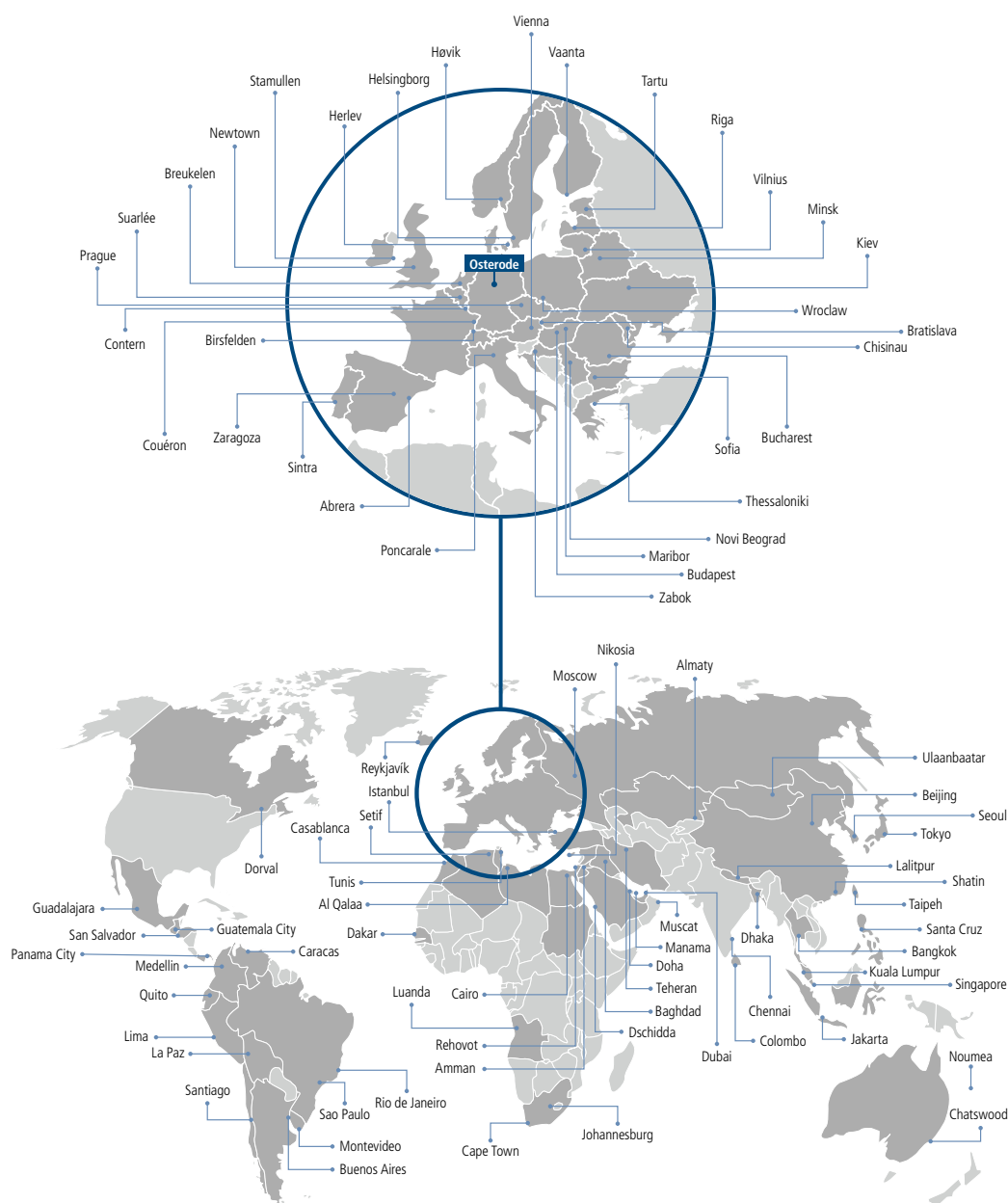
for Sigma 3-16L / 4-5L / 4-16S

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

Global service

For local product security

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



Selected locations of our representatives.

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



WolfLabs

Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

www.wolflabs.co.uk

Tel : 01759 301142

Fax : 01759 301143

sales@wolflabs.co.uk

Please contact us if this literature doesn't answer all your questions.