turns more than heads

Sigma 8KS

Floor-standing centrifuge
• Refrigerated

www.sigma-zentrifugen.de

Top performer for universal deployment

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

The Sigma 8KS is a refrigerated floor-standing centrifuge that is ideal for universal deployment in the industrial and research sectors. This high-performance centrifuge features impressive capacity of up to 12 x 1,000 ml in a swing-out rotor or 6 x 1,000 ml in a fixed-angle rotor. With a maximum RCF of 20,461 x g, even demanding separation processes can be handled efficiently. Particularly thanks to the ability to use large-volume fixed-angle rotors with high RCF, the Sigma 8KS covers a distinctly broader spectrum of applications compared to competitive units.

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

High throughput in the laboratory

Result-oriented, convenient and robust

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

Along with the large-volume fixed-angle rotors, many users appreciate the ability to use a swing-out rotor with or without a windshield at their discretion. A rotor without a windshield has advantages for handling, while the versions with windshields are distinctly more energy efficient. The lower drag enables energy savings of more than 60 %.

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

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

Sigma 8KS

- Compact refrigerated standard centrifuge
- Maximum RCF: 20,461 x g
- Maximum capacity: 12 x 1,000 ml
- High energy efficiency
- Ergonomic 88 cm loading height
- User-friendly Spincontrol S controller
- Extra large TFT display
- 60 programs
- High-performance cooling
- Temperature setting range: -20 °C to +40 °C
- Rapid Temp program
- Rotor cooling also possible at standstill
- Low noise level
- Automatic rotor identification
- Zero-maintenance induction motor
- 30 pairs of braking and acceleration profiles
- Motorised lid locks
- Automatic imbalance monitoring
- Rotor life monitoring for high safety
- Easily cleaned stainless steel chamber
- Window in lid for external speed monitoring
- Manufactured according to the latest national and international standards (e.g. EN 61010-2-020)

Options

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

SIGMA
8KS
20
2900

Rotors and accessories

Diverse options with a multitude of choices

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

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

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

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

▸ p. 9

Swing-out rotor 11805
with round bucket 13850

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

▸ p. 14

Swing-out rotor 11805
with rectangular bucket 13845

- Max. capacity: 48 microtiter plates or 144 x 15ml
- Max. speed: 5,100 rpm
- Max. RCF: 7,328 x g
- Angle: 90°

▸ p. 9

Swing-out rotor 11806
with round bucket 13850

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

▸ p. 14

Swing-out rotor 11806
with rectangular bucket 13845

- Max. capacity: 48 microtiter plates or 144 x 15ml
- Max. speed: 3,700 rpm
- Max. RCF: 3,857 x g
- Angle: 90°

▸ p. 15

Swing-out rotor 11806
with dual bucket 13855

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

▸ p. 19

Fixed-angle rotor 12505

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

▸ p. 21

Fixed-angle rotor 12510

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

NAL-GENE
12510-H

Swing-out rotor 11805

Round bucket 13850 (1 set = 6 pcs)

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

Swing-out rotor 11806

Round bucket 13850 (1 set = 6 pcs)

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

Tube										
Rated capacity (filling volume) [ml]	1.5	2	5	5	6 (5)	7	10	10	10	10
Diameter x length [mm]	10.7 x 42	10.7 x 42	12 x 75	17 x 60	12 x 100	12 x 100	16.1 x 81.1	16.1 x 81.1	16.1 x 81.1	16 x 100
Tube material	PP	PP	PS	PPCO	Glass	Glass	PF	PC	PPCO	Glass
Item no.	15008	15040	15060	–	15007	15027	15000	15010	15039	15015
Adapter for round bucket 13850										
Bore diameter x length [mm]	11.1 x 38.5		12.8 x 52	17 x 52	12.8 x 74		16.5 x 55			17.5 x 55
Tubes per adapter / rotor	26 / 156		37 / 222	12 / 72	31 / 192		20 / 120			19 / 114
Centrifuging radius [mm]	288		287	292	289		290			290
Item no.	17653*		17652*	17211*	17654*		17655*			17658*

Tube								
Rated capacity (filling volume) [ml]	10	14	14	15 (13)	15	25	25	25
Diameter x length [mm]	16 x 100	17 x 100	17 x 100	17 x 110	16.5 x 120	25 x 90	24 x 100	24 x 100
Tube material	Glass	PS	PP	Glass	PP	PP	Glass	Glass
Item no.	15024	15020	15023	15022	15115	–	15025	15026
Adapter for round bucket 13850								
Bore diameter x length [mm]	17.5 x 55				17 x 78.5	17 x 77.5	17 x 80	25.5 x 70	25.5 x 77
Tubes per adapter / rotor	19 / 114				12 / 72	15 / 90	19 / 114	7 / 42	8 / 48
Centrifuging radius [mm]	290				293	292	290	285	292
Item no.	17658*				17659*	17660*,**	17775	17662*	17670*

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

Swing-out rotor 11805

Round bucket 13850 (1 set = 6 pcs)

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

Swing-out rotor 11806

Round bucket 13850 (1 set = 6 pcs)

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

Tube										
Rated capacity (filling volume) [ml]	30 (26)	30 (26)	30 (28)	30	30	50 (38)	50 (43)	50	50	50
Diameter x length [mm]	25.3 x 98	25.3 x 98	25.3 x 98	24 x 105	25 x 107	28.8 x 107	28.5 x 107	28.5 x 101.5	29 x 117	29 x 117
Tube material	PF	PPCO	PC	Glass	PP	PPCO	PF	Stainless steel	PP	PP
Item no.	15029	15032	15030	15033	–	15052	15051	13055	–	15151
Adapter for round bucket 13850										
Bore diameter x length [mm]	25.5 x 77				25.5 x 70	29.5 x 77			29.5 x 74	29.5 x 78.5
Tubes per adapter / rotor	8 / 48				7 / 42	7 / 42			5 / 30	5 / 30
Centrifuging radius [mm]	292				285	292			289	293
Item no.	17670*				17662*	17676*			17678*	17677*

Tube										
Rated capacity (filling volume) [ml]	50	50	50	50	50	85 (73)	85 (76)	94 (85)	94	100 (75)
Diameter x length [mm]	29 x 117	34 x 100	34 x 100	34 x 100	35 x 100	38 x 112	38 x 112	38 x 103	38 x 110	44 x 100
Tube material	PP	Glass	Glass	PC	Glass	PF	PPCO	Stainless steel	PC	Glass
Item no.	15151	15045	15050	15049	15056	15080	15076	13085	15094	15078
Adapter for round bucket 13850										
Bore diameter x length [mm]	29.5 x 80	35.5 x 77.5				38.5 x 77				45.5 x 77
Tubes per adapter / rotor	8 / 48	4 / 24				3 / 18				2 / 12
Centrifuging radius [mm]	290	292				292				292
Item no.	17777	17675*				17685*				17690*,**

* Adapter 13851 additionally required for reduction; ** Including rubber cushion 16051

Swing-out rotor 11805

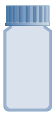
Round bucket 13850 (1 set = 6 pcs)

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

Swing-out rotor 11806

Round bucket 13850 (1 set = 6 pcs)

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

Tube										
Rated capacity (filling volume) [ml]	100 (90)	100	100	150	150	175	175	200 (168)	200 (170)	200
Diameter x length [mm]	44 x 100	44 x 100	45 x 100	51 x 99	56 x 113	61 x 118	62 x 139.2	56 x 112	56 x 112	56 x 135
Tube material	Glass	Glass	PC	PP	Glass	PP	PP	PPCO	Glass	Glass
Item no.	15106	15100	15103	15125	15206	–	15175	15202	15201	15254
Adapter										
for round bucket 13850										
Bore diameter x length [mm]	45.5 x 77			51.5 x 77	58 x 110	61 x 100	62.5 x 110	57.5 x 77	58 x 110	
Tubes per adapter / rotor	2 / 12			1 / 6	1 / 6	1 / 6	1 / 6	1 / 6	1 / 6	
Centrifuging radius [mm]	292			292	290	295	295	292	290	
Item no.	17690*,**			17692*	17695*,**	17694*	17693*	17696*	17695*,**	

Tube									
Rated capacity (filling volume) [ml]	200	225	230 (220)	250 (232)	250 (232)	250	250	250	400	500 (435)
Diameter x length [mm]	61 x 130	61 x 137	56 x 134	61.4 x 122	61.4 x 122	61.4 x 125	61 x 145	59.7 x 171.2	85 x 118	69 x 165
Tube material	PP	PP	Glass	PPCO	PF	Stainless steel	PP	PP	PPCO	PF
Item no.	15174	–	15250	15249	15247	13255	–	–	15401	15507
Adapter										
for round bucket 13850										
Bore diameter x length [mm]	62.5 x 110	61 x 100	58 x 110	62.5 x 77			62.5 x 110		86 x 107	70 x 110
Tubes per adapter / rotor	1 / 6	1 / 6	1 / 6	1 / 6			1 / 6		1 / 6	1 / 6
Centrifuging radius [mm]	295	295	290	292			295		292	295
Item no.	17693*	17694*	17695*,**	17698*			17693*		13654*	13655*

* Adapter 13851 additionally required for reduction; ** Including rubber cushion 16051; *** Including rubber cushion 16250

Swing-out rotor 11805

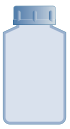
Round bucket 13850 (1 set = 6 pcs)

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

Swing-out rotor 11806

Round bucket 13850 (1 set = 6 pcs)

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

Tube									
Rated capacity (filling volume) [ml]	500 (435)	500	500	500	600	750 (eff. 680)	750	1,000 (885)	1,000
Diameter x length [mm]	69 x 165	69.5 x 152	85 x 135	95.5 x 147	100 x 183	85 x 173	100 x 127	97 x 175	97.5 x 195.3
Tube material	PPCO	Stainless steel	PPCO	PP	PP	PPCO	PPCO	PPCO	PPCO
Item no.	15508	13507	15501	–	-	15751	15917	15921	–
Adapter									
for round bucket 13850								
Bore diameter x length [mm]	70 x 110	86 x 107	96.3 x 100	96.3 x 100	99 x 110	86 x 107	101 x 123.4	97.8 x 141.7
Tubes per adapter / rotor	1 / 6	1 / 6	1 / 6	1 / 6	1/6	1 / 6	1 / 6	1 / 6
Centrifuging radius [mm]	292	292	295	295	289	292	293	292
Item no.	13655*	13654*	17682*	17780	17650	13654*	13851	13511*

Tube			
Rated capacity (filling volume) [ml]	1,000	1,300	1,500
Diameter x length [mm]	100 x 167	115 x 165	115 x 180
Tube material	Stainless steel	Stainless steel	PP
Item no.	13510	13840	15931
Adapter			
for round bucket 13850			
Bore diameter x length [mm]	101 x 123.4	116 x 152	
Tubes per adapter / rotor	1 / 6	– / 6	
Centrifuging radius [mm]	293	295	
Item no.	13851	–	

* Adapter 13851 additionally required for reduction

Swing-out rotor 11805

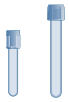
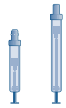
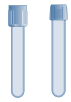
Round bucket 13850 (1 set = 6 pcs)

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

Swing-out rotor 11806

Round bucket 13850 (1 set = 6 pcs)

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

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

Adapter for round bucket 13850				
Bore diameter x length [mm]	12.8 x 52	13.8 x 54	16.5 x 55	17.5 x 55
Tubes per adapter / rotor	37 / 222	23 / 138	20 / 120	19 / 114
Centrifuging radius [mm]	287	289	290	290
Item no.	17652*	17656*	17655*	17658*

* Adapter 13851 additionally required for reduction

Swing-out rotor 11805

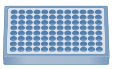
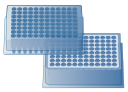
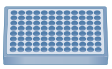
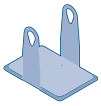
Rectangular bucket 13845 (1 set = 6 pcs), each with plate holder 17981 and cap 17122

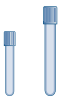
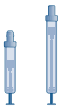
- Max. plate height without / with cap: 131 / 108 mm
- Max. speed: 5,100 rpm
- Max. RCF: 7,328 x g
- Max. load per carrier: 700 g
- Hermetically closable with cap 17122
- Tmin at maximum speed: <4°C
- Angle: 90°

Swing-out rotor 11806

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

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

Plate					
Description	MTP (without lid)	MTP (with lid)	DWP	Filter plate	PCR plate 96-fold
W x D x H [mm]	128 x 86 x 15	128 x 86 x 17.5	128 x 86 x 44.5	128 x 86 x 60	128 x 86 x 20
Adapter					
for rectangular bucket 13845					
Bore diameter x length [mm]	–				
Plates per rotor (without / with cap)	48 / 42	42 / 36	12 / 12	12 / 6	36 / 30
Centrifuging radius [mm]	252				
Item no.	17981				

Blood tubes								
Rated capacity (filling volume) [ml]	1,1 – 1,4	2,7 – 5	4 – 6	1,6 – 5,6	1,8 – 7	4 – 10	6 – 10	9 – 10
Diameter x length [mm]	8 x 82	11 x 82 – 108	13 x 81 – 106	13 x 81 – 106	13 x 81 – 107	15 x 91 – 108	16 x 106 – 107	16 x 108
Tube material	PP	PP	PET	PP	PET	PP	PET	PP
Item no.	–	–	–	–	–	–	–	–
Adapter								
for rectangular cups 13845								
Bore diameter x length [mm]	13,5 x 57					17,5 x 58		
Tubes per adapter / rotor	34 / 204					24 / 144		
Centrifuging radius [mm]	249					250		
Item no.	180845					180846		

Swing-out rotor 11806

Double bucket 13855 (1 set = 6 pcs)

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

Tube										
Rated capacity (filling volume) [ml]	1.5	2	5	5	6 (5)	7	10	10	10	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 double bucket 13855										
Bore diameter x length [mm]	11.1 x 38.5		12.8 x 52	17 x 52	12.8 x 74		16.5 x 55			17.5 x 55
Tubes per adapter / rotor	26 / 312		37 / 444	12 / 144	32 / 264		20 / 240			19 / 228
Centrifuging radius [mm]	287		286	291	288		289			289
Item no.	17653		17652	17211	17654		17655			17658

Tube										
Rated capacity (filling volume) [ml]	10	14	14	15 (13)	15	25	25	25	30 (26)	30 (26)
Diameter x length [mm]	16 x 100	17 x 100	17 x 100	17 x 110	16.5 x 120	25 x 90	24 x 100	24 x 100	25.3 x 98	25.3 x 98
Tube material	Glass	PS	PP	Glass	PP	PP	Glass	Glass	PF	PPCO
Item no.	15024	15020	15023	15022	15115	–	15025	15026	15029	15032
Adapter for double bucket 13855										
Bore diameter x length [mm]	17.5 x 55				17 x 78.5	25.5 x 70	25.5 x 77			
Tubes per adapter / rotor	19 / 228				12 / 144	7 / 84	8 / 96			
Centrifuging radius [mm]	289				292	284	291			
Item no.	17658				17659	17662	17670			

Swing-out rotor 11806

Double bucket 13855 (1 set = 6 pcs)

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

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

Adapter for double bucket 13855				
Bore diameter x length [mm]	25.5 x 77	25.5 x 70	29.5 x 77	35.5 x 77.5
Tubes per adapter / rotor	8 / 96	7 / 84	7 / 84	4 / 48
Centrifuging radius [mm]	291	284	291	291
Item no.	17670	17662	17676	17675

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

Adapter for double bucket 13855				
Bore diameter x length [mm]	29.5 x 74	29.5 x 78.5	38.5 x 77	45.5 x 77
Tubes per adapter / rotor	5 / 60	5 / 60	3 / 36	2 / 24
Centrifuging radius [mm]	288	292	291	291
Item no.	17678	17677	17685	17690*

* Including rubber cushion 16051

Swing-out rotor 11806

Double bucket 13855 (1 set = 6 pcs)

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

Tube										
Rated capacity (filling volume) [ml]	150	150	175	175	200 (168)	200 (170)	200	200	225	230 (220)
Diameter x length [mm]	51 x 99	56 x 113	61 x 118	62 x 139.2	56 x 112	56 x 112	56 x 135	61 x 130	61 x 137	56 x 134
Tube material	PP	Glass	PP	PP	PPCO	Glass	Glass	PP	PP	Glass
Item no.	15125	15206	–	15175	15202	15201	15254	15174	15175	15250
Adapter										
for double bucket 13855									
Bore diameter x length [mm]	51.5 x 77	58 x 110	61 x 100	62.5 x 110	57.5 x 77	58 x 110		62.5 x 110	61 x 100	58 x 110
Tubes per adapter / rotor	1 /12	1 / 12	1 / 12	1 / 12	1 / 12	1 / 12		1 / 12	1 / 12	1 / 12
Centrifuging radius [mm]	291	289	294	295	291	289		295	294	289
Item no.	17692	17695*	17694	17693	17696	17695*		17693	17694	17695*

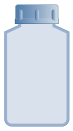
Tube										
Rated capacity (filling volume) [ml]	250 (232)	250 (232)	250	250	250	400	500 (435)	500 (435)	500	500
Diameter x length [mm]	61.4 x 122	61.4 x 122	61.4 x 125	61 x 145	59.7 x 171.2	85 x 118	69 x 165	69 x 165	69.5 x 152	85 x 135
Tube material	PPCO	PF	Stainless steel	PP	PP	PPCO	PF	PPCO	Stainless steel	PPCO
Item no.	15249	15247	13255	–	–	15401	15507	15508	13507	15501
Adapter										
for double bucket 13855									
Bore diameter x length [mm]	62.5 x 77		62.5 x 77	62.5 x 110		86 x 107	70 x 110			86 x 107
Tubes per adapter / rotor	1 / 12		1 / 12	1 / 12		1 / 12	1 / 12			1 / 12
Centrifuging radius [mm]	291		291	294		291	294			291
Item no.	17698		17698	17693		13654	13655			13654

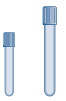
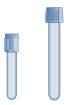
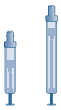
* Including rubber cushion 16250

Swing-out rotor 11806

Double bucket 13855 (1 set = 6 pcs)

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

Tube					
Rated capacity (filling volume) [ml]	500	750 (680)	750	1000 (885)	1000
Diameter x length [mm]	95.5 x 147	85 x 173	100 x 127	97 x 175	100 x 167
Tube material	PP	PPCO	PPCO	PPCO	Stainless steel
Item no.	–	15751	15917	15921	13510
Adapter					
for double bucket 13855					
Bore diameter x length [mm]	96.3 x 110	86 x 107	101 x 146	97.8 x 143	101 x 146
Tubes per adapter / rotor	1 / 12	1 / 12	– / 12	1 / 12	– / 12
Centrifuging radius [mm]	294	291	294	293	294
Item no.	17682	13654	–	13511	–

Blood and urine tubes										
Rated capacity (filling volume) [ml]	1.1 – 1.4	2.7 – 5	1.6 – 6	4 – 6	1.8 – 7	4 – 10	9.5 – 10	6 – 10	9 – 10	8
Diameter x length with closure [mm]	8 x 82	11 x 82 – 108	13 x 81 – 106	13 x 81 – 106	13 x 81 – 107	15 x 91 – 118	15 x 106	16 x 106 – 107	16 x 108	16 x 131
Tube material	PP	PP	PP	PET	PET	PP	PET	PET	PP	Glass
Item no.	–	–	–	–	–	–	–	–	–	–
Adapter										
for double bucket 13855									
Bore diameter x length [mm]	12.8 x 52	13.8 x 54			16.5 x 55			17.5 x 55		
Tubes per adapter / rotor	37 / 444	23 / 276			20 / 240			19 / 228		
Centrifuging radius [mm]	286	288			289			289		
Item no.	17652	17656			17655			17658		

Fixed-angle rotor 12505

with aluminum lid 17891

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

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

Adapter for fixed-angle rotor 12505					
Bore diameter x length [mm]	11.1 x 38.5	16.5 x 69	29.5 x 102	17.7 x 107	26 x 83
Tubes per adapter / rotor	12 / 72	8 / 48	2 / 12	5 / 30	3 / 18
Centrifuging radius [mm]	128	159	130	163	147
Item no.	14151	14144	14148*	14149	14146

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

Adapter for fixed-angle rotor 12505				
Bore diameter x length [mm]	29.5 x 97	29.5 x 102	38.5 x 99	62 x 127
Tubes per adapter / rotor	2 / 12	2 / 12	1 / 6	1 / 6
Centrifuging radius [mm]	161	125	163	166
Item no.	14150	14148*	14153	14157

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

Fixed-angle rotor 12505

with aluminum lid 17891

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

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

Adapter			
for fixed-angle rotor 12505			
Bore diameter x length [mm]	62 x 115	62 x 127	69.9 x 142
Tubes per adapter / rotor	1 / 6	1 / 6	1 / 6
Centrifuging radius [mm]	156	166	166
Item no.	14155	14157	–

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 12510

with aluminum lid 17891
and 6 stainless steel adapters 13511

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

Tube										
Rated capacity (filling volume) [ml]	1.5	2	10	10	10	15	30 (26)	30 (26)	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 12510					
Bore diameter x length [mm]	11.1 x 38.5	16.5 x 69		17 x 107	26 x 83	29.5 x 98
Tubes per adapter / rotor	26 / 156	19 / 114		12 / 72	8 / 48	7 / 42
Centrifuging radius [mm]	185	195		203	194	199
Item no.	14162	14164		14165	14167	14169

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

Adapter						
for fixed-angle rotor 12510					
Bore diameter x length [mm]	29.5 x 98	29.5 x 102	38.5 x 99		62 x 130	62.5 x 106
Tubes per adapter / rotor	7 / 42	5 / 30	3 / 18		1 / 6	1 / 6
Centrifuging radius [mm]	199	198	195		206	202
Item no.	14169	14171	14174		14177	14178

Fixed-angle rotor 12510

with aluminum lid 17891
and 6 stainless steel adapters 13511

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

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

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

** Only possible without lid 17892

Material properties

Guideline for optimal tube selection

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

	Polycarbonate (PC)	Polyvinyl fluoride (PF)	Polystyrene (PS)	Polyethylene (PE)	Polypropylene (PP)
Autoclave resistant	Yes	Yes	No	No	Yes
Elasticity	Not elastic	Not elastic	Not elastic	Good	Not elastic
Transparency	Transparent	Translucent	Transparent	Translucent	Translucent
Microwave resistant	Moderate	Yes	No	Limited	Moderate
Chemical resistance					
Weak acids	Yes	Yes	Yes	Yes	Yes
Strong acids	No	Yes	Limited	Yes	Yes
Alcohols and alkalis	No	Yes	Yes	Yes	Yes
Salts	Limited	Yes	Limited	Yes	Yes
Note:	Frequent autoclaving leads to loss of strength	Tubes should be completely filled and closed for use at maximum RCF			

	PP copolymer (PPCO)	Glass	High-speed glass (HS glass)	Stainless steel
Autoclave resistant	Yes	Yes	Yes	Yes
Elasticity	Moderate	Not elastic	Not elastic	Not elastic
Transparency	Translucent	Transparent	Transparent	Opaque
Microwave resistant	Moderate	Yes	Yes	No
Chemical resistance				
Weak acids	Yes	Yes	Yes	Limited
Strong acids	Yes	Yes	Yes	Limited
Alcohols and alkalis	Yes	Yes	Yes	Yes
Salts	Yes	Yes	Yes	Limited
Note:		Max. RCF for all glass tubes approx. 4,000 x g	High-speed glass for maximum RCF of 13,100 x g	

Spincontrol S controller

Intuitive operation and many options

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

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

The countless features leave nothing to be desired: timer after setpoint speed reached, capacity for 60 programs, password protection against unintentional alteration of run parameters, rotor cycle counter. Those are just a few of the highlights that make the Spincontrol S controller a highly versatile system that will help you to meet the laboratory requirements of the future.

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

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

Premium quality

Made in Germany

The Sigma 8KS meets the highest technical requirements for laboratory centrifuges. Developed and produced at our facility in Osterode, Germany, it is a high-performance, durable and energy-efficient quality product and conforms to the latest safety, emissions and environmental standards. Sigma guarantees the availability of spare parts and wearing parts for at least 10 years.

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

	Sigma 8KS*	Sigma 8KS R455A
Max. capacity [ml]		
Swing-out rotor	12 x 1,000	12 x 1,000
Fixed-angle rotor	6 x 1,000	6 x 1,000
Max. RCF	20,461	20,461
Maximum speed [rpm]	10,500	10,500
Minimum speed [rpm]	100	100
Noise level at maximum speed (approximate) [dB(A)]		
Swing-out rotor 11805 with bucket 13850 in item no. 10631 / 10633	≤ 57 / 55	≤ 57 / 55
Fixed-angle rotor 12510 with lid 17892 in item no. 10631 / 10633	≤ 67 / 54	≤ 67 / 54
Max. acceleration time [s]		
Swing-out rotor 11805 with bucket 13850	≤ 59	≤ 59
Fixed-angle rotor 12510 with lid 17892	≤ 82	≤ 82
Max. braking time [s]		
Swing-out rotor 11805 with bucket 13850	≤ 83	≤ 83
Fixed-angle rotor 12510 with lid 17892	≤ 93	≤ 93
Temperature adjustment range [°C]	-20–+40	-20–+40
Power consumption [W]	6,500	6,500
Height x width x depth [mm]	990 x 820 x 949	990 x 820 x 949
Height with open lid [mm]	1,690	1,690
Weight without rotor [kg]	450	450
Refrigerant	R452A	R455A
Filling quantity [kg] / Max. permissible pressure [bar]	2.280 / 28	2.280 / 28
CO_2 equivalent [t]	4.879	0.337

* 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:

Sigma 8KS centrifuge

3 x 400 V, 50 Hz, air-cooled compressor	(item no. 10631)
3 x 400 V, 60 Hz, air-cooled compressor	(item no. 10630)
3 x 220–240 V, 60 Hz, air-cooled compressor	(item no. 10632)
3 x 400 V, 50 Hz, water-cooled compressor	(item no. 10633)
3 x 400 V, 50 Hz, air-cooled compressor, R455A	(upon request)

Sigma 8KS GMP

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

Sigma 8KS inert gas

3 x 400 V, 50 Hz, air-cooled compressor with inert gas injection system	(item no. 91301)
3 x 400 V, 50 Hz, water-cooling and inert gas injection system	(item no. 91583)

Calibration

Documented proof of compliance with essential technical parameters.

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

Device qualification (IQOQ)

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

IQOQ documents	(item no. 170000)
IQOQ on site	(upon request)

WEEE reg. no. DE 76714077

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

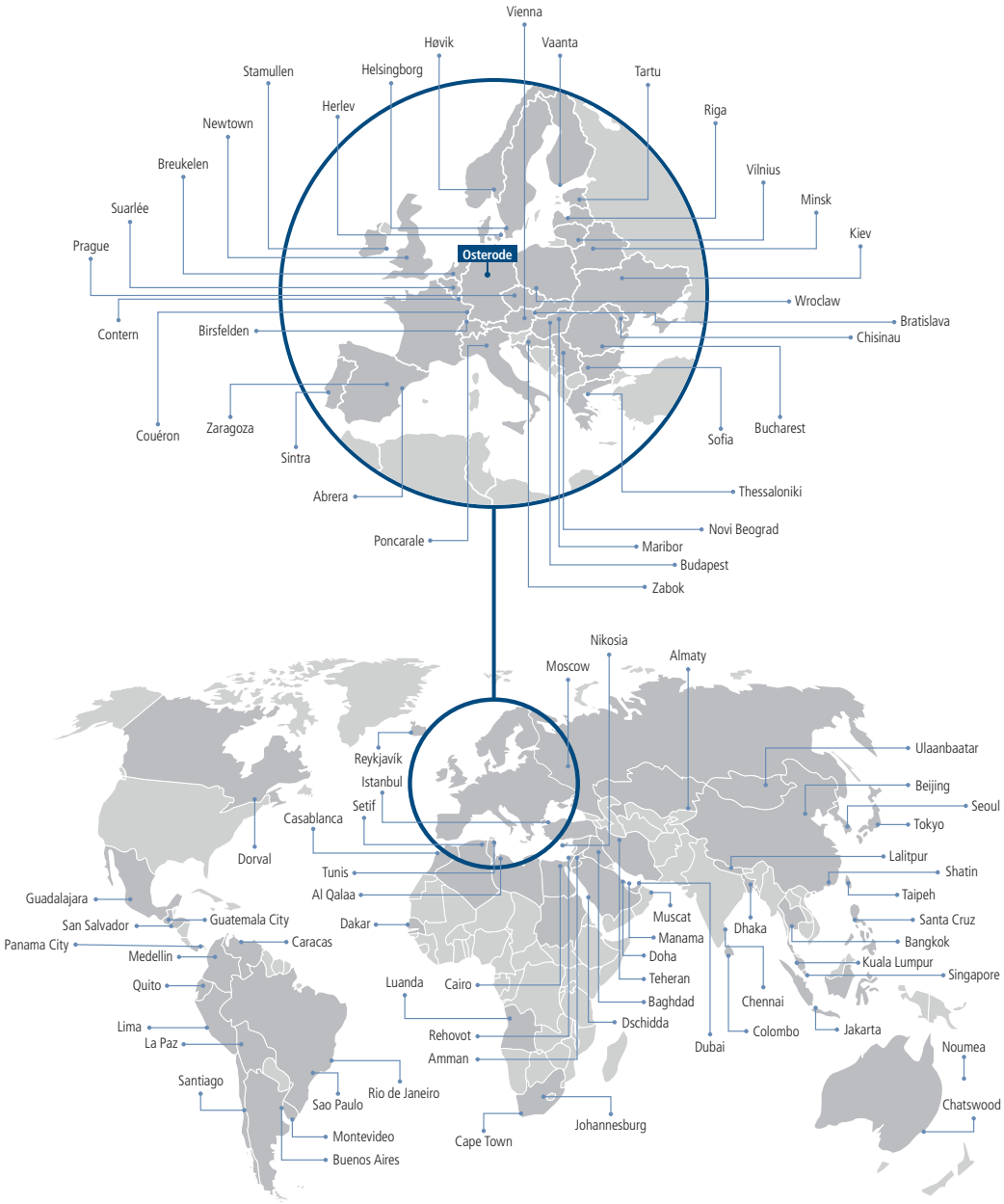
Legend

- 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/

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