



Refrigerated Centrifuge

3-18KS

SIGMA 3-18KS

No. 10370 (220-240 V, 50/60 Hz), No. 10371 (208 V, 60 Hz), No. 10372 (200 V, 50/60 Hz), No. 10373 (120 V, 60 Hz)

- Universal refrigerated table top centrifuge; speed range up to 18.000 rpm
- Spincontrol S
- Illuminated keys for start, stop, lid open
- Various angle and swing-out rotors available
- Maximum capacity of 4 x 400 ml down to microtubes with different adapters in the same bucket
- Maintenance-free induction drive motor A microcontroller controls speed or gravitational field, time and temperature
- Suitable for low speeds e.g. for cell sedimentation, accuracy +/- 1 rpm
- Magnetic rotor identification prevents the rotor from overspeeding, active rotor identification
- Stainless steel bowl
- Imbalance switch
- No need to open the casing for emergency lid lock release
- Easy lid opening due pneumatic spring support
- Window in the centrifuge lid for external speed control
- Produced according to national and international safety regulations (EN 61010-2-020)
- Motorized lid lock
- Possibility of precooling the rotors during standstill Refrigerant CFC-free (R 134 a)

SIGMA 3-18KHS No. 10374 (220-240 V, 50/60 Hz)

- heated version of 3-18KS
- max. rotor temp. 40-60 °C depending on rotor and speed
- Technical datas like 3-18KS

Created during production. Centrifuge with one rotor

<i>Calibration certificate for speed and time</i>	No. 17714
<i>Calibration certificate for temperature speed and time</i>	No. 17715
<i>IQOQ</i>	No. 17711
<i>For a further rotor</i>	No. 17712

Biosafe Rotor					
<i>Rotor No.</i>		<i>max. rpm</i>		<i>max. RCF</i>	
11180 + 2 x 13190		4.700		4.248	
11180 + 2 x 13194		4.700		4.149	
complete rotor					
No. 11182 : 12 x 50 ml (11180 + 2 x 13190 + 2 x 17346 + 12 x 15151)					
adapters for bucket 13190, sealable with cap 17190					
1 Set = 2 pcs					
<i>No.</i>	<i>Adapter</i>	<i>tube Order No.</i>	<i>No.</i>	<i>Adapter</i>	<i>tube Order No.</i>
17350	24 x 0.5 – 0.75 ml	15005	17376	4 x 40 – 50 ml	15052
17361	16 x Microtainer		17375	3 x 50 ml	15050
17353	20 x 1.5 – 2.0 ml	15008, 15040	17346	3 x 50 ml Culture	15151
17352	25 x 5 ml RIA	15006	17377	4 x 50 ml Culture	15151**
17356	16 x 5 – 6 ml		17344	3 x 50 ml Culture*	
	RIA, Hemolyse, Vacutainer		17385	1 x 78 – 85 ml	15076
17354	16 x 7 ml	15007	17390	1 x 100 ml	15100
17351	12 x 7 – 9 ml Monovette		17395	1 x 125 ml	15125
17358	12 x 9 – 10 ml Monov. +15 ml	15015	17393	1 x 175 ml Culture	15174**
17355	12 x 10 – 12 ml	15010	17400	1 x 200 ml	15202
17345	5 x 15 ml Culture	15115	17401	1 x 200 ml**	15201
17359	9 x 15 ml Culture	15115**	17347	1 x 250 ml	15249
17370	5 x 25 – 30 ml	15025	15401	1 x 400 ml	15401
17362	5 x 30 ml				
Adapter for bucket 13194					
<i>No.</i>	<i>Adapter</i>	<i>tube Order No.</i>	<i>No.</i>	<i>Adapter</i>	<i>tube Order No.</i>
18310	4 x 50 ml Culture	15151**	18311	10x 15 ml Culture	15115**
18309	4 x 50 ml Culture*				



<i>Rotor No.</i>		<i>max. rpm</i>		<i>max. RCF</i>	
11180 + 2 x 13180		4.700		4.223	
complete rotor					
No. 11181 : 48 x 15 ml (11180 + 2 x 13180 + 2 x 18015 + 48 x 15023)					
adapters for bucket 13180, sealable with cap 17112					
1 Set = 2 pcs					
<i>No.</i>	<i>Adapter</i>	<i>tube Order No.</i>	<i>No.</i>	<i>Adapter</i>	<i>tube Order No.</i>
18002	20 x 1.5 – 2.0 ml	15008, 15040	18025	5 x 25 ml	15025
18005	20 x 5 ml RIA	15006	18030	5 x 25 – 30 ml	15030
18009	20 x 5 – 6 ml Hemolyse		18022	4 x 30 ml Sterilin	
18012	12 x 5 – 7 ml Vacutainer		18050	2 x 50 ml	15050
18007	20 x 7 ml	15007	18051	2 x 40 – 50 ml	15052
18017	10 x 9 – 15 ml Monov. +15 ml	15015	18052	2 x 50 ml Culture	15151
18010	12 x 9 – 12 ml	15010	18053	2 x 50 ml Culture*	
18015	12 x 15 ml	15015	18085	1 x 78 – 85 ml	15076
18016	4 x 15 ml Culture	15115	18100	1 x 100 ml	15100
18018	6 x 15 ml Culture**	15115	18125	1 x 125 ml	15125
			18200	1 x 200 ml	15202

* with skirt **without bucket cap



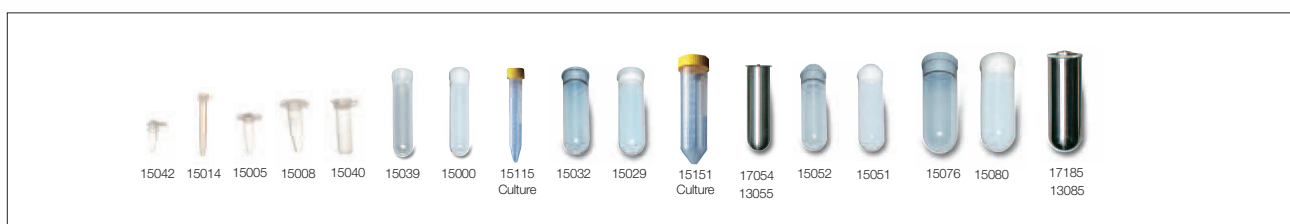
Rotor No.		max. rpm	max. RCF
11133 + 2 x 13104		5.500	5.242
11133 + 2 x 13130		5.500	5.411
complete rotor			
No. 11132: 28 x 15 ml (11133 + 2 x 13104 + 2 x 17015 + 28 x 15023)			
adapters for bucket 13104, sealable with cap 17111			
1 Set = 2 pcs			
No.	Adapter	tube Order No.	No. Adapter tube Order No.
17008	12 x 1.5 – 2.0 ml	15008, 15040	17032 1 x 30 ml Sterilin
17006	12 x 5 ml RIA, Hemolyse	15060	17049 1 x 50 ml Culture 15151
17027	7 x 5 – 7 ml Vacutainer		17048 1 x 50 ml Culture*
17007	12 x 7 ml	15007	17050 1 x 50 ml 15050
17012	6 x 10 ml	15010	17052 1 x 40 – 50 ml 15052
17018	4 x 9 – 10 ml Monov. +15 ml		17085 1 x 78 – 85 ml 15076
17015	7 x 15 ml	15015	17100 1 x 100 ml 15100
17019	3 x 15 ml Culture**	15115	17101 1 x 100 ml 15102
13130	3 x 15 ml Culture	15115	17125 1 x 125 ml 15125
17025	2 x 25 ml	15025	15202 PP-bottle 190 ml
17030	2 x 25 – 30 ml	15030	

* with skirt **without bucket cap



4 x Cytrotor			
Rotor No.		max. rpm	max. RCF
11224		3.000	1.137
MTP swing-out rotor			
Rotor No.		max. rpm	max. RCF
11222		3.000	1.238
max. H. = 56 mm			
11241		4.700	3.136
max. H. = 55 mm with hermetic cap No. 17108			
24 x 1.5 – 2.0 ml swing-out rotor			
Rotor No.		max. rpm	max. RCF
11135		14.000	16.215
No.	Adapter	1 Set = 2 pcs	
13021	0.2 ml PCR		
13000	0.4 ml reaction caps		
13002	0.5 – 0.75 ml reaction caps		
0.2 – 2.0 ml drumrotor			
Rotor No.		max. rpm	max. RCF
11136		14.500	16.454
capacity: 6 x adapter			
No.	Adapter	1 Set = 2 pcs	
14021	8 x 4 x 0.2 ml PCR		
14020	10 x 0.2 – 0.5 ml PCR		
14000	20 x 0.25 – 0.4 ml reaction caps		
14002	10 x 1.5 – 2.0 ml reaction caps		





<i>Rotor No.</i>	<i>capacity</i>	<i>tube Order No.</i>	<i>max. rpm</i>	<i>max. RCF</i>
12115	12 x 8 x 0.2 ml PCR	15042	16.400	29.468
12154	24 x 1.5 – 2.0 ml	15008, 15040	18.000	29.700
12131	30 x 1.5 – 2.0 ml	15008, 15040	16.400	30.070
12349	48 x 1.5 – 2.0 ml	15008, 15040	15.000	25.155
12111	10 x 10 ml	15000, 15039	18.000	27.530
12157	20 x 10 ml	15000, 15039	10.000	10.956
12171	12 x 15 ml Culture	15115	13.500	20.172
12158	6 x 30 ml	15032, 15029	18.000	28.616
19776	6 x 50 ml Culture	15151	14.000	20.379
12150	6 x 50 ml	15051, 15052	14.600	20.018
12156	8 x 50 ml	15051, 15052	13.800	20.440
12155	4 x 85 ml	15076, 15080	14.500	21.390
12159	6 x 85 ml	15076, 15080	11.400	14.239

All rotors incl. hermetic aluminium lid


adapter for angle rotors 1 Set = 2 pcs

<i>Rotortype</i>	<i>No.</i>	<i>Adapter</i>	<i>tube Order No.</i>	<i>No.</i>	<i>Adapter</i>	<i>tube Order No.</i>
1.5 – 2.0 ml	13021	0.25 – 0.4 ml	15042	13002	0.5 – 0.75 ml PCR	(15005)
	13000	0.4 ml	15014			
30 ml	13059	10 ml	15000, 15039			
50 ml Culture	13060	15 ml Culture	15115	13079	50 ml	(15051, 15052)
50 ml	16018	15 ml Glass	15085	16030	30 ml Glass	(15086)
	13062	15 ml round bottom				
85 ml	13084	10 ml	15000, 15020	13083	30 ml	(15029, 15032)
	16019	15 ml Glass	15085	16031	30 ml Glass	(15086)
	13081	15 ml Culture	15115	13080	50 ml Culture	(15151)
	13063	15 ml round bottom		13082	50 ml	(15051, 15052)

Spincontrol S



Spincontrol S

Display	TFT
Plain text pop up windows	+
Permanent display preselected, current values	+
Display shows dimensions	+
Languages	
Timer	10 sec - 99 h 59 min
Timing after set speed has been reached, switchable	+; +
Time increments [sec]	60; 1
Short run	+
Continous run	+
Speed increments [rpm]	10; 1
Display speed and g-force	+
G-force increments [xg]	10; 1
Temperature increments [°C]	1
Switchable °C, °F	+
Standstill cooling, switchable	+; +
Standstill heating, switchable ¹	+; +
Rapid cooling program: Rapid_temp	+
Start refused with exceeded temperature tolerance, tolerance preselectable	+; +
Programs	60
User defined program name	+
Program list shows all parameters	+
Linear acceleration curves	10
Quadratic acceleration curves	10
User defined acceleration curves	10
Linear deceleration curves	10
Quadratic deceleration curves	10
User defined deceleration curves	10
Brakeless	+
Combination deceleration a. brakeless from 1000 - 150 rpm selectable	+
Auto lid open, switchable	+; +
Accoustic signal, switchable	+; +
Signal length preselectable	+
Optical display stillstand	+
Counting cycles centrifuge, each rotor	+; +
Pop up window end of rotor life time	+
Automatic lid opening at the end of the run, switchable	+; +
All rotors pre programmed speed, g-force, radius	+
Max. radius decreaseable	+
Calculation for liquid density >1.2 g/cm ³	+
Start delay	+
Controlunit lockable	+
Code protection	+
Run monitoring	+
Microprocessor controlled	+

¹ only for 3-18KHS



17926 Trolley
(W x H x D, 670 x 497 x 650 mm)

Technical data	3-18KS
Power consumption [W]	1010
Max. capacity [ml]	4 x 400
Max. speed [rpm]	18.000
Min. speed [rpm]	100
Interference suppression	EN 61326
HeightxWidthxDepth [mm]	355 x 630 x 600
Height with open lid [mm]	785
Weight without rotor [kg]	78
Kinetic energy max. [Nm]	22.989
Noise level at max. speed (approx.)	
Rotor 12154 at 18.000 rpm	66 dB (A)
Rotor 11132 at 5.500 rpm	60 dB (A)
Max. acceleration rotor 12154 [sec]	28
rotor 11132 [sec]	20
Max. deceleration rotor 12154 [sec]	53
rotor 11132 [sec]	12
Temperature setting range	-20°C – +40°C
Rotor 11132 5.500 rpm *) [°C]	< 2
Rotor 12154 18.000 rpm *) [°C]	< 4

* at 23 °C ambient temperature

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