



Centrifuge

3-18



Refrigerated Centrifuge

3-18K

SIGMA 3-18

Spincontrol Comfort No. 10265 (220 – 240 V, 50/60 Hz), No. 10266 (120 V, 60 Hz), No. 10267 (100 V, 50/60 Hz)
Spincontrol Professional No. 10325 (220 – 240 V, 50/60 Hz), No. 10328 (120 V, 60 Hz), No. 10329 (100 V, 50/60 Hz)

- Universal table top centrifuge; speed range up to 16.000 rpm
- Spincontrol Comfort
- 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, time and temperature or gravitational field
- 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 (e. g. IEC 1010)
- Motorized lid lock

SIGMA 3-18K

Spincontrol Comfort No. 10290 (220 – 240 V, 50/60 Hz), No. 10291 (200 V, 50/60 Hz), No. 10292 (208 V, 60 Hz), No. 10293 (120 V, 60 Hz),
Spincontrol Professional No. 10297 (220 – 240 V, 50/60 Hz), No. 10299 (200 V, 50/60 Hz), No. 10314 (120 V, 60 Hz)

- **refrigerated version of 3-18**
- Universal refrigerated table top centrifuge; speed range up to 18.000 rpm
- Possibility of precooling the rotors during standstill Refrigerant CFC-free (R 134 a)

SIGMA 3-18KH

Spincontrol Comfort No. 10294 (230 V, 50/60 Hz)
Spincontrol Professional No. 10318 (230 V, 50/60 Hz)

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

Created during production. Centrifuge with one rotor

	Sigma 3-18	Sigma 3-18K, 3-18KH
<i>Calibration certificate for speed and time</i>	No. 17714	No. 17714
<i>Calibration certificate for temperature speed and time</i>	–	No. 17715
<i>IQOQ</i>	No. 17710	No. 17711
<i>For a further rotor</i>	No. 17712	No. 17712

		3-18		3-18K	
Rotor No.		max. rpm	max. RCF	max. rpm	max. RCF
11180 + 2 x 13190		4.200	3.392	4.700	4.248
11180 + 2 x 13194		4.200	3.313	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					
No.	Adapter	tube Order No.	No.	Adapter	tube Order No.
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 RIA, Hemolyse, Vacutainer		17344	3 x 50 ml Culture*	
17354	16 x 7 ml	(15007)	17385	1 x 78 – 85 ml	(15076)
17351	12 x 7 – 9 ml Monovette		17390	1 x 100 ml	(15100)
17358	12 x 9 – 10 ml Monov.+15 ml	(15015)	17395	1 x 125 ml	(15125)
17355	12 x 10 – 12 ml	(15010)	17393	1 x 175 ml Culture	(15174)**
17345	5 x 15 ml Culture	(15115)	17400	1 x 200 ml	(15202)
17359	9 x 15 ml Culture	(15115)**	17401	1 x 200 ml**	(15201)
17370	5 x 25 – 30 ml	(15025)	17347	1 x 250 ml	(15248)
17362	5 x 30 ml Sterilin		15401	1 x 400 ml	(15401)
Adapter for bucket 13194					
No.	Adapter	tube Order No.	No.	Adapter	tube Order No.
18310	4 x 50 ml Culture	(15151)**	18311	10 x 15 ml Culture	(15115)**
18309	4 x 50 ml Culture*				



		3-18		3-18K	
Rotor No.		max. rpm	max. RCF	max. rpm	max. RCF
11180 + 2 x 13180		4.200	3.372	4.700	4.223
complete rotor					
No. 11181: 48 x 15 ml (11180 + 2 x 13180 + 2 x 18015 + 48 x 15020)					
adapters for bucket 13180, sealable with cap 17112					
1 Set = 2 pcs					
No.	Adapter	tube Order No.	No.	Adapter	tube Order No.
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



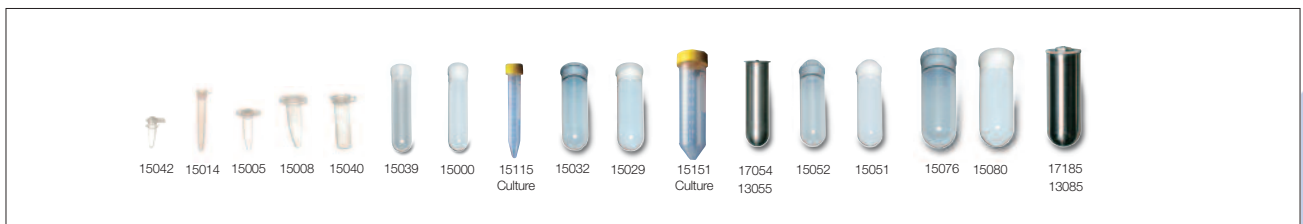
		3-18		3-18K	
<i>Rotor No.</i>		<i>max. rpm</i>	<i>max. RCF</i>	<i>max. rpm</i>	<i>max. RCF</i>
11133	+ 2 x 13104	5.000	4.500	5.500	5.445
11133	+ 2 x 13130	5.000	4.472	5.500	5.411
complete rotor					
No. 11132 : 28 x 15 ml (11133 + 2 x 13104 + 2 x 17015 + 28 x 15023)					
adapters for bucket 13104, sealable with cap 17111					
1 Set = 2 pcs					
<i>No.</i>	<i>Adapter</i>	<i>tube Order No.</i>	<i>No.</i>	<i>Adapter</i>	<i>tube Order No.</i>
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)	15203	PC-bottle 200 ml	

* with skirt **without bucket cap



4 x Cyt rotor					
		3-18		3-18K	
<i>Rotor No.</i>		<i>max. rpm</i>	<i>max. RCF</i>	<i>max. rpm</i>	<i>max. RCF</i>
11224		3.000	1.137	3.000	1.137
MTP swing-out rotor					
		3-18		3-18K	
<i>Rotor No.</i>		<i>max. rpm</i>	<i>max. RCF</i>	<i>max. rpm</i>	<i>max. RCF</i>
11222		3.000	1.238	3.000	1.238
max. H. = 56 mm					
11240		4.700	2.717	4.700	2.717
max. H. = 64 mm					
24 x 1.5 – 2.0 ml swing-out rotor					
		3-18		3-18K	
<i>Rotor No.</i>		<i>max. rpm</i>	<i>max. RCF</i>	<i>max. rpm</i>	<i>max. RCF</i>
11135		12.500	12.927	14.000	16.215
<i>No.</i>	<i>Adapter</i>	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 drum rotor					
		3-18		3-18K	
<i>Rotor No.</i>		<i>max. rpm</i>	<i>max. RCF</i>	<i>max. rpm</i>	<i>max. RCF</i>
11136		13.000	13.226	14.500	16.454
capacity: 6 x adapter					
<i>No.</i>	<i>Adapter</i>	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				





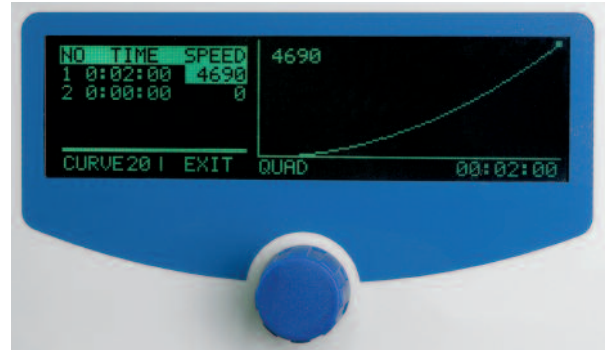
Rotor No.	capacity	tube Order No.	3-18		3-18K	
			max. rpm	max. RCF	max. rpm	max. RCF
12115	12 x 8 x 0.2 ml PCR	(15042)	14.000	21.475	16.400	29.468
12154	24 x 1.5 – 2.0 ml	(15008, 15040)	16.000	23.469	18.000	29.700
12131	30 x 1.5 – 2.0 ml	(15008, 15040)	13.200	19.480	16.400	30.070
12348	48 x 1.5 – 2.0 ml	(15008, 15040)	14.000	18.407	15.300	21.984
12111	10 x 10 ml	(15000, 15039)	16.000	21.752	18.000	27.530
12157	20 x 10 ml	(15000, 15039)	9.000	8.875	10.000	10.956
12171	12 x 15 ml Culture	(15115)	9.000	8.965	13.500	20.172
12112	12 x 15 ml	(15065)	8.000	7.155	13.000	18.894
12158	6 x 30 ml	(15032, 15029)	16.000	22.610	18.000	28.616
19776	6 x 50 ml Culture	(15151)	9.000	8.422	14.000	20.379
12150	6 x 50 ml	(15051, 15052)	10.000	9.391	14.600	20.018
12156	8 x 50 ml	(15051, 15052)	9.000	8.694	13.800	20.440
12155	4 x 85 ml	(15076, 15080)	10.000	10.174	14.500	21.390
12159	6 x 85 ml	(15076, 15080)	8.000	7.012	11.400	14.239

All rotors incl. hermetic aluminium lid

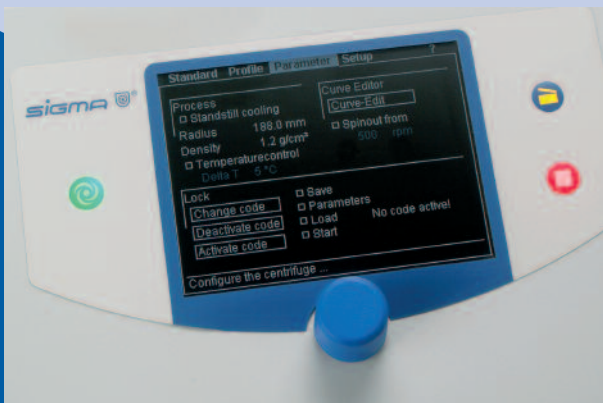
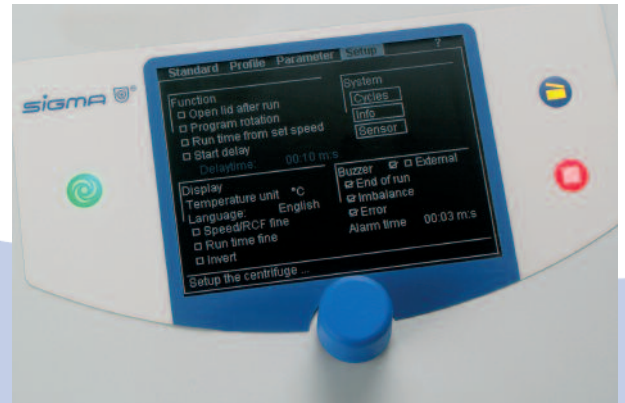
adapter for angle rotors 1 Set = 2 pcs

Rotortype	No.	Adapter	tube Order No.	No.	Adapter	tube Order No.
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 Glas	(15085)	16030	30 ml Glas	(15086)
	13062	15 ml Greiner	(15065)			
85 ml	13084	10 ml	(15000, 15020)	13083	30 ml	(15029, 15032)
	16019	15 ml Glas	(15085)	16031	30 ml Glas	(15086)
	13081	15 ml Culture	(15115)	13080	50 ml Culture	(15151)
	13063	15 ml Greiner	(15065)	13082	50 ml	(15051, 15052)

Spincontrol Comfort



Spincontrol Professional



	Spincontrol Comfort	Spincontrol Professional
Display	Grafic LCD	TFT
Plain text pop up windows	+	+
Permanent display preselected, current values	+	+
Display shows dimensions	-	+
Languages	D, GB	D, GB
Timer	10 sec - 9h 59 min	10 sec - 99 h 59 min
Timing after set speed has been reached	-	+
Time increments [sec]	60; 1	60; 1
Short run	+	+
Continous run	+	+
Speed increments [rpm]	100; 1	10; 1
Display speed and g-force	+	+
G-force increments [xg]	10; 1	10; 1
Temperature increments [°C] ¹	1	1
Switchable °C, °F ¹	-	+
Standstill cooling, switchable ¹	+, +	+, +
Standstill heating, switchable ²	+, +	+, +
Rapid cooling program: Rapid_cool ¹	+	+
Start refused with exceeded temperature tolerance, tolerance preselectable ¹	-	+
Programs	50	60
User defined program name	-	+
Program list shows all parameters	+, +	+, +
Linear acceleration curves	10	10
Quadratic acceleration curves	10	10
User defined acceleration curves	10	10
Linear deceleration curves	10	10
Quadratic deceleration curves	10	10
User defined deceleration curves	10	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	+	+

¹ only for 3-18K, 3-18KH ² only for 3-18KH



17927 Trolley
(W x H x D, 490 x 497 x 647 mm)



17926 Trolley
(W x H x D, 650 x 497 x 647 mm)

Technical data	3-18	3-18K, 3-18KH
Power consumption [W]	480	1010
Max. capacity [ml]	4 x 400	4 x 400
Max. speed [rpm]	16.000	18.000
Min. speed [rpm]	100	100
Interference suppression	EN 61326	EN 61326
HeightxWidthxDepth [mm]	355 x 460 x 600	355 x 630 x 600
Height with open lid [mm]	770	785
Weight without rotor [kg]	48	78
Kinetic energy max. [Nm]	11.250	22.989
Noise level at max. speed (approx.)		
Rotor 12154 at 18.000 rpm	62 dB (A)**	66 dB (A)
Rotor 11132 at 5.500 rpm	66 dB (A)	60 dB (A)
Max. acceleration rotor 12154 [sec]	29	28
rotor 11132 [sec]	22	20
Max. deceleration rotor 12154 [sec]	46	53
rotor 11132 [sec]	11	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

** 16.000 rpm