



通用台式高速冷冻离心机
Refrigerated Centrifuge

3-18KS

通用台式高速冷冻离心机 SIGMA 3-18KS

No. 10370 (220-240 V, 50/60 Hz),

- 最大转速可达 18,000rpm, 精确度±1rpm
- Spincontrol S 面板
- 启动、停止、开盖键采用背光灯按键
- 可配角转子、水平转子、载玻片转子、酶标板转子、鼓式转子等, 可应用于PCR反应, DNA提取, 免疫试验制作细胞涂片等
- 水平转子最大容量4x400ml, 角转子最大容量6x100ml
- 无碳刷变频电机, 微控制器可控制转速、离心力、时间和温度
- 可用于低速离心 (如细胞沉降)
- 磁性转头自动识别, 防止转头超速运转
- 不锈钢腔体
- 不平衡保护
- 紧急开盖
- 气动弹簧, 轻松开盖
- 机盖上具有观察窗, 便于测量、控制
- 符合国际安全标准 EN 61010-2-020
- 自动锁盖
- 在静止状态下也可对转子进行预冷, 采用无氟环保制冷剂 (R 134 a)
- Speed range up to 18.000rpm
- Spincontrol S
- Illuminated keys for start, stop, lid open
- Various angle and swing-out rotors available
- Maximum capacity of 4x400ml down 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)

- Sigma 3-18KS 的加热型号
- 温度控制可达+40--+60°C, 取决于转子型号及转速
- 其它技术参数与3-18KS相似
- heated version of 3-18KS
- max. rotor temp. 40-60°C depending on rotor and speed
- Technical datas like 3-18KS

离心机生产校准证 (单个转子)

Created during production. Centrifuge with one rotor

转速时间校准证

Calibration certificate for speed and time

No. 17714

温度、速度和时间校准证

Calibration certificate for temperature speed and time

No. 17715

安装操作确认

IQOQ

No. 17711

增加一个转子的IQOQ

For a further rotor

No. 17712

生物安全转子/Biosafe Rotor

转子/Rotor No.	max. rpm	max. RCF[xg]
11180 + 2 x 13190	4,700	4,248
11180 + 2 x 13194	4,700	4,149

全套转子/complete rotor

No. **11182**: 12 x 50 ml (**11180** + 2 x **13190** + 2 x **17346** + 12 x **15151**)

吊篮13190, 可配盖17190, 适用适配器
adapters for bucket 13190, sealable with cap 17190
1 Set=2 pcs

No.	适配器/Adapter	离心管/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		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				

吊篮13194适用适配器/Adapter for bucket 13194

No.	适配器/Adapter	离心管/tube Order No.	No.	适配器/Adapter	离心管/tube Order No.
18310	4 x 50 ml Culture	15151**	18311	10 x 15 ml Culture	15115**
18309	4 x 50 ml Culture*				



转子/Rotor No.	max. rpm	max. RCF[xg]
11180 + 2 x 13180	4,700	4,223

全套转子/complete rotor

No. **11181**: 48 x 15 ml (**11180** + 2 x **13180** + 2 x **18015** + 48 x **15023**)

吊篮13180, 可配盖子17112, 适用适配器
adapters for bucket 13180, sealable with cap 17112
1套=2个 1 Set=2 pcs

No.	适配器/Adapter	离心管/tube Order No.	No.	适配器/Adapter	离心管/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

*带沿/with skirt

** 无吊篮盖/without bucket cap



转子/Rotor No.	max. rpm	max. RCF[xg]			
11133 + 2 x 13104	5,500	5,242			
11133 + 2 x 13130	5,500	5,411			
全套转子/complete rotor					
No. 11132: 28 x 15 ml (11133 + 2 x 13104 + 2 x 17015 + 28 x 15023)					
吊篮13104, 可配盖子17111, 适用适配器 adapters for bucket 13104,sealable with cap 17111 1套=2个 1 Set=2 pcs					
No.	适配器/Adapter	离心管/tube Order No.	No.	适配器/Adapter	离心管/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			

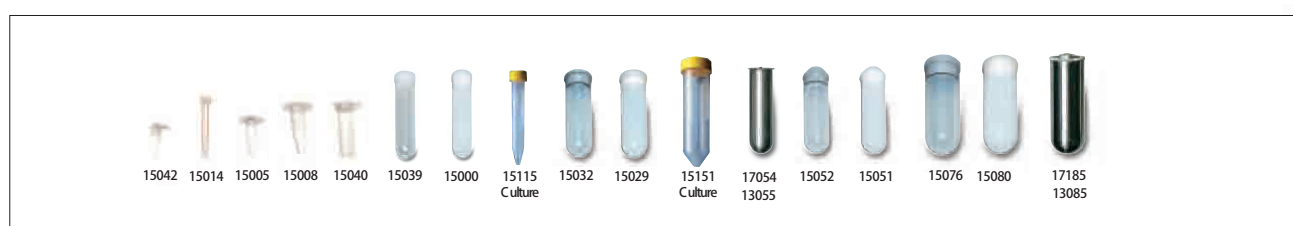
*带沿/with skirt

**无吊篮盖/without bucket cap



载玻片转子/4xCytotorotor, 用于细胞涂片离心		
转子/Rotor No.	max. rpm	max. RCF[xg]
11224	3,000	1,137
酶标板转子/MTP swing-out rotor		
转子/Rotor No.	max. rpm	max. RCF[xg]
11222	3,000	1,238
max. H. = 56 mm		
11241	4,700	3,136
带密封盖17108 max. H. = 55 mm with hermetic cap No. 17108		
24x1.5/2.0ml 水平转子/swing-out rotor		
转子/Rotor No.	max. rpm	max. RCF[xg]
11135	14,000	16,215
No.	适配器/Adapter	1 Set = 2 pcs 1套=2个
13021	0.2 ml PCR	
13000	0.4 ml reaction caps	
13002	0.5 / 0.75 ml reaction caps	
0.2 ~ 2.0 ml 鼓式转子/drumrotor		
转子/Rotor No.	max. rpm	max. RCF[xg]
11136	14,500	16,454
容量/capacity: 6 x adapter		
No.	适配器/Adapter	1 Set = 2 pcs 1套=2个
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	





转子/Rotor No.	容量/capacity	离心管/tube Order No.	max. rpm	max. RCF[xg]
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 100 ml	15076, 15080	14,500	21,390
12159	6 x 100 ml	15076, 15080	11,400	14,239

所有转子均带有密封铝合金盖
All rotors incl. hermetic aluminium lid

角转子适配器/adapter for angle rotors 1 Set=2 pcs 1套=2个

转子类型 Rotortype	No.	适配器 Adapter	离心管/tube Order No.	No.	适配器 Adapter	离心管/tube Order No.
1.5 / 2.0 ml	13021	0.2 ml	15042	13002	0.5 / 0.75 ml PCR	(15005)
	13000	0.25/0.4ml	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)

控制面板 Spincontrol S



显示屏	Display	TFT
纯文本人机对话窗口	Plain text pop up windows	+
显示界面设定和实际值显示	Permanent display preselected, current values	+
显示尺寸	Display shows dimensions	+
语言	Languages	
时间控制	Timer	10 sec - 99 h 59 min
定速计时	Timing after set speed has been reached, switchable	+; +
时间步增[秒]	Time increments [sec]	60; 1
短时运行	Short run	+
连续运行	Continous run	+
速度步增[rpm]	Speed increments [rpm]	10; 1
显示速度和相对离心力	Display speed and g-force	+
离心力步增[xg]	G-force increments [xg]	10; 1
温度步增[°C]	Temperature increments [°C]	1
单位转换 °C °F	Switchable °C, °F	+
静止预冻	Standstill cooling, switchable	+; +
静止加热 ¹	Standstill heating, switchable ¹	+; +
快速预冷程序	Rapid cooling program: Rapid_temp	+
过温保护, 过温容忍度可调	Start refused with exceeded temperature tolerance, tolerance preselectable	+; +
程序	Programs	60
程序命名	User defined program name	+
程度列表显示所有参数	Program list shows all parameters	+
线性加速曲线	Linear acceleration curves	10
二次方加速曲线	Quadratic acceleration curves	10
用户自定义加速曲线	User defined acceleration curves	10
线性减速曲线	Linear deceleration curves	10
二次方减速曲线	Quadratic deceleration curves	10
用户自定义减速曲线	User defined deceleration curves	10
无阻尼制动	Brakeless	+
减速曲线组合	Combination deceleration a. brakeless	+
无阻尼从1000至150rpm可选	from 1000 - 150 rpm selectable	
自动开盖, 可选	Auto lid open,switchable	+; +
声音报警	Accoustic signal, switchable	+; +
声音长度预选	Signal length preselectable	+
静态背光显示	Optical display stillstand	+
转数统计, 每个转子	Counting cycles centrifuge, each rotor	+; +
转子寿命对话框	Pop up window end of rotor life time	+
运行结束自动开盖	Automatic lid opening at the end of the run, switchable	+; +
提供所有转子参数	All rotors pre programmed	+
速度、离心力、半径	speed, g-force, radius	
最大半径调节	Max. radius decreaseable	+
密度 > 1.2g/cm ³ 最大转速计算	Calculation for liquid density >1.2 g/cm ³	+
延迟启动	Start delay	+
控制面板锁定	Controlunit lockable	+
密码保护	Code protection	+
运行监控	Run monitoring	+
微电脑控制	Microprocessor controlled	+

¹ 仅3-18KHS/only for 3-18KHS



17926 Trolley 离心机柜，双开门，带可锁定的小脚轮
宽x高x长，670x497x650mm
(W x H x D, 670 x 497 x 650 mm)

技术参数	Technical data	3-18KS
功率[w]	Power consumption [W]	1,010
最大容量[ml]	Max. capacity [ml]	6x100/4x400
最高转速[rpm]	Max. speed [rpm]	18,000
最大相对离心力[kg]	Max. RCF[xg]	30,070
干扰抑制标准	Interference suppression	EN 61326
尺寸：高x宽x长[mm]	HeightxWidthxDepth[mm]	355 x 630 x 600
重量（不带转子）[kg]	Weight without rotor [kg]	78
最大动能[Nm]	Kinetic energy max. [Nm]	22,989
最高转速时噪音水平（约）[dB(A)]	Noise level at max. speed (approx.)	
转子12154在18,000rpm	Rotor 12154 at 18.000 rpm	< 66 dB (A)
转子11132在5,500rpm	Rotor 11132 at 5.500 rpm	< 60 dB (A)
最快加速时间[秒]转子12154	Max. acceleration rotor 12154 [sec]	28
转子11132	rotor 11132 [sec]	20
最快减速时间[秒]转子12154	Max. deceleration rotor 12154 [sec]	53
转子11132	rotor 11132 [sec]	12
温度设定范围[°C]	Temperature setting range	-20°C ~ +40°C
转子11132 5,500rpm*[°C]	Rotor 11132 5.500 rpm *) [°C]	< 2
转子12154 18,000rpm*[°C]	Rotor 12154 18.000 rpm *) [°C]	< 4

* 环境温度+23°C测试/at 23°C ambient temperature

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