

Packaging - Processing

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Thermo Scientific Sorvall Evolution RC Superspeed Centrifuge

**Unmatched productivity
through simplified
sample handling**



Thermo Scientific Sorvall Evolution RC Superspeed Centrifuge

Unmatched productivity through simplified sample handling

The most advanced centrifuge technology in the world means nothing unless it accomplishes one simple objective – making you more productive. For efficient, high-volume sample processing, the Thermo Scientific Sorvall Evolution RC superspeed centrifuge has no comparison.

Designed with your productivity in mind, the Sorvall® Evolution™ RC delivers simplified sample handling, reduced overall spin times and superior ergonomics. The bottom line is more throughput, which is just what you would expect from Thermo Scientific superspeed centrifuge solutions.

Fastest processing in the industry
Combining speeds of up to 26,000 rpm with exceptionally fast acceleration and deceleration rates, the Sorvall Evolution RC superspeed centrifuge does more than reduce spin times – it optimizes your overall productivity.

Reliable in every sense of the word
Reliability means consistent results, run to run, day to day, and operator to operator. The Sorvall Evolution RC offers proven reliability, incorporating numerous features that eliminate variability in results from outside factors.



The Sorvall Evolution RC inherits its reliability from a proven platform – the Thermo Scientific Sorvall RC2B superspeed. First introduced in 1972, many Sorvall RC2B superspeeds are still in operation around the world today.



Simple, intelligent operation

A user-friendly instrument panel and intuitive software design make this system's advanced functionality easy to use. The Thermo Scientific RunBrowser provides quick set-up of your frequently-used protocols.

Unsurpassed choice of rotors

Choose from the industry's largest rotor selection, which includes 20 fixed angle rotors, 4 swinging-bucket rotors and a variety of special-purpose rotors.

Maximum sample protection

The Sorvall Evolution RC achieves high performance levels without dependence on a delicate vacuum system, reducing the cost of ownership since there are no vacuum oil, seals, and filters to maintain. Spills can easily be cleaned without worrying about contaminated vacuum oil or filters.

Also, there is better sample protection because without a vacuum, there is less risk of tube and bottle leakage and the ability to control and change temperatures is superior in an air environment. Overall, without the vacuum system, the Sorvall Evolution RC reduces user attention required and minimizes potential downtime.

Strong, imbalance-tolerant drive system

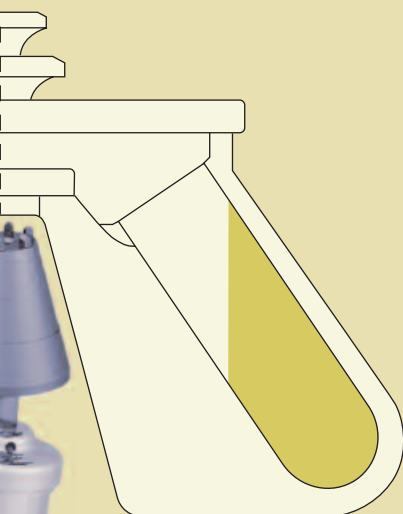
The Sorvall Evolution RC drive system includes a powerful, brushless motor and our patented Thermo Scientific DuraFlex gyro. This system provides the highest superspeed imbalance tolerance on the market with the convenience of eye balancing plus the assurance that if you make a mistake, your drive is less likely to be damaged.

If a rotor is unbalanced, the DuraFlex gyro mechanism flexes in two places to accommodate the misalignment without damage to the drive shaft or motor.

187V

Full Performance Range

253V



▲ Consistent performance. The built-in Constant Power System™ (CPS) provides power factor correction to ensure peak instrument performance even under poor power supply conditions. Input voltage can vary from 187-253 volts without speed or temperature control degradation.



▲ The Sorvall Evolution RC achieves high performance levels without dependence on a delicate vacuum system.



Superior processing saves you time

In a busy high-throughput lab, reliability is essential – and so is increasing sample throughput. With the Sorvall Evolution RC, you make significant gains – not only through higher rpm's and g-forces – but through features that provide shorter total processing: the time it takes to load a sample, set parameters, perform the separation, and unload. That's where speed counts most and where the Sorvall Evolution RC delivers best.

Rapid 6-liter processing

The Thermo Scientific Fiberlite F8S 6 x 1000y rotor can separate 6-liters of sample at up to 8,500 rpm and 15,810 x g in as little as 9 minutes without using messy and time consuming canisters.

Fast acceleration and deceleration

The Sorvall Evolution RC provides the fastest acceleration and deceleration of any superspeed available, which translates into shorter run times.

Easy sample handling

Vacuum-based systems often require additional canisters to support the bottle. Without dependence on a vacuum system, the Sorvall Evolution RC eliminates the need for canisters – you can simply slide sample bottles into the rotor and start your run. This not only reduces handling steps but minimizes the number of components that could be misplaced or damaged.

High speed, high RCF

With speeds of up to 26,000 rpm and RCFs up to 70,450 x g, the Sorvall Evolution RC gives you all the speed and g-force needed to handle the vast majority of current and emerging superspeed applications.

The user-friendly control panel makes the unit's advanced functionality easy to use. The RunBrowser program provides quick set-up of your frequently-used protocols. ▶



Sorvall Evolution RC

Intelligent operation made easy

The Sorvall Evolution RC is not only powerful and reliable, it is also user friendly. From its large, easy-to-read control panel to the ergonomic door handle, the Sorvall Evolution RC systematically reduces effort.



Simple operator interface

The large digital display continuously shows both the set and run conditions for time, temperature and speed, making them easy to monitor – even from a distance.

Hands-free access

Simply nudge the chamber door with the rotor and it automatically slides open. An integrated rotor lid holder provides convenient lid storage.

Compact, ergonomic design

The deck is only 33 inches from the ground – the lowest profile on the market – which makes the rotor chamber and control panel easily accessible.

Safety and mobility

Unlike other superspeed centrifuges, the Sorvall Evolution RC meets CE, UL and CSA safety requirements without the need to bolt the unit to the floor.



A broad range of rotors offering superior performance and lasting value

Our Thermo Scientific Sorvall superspeed rotor family represents the industry's broadest, most diverse collection of its kind. And because most can be used in any Thermo Scientific Sorvall superspeed centrifuge, you have maximum flexibility and long-term value in your rotor investment.

High-performance carbon fiber rotors

Maximize the performance of your centrifuge with robust, corrosion-free Thermo Scientific Fiberlite rotors. An easy to handle, safer alternative to conventional metallic rotors, our carbon fiber rotors offer superior durability, making them a truly cost-effective investment for your lab.

Several carbon fiber rotors are available for the Evolution RC, including a 6 liter rotor made specifically for the Evolution RC. The Fiberlite™ F8S 6 x 1000y carbon fiber rotor offers unsurpassed sample capacity for processing up to 6 liters in a single run at speeds up to 8,500 rpm and 15,810 x g.



Swinging bucket rotors

The Sorvall Evolution RC accommodates 4 swinging bucket rotors ranging in capacity from 80 ml to 3 liters. These rotors provide the highest g-force on the market – saving you run time.

Special-purpose rotors

To complement our wide selection of traditional fixed angle and swinging bucket rotors, we offer unique rotors designed for specialized applications.

Conical Tube Rotors

The F13S-14x50cy can spin up to 14 x 50 mL conical tubes at the maximum speed for the rotor (28,000 x g) – greatly reducing processing time. Adapters are also available for 15 mL conical high speed tubes.

• Continuous-flow systems

The TZ-28/GK and SS-34/KSB-R efficiently process large-volume cultures.

• Zonal rotor

The TZ-28 zonal rotor is also designed for large-volume, reorienting gradient separation and sealed batch runs.

• Vertical rotors

Short pathlengths in the SV-288 and SV-80 vertical rotors translate into fast gradient separations.

• Biological Containment

Most of the rotors used in the Evolution RC have been independently tested for microbiological containment. These rotors with Bioseal technology are recommended when an extra level of biological safety is desired.





Thermo Scientific Sorvall Evolution RC Superspeed Centrifuge

Sorvall Evolution RC Rotors

Rotor	Capacity (place x ml)	Speed (rpm)	Max RCF (x g)	Tube Size Range (ml)	Accel/Decel Min:sec	Cat. No.
Fixed Angle Rotors – Carbon Fiber						
F8S-6x1000y	6 x 1000	8,500	15,810	8-1000	4:45/3:15	76641
F9S-4x1000y	4 x 1000	9,000	15,180	8-1000	2:15/2:15	76981
F10S-6x500y	6 x 500	10,000	17,696	8-100	2:15/1:45	78510
F14S-6x250y	6 x 250	14,000	30,074	8-250	1:30/1:15	78500
Fixed Angle Rotors – Aluminum						
SS-34 ¹	8 x 50	20,500	50,230	1-50	1:15/1:00	28020
SLA-3000 ¹	6 x 500	12,000	24,340	3-500	3:00/2:00	07149
SLA-1500 ¹	6 x 250	15,000	34,160	3-250	2:00/1:30	08142
SLA-1000 ¹	4 x 250	16,500	35,790	3-250	1:15/1:00	74200
SA-800	8 x 100	20,500	49,054	1.5-100	1:00/1:00	76940
SA-600 ¹	12 x 50	17,000	41,840	1-50	2:00/1:30	28500
SA-512	32 x 16	19,500	48,930	1.5-16	1:15/1:00	76950
SA-300 ¹	6 x 50	25,000 ³	67,510	1-50	1:15/0:45	18100
SM-24 ¹	24 x 16	20,500	51,970	1.5-16	1:30/1:00	29017
SE-12 ¹	12 x 14	26,000	70,450	1-14	1:00/0:30	27004
F-20/MICRO ¹	32 x 1.5	20,000	51,430	0.25-1.5	0:45/0:45	27038
F-16/250 ¹	6 x 250	14,500	31,940	3-250	2:30/1:45	11966
F-28/50 ¹	10 x 50	20,000	51,250	1-50	1:30/1:15	11885
Swinging Bucket Rotors						
SH-3000 ¹	4 x 750	4,700	4,580	3-750	1:00/1:00	11796
HB-6 ¹	6 x 50	13,000	27,620	1-50	0:45/0:45	11860
HS-4	4 x 250	7,500	11,070	1-250	1:45/1:30	38018
SH-80	8 x 10	20,000	45,400	10	0:30/0:30	08296
Vertical Rotors						
SV-288	8 x 36	20,000	40,300	36	1:30/1:00	09203
SV-80	16 x 5	19,000	40,970	5	1:15/0:45	09204
Special Purpose Rotors						
SS-34/KSB-R	8 x 50	20,000	47,810	280 ³	N/A	28020 & 14005
TZ-28	Bowl x 1,350	20,000	42,580	N/A	N/A	52358
TZ-28/GK	Bowl x 1,350	19,000	38,430	800 ³	N/A	52358 & 49633 & 49089

¹ These rotors and bucket/cover assemblies have been rigidly tested for microbiological containment by the Public Health Laboratory Service, Centre for Applied Microbiological Research, Porton Down, UK, and shown to be suitable for use with materials up to ACDP Category 3 as categorized by the Advisory Committee on Dangerous Pathogens.

² Maximum speed at 4°C is 24,400.

³ Precipitate capacity.

A History of Performance and Reliability

For more than 50 years, our Thermo Scientific Sorvall centrifuges have stood for outstanding performance and reliability in the lab. That tradition continues today.

From basic benchtop instruments to the advanced floor models, we take pride in manufacturing centrifuges that deliver reliable operation and consistent results year after year.





Thermo Scientific Sorvall Evolution RC Superspeed Centrifuge

Technical Specifications

Maximum speed	26,000 rpm
Maximum RCF	70,450 x g
Maximum capacity	6 liters
Drive system	Brushless DC motor with gyro drive
Accel/decel profiles	3/3
Speed control accuracy	± 20 rpm in the 0 - 1000 rpm range; ± 0.2% in the 1000 - 26,000 rpm range
Temperature set range	-20°C to 40°C
Temperature accuracy (run mode)	± 2°C under normal laboratory conditions
Operating temperature range	10°C - 38°C
Temperature control system	Non-CFC refrigerant
Average heat output	2.5 kW/8500 BTU/hr
Noise	63 dbA (1m from instrument at maximum speed)
Dimensions H x W x D: mm (inches)	1295 x 710 x 1055 (51 x 28 x 42)
Height to top of deck: mm (inches)	850 (33)
Depth with door open: mm (inches)	1125 (44)
Weight	390 kg (860 lb)
Warranty	1 year instrument, 3 years drive motor, 5 years refrigeration system

Ordering Information

Model	Electrical configuration	Plug	Cat. No.
Sorvall Evolution RC, Knob Interface	Single Phase, 30 A, UL Listed: 187 - 253 V, 60 HZ	NEMA plug 6-30P	728111
Sorvall Evolution RC, Keypad Interface	Single Phase, 30 A, UL Listed: 187 - 253 V, 60 HZ	NEMA plug 6-30P	728211
Sorvall Evolution RC, CE Version, Knob Interface	Single Phase, 32 A, 187 - 253 V, 50 HZ	IEC 60309 3-pin plug	728311
Sorvall Evolution RC, CE Version, Keypad Interface	Single Phase, 32 A, 187 - 253 V, 50 HZ	IEC 60309 3-pin plug	728411
Sorvall Evolution RC, CE Version, Knob Interface	Polyphase, 32 A, 187 - 253 V, 50/60 HZ	IEC 60309 5-pin plug	728511
Sorvall Evolution RC, CE Version, Keypad Interface	Polyphase, 32 A, 187 - 253 V, 50/60 HZ	IEC 60309 5-pin plug	728611

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Comprehensive Centrifuge Solutions

We offer a wide range of additional high-performance superspeed and ultraspeed centrifuges for the pursuit of scientific discoveries. Models include the Thermo Scientific Sorvall Evolution RC6 Plus for fast, high-volume processing, and the Sorvall WX Ultra series or the Sorvall Discovery series for sample processing at speeds up to 100,000 rpm.

Worldwide Service and Support

We are committed to keeping your lab equipment working at peak performance levels. Our goal is to help you lower ownership costs, manage labs more effectively, and increase productivity. Contact your sales representative to learn more about our service offerings, including service agreements, preventative maintenance, onsite field repair, depot repair, compliance services and educational services.



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