

## Thermo Scientific Sorvall® Evolution™ RC Superspeed Centrifuge

Unmatched productivity  
through simplified sample  
handling



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# 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 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'd expect from the company that has been providing innovative centrifuge solutions for nearly 60 years.

## **Fastest processing in the industry**

Combining speeds of up to 26,000 rpm with exceptionally fast acceleration/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 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. This leads to two significant benefits. First, cost of ownership is reduced since there are no vacuum oil, seals, and filters to maintain. Spills can easily be cleaned up without worrying about contaminated vacuum oil or filter.

Secondly, there is better sample protection because no vacuum means less risk of tube and bottle leakage. In addition, the ability to control and change temperatures is superior in an air environment. Overall there is less potential downtime and less user attention needed.

### Strong, imbalance-tolerant drive system

The Sorvall Evolution RC drive system includes a powerful, brushless motor and our patented DuraFlex™ gyro. This system provides the highest superspeed imbalance tolerance on the market. So you have 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, our patented 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.



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# 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 F8S 6 x 1000y rotor can spin 6-liters of sample at up to 8,500 rpm and 15,810 x g, providing run times as fast as 9 minutes.

## 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. The Sorvall Evolution RC eliminates the need for canisters – you can simply slide sample bottles into the rotor and start your run. This reduces handling steps and 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.



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# 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

Our high-capacity carbon fiber rotors have broken the capacity barrier! With their lightweight construction, you can process up to 6 liters in a single run. Made specifically for the Sorvall Evolution RC, the F8S 6 x 1000y carbon fiber rotor offers unsurpassed sample capacity and processing time at speeds up to 8,500 rpm and 15,810 x g.

### Fixed-angle rotors

You can select from 20 fixed-angle superspeed rotors – 12 aluminum, 4 composite and 4 titanium rotors – to fulfill all your general pelleting needs.

Our SUPER-LITE aluminum rotors offer higher top speeds and superior separation performance. They have a unique biocontainment design for maximum user protection.



### 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.

### • 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.



## 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.
<b>Fixed Angle Rotors – Aluminum</b>						
SS-34 <sup>1</sup>	8 x 50	20,500	50,230	1-50	1:15/1:00	28020
SLA-3000 <sup>1</sup>	6 x 500	12,000	24,340	3-500	3:00/2:00	07149
SLA-1500 <sup>1</sup>	6 x 250	15,000	34,160	3-250	2:00/1:30	08142
SLA-1000 <sup>1</sup>	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 <sup>1</sup>	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 <sup>1</sup>	6 x 50	25,000	67,510	1-50	1:15/0:45	18100
SM-24 <sup>1</sup>	24 x 16	20,500	51,970	1.5-16	1:30/1:00	29017
SE-12 <sup>1</sup>	12 x 14	26,000	70,450	1-14	1:00/0:30	27004
F-20/MICRO <sup>1</sup>	32 x 1.5	20,000	51,430	0.25-1.5	0:45/0:45	27038
F-16/250 <sup>1</sup>	6 x 250	14,500	31,940	3-250	2:30/1:45	11966
F-28/50 <sup>1</sup>	10 x 50	20,000	51,250	1-50	1:30/1:15	11885
<b>Fixed Angle Rotors – Carbon Fiber</b>						
F8S-6x1000y	6 x 1000	8,500	15,810	50-1000	4:45/3:15	76641
F9S-4x1000y	4 x 1000	9,000	15,180	50-1000	2:15/2:15	76981
F10S-6x500y	6 x 500	10,000	17,600	35-500	2:15/1:45	78510
F14S-6x250y	6 x 250	14,000	29,990	12-250	1:30/1:15	78500
<b>Swinging Bucket Rotors</b>						
SH-3000 <sup>1</sup>	4 x 750	4,700	4,580	3-750	1:00/1:00	11796
HB-6 <sup>1</sup>	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
<b>Vertical Rotors</b>						
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
<b>Special Purpose Rotors</b>						
SS-34/KSB-R	8 x 50	20,000	47,810	280 <sup>2</sup>	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 <sup>2</sup>	N/A	52358 & 49633 & 49089

<sup>1</sup> 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.

<sup>2</sup> 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 delivery reliable operation and consistent results year after year.



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## SPECIFICATIONS AND ORDERING INFORMATION

### Thermo Scientific Sorvall Evolution RC Superspeed Centrifuge



#### Technical Specifications

Maximum speed	26,000 rpm
Maximum g-force	70,450 x g
Maximum capacity	6 liters
Drive system	Brushless DC motor with gyro* drive
Accel/decel rates	3 accel/4 decel
Programmability	Optional
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
DuoTherm™	Temperature control system
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

\* Patent pending.

#### 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



#### Comprehensive Centrifuge Solutions

We offer a wide range of high-performance superspeed and ultraspeed centrifuges for the pursuit of scientific discoveries. Models include the Thermo Scientific Sorvall Evolution RC and RC-6™ Plus superspeeds 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 Thermo Scientific 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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