



**Thermo Scientific
Sorvall® Discovery™ SE Series
Micro-Ultracentrifuges**



**Fastest.
Smallest.
Quietest.**

Highest Performance in the Industry

The Thermo Scientific Sorvall Discovery M150 SE and M120 SE are next-generation floor model micro-ultracentrifuges that raise the standard for rapid, small-volume sample processing.

Combining whisper-quiet operation with a space-saving, compact design, our Sorvall Discovery SE Series offers the world's highest RCFs – in excess of 1,048,000 x g* – and rotor capacities of up to 108 ml for unbeaten sample separation performance and processing capacity.

The 150,000 rpm Sorvall Discovery M150 SE and 120,000 rpm Sorvall Discovery M120 SE are so small they can be located almost anywhere.

Both models incorporate functionality to simplify rotor loading, instrument set-up, and instrument operation.

Their cutting-edge combination of performance, capacity and compactness adds up to all the ultracentrifuge capability your research may need!

* S140-AT rotor in Sorvall Discovery M150 SE

Thermo Scientific Sorvall Discovery M150 SE and M120 SE Micro-Ultracentrifuges

- **High Speeds and Low K-factors**

150,000 rpm or 120,000 rpm maximum speeds with optimized rotor designs provide shorter total spin times.

- **Compact and Personal**

Small 2.3 sq. ft. footprint allows for convenient 'in laboratory' location without occupying valuable bench space.

- **Quiet Operation**

With noise levels below 48 dBA, you can work right next to it without hearing it running.

- **Versatile Performance**

A wide range of rotors and tube volumes supports a host of different sample requirements.

- **Ease of Use**

Simple keypad entry of speed or RCF, easy-to-read LCD screen, and visual tube balancing make operation easy.

- **Rugged Reliability**

Maintenance-free brushless drive system and rotor imbalance protection ensure dependable performance.



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Sorvall Discovery M150SE and M120SE

Rotor Selection Guide

	Rotor*	Catalog Number	Max. Tube Volume (ml)	Number of Places	Sorvall Discovery M150 SE			Sorvall Discovery M120 SE		
					Max. Speed (rpm)	Max. RCF (x g)	K Factor**	Max. Speed (rpm)	Max. RCF (x g)	K Factor**
FIXED ANGLE	S150-AT	45582	2.0	8	150,000	899,740	6.1	120,000	575,840	9.5
	NEW S140-AT	45978	2.0	10	140,000	1,048,680	5.0	120,000	770,460	6.8
	S120-AT2	45583	2.0	10	120,000	649,830	8.2	120,000	648,830	8.2
	S120-AT3	45584	0.5	14	120,000	649,830	7.8	120,000	649,830	7.8
	S100-AT3	45585	0.2	20	100,000	435,630	7.0	100,000	435,630	7.0
	S100-AT4	45586	3.5	6	100,000	540,630	15.9	100,000	540,630	15.9
	S100-AT6	45588	5.1	8	100,000	603,180	17.6	100,000	603,180	17.6
	S80-AT2	45589	0.5	20 (outer)	80,000	357,440 (outer)	13.5 (outer)	80,000	357,440 (outer)	13.5 (outer)
			0.5	10 (inner)		303,820 (inner)	16.5 (inner)		303,820 (inner)	16.5 (inner)
	S80-AT3	45590	8.3	8	80,000	414,630	23.1	80,000	414,630	23.1
	S70-AT	45591	0.5	20	70,000	307,050	30.6	70,000	307,050	30.6
NEW	S55-A	45979	13.5	8	55,000	259,840	56.0	55,000	259,840	56.0
	S45-A	45592	1.5	12	45,000	124,860	66.6	45,000	124,860	66.6
VERTICAL	S120-VT	45593	2.0	8	120,000	500,240	7.8	120,000	500,240	7.8
SWINGING BUCKET	S55-S	45594	2.2	4	55,000	258,830	43.7	55,000	258,830	43.7
	NEW S52-ST	45977	5.0	4	52,000	275,460	78.5	52,000	275,460	78.5

* All rotors are titanium except the S45-A, which is aluminum, and the S55-S, which has an aluminum body and titanium buckets. ** Using unsealed tubes.

Sorvall Discovery SE Series

Rotor Highlights

S140-AT TITANIUM FIXED-ANGLE ROTOR		• Highest RCF in the industry with over 1,048,000 x g in the Sorvall Discovery M150 SE • K-factor of 5.0 results in faster separations • Ideal for rapid separation of serum lipoproteins, DNA, RNA and subcellular fractionation • Compatible with Re-Seal™ tubes
S52-ST TITANIUM SWINGING BUCKET ROTOR		• High capacity swinging bucket rotor spins up to 20 ml per run • 5 ml tubes provide length needed for better density gradient separations of cell organelles, proteins and viruses • Use with Ultracrimp® tubes for heat-free sealing of hazardous samples



Thermo Scientific Sorvall Discovery M150 SE and M120 SE Micro-Ultracentrifuge Specifications and Ordering Information

Technical Specifications	Sorvall Discovery M150 SE	Sorvall Discovery M120 SE
Max. speed (rpm)	150,000	120,000
Max. RCF (x g)	1,048,680 (with S140-AT rotor)	770,460 (with S140-AT rotor)
Max. rotor capacity (ml)	66	66
Accel/decel. profiles	9/9, brake off	9/9, brake off
Speed control accuracy (rpm)	± 50	± 50
Program memory	10, each with up to 9 steps	10, each with up to 9 steps
Temperature control	solid-state thermoelectric cooling	solid-state thermoelectric cooling
Set temperature range (°C)	0 - 40 in 1°C increments	0 - 40 in 1°C increments
Operation modes	elapsed time, speed, hold, RCF	elapsed time, speed, hold, RCF
Noise level (dBA)	≤ 48 (1 m from instrument)	≤ 48 (1 m from instrument)
Heat output (kW / BTU/hr)	0.6 / 2000	0.6 / 2000
Dimensions (H x W x D) (mm / in)	1000 (panel open) / 850 (panel closed) x 440 x 490 (39.4/33.5 x 17.3 x 19.3)	
Weight (kg / lb)	110 / 242	110 (242)

Ordering Information	Electrical Requirements	Cat. No.
Sorvall Discovery M150 SE	115 V, 50/60 Hz, 12 A single phase	45960
Sorvall Discovery M150 SE	208 V, 50/60 Hz, 6 A single phase	45961
Sorvall Discovery M150 SE	220 V, 50/60 Hz, 6 A single phase	45962
Sorvall Discovery M150 SE	230 V, 50/60 Hz, 6 A single phase	45963
Sorvall Discovery M150 SE	240 V, 50/60 Hz, 6 A single phase	45964
Sorvall Discovery M120 SE	115 V, 50/60 Hz, 12 A single phase	45965
Sorvall Discovery M120 SE	208 V, 50/60 Hz, 6 A single phase	45966
Sorvall Discovery M120 SE	220 V, 50/60 Hz, 6 A single phase	45967
Sorvall Discovery M120 SE	230 V, 50/60 Hz, 6 A single phase	45968
Sorvall Discovery M120 SE	240 V, 50/60 Hz, 6 A single phase	45969

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 advanced floor models, we take pride in manufacturing centrifuges that deliver reliable operation and consistent results year after year.

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 local account representative to learn more about our service offerings, including service agreements, preventive maintenance, on-site field repair, depot repair, compliance services and educational services.

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