



**New Thermo Scientific Sorvall Micro-ultracentrifuges  
MTX 150 Benchtop and MX Series Floor Models**

Fast. Small. Quiet.  
*Put the power within your reach.*

## Thermo Scientific Sorvall Micro-ultracentrifuges MTX 150 Benchtop and MX Series Floor Models

Our new Sorvall® micro-ultracentrifuges are purpose engineered to deliver unrivalled performance and versatility for rapid small-volume processing applications. Cutting-edge technologic innovations allow you to conduct more experiments of greater capacity and in less time. With g-forces of up to 1,048,000 x g, our Sorvall micro-ultracentrifuges feature advanced functionality in a compact footprint that easily fit in the lab.

### Performance Redefined

The new Sorvall micro-ultracentrifuges deliver superior sample separation performance and processing capacity, combining high speeds and RCFs with fast accel/decel rates.

### Unrivalled Versatility

High g-force rotors and three new rotor designs offer higher capacities and capabilities optimized for rapid small volume processing applications.



### Flexibility for a Full Range of Micro-ultra Applications

Accommodating tubes from 0.2 mL to 30 mL with a choice of fixed-angle, swinging bucket and vertical rotors, our new Sorvall micro-ultracentrifuges address the full range of small volume processing applications.

- Virus (i.e., HIV, SRSV, rotavirus)
- Cellular organelles (i.e., ribosomes, mitochondria, microsomes)
- Lipoproteins
- Nanoparticles
- Nucleic Acids



## NEW Thermo Scientific Sorvall Micro-ultracentrifuges—

>> *Worlds ahead in performance, capacity and versatility*

Our new micro-ultracentrifuges put the power of the smallest, quietest and fastest technology within your reach\*.

- Faster separations
- Increased volume
- Greater productivity
- Simple yet powerful operator environment
- Compact and readily accessible from the benchtop or within the laboratory

\*Compared to similar available micro-ultracentrifuges.

Meet the Next Generation of Benchtop Micro-ultracentrifuges

# Thermo Scientific

**New innovations. New technologies. Worlds ahead in performance, capacity and versatility. The new Sorvall MTX 150 offers all the speed, capacity, and performance you will need in a small, nearly silent (<45 dBA) benchtop design.**

Although it has an up to 20% smaller footprint than other models in its class, the Sorvall MTX 150 delivers unsurpassed speed (150,000 rpm), g-force (1,048,000 x g) and rotor capacities (up to 180 mL), to accomplish the most demanding ultracentrifuge applications. Its sleek, aesthetically pleasing design and intuitive LCD touchscreen interface provide space-saving and ease-of-use advantages, making our next generation micro-ultracentrifuge ideal for personal use on the lab bench. With standard electrical outlet capabilities, you have the added convenience of being able to place the unit anywhere in your lab.

## Fast

Accelerate to top 150,000 rpm in only 80 seconds (rotor S150-AT)

## Small

Up to 20% smaller footprint, saving valuable bench space

## Quiet

Almost silent operation (<45dBA), designed for your personal use

## Powerful

With RCF in excess of 1,048,000 x g almost any separation is within reach

## Large

66% more capacity (up to 180mL) than before for added versatility and throughput

## Easy

Intuitive touch-sensitive color LCD with a graphical user interface simplifies operation

## Safe

Self locking rotor system and imbalance tolerant drive enhance convenience and safety



# Sorvall MTX 150

## Easy to Use

### Simple Operation

Our Sorvall MTX 150 micro-ultracentrifuge provides user friendly, reliable operation to simplify rotor loading, instrument set-up, and instrument operation. The Sorvall MTX 150 also offers visual tube balancing for enhanced ease of use.

### Self Locking Rotor System

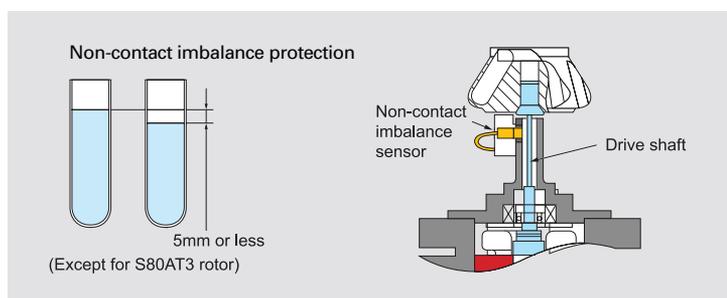
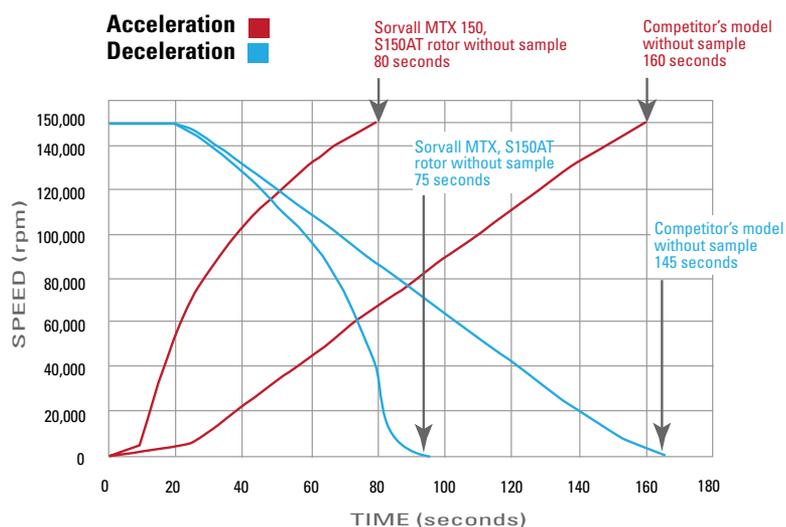
Self locking rotor system automatically secures the rotor to the drive shaft. This innovation eliminates the need to manually secure the rotor, facilitating rotor installation and enhancing safety.

### GMP/GLP Data Compliance and Management

The Sorvall MTX 150 offers traceability and quality control for biopharmaceutical processing needs. A USB port allows connectivity to a memory stick, facilitating output of operating data in CSV format.

### Fast Acceleration and Deceleration

The high torque drive in the Sorvall MTX 150 provides fast acceleration and deceleration rates, which means quicker separations and less waiting at the end of the run.



### Powerful Imbalance Protection

For increased safety and convenience, the Sorvall MTX 150 has an imbalance tolerant drive allowing eye-balancing of tubes.

# Powerful Separation Technology in a Quiet, Compact Design

Easy to use, the new Sorvall MTX 150 micro-ultracentrifuge provides advanced functionality, rotor management and controlled access, to meet your laboratory needs.

## Innovative Software for Improved Safety and Efficiency

The easy-to-use touchscreen keeps operation and programming simple – giving you peace-of-mind. The display is easy to read and easier to navigate. An intuitive touch-sensitive color LCD screen with a graphical user interface enables users to easily operate the system and select various menus and functions all by the touch of a button.



Name	SPED	RCFmax	RCFavg	r1	r2
S55-B	52000	320000	200	14	4x 2.20
S53-ST	52000	315450	127300	4x	5.00
S52-A	50000	309400	122544	6x	20.00
S52-ST	50000	212721	125701	4x	7.00
S45-A	42000	124350	59073	12x	1.50

### Manage Rotor Life

The Rotor Life Management system allows you to log and control individual rotor usage by tracking the number of rotor runs and total spin hours.

### Rotor Catalog

All rotors with model name and specifications are listed for your reference.

### Check Rotor Specifications

Key specifications for rotors are stored in memory, and you can conveniently recall and view them on the display screen.

### Operating Histories

Histories are recorded in memory (up to 100 cases) facilitating your ability to recall past operating parameters.



### Flexible Control, Set-up and Run Options for Greater Productivity

Innovative software puts you in control with more options. Customize set-up and run options for greater flexibility and efficiency. Control access in a multi-user environment for better security.



#### Control Access

The control access feature restricts access to authorized users in a multi-user environment. An ID code is required before the centrifuge will operate.



#### Set-Up and Recall Runs

Save time and steps for commonly used protocols by creating and storing up to 20 programs into memory in RPM or RCF mode, along with user ID and comments. Each program has up to 9 steps of operating parameters. You can change operating parameter, such as speed, time, temperature, during operation under one program

#### Real Time Control / Program Start and Stop Times

The real-time control mode lets you set up a delayed start/stop run. Schedule runs so that your samples are ready when needed.

#### Actual Run Timer

With this feature, actual run timer starts when the set speed is attained, providing precise control of the net run-time for high-reproducibility separation. (Conventional run timer is also selectable.)

#### Control Runs by Speed or g Force

In automatic RCF/RPM mode, you can set runs to a maximum speed or to a desired g force. No protocol conversion is necessary.

#### Perform Pulse-Runs

The pulse-run function provides quick spins of a few seconds, made possible with the unrivalled acceleration rate of the Sorvall MTX 150.

#### Perform Step-Runs

The step-run function provides greater applications flexibility.



# Get the highest performing technologies in a floor model micro-ultracentrifuge

## Thermo Scientific Sorvall MX 150 and MX 120

The 150,000 rpm Sorvall MX 150 and 120,000 rpm Sorvall MX 120 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 floor-model micro-ultracentrifuge capability you need.

### **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 0.34 sq.m (2.3 sq.ft.) footprint allows for convenience in laboratory location without occupying valuable floor space.

### **Quiet Operation**

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

### **Versatile Performance**

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

### **Rugged Reliability**

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

## Thermo Scientific Sorvall MX 150 and MX 120 Floor Model and MTX 150 Benchtop Rotor Selection Guide

Rotor	Cat No.	Capacity (# places x volume)	Max. Speed (rpm)	Max. RCF (x g)	k-factor
<b>Fixed-Angle Rotors</b>					
S150-AT	45582	8 x 2 mL	150,000	899,744	6.1
S140-AT	45978	10 x 2 mL	140,000	1,048,684	5.0
S120-AT3	45584	14 x 0.5 mL	120,000	649,826	7.8
S120-AT2	45583	10 x 2 mL	120,000	649,826	7.8
S110-AT	45539	8 x 5 mL	110,000	690,652	15
S100-AT4	45586	6 x 3.5 mL	100,000	540,628	16
S100-AT3	45585	20 x 0.2 mL	100,000	435,630	7.0
S80-AT2	45589	30 x 0.5 mL	80,000	357,440	14
S80-AT3	45590	8 x 8.3 mL	80,000	414,630	23
S70-AT	45591	20 x 0.5 mL	70,000	307,052	31
S58-A	45866	8 x 13.5 mL	58,000	288,958	50
S55-A2	45865	12 x 1.5 mL	55,000	201,046	40
S50-A	45540	6 x 30 mL	50,000	209,438	61
<b>Swinging Bucket Rotors</b>					
S55-S	45594	4 x 2.2 mL	55,000	258,826	44
S52-ST	45977	4 x 5 mL	52,000	275,458	79
S50-ST	45541	4 x 7 mL	50,000	252,721	77
<b>Vertical Rotors</b>					
S120-VT	45593	8 x 2 mL	120,000	500,237	7.9

### Sorvall MTX 150 and MX Series Rotor Highlights

<p><b>NEW S50-A Fixed-Angle Rotor</b></p>		<ul style="list-style-type: none"> <li>• 66% larger total capacity (30 mL x 6 tubes)</li> <li>• New "T-shape" handle for easy open/close rotor cover</li> </ul>
<p><b>NEW S50-ST Swinging Bucket Rotor</b></p>		<ul style="list-style-type: none"> <li>• 40% higher capacity (4 x 7mL), spins up to 28 mL per run</li> <li>• Newly introduced 7 mL tube series (3 types) provides versatility for better density gradient separations of cell organelles, proteins and viruses</li> <li>• Top-loading buckets reduce mishandling resulting in greater safety</li> </ul>
<p><b>NEW S110-AT Fixed-Angle Rotor</b></p>		<ul style="list-style-type: none"> <li>• High Max. RCF 691,000 x g with nominal capacity of 8 x 5 mL</li> <li>• Reduced separation time (17% faster than previous generations)</li> <li>• Screw Cap Microtube can be centrifuged at 581,000 x g with exclusive adaptor</li> </ul>
<p><b>S140-AT Fixed Angle Rotor</b></p>		<ul style="list-style-type: none"> <li>• Highest RCF with over 1,048,000 x g in the Sorvall MX 150 and MTX 150</li> <li>• Fastest separations (k-factor = 5.0)</li> <li>• Ideal for rapid separation of serum lipoproteins, DNA, RNA and subcellular fractionation</li> <li>• Compatible with Re-Seal™ tubes</li> </ul>

# Thermo Scientific Sorvall MX Series and MTX 150 Micro Ultracentrifuges

Technical Specifications	MTX 150	MX 150	MX 120
<b>Form factor</b>	Benchtop	Floor Model	Floor Model
<b>Max. speed (rpm)</b>	150,000	150,000	120,000
<b>Max. RCF (x g)</b>	1,048,680 (with S140-AT rotor)	1,048,680 (with S140-AT rotor)	770,460 (with S140-AT rotor)
<b>Max. rotor capacity - Fixed Angle</b>	180mL (6 x 30mL) with S50A rotor		
<b>Max. rotor capacity - Swinging Bucket</b>	28mL (4 x 7mL) with S50ST rotor		
<b>Accel/decel. profiles</b>	9/9, brake off 9/9, brake off		
<b>Speed control accuracy (rpm)</b>	± 50		
<b>Program memory</b>	20, each with up to 9 steps	10, each with up to 9 steps	
<b>Refrigeration system</b>	Solid-state thermoelectric cooling		
<b>Set temperature range (°C)</b>	0 - 40° in 1°C increments		
<b>Ambient temperature operating range</b>	5 – 35 °C		
<b>Noise level (dBA) measured 1M from instrument</b>	<45	<48	< 47
<b>Heat output (kW / BTU/hr)</b>	0.7/ 2400		
<b>Dimensions (H x W x D)</b>	408 x 590 x 582 mm 16.1 x 23.2 x 22.9 in	1000 (panel open) / 850 (panel closed) x 440 x 490 mm 39.4 (panel open) / 33.5 (panel closed) x 17.3 x 19.3 in	
<b>Weight (kg / lb)</b>	97kg/213lb	110kg / 242lb	
<b>Regulatory standards</b>	cCSAus, CE, IEC61010-2-020, EN61326-1 2006		

Ordering Information		
	Electrical Requirements	Cat. No.
<b>MTX 150</b>	115 V, 50/60 Hz, 12 A single phase	46960
<b>MTX 150</b>	208 V, 50/60 Hz, 6 A single phase	46961
<b>MTX 150</b>	220 V, 50/60 Hz, 6 A single phase	46962
<b>MTX 150</b>	230 V, 50/60 Hz, 6 A single phase	46963
<b>MTX 150</b>	240 V, 50/60 Hz, 6 A single phase	46964
<b>MX 150</b>		
<b>MX 150</b>	115 V, 50/60 Hz, 12 A single phase	46950
<b>MX 150</b>	208 V, 50/60 Hz, 6 A single phase	46951
<b>MX 150</b>	220 V, 50/60 Hz, 6 A single phase	46952
<b>MX 150</b>	230 V, 50/60 Hz, 6 A single phase	46953
<b>MX 150</b>	240 V, 50/60 Hz, 6 A single phase	46954
<b>MX 120</b>		
<b>MX 120</b>	115 V, 50/60 Hz, 12 A single phase	46955
<b>MX 120</b>	208 V, 50/60 Hz, 6 A single phase	46956
<b>MX 120</b>	220 V, 50/60 Hz, 6 A single phase	46957
<b>MX 120</b>	230 V, 50/60 Hz, 6 A single phase	46958
<b>MX 120</b>	240 V, 50/60 Hz, 6 A single phase	46959



The Sorvall MTX 150 and Sorvall MX Series are part of the Thermo Scientific comprehensive suite of advanced centrifuge solutions for laboratory environments, which include instruments, rotors, tubes, applications and services. For nearly 60 years, Thermo Scientific Sorvall centrifuges have set the standard for quality and productivity. From advanced ultracentrifuges and superspeeds to low-speed clinical models, our reputation for dependability is as solid as the craftsmanship built into every unit. With our proven applications expertise and unmatched global resources, we continue to provide innovative centrifuge solutions that you can depend on for your critical research needs, now and in the future.

#### 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 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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