



Thermo Scientific
Sorvall WX Ultracentrifuge Series

Quiet, compact
powerful separation

Thermo
SCIENTIFIC



Thermo Scientific Sorvall WX Ultracentrifuge Series

Our Sorvall® WX Ultracentrifuge Series are next-generation instruments designed to change your expectation of ultracentrifuges. Combining outstanding speed with exceptional safety and ergonomics, the Sorvall WX Ultracentrifuge Series provides a new level of convenience and ease-of-use.



Fast, High Productivity Separations

Available in 80,000, 90,000 and 100,000 rpm models offering RCF up to 802,000 xg, the Sorvall WX Ultracentrifuge Series delivers the processing power to meet your high-throughput processing needs.

Samples experience optimal RCFs in the shortest possible time, saving precious research hours.

Small, Quiet and Energy-Efficient

With its compact footprint and low noise level (<53 dBA), the Sorvall WX Ultracentrifuge Series sets the standard for operator comfort and space efficiency.

The energy-saving design reduces power consumption by up to 15% compared with other ultracentrifuges.

Application Flexibility with Versatile Rotor Portfolio

- Thermo Scientific Fiberlite carbon fiber rotors for proteomics, nucleic acid preparation, viral work and cell clarification
- High performance swinging buckets, fixed angle, vertical and zonal rotors
- Continuous-flow rotor for biotechnology and pharmaceutical scale-up processes



RESEARCH FOCUS	APPLICATION
Cellular Biology	Cell Lysate Clarification Subcellular Organelle/Plasma Membrane Isolations
Genomics/Molecular Biology	Genomic DNA/Plasmid DNA/RNA Isolation/Purification Plasmid DNA/RNA Gradient (CsCl) Preps
Proteomics	Protein Purification Lipoprotein Processing/Chylomicron Removal
Microbiology	Bacteria, Yeast/Virus Pelletting Virus Gradient Isolation/Separation
Biochemistry	Structure and Function of Cellular Components Studies
Pharmaceutical Studies/ Drug Discovery	Quality Assurance Metabolism Studies
Nanotechnology	Nanoparticle Separations
Food Processing	Quality Assurance

Powerful Functionality



Intuitive touch pad makes programming easy.



for Demanding Research Needs

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

Control Runs by Speed or g-Force in RCF/RPM mode.

Set-Up and Recall Programs

- up to 20 programs in memory - in RPM or RCF mode, along with user ID and comments for immediate recall.

Perform Step-Runs

to deliver better separations for greater application flexibility.

Store Key Specifications

for Thermo Scientific Sorvall rotors, as well as other manufacturers' rotors, in memory for convenient recall.

Unique Thermo Scientific UltraSecur System Maximizes Safety and Convenience

Restrict Access

Limit access to authorized users in a multi-user environment with the lockout feature.

Schedule Runs

Reserve the centrifuge for use at a future date and time.

Program Start and Stop Times

Set up a delayed start/stop run so samples are ready when needed.

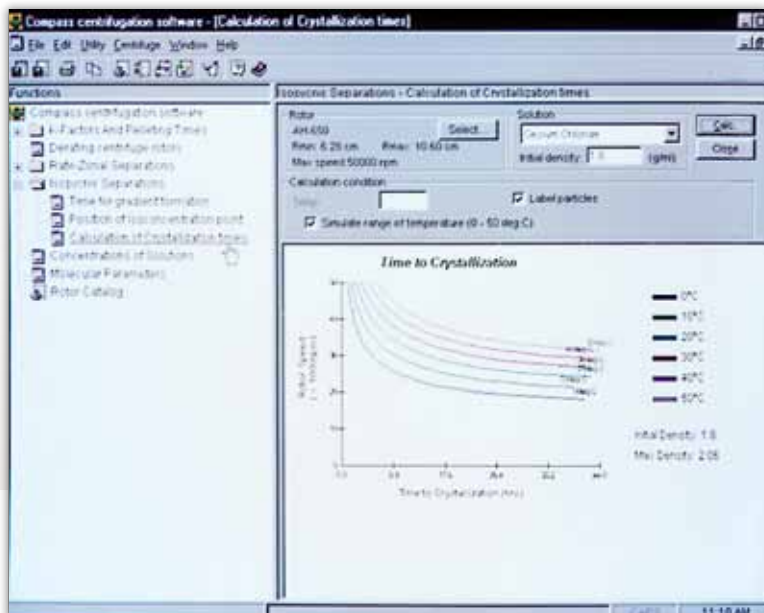
Manage Rotor Life

Log and control individual rotor usage by tracking the number of rotor runs and total spin hours.

Simulate New Protocols and Ensure Regulatory Compliance

Compass, a Windows®-based run simulation software (cat. no. 45910), allows for development of new separation protocols on a laptop or PC for export to the Sorvall WX ultracentrifuge. The software provides comprehensive help and troubleshooting support for faster and easier development of more efficient centrifugation methods.

- Set run parameters and convert run values.
- Calculate k-factors, pelleting times, derating speeds, molecular masses, s-value conversions and crystallization times.
- Simulate particle sedimentation and diffusion for complex rate zonal separations.



GMP Support

Connection to a printer via an RS-232 interface allows tracking of runs, users and faults for GMP compliance.

Sorvall WX

Ultracentrifuge Series



Outstanding power, safety and convenience

User-Friendly Controls

The interactive color LCD touch panel makes set-up and operation straightforward, even for novice users. Easily monitor set and run conditions, even from across the room.

Energy-Efficient Performance

The energy-saving design reduces power consumption by up to 15% compared to other ultracentrifuges, with a significant reduction in heat output for a more comfortable working environment.

Compact, Ergonomic Design

The small footprint of the Sorvall WX ultracentrifuge series (H x W x D: 100 x 79 x 69 cm, 39.4 x 31.1 x 27.2 in) makes it ideal for labs where space is limited. A low deck height (85 cm, 34.4 in) makes rotor loading and unloading easy, while the chamber door glides open smoothly with just a push.

Whisper-Quiet Operation

A noise level of just 53 dBA means that users can work right next to the unit without distraction.

Visual Tube Balancing

Automatic balance compensation accelerates sample preparation by allowing visual sample balancing.

Easier, Safer Separations

Our Sorvall ultracentrifuge rotors enable easier and more secure sample loading, saving time and delivering efficient, worry free separations.

Process samples faster, more easily and more securely



SureSpin Swinging Bucket Rotors



Fiberlite Carbon Fiber Rotors



StepSaver Vertical Rotors



TCF-32 Continuous Flow Rotor

Fiberlite Carbon Fiber Rotors

An advanced alternative to metal rotors, offering superior durability, high performance and higher level of safety for worry-free operation spin after spin.

- **Fatigue-resistance** for unequalled structural integrity, eliminating the need to derate or limit the speed over the rotor lifespan.
- **Corrosion-resistant** design protects against damage due to moisture, chemicals, alkaline solutions or other salts in the laboratory which may attack the surface.
- **Lightweight** and easy to handle, improving ergonomics for a safer work environment and minimizing the risk of damage to centrifuge equipment.
- **Repairable** in the unlikely event of a mishap.
- **Naturally insulating** properties which helps to maintain sample temperature integrity.
- **Secure investment**, backed by a 15-year warranty.

StepSaver Vertical Rotors

Streamline sample loading and unloading.

- Load samples tubes in half the steps required for conventional vertical rotors.
- Filled sample tubes can be securely contained inside proprietary cartridges, eliminating the need for inconvenient torque wrench procedures.

TCF-32 Continuous Flow Rotor

Ideal for multi-liter processing application requiring high RCFs, including viral separations, particle isolations and vaccine production.

SureSpin Swinging Bucket Rotors

Offer the convenience and security of buckets that are loaded and unloaded through the top of the rotor body. This time saving design maintains delicate gradients and prevents mishanging of buckets.

UltraCrimp Tube Sealing System

Employs reliable crimping technology to contain samples safely inside tube.

- Dependable seal assures safe sample containment and does not expose sample to heat.
- ClearCrimp tubes improve visibility of density gradient bands.

Open System Optimizes Your Existing Rotor Inventory

Our Sorvall WX ultracentrifuge series accepts ultra rotors from most major manufacturers. Ask your sales representative for details.









UltraCrimp Tube Sealing System

Versatile Selection of Ultracentrifuge Tubes For Your Applications



The right tube for your application is an important consideration. Choose from our wide selection of tubes in various materials, styles and volumes to meet your processing requirements and get the ultimate performance from your Sorvall WX ultracentrifuge.

- Open-top Thin-wall Tube
- Open-top Thick-wall Tube
- Ultracrimp® Tube
- Re-Seal Tube
- Oak Ridge Bottle
- High Performance Microtubes

TUBE STYLE	TUBE VOLUME (mL)				
	1.5	6.5	13.5	39	100
 Open-top Thin-wall Tube		X	X	X	
 Open-top Thick-wall Tube		X			
 Ultracrimp Tube		X	X	X	X
 Re-Seal Tube	X	X	X	X	
 Oak Ridge Bottle		X	X	X	X
 High Performance Microtube	X				



All Fiberlite ultracentrifuge rotors ship with one set of tubes.

Rotor Selection Guide

Rotor	Capacity (place x ml)	Max.Speed (rpm)	Max. RCF (xg)	K factor	Tube Angle (°)	Cat. No.
Fiberlite Fixed Angle Rotors						
F65L-6x13.5	6 x 13.5	65,000	324,000	71.0	30	096-067135
F50L-8x39	8 x 39	50,000	266,000	83.0	23	096-087051
F50L-24x1.5	24 x 1.5	50,000	280,000	33.0	45	096-247028
F37L-8x100	8 x 100	37,000	182,460	168.0	25	096-087056
Fixed Angle Rotors						
T-8100	8 x 6.5	100,000	802,010	17.7	26	45621
T-890	8 x 12.5	90,000	692,150	25.1	25	11690
TFT 80.4	10 x 4.4	80,000	468,250	25.8	25	54356
TFT 80.2	12 x 2.0	80,000	429,640	22.6	25	54456
T-1270	12 x 12.5	70,000	448,810	36.3	24	08259
T-865	8 x 36	65,000	429,460	51.7	23.5	51411
T-1250	12 x 36	50,000	301,030	68.7	24	11713
T-647.5	6 x 100	47,500	250,260	121.0	22.5	08322
TFT 45.6	40 x 6.0	45,000	(outer) 238,860 (inner) 204,250	41.1 49.6	20	11637
A-621	6 x 250	21,000	66,990	751.0	23	11876
Swinging Bucket Rotors						
TH-660	6 x 4.4	60,000	488,580	44.4	90	10502
AH-650	6 x 5	50,000	296,010	53.0	90	54294
TH-641	6 x 13.2	41,000	287,660	114.0	90	54295
SureSpin™ 630/36	6 x 36	30,000	166,880	219.0	90	79368
SureSpin 630/17	6 x 17	30,000	166,880	268.0	90	79363
AH-629 (36 ml buckets)	6 x 36	29,000	151,240	242.0	90	54284
AH-629 (17 ml buckets)	6 x 17	29,000	155,850	284.0	90	54285
Vertical Rotors						
StepSaver™ 70 V6	8 x 6	70,000	467,420	8.7	0	79240
StepSaver 70 V6	8 x 2 x 2	70,000	467,420	8.7	0	79274
StepSaver 70 V6	8 x 5.1 QS*	70,000	467,420	8.7	0	79280
StepSaver 65 V13	8 x 13.5	65,000	400,670	12.9	0	79243
StepSaver 65 V13	8 x 6	65,000	393,110	10.3	0	79290
StepSaver 65 V13	8 x 13.5 QS*	65,000	400,670	12.9	0	79285
StepSaver 50 V39	8 x 39	50,000	241,830	35.8	0	79245
StepSaver 50 V39	8 x 13.5	50,000	228,700	22.6	0	79277
TV-1665	16 x 6	65,000	414,360	9.8	0	11672
TV-860	8 x 35	60,000	340,600	25.2	0	53289
Continuous Flow Rotors						
TCF-32	430 ml	32,000	102,000	35	n/a	45820 + 45835
Accessory core	940 ml			106		45830
Zonal Rotors						
TZ-28	1,350 ml	28,000	83,440	312	n/a	52358 + 12271

Thermo Scientific Sorvall WX Ultracentrifuge Series

Specifications			
Model	Sorvall WX100	Sorvall WX90	Sorvall WX80
Maximum speed	100,000 rpm	90,000 rpm	80,000 rpm
Maximum RCF	802,000 xg	692,000 xg	602,000 xg
Maximum capacity	6 x 250 mL	6 x 250 mL	6 x 250 mL
Drive	Imbalance tolerant direct drive. Eye balance to within 5 mm.		
Accel/decel profiles	10/11		
Speed range	1,000 rpm to maximum speed in 100 rpm increments		
Speed control accuracy	±10 rpm		
Temperature set range	0 to +40 °C		
Temperature accuracy	±0.5 °C		
Ambient temperature range	+10 to +35 °C		
Temperature control system	Solid-state thermoelectric refrigeration (CFC-free)		
Vacuum system	Oil-rotary vacuum pump with moisture removal function and oil diffusion pump; vacuum of 0.13 Pa		
Dimensions (H x W x D)	1000 x 790 x 690 mm (39.4 x 31.1 x 27.2 in)		
	850 mm (33.4 in) height to top of deck		
Weight	400 kg (881.8 lb)		
Control	Microprocessor		
Programmability	20 programs; Step-Run		
Heat output	< 1 kW/hr		
Operational noise	53 dBA, measured 1 m in front of instrument		
Functions	Automatic RCF; ω^2t Integrator; Real Time Control; Controlled Access; Rotor Life Management		
Electrical	208/220/230/240 V (50/60 Hz), 16/20 A, single phase		
Certification	CE and cCSAus certified		

Ordering Information			
Description	Cat. No.	Electrical Configurations	Plug
Sorvall WX100 Ultracentrifuge	46902	208-240 V, Single Phase, 50/60 Hz CSA/CE 32A-6h 2P+PE included	NEMA plug 6-30P and IEC60309 CEE plug
Sorvall WX90 Ultracentrifuge	46901	208-240 V, Single Phase, 50/60 Hz CSA/CE 32A-6h 2P+PE included	NEMA plug 6-30P and IEC60309 CEE plug
Sorvall WX80 Ultracentrifuge	46900	208-240 V, Single Phase, 50/60 Hz CSA/CE 32A-6h 2P+PE included	NEMA plug 6-30P and IEC60309 CEE plug

Accessories			
Description	Cat. No.	Description	Cat. No.
Compass Software	45910	User Lockout Feature	45911
Printer (115/120V)	45933	HEPA Filter Kit	46121
Printer (220V/240V)	45934	Log Manager for Sorvall WX Centrifuges	46943

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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