



**Thermo Scientific
Sorvall WX+ Ultracentrifuge Series**



**performance simplified
at every turn**

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Ultracentrifugation simplified at every turn

Multiple users. A variety of processing requirements. A range of user experience. To overcome these everyday challenges of a shared laboratory setting, choose the **NEW! Thermo Scientific™ Sorvall™ WX+ ultracentrifuge.**

With up to 100,000 rpm performance in a

small footprint to maximize space in your lab. Plus lightweight and fatigue-resistant

Thermo Scientific™ Fiberlite™ carbon fiber rotors that do not need to be derated over time. And accelerated run set-up with an intuitive, easily accessible touch screen interface and automatic tube balancing.

The result? Productivity, safety, and reliability simplified.



Performance simplified

Fast, High Productivity Separations

- Available in 80,000, 90,000 and 100,000 rpm models, offering RCF up to 802,000 x g
- Extensive rotor selection supports labware from 1.5 mL microtubes to 250 mL bottles, providing application flexibility as your lab's research focus evolves
- PLUS the flexibility to use most ultra rotors from other major manufacturers¹ with our open rotor system

Built-in Safety and Efficiency

- Small footprint is ideal for labs where space is limited, while a low deck height (86.3 cm/33.9 in) makes rotor loading and unloading easy
- Non-bolt-down design greatly simplifies installation and flexibility to relocate within a facility
- Quiet performance (<51 dBA) allows you to work right next to the unit without distraction
- Self-locking rotor system eliminates the need to bolt down the rotor, while providing confidence that the rotor is automatically and securely locked
- Accessible on the front of the unit, the user-friendly touch screen interface puts you in control with set-up and run customization
- Ability to control access in a multi-user environment for security
- Automatic tube balance compensation accelerates sample preparation by allowing visual sample balancing up to 5 mm
- Personalize and monitor instrument status from across the lab with Stat Light, our multi-color, programmable 47 cm/18.5 in long LED bar mounted on the front of the instrument for easy visibility



Personalize Stat Light color and intensity for visual indication of instrument status.

¹ Ask your sales representative for details.



Applications simplified

Versatile rotor portfolio addresses your high performance processing applications, accommodating tubes from 0.2 mL to 250 mL — and providing application flexibility as your lab's research focus evolves.

Fast pelleting and density gradient separations

Fixed angle rotors, including lightweight and durable **Fiberlite carbon fiber rotors** which improve ergonomics, backed by a 15-year warranty²

- Fatigue-resistance provides 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
- Lightweight rotors designed to improve ergonomics for a safer work environment and minimize the risk of damage to centrifuge equipment

Density gradient runs and for locating small pellets at the bottom of a tube

High performance swinging bucket rotors, such as **SureSpin rotors** which offer the convenience and security of loading buckets through the top of the rotor body to maintain delicate gradients and prevent mishanging of buckets.

Fast lipoprotein and plasmid DNA separations

StepSaver vertical rotors streamline sample loading and unloading. Filled sample tubes can be securely contained inside special cartridges, eliminating the need for inconvenient torque wrench procedures.

NEW! Neo Angle rotors provide a very steep angle — much greater than fixed angle rotors — which is optimized for CsCl Plasmid DNA separations.

Biotechnology and pharmaceutical scale-up processes

The **TCF-32 continuous flow rotor** is ideal for multi-liter processing applications requiring high RCFs, including viral separations, particle isolations and vaccine production.

Batch processing gradient applications with zonal rotors

Optimize your existing rotor inventory

The open system on Sorvall WX+ ultracentrifuges accepts most ultra rotors from other major manufacturers. Ask your sales representative for details.

² Subject to Thermo Fisher Scientific's standard limited warranty. See thermoscientific.com or your sales representative for details.

Operation simplified

Now with an intuitive color LCD touch screen, keep operation and programming simple, with an easy-to-read and navigate graphical display at the front of the centrifuge. Access menus and functions all with the touch of a button.

Maximize Productivity with Flexible Control, Set-Up and Run Options

- Eliminate the need for calculating protocol conversions by setting runs for a maximum speed, or to a desired g-force, with automatic RCF/RPM mode
- Save time during run set-up for commonly used protocols by creating up to 1000 programs, along with user ID and comments
- Select rotor from on-board catalog, with key rotor specifications stored for convenient recall
- Perform pulse-runs — quick spins of a few seconds — or step-runs
- Achieve precise control of the net run-time for high-reproducibility separations by starting the run timer when the set speed is attained (conventional run timer is also available)

Focus on Safety and Convenience

- Require an ID code to control user access with the optional lockout feature — ideal for multi-user environments
- Schedule a run to reserve the centrifuge, or delay start and stop times, so samples are ready when needed
- Designed to assist with GMP/GLP compliance
 - Monitor centrifuge run data with optional Log Manager software
 - Recall past operating parameters with recorded histories (up to 5,120 cases)
- Manage rotor life via logs and control individual rotor usage by tracking the number of rotor runs and total spin hours
- Reduce power usage by up to 50% when in idle mode, compared with previous model

Simulate New Protocols

Compass, a Windows™-based run simulation software included with our ultracentrifuges, allows for development of new separation protocols on a laptop or PC for export to a Sorvall WX+ ultracentrifuge. The software provides comprehensive help and troubleshooting support for fast and easy 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



Tube selection simplified

The right tube for your application is an important consideration. Choose from our wide selection of tubes to meet your processing requirements:

Tube Style	Tube Volume (mL)					
	1.5	6.5	13.5	39	100	250
Open-top Thin-wall Tube		●	●	●		
Open-top Thick-wall Tube		●				
Ultracrimp Tube		●	●	●	●	
Re-Seal Tube	●	●	●	●		
Oak Ridge Bottle		●	●	●	●	●
High Performance Microtubes	●					

All Fiberlite ultracentrifuge rotors ship with one set of tubes.



Protect your investment with comprehensive service and support offerings.

Service simplified

Instrument Services from Unity Lab Services

To improve your laboratory's efficiency, you should be free to focus on your work, not burdened with managing instrument service. We provide a complete portfolio of customized, integrated and innovative services and support solutions designed to help you improve productivity, reduce total cost of ownership and ensure compliance throughout your laboratory — from equipment acquisition to disposition.

Protect your investment with a support plan, from first-level extended warranties to comprehensive scheduled care plans, including:

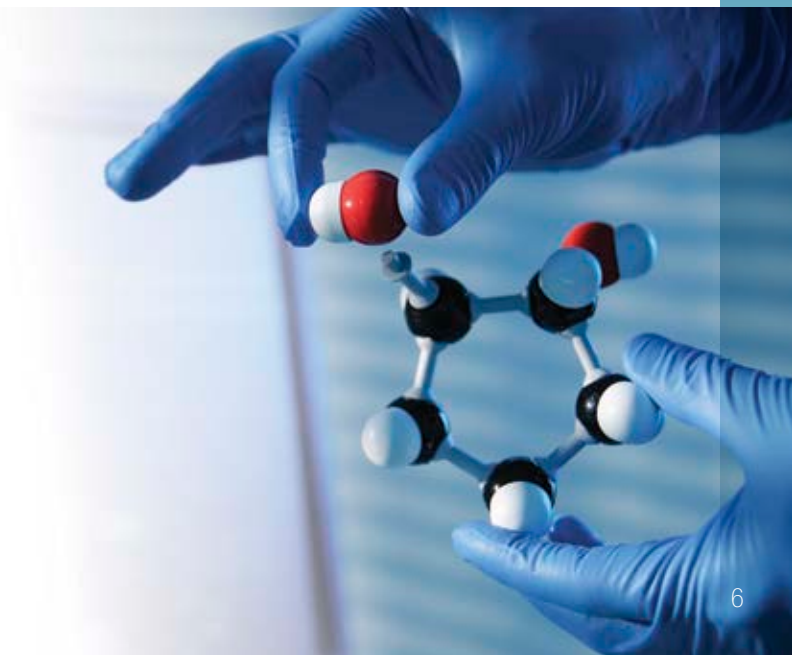
- Priority on-site visits including labor and travel
- Preventive maintenance parts kits
- Factory-certified parts
- Firmware/software updates
- Operational handling error coverage
- Service history tracking
- New operator assessment
- Unlimited priority telephone support
- Repair during qualification services
- Technical reviews
- On-site preventive maintenance
- e-Support online technical resource

Explore all the new ways to protect your instruments at unitylabservices.com

Let our expertise complement yours.

Unity Lab Services

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Rotor specifications

	Cat. No.	Rotor	Maximum Capacity (mL)	Tube Dimensions (mm)	Maximum Speed (rpm)	Maximum RCF (x g)	K Factor	Tube Angle (°)
Fiberlite Fixed Angle Rotors	096-067135	F65L-6x13.5	6 x 13.5	16 x 76	65,000	324,000	70.0	30
	096-087051	F50L-8x39	8 x 39	25 x 89	50,000	266,000	87.0	23
	096-247028	F50L-24x1.5	24 x 1.5	11 x 40	50,000	280,000	33.0	45
	096-087056	F37L-8x100	8 x 100	38 x 102	37,000	182,460	168.0	25
Fixed Angle Rotors	45621	T-8100	8 x 6.5	13 x 64	100,000	802,006	17.7	26
	11690	T-890	8 x 12.5	16 x 80	90,000	692,149	25.1	25
	54356	TFT 80.4	10 x 4.4	11 x 60	80,000	468,246	25.8	25
	54456	TFT 80.2	12 x 2.0	8 x 51	80,000	429,643	22.6	25
	08259	T-1270	12 x 12.5	16 x 80	70,000	448,811	36.3	24
	51411	T-865	8 x 36	25 x 97	65,000	429,459	51.7	23.5
	11713	T-1250	12 x 36	25 x 97	50,000	301,032	68.7	24
	08322	T-647.5	6 x 100	39 x 107	47,500	250,259	121.0	22.5
	11637	TFT 45.6	40 x 6.0	13 x 66	45,000	238,859 (outer) 204,252 (inner)	41.4 (outer) 49.6 (inner)	20
	11876	A-621	6 x 250	61 x 153	21,000	66,993	751.0	23
Swinging Bucket Rotors	10502	TH-660	6 x 4.4	11 x 60	60,000	488,576	44.4	90
	54294	AH-650	6 x 5	13 x 51	50,000	296,005	53.0	90
	54295	TH-641	6 x 13.2	14 x 89	41,000	287,660	114.0	90
	79368	SureSpin 630/36	6 x 36	25 x 89	30,000	166,880	219.0	90
	79363	SureSpin 630/17	6 x 17	16 x 102	30,000	166,880	268.0	90
	54284	AH-629 (36)	6 x 36	25 x 89	29,000	151,243	242.0	90
	54285	AH-629 (17)	6 x 17	16 x 102	29,000	155,846	284.0	90
Vertical Rotors	79240	StepSaver 70 V6 (8 x 6)	8 x 6	13 x 66	70,000	467,420	8.7	0
	79274	StepSaver 70 V6 (8 x 2)	8 x 2 x 2	13 x 45	70,000	467,420	8.7	0
	79280	StepSaver 70 V6 (8 x 5.1 QS)	8 x 5.1 QS	13 x 51	70,000	467,420	8.7	0
	79243	StepSaver 65 V13 (8 x 13.5)	8 x 13.5	16 x 93	65,000	400,671	12.9	0
	79290	StepSaver 65 V13 (8 x 6)	8 x 6	16 x 76	65,000	393,120	10.3	0
	79285	StepSaver 65 V13 (8 x 13.5 QS)	8 x 13.5 QS	13 x 66	65,000	393,120	12.9	0
	79245	StepSaver 50 V39 (8 x 39)	8 x 39	16 x 93	50,000	241,831	35.8	0
	79277	StepSaver 50 V39 (8 x 13.5)	8 x 13.5	16 x 93	50,000	228,706	22.6	0
	11672	TV-1665	16 x 6	13 x 66	65,000	414,357	9.8	0
	53289	TV-860	8 x 35	25 x 97	60,000	340,596	25.2	0
Neo Angle Rotors	75003033	TN-890	8 x 5	13 x 53	90,000	645,101	10	10
	75003034	TN-1065	10 x 12	16 x 78	65,000	401,614	23	10
	75003035	TN-1865	18 x 5	13 x 53	65,000	430,874	15	10
Continuous Flow Rotors	45820 + 50149172	TCF-32	430		32,000	102,000	35.0	n/a
	45830	Accessory core	940				106.0	
Zonal Rotors	75000008	TZ-32	1,690	n/a	32,000	102,000	363	n/a
	52358 + 12271	TZ-28	1,350		28,000	83,440	312.0	n/a



Ultracentrifuge specifications

Specifications	Sorvall WX 100+ Ultracentrifuge	Sorvall WX 90+ Ultracentrifuge	Sorvall WX 80+ Ultracentrifuge
Maximum Speed	100,000 rpm	90,000 rpm	80,000 rpm
Maximum RCF	802,000 x g (with T-8100 rotor)	692,149 x g (with T-890 rotor)	546,883 x g (with T-890 rotor)
Maximum Capacity	6 x 250 mL		
Drive System	Imbalance tolerant direct drive; eye balance to within 5 mm		
Control	Microprocessor		
Control Panel	Touch screen color LCD panel (6.5 in)		
Control Panel Languages	English, French, German, Italian, Portuguese, Spanish, Russian, Dutch, Korean		
Programmability	1,000 programs with step-runs		
Run Log Database	Up to 5,120 runs recorded in onboard memory		
Data Communication	USB: Host x 1, Device x 1 / LAN x 1		
Accel/Decel Profiles	10/11 (10 and coasting)		
Speed Range	1,000 rpm to max. speed in 100 rpm increments		
Speed Control Accuracy	±2 rpm (1,000 rpm – max. speed)		
Timer	1 min to 999 hours 59 min (with 1 min increments) with HOLD function		
Temperature Set Range	0 to +40 °C		
Temperature Accuracy	±0.5 °C		
Ambient Temperature Range	Ambient temperature for operation : +2 to +40 °C; Ambient temperature for performance guarantee : +10 to +30 °C		
Temperature Control System	Solid-state thermoelectric module refrigeration (CFC/HCFC/HFC-free)		
Vacuum System	Oil-rotary vacuum pump with moisture removal function and oil diffusion pump; vacuum of 0.13 Pa		
Functions	Automatic RCF; ω 2dt integrator; real time control; controlled user access; rotor life management		
Dimensions (H x W x D)	880 x 790 x 690 mm/ 34.6 x 31.1 x 27.2 in; Depth including door cover 890 mm/ 35.0 in		
Work Height of Top Deck	863 mm/ 33.9 in		
Weight	390 kg/ 859.8 lb		
Heat Output	1 kW or below		
Noise	51 dBA (running at set speed, under in-house test condition) measured 1 m in front of instrument		
Certification	CE and cCSAus. Product Safety: EN61010-1 and EN 61010-2-020; Electromagnetic Compatibility: EN 61326-1		
Warranty	1 Yr Unit, 10 Yrs Drive (Non-prorated)		

Ordering Information

Cat. No.	Description	Plug
75000100	Sorvall WX 100+ Ultracentrifuge, 208-240 V, 50/60 Hz, 16/20 A, Single-phase	NEMA plug 6-30P and IEC60309 CEE plug
75000090	Sorvall WX 90+ Ultracentrifuge, 208-240 V, 50/60 Hz, 16/20 A, Single-phase	NEMA plug 6-30P and IEC60309 CEE plug
75000080	Sorvall WX 80+ Ultracentrifuge, 208-240 V, 50/60 Hz, 16/20 A, Single-phase	NEMA plug 6-30P and IEC60309 CEE plug

Accessories

Cat. No.	Description
45910	Compass Software (included with centrifuge)
50146146	HEPA Filter Kit
50149346	Log Manager for Sorvall WX+ Ultracentrifuges



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Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

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Please contact us if this literature doesn't answer all your questions.