



**Thermo Scientific  
Sorvall WX+ Ultracentrifuge Series**



**performance simplified  
at every turn**

**Thermo**  
SCIENTIFIC

# 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.

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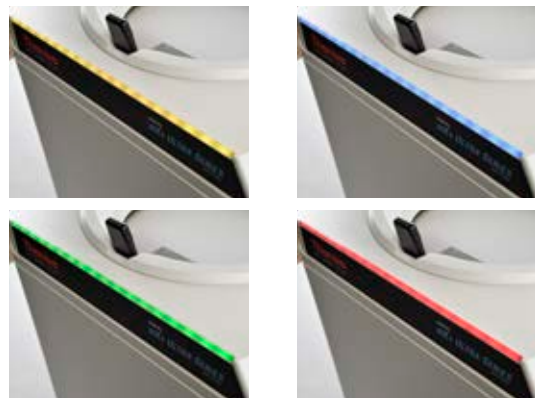
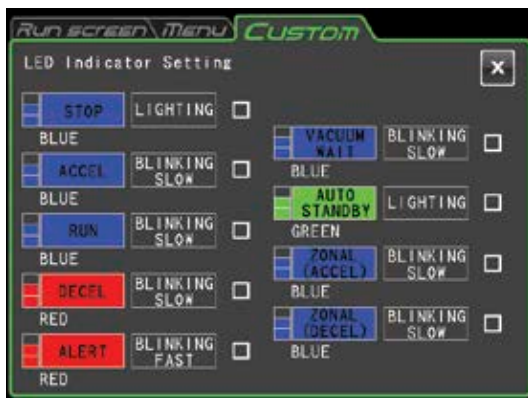
# Performance simplified

## 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 manufacturers<sup>1</sup> 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.

<sup>1</sup> 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 warranty<sup>2</sup>

- 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.

<sup>2</sup> Subject to Thermo Fisher Scientific's standard limited warranty. See [thermoscientific.com](http://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:

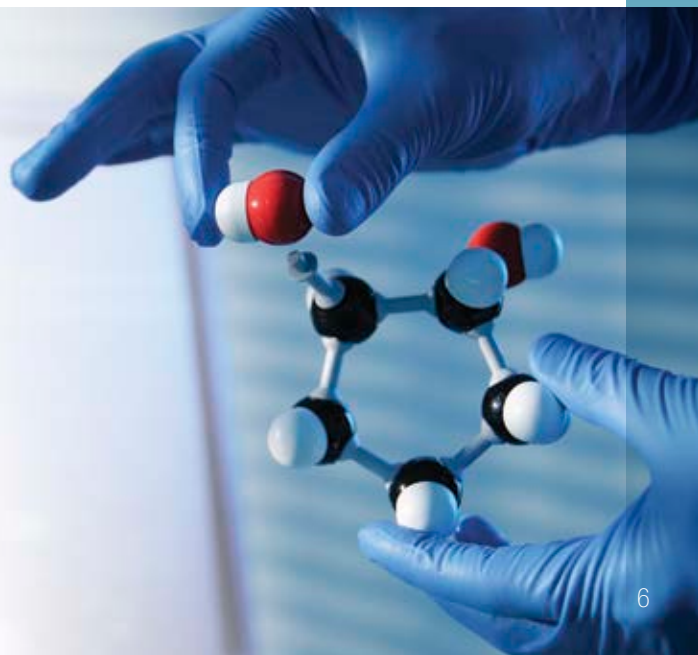
- Priority on-site visits including labor and travel
- Factory-certified parts
- Operational handling error coverage
- New operator assessment
- Repair during qualification services
- On-site preventive maintenance
- Preventive maintenance parts kits
- Firmware/software updates
- Service history tracking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

Explore all the new ways to protect your instruments at [unitylabservices.com](http://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
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; $\omega$ 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



[thermoscientific.com/ultracentrifuge](http://thermoscientific.com/ultracentrifuge)

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