

Optima Series Floor-Model Rotors

The perfect complement to our ultracentrifuges.






Brilliance
at every turn.






Capacity (mL)	Name/Features	Part Number	Max Speed (rpm)	Max Force (x g)	k Factor	No. Tubes x Volume (mL)	Tube Vol. Range w/g-Max (mL)
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FIXED-ANGLE ROTORS

48.0	Type 100 Ti	363013	100,000	802,000	15	8 x 6.0	2.0 - 6.0	
<p>Highest speed and <i>g</i>-force, for rapid separation of plasmid DNA and rapid differential centrifugation of small particles.</p>								
312.0	Type 70 Ti	337922	70,000	504,000	44	8 x 39.0	4.0 - 39.0	
<p>High speed and high volume, for differential centrifugation of subcellular fractions.</p>								
564.0	Type 45 Ti	339160	45,000	235,000	133	6 x 94.0	4.0 - 94.0	
<p>Largest volume, high speed, for differential centrifugation of large volumes of subcellular fractions and viruses.</p>								

SWINGING BUCKET ROTORS



231.0	SW 32 Ti	369650	32,000	175,000	204	6 x 38.5	8.4 - 38.5	
<p>Top-loading, for separation of subcellular particles and viruses in density gradients.</p>								
102.0	SW 32.1 Ti	369651	32,000	187,000	229	6 x 17.0	4.2 - 17.0	
<p>Top-loading, smaller-volume alternative for separation of subcellular particles and viruses. Buckets set interchangeable with SW 32 Ti.</p>								
79.2	SW 41 Ti	331362	41,000	288,000	124	6 x 13.2	3.5 - 13.2	
<p>High speed and high volume for rate-zonal and isopycnic centrifugation of viruses, and rate-zonal centrifugation of RNA.</p>								

VERTICAL & NEAR-VERTICAL TUBE ROTORS

108.0	NVT 65	362755	65,000	402,000	21	8 x 13.5	6.3 - 13.5	
<p>Separation of plasmid, mitochondrial or chromosomal DNA, proteoglycans and lipoproteins.</p>								
40.8	VTi 90	362751	90,000	645,000	6	8 x 5.1	2.0 - 5.1	
<p>High-speed density gradient separations.</p>								

Capacity (mL)	Name/Features	Part Number	Max Speed (rpm)	Max Force (x g)	k Factor	Typical Sample Volume (mL)	Particles Separated (S) [§]
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SPECIAL APPLICATIONS ROTORS

430.0	CF-32 Ti	350700	32,000	102,000	42	>1000	>50	
<p>Continuous-flow for isopycnic banding of viruses.</p>								
1,675.0	Ti-15	969312	32,000	102,000	-	50 - 200	>100	
<p>Rate-zonal centrifugation of subcellular particles.</p>								

[§](S) = Sedimentation coefficient in Svedberg units.

FLOOR-MODEL ROTOR SELECTION BY APPLICATION†

BIOSEPARATION	SPECIFIC APPLICATION
Separation of Subcellular Particles	Largest Volume for Pelleting Largest Volume Rate-Zonal Separation Fastest Rate-Zonal Separation
Separation of Virus and Viral Particles	Largest Volume for Pelleting Largest Volume Rate-Zonal Separation Fastest Rate-Zonal Separation
Rate-Zonal Separation of Proteins in Sucrose Gradient	Fastest Separation Largest Volume Largest Number of Samples Greatest Interband Distance
Separation of Lipoproteins	Fastest Differential Flotation Largest Number for Differential Flotation Largest Volume for Differential Flotation Greatest Interband Space Fastest Density Gradient Separation
Pelleting RNA Through a CsCl Gradient	Fastest Separation Largest Volume
Isopycnic Separation of Plasmid DNA	Fastest Separation Greatest Interband Distance Largest Volume

† Selected rotor has the capability (RCF, volume, labware) to accommodate the application, but may not be the most optimal/efficient choice for the specific application.

FLOOR-MODEL OPTIMA ULTRACENTRIFUGE ROTORS††

Rotor Type	Part Number	Max Speed (rpm)	Force at r max (x g)	k Factor	No. Tubes x Volume (mL)	Rotor Capacity (mL)	Tube Vol. Range w/ g-Max (mL)
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FIXED-ANGLE ROTORS

Type 100 Ti	363013	100,000	802,000	15	8x6.0	48.0	2.0 - 6.0
Type 90 Ti	355530	90,000	694,000	25	8x13.5	108.0	2.0 - 13.5
Type 70.1 Ti	342184	70,000	450,000	36	12x13.5	162.0	2.0 - 13.5
Type 70 Ti	337922	70,000	504,000	44	8x39.0	312.0	4.0 - 39.0
Type 50.4 Ti	347299	50,000	312,000	33	44x6.5	286.0	1.0 - 6.5
Type 50.2 Ti	337901	50,000	302,000	69	12x39.0	468.0	4.0 - 39.0
Type 45 Ti	339160	45,000	235,000	133	6x94.0	564.0	4.0 - 94.0
Type 42.2 Ti	343007	42,000	223,000	12	72x230.0 µL	16.5	0.2
Type 25	347261	25,000	92,500	62	100x1.0	100.0	1.0
Type 19	325620	19,000	53,900	951	6x250.0	1,500.0	250.0

NEAR-VERTICAL TUBE ROTORS

NVT 100	365898	100,000	750,000	8	8x5.1	40.8	2.0 - 5.1
NVT 90	362752	90,000	645,000	10	8x5.1	40.8	2.0 - 5.1
NVT 65.2	361073	65,000	416,000	15	16x5.1	81.6	2.0 - 5.1
NVT 65	362755	65,000	402,000	21	8x13.5	108.0	6.3 - 13.5

Type 100 Ti	Type 90 Ti	Type 70.1 Ti	Type 70 Ti	Type 50.2 Ti	Type 50.4 Ti	Type 42.2 Ti	Type 45 Ti	Type 25	Type 19	SW 60 Ti	SW 55 Ti	SW 41 Ti	SW 40 Ti	SW 32.1 Ti	SW 32 Ti	SW 28.1	SW 28	NVT 100	NVT 90	NVT 65	NVT 65.2	VTi 90	VTi 65.1	VTi 65.2	VTi 50	CF-32 Ti	Ti-15
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Rotor Type	Part Number	Max Speed (rpm)	Force at r max (x g)	k Factor	No. Tubes x Volume (mL)	Rotor Capacity (mL)	Tube Vol. Range w/ g-Max (mL)
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SWINGING BUCKET ROTORS

SW 60 Ti	335649	60,000	485,000	45	6x4.0	24.0	1.3 - 4.0
SW 55 Ti	342194	55,000	368,000	48	6x5.0	30.0	0.8 - 5.0
SW 41 Ti	331362	41,000	288,000	124	6x13.2	79.2	3.5 - 13.2
SW 40 Ti	331302	40,000	285,000	137	6x14.0	84.0	3.5 - 14.0
SW 32.1 Ti	369651	32,000	187,000	228	6x17.0	102.0	4.2 - 17.0
SW 32 Ti	369650	32,000	175,000	204	6x38.5	231.0	8.4 - 38.5
SW 28.1	342216	28,000	150,000	276	6x17.0	102.0	4.2 - 17.0
SW 28	342207	28,000	141,000	246	6x38.5	231.0	8.4 - 38.5

VERTICAL TUBE ROTORS

VTi 90	362751	90,000	645,000	6	8x5.1	40.8	2.0 - 5.1
VTi 65.2	362754	65,000	416,000	16	16x5.1	81.6	2.0 - 5.1
VTi 65.1	362759	65,000	402,000	13	8x13.5	108.0	6.3 - 13.5
VTi 50	362758	50,000	242,000	36	8x39.0	312.0	15.0 - 39.0

Rotor Type	Part Number	Max Speed (rpm)	Force at r max (x g)	k Factor	Typical Sample Volume (mL)	Particles Separated (S) [§]	Capacity (mL)
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CONTINUOUS-FLOW AND ZONAL ROTORS

CF-32 Ti	350700	32,000	102,000	42	>1000	>50	430
Ti-15	969312	32,000	102,000	-	50 - 200	>100	1,675

^{††} Maximum rotor speeds may differ between instrument models. For complete rotor specifications, available tubes, bottles and accessories, and required parts, refer to our Ultracentrifuges Catalog (BR-8101) available at www.beckmancentrifuges.com.

[§] (S) = Sedimentation coefficient in Svedberg units.

Optima Series Floor-Model Rotors

They're Beckman built.

With total-system design in mind from the start, Beckman Coulter created Optima Series rotors to complement our Optima Series floor-model ultracentrifuges, optimizing performance and safety. The superior design of Optima Series rotors ensures maximum separation purity in the shortest possible time, while delivering our promise of total package satisfaction.

Setting an all-new standard in ultracentrifugation, Beckman Coulter's Optima Series rotors deliver unprecedented functionality, exceptional separation efficiencies, enhanced capabilities,

and fast turnarounds. Used in conjunction with our Optima XE and XPN ultracentrifuges, these rotors offer excellent speed and power—up to 100,000 rpm and over 800,000 $\times g$ —as well as rapid attainment and precise control of temperature.

From traditional fixed-angle and swinging bucket, to specialty continuous-flow and zonal, to our patented near-vertical tube technology, our Optima Series rotors expedite your daily workflow and enable a vast range of discovery applications.



Optima Series Floor-Model Rotors

Extraordinary performance. Optimum safety.

Coupled with our innovative labware and accessories, Optima Series rotors offer extraordinary performance, ease, and functionality.

In addition, all Beckman Coulter instruments, rotors, and labware are designed, manufactured, and tested as a system. Multi-layered BioSafety® features, Dynamic Rotor Inertia Check, overspeed protection, and our exclusive Field Rotor Inspection Program ensure optimum safety and a full, useful lifetime for your investment.

*BioSafe and BioSafety are terms intended to describe the enhanced biocontainment features of our products.



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