

General purpose centrifuges

QA

How can multiple rotor options help achieve maximum versatility in Thermo Scientific General Purpose X Series Centrifuges?

Thermo Scientific™ General Purpose X Series Centrifuges achieve maximum flexibility by offering a large variety of 17 optional rotors for 1.6 L versions and 18 optional rotors for 4 L versions. For example, for the 4 L version, among the 18 rotors, we have 7 swinging bucket and 11 fixed angle, 7 of these rotors (1 swinging bucket and 6 fixed angle) are Thermo Scientific™ Fiberlite™ Carbon Fiber Rotors. By offering the ability to choose between all these rotors with a RCF (relative centrifugal force) up to 25,830 x g and working volumes between 0.2-1,000 mL, X series centrifuges can address a wide variety of applications and sample sizes. The easy-to-use Thermo Scientific™ Auto-Lock™ Rotor Exchange makes it simple to seamlessly switch between these rotors. 17 of the 18 rotors offered with the X series are equipped with the added security of biocontainment certified¹ sample protection, which is either optional or integrated within the rotor.

Choose from high capacity swinging rotors or high performance and lightweight Fiberlite carbon fiber rotors – all with our Auto-Lock technology.



Thermo Scientific X Series Centrifuges (4 L models)



Rotor options for 1.6 L and 4 L general purpose X series centrifuges

¹Biocontainment certification by Public Health England, Porton Down, UK or TÜV NORD CERT GmbH, Germany.



Auto-Lock technology



F10-6x100 LEX rotor with integrated biocontainment



TX-1000 bucket with optional biocontainment lids

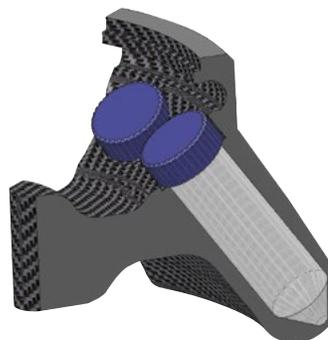
Table 1 shows the variety of rotors, range of RCFs and volume, and matches them to different applications that can be addressed by each rotor.

Rotor type	Rotor name	Maximum RCF	Volume range (mL)	Biocontainment	Application type
Fixed angle	Fiberlite F14-6x250 LE	18,533 x g	10-250	Integrated	Environmental studies, chemistry, microbiology
	Fiberlite F15-6x100y	24,652 x g	1.5-85	Integrated	Environmental studies, chemistry, microbiology
	Fiberlite F10-6x100 LEX	15,038 x g	1.5-85	Integrated	Environmental studies, chemistry, microbiology
	Fiberlite F13-14x50cy	17,105 x g	10-50	Integrated	Molecular biology, protein biology
	Fiberlite F15-8x50cy	24,446 x g	10-50	Integrated	Molecular biology, protein biology
	HIGHConic II	15,090 x g	1.5-85	Integrated	Molecular biology, protein biology
	MicroClick 18 x 5	24,652 x g	1.5-5	Integrated	Molecular biology, protein biology
	Fiberlite F21-48x2	25,055 x g	1.5-2	Integrated	Molecular biology, protein biology
	Microliter 48 x 2	25,314 x g	1.5-2	Integrated	Molecular biology, protein biology
	MicroClick 30 x 2	21,693 x g	1.5-2 (and spin columns)	Integrated	Molecular biology, protein biology
Microliter 30 x 2	25,830 x g	1.5-2	Integrated	Molecular biology, protein biology	

Rotor type	Rotor name	Maximum RCF	Volume range (mL)	Biocontainment	Application type
Swinging bucket	TX-1000	4,122 x g	0.2-1,000	Optional	Diagnostics, environmental studies, chemistry, microbiology, molecular biology, cell therapy
	TX-750	4,816 x g	0.2-750	Optional	Diagnostics, environmental studies, chemistry, microbiology, molecular biology, cell therapy
	BIOShield 1000A	7,164 x g	1.5-250	Integrated	Diagnostics, environmental studies, chemistry, microbiology, molecular biology
	HIGHPlate	6,168 x g	0.2	Integrated	Diagnostics, molecular biology, protein biology
	Fiberlite H3-LV	2,738 x g	0.2	None	Diagnostics, molecular biology, protein biology
	M-20	2,272 x g	0.2	Optional	Diagnostics, molecular biology, protein biology
	H-Flex HS4	7,197 x g	2-400	Optional	Diagnostics, molecular biology, protein biology

Fiberlite carbon fiber rotors offer excellent ergonomics and enhanced performance

- Fiberlite™ rotor/lid combinations offer protection to the user, the centrifuge and the samples during centrifugation.
- Outstanding durability provided by carbon fiber construction is supported by a 15 year Fiberlite rotor warranty and no limitation in cycles of use.
- Carbon fiber offers a unique ability to mold each cavity to form fit disposable conical tubes, bottles and other consumables, enabling high g-force spins for tougher separations compared to metal rotors and hybrid superspeed capabilities in a general purpose centrifuge.
- Excellent ergonomics driven by lightweight construction, integrated handle design and Auto-Lock rotor exchange.



Fiberlite rotor cavities are molded to the exact shape of many disposable conical tubes for maximum support; 50 mL conical tube shown here. In addition, a cap support is designed to relieve high g-forces.

Aerodynamics

Our rotors are designed to reduce drag, enabling higher top speed performance and low noise levels. With enhanced aerodynamics, there is also less friction in the chamber, reducing energy required for the motor to turn and the refrigeration system to cool (example: Thermo Scientific™ BIOShield™ Swinging Bucket Rotor which is a high RCF swinging bucket rotor features a windshield to reduce drag).

- Windshielded rotor options include Thermo Scientific™ H-Flex™ HS4, BIOShield 1000A and HIGHPlate™ 6000 rotors.
- Windshielded rotors enable users to spin tubes, bottles and plates at higher speeds with less energy than non-windshielded designs of the same rotor body.

Ease of use

- Fiberlite F10-6x100 LEX has been designed to offer an optimized angle of 45 degrees for better pelletization at RCF up to 17,105 x g.
- MicroClick 18x5 rotor is compatible with shorter 5 mL centrifuge tubes. Spin 18 x 5 mL small volume conical tubes.

Excellent versatility and capacity with TX-1000 rotor

- Thermo Scientific™ TX-1000 Rotor offers excellent application versatility with a variety of sample containers (bottles, conical bottles, conical tubes, round bottom tubes, blood tubes, microtubes, microplates, blood bags and cell culture bags).
- Expand options with use of the BIOLink adapter (cat. no. 75007304), which opens up 17 additional adapter configurations for the TX-1000 rotor.



1L Bio-bottles



15 mL conical tubes



Blood bags



50 mL conical tubes with Thermo Scientific™ ClickSeal™ Biocontainment lids



Microplates



Cell culture bags

Summary

Thermo Scientific General Purpose X Series centrifuges offer a large rotor portfolio with innovations for quick change of rotors, light and long-lasting rotor options, and reduced energy consumption. With up to 18 options with RCFs up to 25,830 x g and working volumes between 0.2-1,000 mL the X series can address a wide variety of applications including diagnostics, environmental studies, chemistry, microbiology, molecular biology, cell therapy and protein biology.

Find out more at thermofisher.com/centrifuges

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