



FRONTIER™ 5513&5513R

High-Speed Micro Centrifuges



Compact Micro Centrifuges with Modern Touch-Wheel Interface Ideal for High-Speed Lab Applications

Frontier 5513 and 5513R Benchtop Micro Centrifuges, as high-speed centrifuges, are capable of generating approximately 17 000 × g. With refrigeration capabilities (FC5513R), five optional rotors are designed for clinical, industrial, and research applications. Engineered with convenient operation in mind, FC5513 and FC5513R feature a uniquely designed splash-proof front panel with touch-wheel control on an intuitive interface. The compact design saves valuable bench space in the lab.

Features:

- Thanks to rotors compatible with microtubes, and spin columns, the Frontier 5513 and 5513R centrifuges can be applied in molecular biology applications. Additionally, when equipped with the appropriate rotor options, these centrifuges can also be used in diagnostic settings for hematocrit capillaries and PCR tubes/ strips.
- Designed for ease of operation, the FC5513 and FC5513R feature convenient control on a protective splash-proof interface, which allows for responsive operation—even when wearing gloves.
- With a small footprint, Frontier 5513 and 5513R centrifuges are compact enough to save valuable space.

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Sleekly designed interface enables smooth operation for a great user experience

- Easy-to-Use touch-wheel interface for parameter adjustments
- Convenient interface shows both set and actual parameters
- One-touch toggling between RPM/RCF, Acc/Dec
- Crisp display on a double-line LCD display with light blue backlight

Solid engineering to ensure functionality and reliability

- True splash-proof panel protects the centrifuge from accidental sample spilling
- Maintenance-free induction motor produces maximum G-force of $17\,317\times g$ for FC5513 and $17\,157\times g$ for FC5513R
- Speeds up to 13 500 rpm in less than 15 seconds with $24\times 1,5/2,0$ ml rotor
- 10 acceleration/deceleration settings
- 99 memory sets to quickly store and recall commonly used parameters
- FC5513R model has refrigeration capabilities from $40\text{ }^{\circ}\text{C}$ to $-20\text{ }^{\circ}\text{C}$
 - R290, an environmentally friendly coolant, contributes to the eco-friendliness of refrigerated centrifuges by minimizing their environmental impact and supporting efforts to combat global warming
 - Pre-cool feature in quickly lowers the temperature of rotor and chamber before a run

Flexible rotor selections to cover wide range of laboratory applications

- Works with microtube rotors with different rotor capacity
 - $18\times 1,5/2,0$ ml or $24\times 1,5/2,0$ ml
- Compatible with up to 7 rotor option and maximum rotor capacity of $24\times 1,5/2,0$ ml
- Support spin-column and hematocrit capillary tubes through additional rotor options

Safety features that prevent injury

- Sealed and TÜV certified rotors to safeguard operators from harmful aerosols
- Rotor imbalance sensing systems stops the unit when it detects an imbalanced load
- Lid-locking system prevents centrifuge from opening during operation (FC5513R)



FRONTIER™ 5513&5513R

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Specifications

Model		FC5513		FC5513R	
Order No.		230V: 30393187	120V: 30393188	230V: 83042059	120V: 83042060
Speed Range		200 rpm – 13 500 rpm; 10 rpm / increments		200 rpm – 14 500 rpm; 10 rpm / increments	
Maximum RCF		17 317×g; 10×g / increments		17 157×g; 10×g / increments	
Maximum Capacity (Rotor)		Angle Rotor: 24×1,5/2,0 ml			
Temperature Range		Air cooled		-20 °C to 40 °C, 1 °C/ increments	
Refrigerant		N/A		R290 (Propane)	
Running Time		Quick Spin, 10 sec to 99 hr 59 min, or continuous			
Noise Level (depending on the rotor)		≤ 60 + 2 dB(A)		≤ 56 + 2 dB(A)	
Acc/Dec Levels		10/10			
Allowable Density at Maximum Speed		1,2 g/ml			
Allowable Kinetic Energy		2 129 Nm		2 266 Nm	
Rated voltage		230 V/50 – 60 Hz	120 V/50 – 60 Hz	230 V/50 – 60 Hz	120 V/50 – 60 Hz
Voltage Fluctuation		± 10%			
Rated current		1,05 A	1,9 A	1,8 A	1,9 A
Power continues		170 W		320 W	
Dimensions (W×D×H)		277×351×231 mm		280×555×287 mm	
Net Weight (without rotor)		14 kg		33 kg	
Shipping Dimensions (W×D×H)		370×460×360 mm		390×690×390 mm	
Shipping Weight (without rotor)		14 kg		38 kg	
Ambient conditions (EN/IEC 61010-1)	Environment	For indoor use only			
	Altitude	Use up to an altitude of 2 000 m			
	Ambient temperature	5 °C up to 35 °C			
	Max. relative humidity	Max. relative humidity 80 % for temperatures up to 31 °C, Decreasing linearly to 50 % relative humidity up to 35 °C.			
EMC		EN/IEC 61326-1 Class B emissions, Basic immunity FCC Class B emissions			
Not suitable for use in hazardous environments.					

Rotors for FRONTIER™ FC5513 and FC5513R

	Angle Rotor 24 × 1.5/2.0 ml BIOSEALS	
	Item No.	30472302
	Rotor Capacity	24 × 1.5/2.0 ml
	Rotor Type	Angle, 45°
	Permissible Net Weight	24 x 3.4 g
	Lowest Temp. at max. speed	0 °C

Accessory Specifications	n/a		
Accessory Item No.	n/a	30130884	30130885
Accessory Type	n/a	Adapter	
Max. RPM (FC5513/FC5513R)	13,500/13,000		
Quantity in Package	n/a	6/pk	
Max. RCF	17,317/16,058 x g	15,076/ 14,169 x g	16,706/ 15,491 x g
Tube Specifications			
Tube Type	Microtube		
Tube volume	1.5/2.0 ml	0.2/0.4 ml	0.5 ml
Tubes per Rotor	24		
Max. Tube Diameter (mm)	11	6	8
Tube Height (mm)	40	45	

	Angle Rotor 24 × 2.0 ml Spin Column	
	Item No.	30210898
	Rotor Capacity	24 × 2.0 ml
	Rotor Type	Angle, 45°
	Permissible Net Weight	24 x 3.4 g
	Lowest Temp. at max. speed	n/a

Accessory Specifications	n/a
Accessory Item No.	n/a
Accessory Type	n/a
Max. RPM (FC5513)	13,500
Quantity in Package	n/a
Max. RCF (FC5513)	17,317 x g
Tube Specifications	
Tube Type	Spin Column
Tube volume	2 ml
Tubes per Rotor	24
Max. Tube Diameter (mm)	11
Tube Height (mm)	45

*No Adapters

Rotors for FRONTIER™ FC5513 and FC5513R

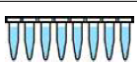


Rotor Angle 18 x 1.5/2.0 ml	
Item No.	83041006
Rotor Capacity	18 × 1.5/2.0 ml
Rotor Type	Angle, 45°
Permissible Net Weight	18 x 3.4 g
Lowest Temp. at max. speed	0 °C

Accessory Specifications	n/a		
Accessory Item No.	n/a	30130884	30130885
Accessory Type	n/a	Adapter	
Max. RPM (FC5513/FC5513R)	14,500		
Quantity in Package	n/a	6/pk	
Max. RCF	17,157 x g	14,807 x g	16,452 x g
Tube Specifications			
Tube Type	Microtube		
Tube volume	1.5/2.0 ml	0.2/0.4 ml	0.5 ml
Tubes per Rotor	24		
Max. Tube Diameter (mm)	11	6	8
Tube Height (mm)	40	45	



Angle Rotor 4 x 8-w PCR Strip	
Item No.	83041014
Rotor Capacity	4 x 8-w PCR Strip
Rotor Type	Angle, 45°
Permissible Net Weight	4 x 3.5 g
Lowest Temp. at max. speed	0°C

Accessory Specifications	n/a
Accessory Item No.	n/a
Accessory Type	n/a
Max. RPM (FC5513)	13,500/13,000
Quantity in Package	n/a
Max. RCF (FC5513)	17,317/13,602 x g
Tube Specifications	
Tube Type	8-w PCR Strip
Tube volume	0.2/0.4 ml
Tubes per Rotor	32
Max. Tube Diameter (mm)	n/a
Tube Height (mm)	n/a

Rotors for FRONTIER™ FC5513 and FC5513R

	Hematocrit Rotor 24 × Capillaries V2	
	Item No.	30472304*
	Rotor Capacity	24 × Capillaries
	Rotor Type	Hematocrit, 90°
	Permissible Net Weight	24 x 0.2 g
	Lowest Temp. at max. speed	n/a
Accessory Specifications	n/a	
Accessory Item No.	n/a	
Accessory Type	n/a	
Max. RPM (FC5513)	13,500/13,000	
Quantity in Package	n/a	
Max. RCF (FC5513)	16,058 x g	
Tube Specifications		
Tube Type	Capillaries	
Tube volume	n/a	
Tubes per Rotor	24	
Max. Tube Diameter (mm)	1.9 mm	
Tube Height (mm)	75 mm	

*No Adapters