

## Frontier<sup>™</sup> 5515 & 5515R

**High-Speed Microliter Centrifuges** 



# Smooth and Dependable High-Speed Microliter Centrifuge for Liquid Separation Applications

Frontier 5515 and 5515R microliter benchtop centrifuges provide high-speed operation for spin-down applications requiring a wide variety of tube volumes and capacities. With refrigeration capabilities (FC5515R), 10 acceleration/deceleration settings, multiple safety features, and an unmatched capacity, Frontier provides stable liquid separation for life science applications requiring high-speed operation.

#### Standard Features Include:

- Easy-to-Use Control Panel that Supports Simple Operation—The intuitive control panel with rotary knob puts the centrifuge's simple operations at your fingertips, including the ability to set and recall speed and g-force, as well as control the temperature (FC5515R only).
- Sophisticated Technology that Drives High-Performance—A powerful brushless induction motor, 10 acceleration and deceleration settings, and memory for up to 99 commonly-used parameters are a few of Frontier's features that propel high-performance.
- Several Safety Features that Protect Against Injury
   — Among Frontier's safety attributes are a
  motorized lid locking system and a rotor imbalance sensor that stops the centrifuge if the rotors
  become imbalanced or sudden shock occurs, protecting the operator from by the high-speed
  spinning rotors.
- Seven Rotor Sizes that Provide Flexibility for Varied Centrifugation Needs—Compatible with seven different rotors, more than any centrifuge in its class, the highly-versatile Frontier can be used for various applications of different volumes.

## Frontier <sup>™</sup>5515 & 5515R High-speed Microliter Centrifuges

### **Easy-to-Use Control Panel**

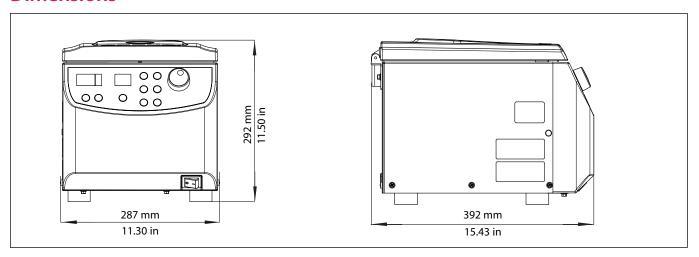
- Easy-to-turn rotary knob for parameter adjustments
- Waterproof keypad provides protection that helps significantly increase the lifespan of the product
- One-touch toggling between speed, g-force, and temperature controls (R model only)
- LCD display which projects information in real-time
- View and adjust user parameters from the main screen; no need to navigate through sub-screens



### **High-Performance Driven by Sophisticated Technology**

- Powerful induction motor reaches speeds up to 15,200 RPM in less than 16 seconds
- Maximum g-force of 21,953 RCF
- 10 acceleration/deceleration settings
- 99 memory sets for commonly-used speed, time, and temperature settings (R Model Only)
- R models has refrigeration capabilities from 40° C to -20° C
  - Cools down from 23° C to 4° C in less than 10 minutes
  - Pre-cool feature quickly lowers the temperature of rotor and chamber before a run

#### **Dimensions**



Frontier 5515

### **Safety Features that Prevent Injury**

- Motorized lid-locking system prevents centrifuge from opening during operation
- Rotor imbalance sensing system stops the motor should the rotors become imbalanced, protecting the user from spinning rotors

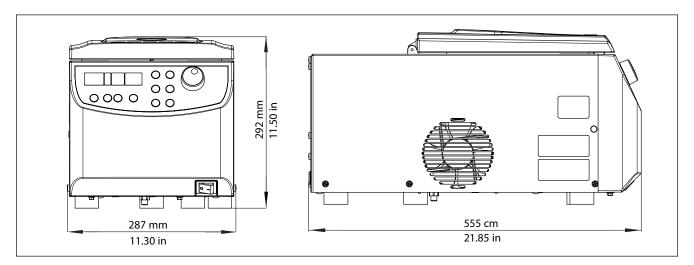
### **Flexibility for Varied Centrifugation Needs**

- Maximum capacity of  $44 \times 1.5/2$  mL and  $12 \times 5$  mL tubes
- Only centrifuge in its class compatible with 6 rotors (7 rotors on 5515 model), including a PCR strip tube rotor
- The most economical centrifuge on the market to include a unique 5 mL tube rotor
- The signature snap-on rotor and lid locking system allows for quick installation of rotors with just one press of a button





#### **Dimensions**



Frontier 5515R

# Frontier <sup>™</sup> 5515 & 5515R High-speed Microliter Centrifuges

Model	FC5515R		FC5515		
Speed Range	200 rpm - 15200 rpm; 10 rpm/set		200 rpm - 15200 rpm; 10 rpm/set		
Maximum RCF	21953 × g;	10 × g/set	21953 × g; 10 × g/set		
Maximum Capacity (Rotor)	44 × 1.5/2.0r	mL; 12 × 5mL	44 × 1.5/2.0mL; 12 × 5mL		
Temperature Range/Cooling	-20° to 40	°C,1°C/set	Air	Air cool	
Running Time	10sec to 99hr 99min	59sec or continuous	10sec to 99hr 99min 59sec or continuous		
Noise Level (Varies by Rotor)	≤ 57 +	2 dB(A)	≤ 60 + 2 dB(A)		
AC Power	230 V/50 - 60 Hz	120 V/50 - 60 Hz	230 V/50-60 Hz	120 V/50-60 Hz	
Fluctation	± 10%	± 10%	± 10%	± 10%	
Current Consumption	2.4 A	5.1 A	1.3 A	2.3 A	
Power Consumption	500 W	560 W	270 W	280 W	
Dimensions (W $\times$ D $\times$ H)	11.3 × 22.1 × 11.5 in/287 × 561 × 292 mm		11.3 × 15.5 × 11.5 in/287 × 393 × 292 mm		
Net Weight (Without Rotor)	77 lb/35 kg		38 lb/17 kg		
Shipping Dimensions (W $\times$ D $\times$ H)	15.7 × 26.0 × 20.5 in/400 × 660 × 520 mm		15.7 × 21.5 × 16.1 in/400 × 545 × 410 mm		
Shipping Weight (Without Rotor)	97 lb/	′44 kg	44 lb/20 kg		

#### **Approvals**

- **Product Safety:** EN 61010-1:2010, EN 61010-2-020:2006
- Electromagnetic Compatibility: EN 61326-1:2006, FCC Part 15 Class B

## Frontier<sup>™</sup>5515 & 5515R Rotors and Adapters



## Rotors and Adapters that Expand the Versatility of the Frontier FC5515 Series

A variety of rotors and tube adapters can be used in conjunction with the Frontier FC5515 Series, providing centrifugation for samples of various sizes

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Item	Angle Rotor, 24 × 1.5/2.0 mL	0.5 mL Tube Adapter	0.4/0.2 mL Tu	ube Adapter
Item Number	30130870	30130885	3013	0884
Compatible Tubes	1.5 mL and 2.0 mL	0.5 mL	0.4 mL	0.2 mL
Maximum Number of Tubes	24	24	24	24
Max. RPM	15200 rpm	15200 rpm	15200	) rpm
Max. RCF	21953 × g	19112 × g	21178 × g	17562 × g
Radius	3.35 in/85 mm	2.91 in/74 mm	3.23 in/82 mm	2.68 in/68 mm
Туре	Angle Rotor ∠45		_	•
Lid/Lid Material/Rotor Material	Snap-on/PEI <sup>2</sup> /Aluminium			
Lowest refrigerated temperature in FC5515R <sup>1</sup>		+5 ℃		

# Frontier<sup>™</sup> 5515 & 5515R Rotors and Adapters

Item	Angle Rotor, 24 × 1.5/2.0 mL, Biocontainment	0.5 mL Tube Adapter	0.4/0.2 mL	Tube Adapter
Item Number	30130871	30130885	301	30884
Compatible Tubes	1.5 mL and 2.0 mL	0.5 mL	0.4 mL	0.2 mL
Maximum Number of Tubes	24	24	24	24
Max. RPM	15200 rpm	15200 rpm	152	00 rpm
Max. RCF	21953 × g	19112 × g	21178 × g	17562 × g
Radius	3.35 in/85 mm	2.91 in/74 mm	3.23 in/82 mm	2.68 in/68 mm
Туре	Angle Rotor ∠45		_	
Lid/Lid Material/Rotor Material	Aerosol Tight/Aluminium/Aluminium		<del></del>	
Lowest refrigerated temperature in FC5515R <sup>1</sup>		+5°C		

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Item	Angle Rotor, 30 × 1.5/2.0 mL, Biocontainment	0.5 mL Tube Adapter	0.4/0.2 mL To	ube Adapter
Item Number	30130872	30130885	3013	0884
Compatible Tubes	1.5 mL and 2.0 mL	0.5 mL	0.4 mL	0.2 mL
Maximum Number of Tubes	30	30	30	30
Max. RPM	13500 rpm	13500 rpm	13500	) rpm
Max. RCF	19150 × g	17113 × g	18539 × g	15687 × g
Radius	3.70 in/94 mm	3.31 in/84 mm	3.58 in/91 mm	3.03 in/77 mm
Туре	Angle Rotor ∠45		_	
Lid/Lid Material/Rotor Material	Aerosol Tight/PC³/Aluminium		_	
Lowest refrigerated temperature in FC5515R <sup>1</sup>		+6 °C		

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Item	Angle Rotor, 44 × 1.5/2.0 mL	0.5 mL Tube Adapter	0.4/0.2 mL T	ube Adapter
Item Number	30130879	30130885	3013	0884
Compatible Tubes	1.5 mL and 2.0 mL	0.5 mL	0.4 mL	0.2 mL
Maximum Number of Tubes	44	44	44	44
Max. RPM	13500 rpm	13500 rpm	1350	0 rpm
Max. RCF	17113 × g / 17317 × g	14872 × g / 15687 × g	16705 × g / 16909 × g	13446 × g / 14872 × g
Radius	3.30 in/84mm 3.34 in/85mm	2.87 in/73mm 3.03 in/77mm	3.22 in/82mm 3.26 in/83mm	2.59 in/66mm 2.87 in/73mm
Туре	Angle Rotor ∠32/55		_	
Lid/Lid Material/Rotor Material	Snap-on/PP⁴/Aluminium		<u> </u>	
Lowest refrigerated temperature in FC5515R <sup>1</sup>		+6 °C		

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Item	Angle rotor, 12 × 5 mL, biocontainment	1.5 mL/2.0 mL Tube Adapter	1.8 mL Cryo Tube Adapter	1.0 mL Cryo Tube Adapter
Item Number	30130873	30130886	30130888	30130887
Compatible Tubes	5.0 mL	1.5 mL/2.0 mL	1.8 mL	1.0 mL
Maximum Number of Tubes	12	12	12	12
Max. RPM	14500 rpm	14500 rpm	14500 rpm	14500 rpm
Max. RCF	19978 × g	16687 × g	17627 × g	16217 × g
Radius	3.35 in/85 mm	2.80 in/71 mm	2.80 in/61 mm	2.72 in/69 mm
Туре	Angle Rotor ∠45		_	
Lid/Lid Material/Rotor Material	Aerosol Tight/Aluminium/Aluminium		_	
Lowest refrigerated temperature in FC5515R <sup>1</sup>		+4 °C		

## Frontier<sup>™</sup>5515 & 5515R Rotors and Adapters

	(P)
Item	Angle rotor, $4 \times 8$ -Place PCR Stripes
Item Number	30130874
Compatible Tubes	0.2 mL PCR 8-strips
Maximum Number of Tubes	4 x 8-place strips
Max. RPM	15000 rpm
Max. RCF	15342 × g
Radius	2.40 in/61 mm
Туре	Angle Rotor ∠45
Lid/Lid Material/Rotor Material	Screw/PC <sup>3</sup> /PP <sup>4</sup>
Lowest refrigerated temperature in FC5515R <sup>1</sup>	+5°C

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Item	Hematocrit rotor, 24 × Capillaries
Item Number	30130881
Compatible Tubes	Capillaries
Maximum Number of Tubes	24
Max. RPM	12000 rpm
Max. RCF	14970 × g
Radius	3.66 in/93 mm
Туре	Angle Rotor ∠90
Lid/Lid Material/Rotor Material	Snap-on/Aluminium/Aluminium

#### Notes:

- At room temperature of 23 °C. This is the lowest attainable temperature at which the pre-cooled, refrigerated centrifuge spins at maximum speed with a full load. Lower temperatures can be attained by reducing the speed, number of samples or room temperature.
- 2. PEI: Polyetherimide
- 3. PC: Polycarbonate
- 4. PP: Polypropylene



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The management system governing the manufacture offthis product is ISO 9001:2015 certified