



FRONTIER™ 5000 SERIES

Multi-Pro Centrifuges



Powerful and Versatile Universal Centrifuges for Virtually Every Lab Application

Frontier 5000 Multi-Pro Centrifuges are designed for universal use in virtually every application in research, industrial & clinical laboratories. Combine with our range of rotors & accessories for customized use in specific applications. Available in 7 models with capacities from 0.2 ml to 4 × 750 ml - and feature high speed performance at maximum volume, automatic rotor identification and safety features.

Standard Features Include:

- **Powerful Platform Offers Maximum Flexibility for a Range of Applications**
Our multi-purpose centrifuges offer a high-speed centrifugation platform which can be customized to fit workflow needs using a wide variety of rotors and accessories.
- **Intuitively Designed for User-Friendly Operation**
The intuitive design of the centrifuges & accessories enable easy access to parameter settings, and quick rotation between applications. Features include automatic rotor recognition and backlit LCD.
- **Solid Engineering Ensures Reliability and Durability**
The performance of these centrifuges is propelled by German engineering, and high-quality components for reliable use. Constructed of chemical-resistant stainless steel to ensure durability in lab use.
- **Increased Safety With Built-in Protective Features**
Frontier 5000 Series is equipped with protective features, including automatic over-speed protection, imbalance detection and self-diagnostic system to ensure reliable use and operator safety.

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Maximum Application Flexibility

Choose from seven models from small to medium capacity, speed range of 14,000 – 16,000 rpm and non-refrigerated/refrigerated options to suit your application. Ideal for spinning most tubes and bottles in the lab, including microtubes, blood tubes, round bottom tubes, conical tubes and microtiter plates.

FC5714 Centrifuge (non-refrigerated)

- Compatible with up to 9 optional rotors and 77 accessories
- Capacities from microliter to 4x100 ml
- High-speed centrifugation (>10000 rpm) from 0.2 ml up to 1.5/2.0 ml tubes

FC5718 (non-refrigerated) and FC5718R (refrigerated) Centrifuges

- Compatible with up to 19 optional rotors and 122 accessories
- Capacities from microliter to 4x100 ml
- High-speed centrifugation (>10000 rpm) from 0.2 ml up to 85 ml tubes
- Temperature variable range of -20 °C to 40 °C (FC5718R)

FC5816 (non-refrigerated) and FC5816R (refrigerated) Centrifuges

- Compatible with up to 13 optional rotors and 71 accessories
- Capacities from microliter to 6x250 ml
- Improved sample processing through-put with additional rotor for blood collection tubes and standard conical tubes
- High-speed centrifugation (>10000 rpm) from 0.2 ml up to 85 ml tubes
- Temperature variable range of -20 °C to 40 °C (FC5816R)

FC5916 (non-refrigerated) and FC5916R (refrigerated) Centrifuges

- Compatible with up to 14 optional rotors and 75 accessories
- Capacities from microliter to 4 x 750 ml
- Improved sample processing through-put with additional rotor for blood collection tubes and standard conical tubes
- High-speed centrifugation (>10000 rpm) from 0.2 ml up to 85 ml tubes
- Temperature variable range of -20 °C to 40 °C (FC5916R)

Intuitively Designed for Simple Operation

Frontier 5000 Series was designed to make lab processes more efficient and easier, and includes many user-friendly features & software that allow for intuitive operation.

- Automatic rotor identification makes switching between applications extremely easy
- Simple one-hand operation enabled by the selection button/rotary knob combination — even with gloves on
- Large backlit LCD display shows centrifugation settings and real-time parameters on one interface
- Program storage up to 99 runs including parameter settings and rotor types

Solid Engineering Ensures Reliability

Manufactured with high-quality components for reliable use and German engineered for high performance. Chemical and corrosion-resistant stainless steel housing ensures durability in lab environments.

- Maintenance-free induction drive
- Thread-free rotor locking mechanism
- Optimized airflow system to keep samples cool (non-refrigerated models)
- Pre-cooling program to quickly reach desired temperature (refrigerated models)
- Chemical and corrosion-resistant stainless steel housing ensures durability in lab environments
- Self-diagnostic program to record usage and error history for easy maintenance and to minimize downtime



Safety Features for Increased Security

These centrifuges are equipped with additional protective features for redundancy in safety and reliable operation.

- Over-speed protection, immediately upon rotor insertion
- Active imbalance-detection with individual imbalance tolerances set for each rotor
- Motorized lid-locking system to protect operators from accidental injuries
- Sealed and bio-containment rotors to safeguard operators from harmful aerosols

Rotor Compatibility Table

FC5714		0.2/ 0.4 ml	0.5 ml	1.5/ 2.0 ml	4.5 ml	5 ml	7 ml	10 ml	15 ml	16 ml	25 ml	30 ml	50 ml	85 ml	100 ml	4- 10 ml*	5- 7 ml*	PCR	MTP
Swing out rotor, 4 × 100 ml, ID																			
Item	30314822			▲	▲				▲		▲	▲	▲	▲	●	▲	▲		
Max Speed	4500 rpm																		
Max RCF	3350 × g																		
Swing out rotor, 4 × 100 ml, ID, Sealable																			
Item	30314823			▲				▲	▲		▲	▲	▲	▲	●		▲		
Max Speed	4000 rpm																		
Max RCF	2486 × g																		
Rotor Swing out 2x3MTP w/ bucket ID																			
Item				▲															●
Max Speed	4500 rpm																		
Max RCF	2716 × g																		
Angle rotor, 6 × 50 ml, ID																			
Item	30314830			▲		▲	▲		▲	▲		▲	●						
Max Speed	6000 rpm																		
Max RCF	4427 × g																		
Angle rotor, 30 × 15 ml, ID																			
Item	30314832			▲		▲	▲		●										
Max Speed	4500 rpm																		
Max RCF	2830 × g																		
Angle rotor, 12 × 15 ml, ID																			
Item	30314834			▲		▲	▲		●										
Max Speed	6000 rpm																		
Max RCF	4427 × g																		
Angle rotor, 30 × 1.5/2.0 ml, ID, Sealable																			
Item	30314836	▲	▲	●															
Max Speed	12000 rpm																		
Max RCF	15131 × g																		
Angle rotor, 24 × 1.5/2.0 ml, ID																			
Item	30314838	▲	▲	●															
Max Speed	14000 rpm																		
Max RCF	18624 × g																		
Angle rotor, 24 × 1.5/2.0 ml, ID, BIOSEALS																			
Item	30304361	▲	▲	●															
Max Speed	14000 rpm																		
Max RCF	18624 × g																		

* Blood collection tube
ID: auto rotor identification
Hi: version with higher speed

● Original size ▲ With adapter

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FC5916/FC5916R			0.2/ 0.4 ml	0.5 ml	1.5/ 2.0 ml	4.5 ml	5 ml	7 ml	10 ml	15 ml	16 ml	25 ml	30 ml	50 ml	85 ml	100 ml	175/ 225 ml	250 ml	500 ml	750 ml	4- 10 ml*	5- 7 ml*	PCR	MTP
Angle rotor, 24 × 1.5/2.0 ml, ID, BIOSEALS																								
Item	30304361																							
For	FC5916	FC5916R	▲	▲	●																			
Max Speed	16000 rpm	16000 rpm																						
Max RCF	24325 × g	24325 × g																						
Angle rotor, 6 × 250 ml, ID																								
Item	30314821																							
For	FC5916	FC5916R			▲				▲	▲			▲	▲				●						
Max Speed	8000 rpm	8000 rpm																						
Max RCF	10016 × g	10016 × g																						
Rotor Swing out 2x3MTP w/ bucket ID																								
Item																								
For	FC5916	FC5916R			▲																			●
Max Speed	4500 rpm	4500 rpm																						
Max RCF	2716 × g	2716 × g																						
Angle rotor, 6 × 85 ml, ID																								
Item	30314826																							
For	FC5916	FC5916R								▲	▲		▲	▲	●									
Max Speed	11000 rpm	13000 rpm																						
Max RCF	15555 × g	21726 × g																						
Angle rotor, 4 × 85 ml, ID, Hi																								
Item	30314827																							
For	FC5916	FC5916R								▲			▲	▲	●									
Max Speed	15000 rpm	16000 rpm																						
Max RCF	23140 × g	26328 × g																						
Angle rotor, 10 × 50 ml, ID																								
Item	30314829																							
For	FC5916	FC5916R			▲		▲	▲		▲				●										
Max Speed	10000 rpm	10500 rpm																						
Max RCF	14532 × g	16022 × g																						
Angle rotor, 6 × 50 ml, ID, Hi																								
Item	30314831																							
For	FC5916	FC5916R								▲	▲		▲	●										
Max Speed	13000 rpm	13000 rpm																						
Max RCF	15869 × g	15869 × g																						
Angle rotor, 20 × 10 ml, ID, Hi																								
Item	30314833																							
For	FC5916	FC5916R							●															
Max Speed	12000 rpm	12000 rpm																						
Max RCF	15775 × g	15775 × g																						

* Blood collection tube
ID: auto rotor identification
Hi: version with higher speed

● Adapter not required

▲ With adapter

(Continue on next page)

FC5916/FC5916R			0.2/ 0.4 ml	0.5 ml	1.5/ 2.0 ml	4.5 ml	5 ml	7 ml	10 ml	15 ml	16 ml	25 ml	30 ml	50 ml	85 ml	100 ml	175/ 225 ml	250 ml	500 ml	750 ml	4-10 ml*	5-7 ml*	PCR	MTP
Angle rotor, 44 × 1.5/2.0 ml, ID																								
Item	30314835																							
For	FC5916	FC5916R	▲	▲	●																			
Max Speed	16000 rpm	16000 rpm																						
Max RCF	24325 × g	24325 × g																						
Angle rotor, 30 × 1.5/2.0ml, ID, Sealable																								
Item	30314836																							
For	FC5916	FC5916R	▲	▲	●																			
Max Speed	15000 rpm	15000 rpm																						
Max RCF	23643 × g	23643 × g																						
Angle rotor, 24 × 1.5/2.0 ml, ID																								
Item	30314838																							
For	FC5916	FC5916R	▲	▲	●																			
Max Speed	16000 rpm	16000 rpm																						
Max RCF	24325 × g	24325 × g																						
Swing out rotor, 16 × 50 ml, ID																								
Item	30314841																							
For	FC5916	FC5916R																					●	
Max Speed	15000 rpm	15000 rpm																						
Max RCF	15343 × g	15343 × g																						
Swing out rotor, 4 × 750 ml, ID, Sealable																								
Item	30553085																							
For	FC5916	FC5916R						▲	▲	▲			▲	▲		▲	▲	▲	▲	▲	▲	●		▲
Max Speed	4000 rpm	4500 rpm																						
Max RCF	3434 × g	4346 × g																						
Angle rotor, 4 × 500 ml, ID																								
Item	30553086																							
For	FC5916	FC5916R							▲				▲	▲			▲	▲	●					
Max Speed	8000 rpm	8000 rpm																						
Max RCF	10367 × g	10367 × g																						

* Blood collection tube
ID: auto rotor identification
Hi: version with higher speed

● Adapter not required ▲ With adapter

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Model	FC5714		FC5718		FC5718R		FC5816		FC5816R		FC5916		FC5916R	
Speed Range	200 - 14000 rpm 10 rpm/set		200 - 18000 rpm 10 rpm/set		200 - 18000 rpm 10 rpm/set		200 - 15000 rpm 10 rpm/set		200 - 16000 rpm 10 rpm/set		200 - 16000 rpm 10 rpm/set		200 - 16000 rpm 10 rpm/set	
RCF Range	20 - 18624 × g 10 × g/set		20 - 23542 × g 10 × g/set		20 - 23542 × g 10 × g/set		20 - 21379 × g 10 × g/set		20 - 24325 × g 10 × g/set		20 - 24325 × g 10 × g/set		20 - 26331 × g 10 × g/set	
Maximum Capacity	4 × 100 ml		4 × 100 ml		4 × 100 ml		6 × 250 ml		6 × 250 ml		4 × 750 ml		4 × 750 ml	
Temperature range	Air cool		Air cool		-20~40 °C		Air cool		-20~40 °C		Air cool		-20~40 °C	
Running Time	Short Spin, 10 sec to 99 hr 59 min 59 sec, or continuous													
Noise Level (depending on the rotor)	≤ 63 ± 2 dB(A)		≤ 60 ± 2 dB(A)		≤ 60 ± 2 dB(A)		≤ 61 ± 2 dB(A)		≤ 63 ± 2 dB(A)		≤ 63 ± 2 dB(A)		≤ 63 ± 2 dB(A)	
Number of Compatible Rotors	9		19		19		13		13		14		14	
Acc/Dec Levels	10													
Allowable Kinetic Energy	5595 Nm		16672 Nm		25111 Nm		34363 Nm		34363 Nm		60629 Nm		54458 Nm	
AC Power	230 V ~ 50/60 Hz													
Current Consumption	2.4 A	1.1 A	4.0 A	2.0 A	6.0 A	3.0 A	4.2 A	2.4 A	7.8 A	3.7 A	5.6 A	2.8 A	20 A	7.2 A
Power Consumption	300 W	240 W	475 W	455 W	660 W	660 W	520 W	530 W	850 W	785 W	640 W	680 W	1630 W	1750 W
Voltage Fluctuation	± 10 %													
Dimensions (W × D × H)	362 × 493 × 330 mm		408 × 499 × 351mm		407 × 731 × 359 mm		446 × 538 × 354 mm		723 × 538 × 354 mm		780 × 670 × 590 mm		900 × 750 × 560 mm	
Net Weight (without rotor)	30 kg		43 kg		60 kg		52 kg		77 kg		98 kg		137 kg	
Environment	For indoor use only													

Other Standard Features and Equipment

Ten acceleration and ten deceleration rates, pre-selection of running time from 10s to 99h 59min or continuous, audible signal at the end of each run with melody options, quick spin, CFC-free refrigeration system, sample temperature indication and standstill cooling (refrigerated models)

Compliance

- **Product Safety:** EN 61010-1; EN 61010-2-020
- **EMC:** EN 61326-1



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The management system governing the manufacture of this product is ISO 9001: 2015 certified.

CH16D274