



FRONTIER™ 5916&5916R

High-Capacity Multi-Pro Centrifuges



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Powerful and Versatile High-throughput Centrifuges for Virtually Any Lab Application

Frontier 5916 and 5916R are designed for multipurpose use in various applications within research, industrial, and clinical laboratories. They can be combined with our range of rotors and accessories for customized use. The FC5916 and FC5916R are able to spin containers from 0.2 ml to 4 × 750 ml with swing-out and fixed angle rotors. They feature high-speed performance at maximum volume, automatic rotor identification, and multiple safety features. These models can process large quantities and different sizes of blood collection tubes, conical cell culture tubes, plates, and various volumes and types of bottles.

Features:

- Thanks to its powerful motor, the FC5916 and FC5916R deliver precise separation results achieving values up to 16000 rpm and 24326/26331 G-force. This can be configured to fit workflow needs using a selection of rotors and accessories.
- The intuitive design of the centrifuges & accessories enable easy access to parameter settings, with the flexibility to change parameters during operation without the need to stop the machine. Features include automatic rotor recognition and backlit LCD.
- The performance of these centrifuges is propelled by German engineering, and high-quality components for reliable use. Rotor chamber constructed of chemical-resistant stainless steel to ensure durability in lab use.

FRONTIER™ 5916&5916R *High-Capacity Multi-Pro Centrifuges*

Maximum Application Flexibility

FC5916 and FC5916R centrifuges are designed for maximum application flexibility efficiently accommodate a wide variety of tubes and bottles, including microtubes, blood tubes, round bottom tubes, conical tubes, PCR Stripes/Tubes and microliter plates, ensuring versatile and reliable performance for diverse laboratory needs.

- Compatible with up to 13 optional rotors and 67 accessories
 - Capacity of up to 4 x 750 ml with the ability to spin up to 108 blood tubes or 68 x 15 ml conical tubes and 28 x 50 ml conical tubes
 - High-speed centrifugation (>10 000 rpm) from 0.2 ml up to 1.5/2.0 ml tubes
 - FC5916R has refrigeration capabilities from 40 °C to -20 °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 quickly lowers the temperature of rotor and chamber before a run

Intuitively Designed for Simple Operation

FC5916 and FC5916R were designed to make lab processes more efficient and easier, and includes many user-friendly features & software that allow for intuitive operation.

- Automatic rotor recognition (RFID) makes switching between applications extremely easy
- Simple one-hand operation enabled by the selection button/rotary knob combination – even when wearing gloves
- 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.

- Maintenance-free induction motor provides maximum G-force of 24326 /26331
- Optimized airflow system to keep samples cool (non-refrigerated models)
- Chemical and corrosion-resistant stainless steel rotor chamber 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

FC5916 and FC5916R centrifuges are equipped with 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 TÜV certified rotors to safeguard operators from harmful aerosols



FRONTIER™

5916&5916R

High-Capacity Multi-Pro Centrifuges

Specifications

Model		FC5916		FC5916R	
Order No.		230V: 83041574	120V: 83041575	230V: 83041576	120V: 83041577
Speed Range		200 rpm – 16000 rpm; 10 rpm / increments Angle Rotor: 16000 rpm Swing out Rotor: 4000 rpm		200 rpm – 16000 rpm; 10 rpm / increments Angle Rotor: 16000 rpm Swing out Rotor: 4500 rpm	
Maximum RCF		24325 x g; 10 x g / increments Angle Rotor: 24325 x g Swing out Rotor: 3434 x g		26328 x g; 10 x g / increments Angle Rotor: 26328 x g Swing out Rotor: 4346 x g	
Maximum Capacity (Rotor)		Angle Rotor: 4 x 500 ml Swing out: 4 x 750 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)		≤ 63 + 2 dB(A)			
Acc/Dec Levels		10/10			
Allowable Density at Maximum Speed		1.2 g/ml			
Allowable Kinetic Energy		60629 Nm		54458 Nm	
AC Power		230 V/50-60 Hz	120 V/50-60 Hz	230 V/50-60 Hz	120 V/50-60 Hz
Voltage Fluctuation		± 10%			
Current Consumption		2.8 A	5.6 A	7.2 A	20 A
Power Consumption		640 W	680 W	1630 W	1750 W
Dimensions (W x D x H)		544 x 651 x 371 mm		728 x 667 x 370 mm	
Net Weight (without rotor)		85 kg		118 kg	
Shipping Dimensions (W x D x H)		780 x 670 x 590 mm		900 x 750 x 560 mm	
Shipping Weight (without rotor)		98 kg		137 kg	
Ambient conditions (EN/IEC 61010-1)					
Ambient conditions (EN/IEC 61010-1)	Environment	For indoor use only			
	Altitude	Use up to an altitude of 2000 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™ FC5916 and FC5916R



Swing Out Rotor 4 × 750 ml ID	
Item No.	30553085
Rotor Capacity	4 × 750 ml
Rotor Type	Swing Out, 0-90°
Permissible Net Weight	4 × 995 g
Lowest Temp. at max. speed	4 °C, however -3 °C when using 30553119

Accessory Specifications									
Accessory Item No.	30602502*	30553122*	30553123	30553124	30553125	30772866	30553126	30553127	30553128
Accessory Type	Bucket	Lid assembly	Spare O-ring	Rack					
Max. RPM (FC5916/FC5916R)	4,000/4,500			4,000/4,500					
Quantity in Package	2 /pk		10/pk	2 /pk					
Max. RCF (FC5916/FC5916 R)	3,434 / 4,346 × g	n/a		3,416 / 4,324 × g	3,380 / 4,278 × g	3,452 / 4,369 × g	3,416/4,324 × g		
Tube Specifications		n/a							
Tube Type	Flat Bottom - Herolab®	n/a		Conical Bottom Corning®	Flat Bottom	Conical Bottom Corning®	Conical Bottom Falcon®	Round Bottom	Conical Bottom
Tube volume	750 ml	n/a		500 ml	250 ml		175 / 225 ml	100 ml	50 ml
Tubes per Rotor	4	n/a		4				12	20
Max. Tube Diameter (mm)	98	n/a		97	62	60	61	41	29
Tube Height (mm)	152	n/a		148	122/137	159	118/137	102/123	116

Accessory Specifications										
Accessory Item No.	30553129	30553130	30553131	30553132	30553133	30553134	30553135	30553136		
Accessory Type	Rack									
Max. RPM (FC5916/FC5916R)	4,000/4,500									
Quantity in Package	2 /pk									
Max. RCF (FC5916/FC5916R)	3,416/4,324 × g			3,416 / 4,324 × g	3,434 / 4,346 × g	3,398 / 4,301 × g	3,363/4,256 × g			
Tube Specifications										
Tube Type	Skirted Conical Bottom	Conical Bottom	Round Bottom	Round Bottom	Conical Bottom		Round Bottom			
Tube volume	50 ml			30 ml	15 ml			10 ml		
Tubes per Rotor	20	28		32	56	68	72	84		
Max. Tube Diameter (mm)	29			26	17			16		
Tube Height (mm)	100/120	116	102/123		120		97/120	70/121		

* BIOSEALS certified: When using the Lid Assembly(with 1 EA O-ring) on the rotor, the buckets are hermetically sealed. O-ring should be changed when it's worn.
83041625 Package Cell Culture for 750ml Bucket available. For more info check our website.

Rotors for FRONTIER™ FC5916 and FC5916R

Accessory Specifications									
Accessory Item No.	30553138	83041591	30553139	30553140	30559377	83041040	30553104	30553105	30553117*
Accessory Type	Rack						Bucket	Holder	Lid assembly
Max. RPM (FC5916/FC5916R)	4,000/4,500								
Quantity in Package	2/pk								
Max. RCF (FC5916/FC5916 R)	3,345 / 4,233 × g			3,398 / 4,301 × g	3,363 / 4,256 × g		3,130 / 3,961 × g	n/a	
Tube Specifications							n/a		
Tube Type	Round Bottom	Vacutainer®	Vacutainer® / Sarstedt®		Sarstedt®	Microtube	Microplate	n/a	
Tube volume	7 ml	8 ml	1.8-7 ml	4- 10 ml	1.1-1.4 ml	1.5/2.0 ml	n/a		
Tubes per Rotor	128	72	108	72	152	96	12 Standard Microplates or 4 Deepwell Plates	n/a	
Max. Tube Diameter (mm)	13	16	13	16	8	11	87 × 128	n/a	
Tube Height (mm)	98/119	125	65/100	75/100	66	42	80	n/a	

Accessory Specifications		
Accessory Item No.	30553118	30553119
Accessory Type	Spare O-ring	Bucket
Max. RPM (FC5916/FC5916R)	4,000/4,500	
Quantity in Package	10/pk	2/pk
Max. RCF (FC5916/FC5916R)	n/a	2,754/3,486 × g
Tube Specifications	n/a	
Tube Type	n/a	Microplate
Tube volume	n/a	n/a
Tubes per Rotor	n/a	12 Standard Microplates or 4 Deepwell Plates
Max. Tube Diameter (mm)	n/a	87 × 128
Tube Height (mm)	n/a	72

* BIOSEALS certified: When using the Lid Assembly(with 1 EA O-ring) on the rotor, the buckets are hermetically sealed. O-ring should be changed when it's worn.
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Rotors for FRONTIER™ FC5916 and FC5916R



Angle Rotor 4 x 500 ml	
Item No.	30553086
Rotor Capacity	4 x 500 ml
Rotor Type	Angle, 24°
Permissible Net Weight	4 x 708 g
Lowest Temp. at max. speed	7 °C

Accessory Specifications	n/a							
Accessory Item No.	n/a	30559416	30559417	30559419	30559420	30559421	30559422	30564850
Accessory Type	n/a	Adapter						
Max. RPM (FC5916/FC5916R)	8,000							
Quantity in Package	n/a	2/pk						
Max. RCF (FC5916/FC5916R)	10,374 × g	9014 × g	9,587 × g	8,871 × g	10,231 × g	9,873 × g		9,801 × g
Tube Specifications								
Tube Type	Flat Bottom	Conical Bottom Corning®	Conical Bottom		Round Bottom		Conical Bottom	Flat Bottom
Tube volume	500 ml	250 ml	175-225 ml	50 ml		30 ml	15 ml	250 ml
Tubes per Rotor	4				12	16	24	4
Max. Tube Diameter (mm)	69.5	60	61	29.5	29	25	17	62
Tube Height (mm)	165	159	118/137	116	103	92	120	122



Angle Rotor 6 x 250 ml	
Item No.	30314821
Rotor Capacity	6 x 250 ml
Rotor Type	Angle, 28°
Permissible Net Weight	6 x 355 g
Lowest Temp. at max. speed	-5 °C

Accessory Specifications	n/a								
Accessory Item No.	n/a	30559414	30304369	30304370	30304371	30304372	30304373	30304374	30559412
Accessory Type	n/a	Adapter							
Max. RPM (FC5916/FC5916R)	8,000								
Quantity in Package	n/a	2 /pk							
Max. RCF (FC5916/FC5916R)	10,016 × g	10,016 × g	9,444 × g	9,515 × g	9,301 × g	8,943 × g	8,585 × g	8,371 × g	9,444 × g
Tube Specifications									
Tube Type	Flat Bottom	Conical Bottom	Microtube	Round Bottom	Conical Bottom	Round Bottom		Conical Bottom	Microtube
Tube volume	250 ml	175-225 ml	1.5/2.0 ml	10 ml	15 ml	30 ml	50 ml		1.5/2.0 ml
Tubes per Rotor	6	6	48	30	24	12	6		90
Max. Tube Diameter (mm)	62	61	11	16	17	26	29		11
Tube Height (mm)	122	118/137	40	80	120	92	103	116	40

Rotors for FRONTIER™ FC5916 and FC5916R



Angle Rotor 6 × 85 ml	
Item No.	30314826
Rotor Capacity	6 x 85 ml
Rotor Type	Angle, 38°
Permissible Net Weight	6 x 140 g
Lowest Temp. at max. speed	2 °C

Accessory Specifications	n/a							
Accessory Item No.	n/a	30314893	30314894	30314895	30314896	30314897	30314898	30314899
Accessory Type	n/a	Adapter						
Max. RPM (FC5916/FC5916R)	11,000/13,000							
Quantity in Package	n/a	2/pk						
Max. RCF (FC5916/FC5916R)	15,555 / 21,762 × g	14,338 / 20,025 × g	14,067 / 19,647 × g	14,743 / 20,592 × g	14,338 / 20,025 × g	14,067 / 19,647 × g	15,014 / 20,970 × g	14,067 / 19,647 × g
Tube Specifications								
Tube Type	Round Bottom				Conical Bottom		Round Bottom	
Tube volume	85 ml	15 ml	30 ml	50 ml		15 ml		16 ml
Tubes per Rotor	6						12	6
Max. Tube Diameter (mm)	38	17	25	29		17		18
Tube Height (mm)	113	103/110	90/103	105	116	120	95/100	103/110



Angle Rotor 10 × 50 ml	
Item No.	30314829
Rotor Capacity	10 x 50 ml
Rotor Type	Angle, 38°
Permissible Net Weight	10 x 76 g
Lowest Temp. at max. speed	0 °C

Accessory Specifications						
Accessory Item No.	n/a	30130886*	30130889*	30130890*	30472300	30472307
Accessory Type	n/a	Adapter				
Max. RPM (FC5916/FC5916R)	10,000/10,500					
Quantity in Package	n/a	6/pk	2/pk			
Max. RCF (FC5916/FC5916R)	14,532 / 16,022 x g	9,278 / 10,229 x g	12,774 / 14,050 x g	10,955 / 12,078 x g	14,197 / 15,652 x g	14,309 / 15,775 x g
Tube Specifications						
Tube Type	Conical Bottom	Microtube	Round Bottom/ Vacutainer®	RIA (Radioimmuno- assay)/Vacutainer®/ Sarstedt®	Round Bottom/ Vacutainer®	Conical Bottom
Tube Volume	50 ml	1.5/2.0 ml	7 ml	5 ml	15 ml	
Tubes per Rotor	10					
Max. Tube Diameter (mm)	29	11	13		17	
Tube Height (mm)	116	40	95/115	65/75	97/123	120

*Only possible with adapter 30472300

Rotors for FRONTIER™ FC5916 and FC5916R



Swing Out Rotor 2 × 3 MTP (Buckets included)	
Item No.	30314824
Rotor Capacity	2 × 3 MTP
Rotor Type	Swing Out, 0-90°
Permissible Net Weight	2 × 310 g
Lowest Temp. at max. speed	-15 °C

Accessory Specifications		
Accessory Item No.	30314890	30314891
Accessory Type	Bucket (included)	Adapter
Max. RPM (FC5916/FC5916R)	4,500	
Quantity in Package	2/pk	
Max. RCF	2,716 × g	
Tube Specifications	n/a	
Tube Type	Microplate	Microtube
Tube volume	MTP	1.5/2.0 ml
Tubes per Rotor	6 Standard Microplates or 2 Deepwell Plates	96
Max. Tube Diameter (mm)	87 x 128	11
Tube Height (mm)	63	42



Angle Rotor 4 × 85 ml	
Item No.	30314827
Rotor Capacity	4 x 85 ml
Rotor Type	Angle, 30°
Permissible Net Weight	4 x 140 g
Lowest Temp. at max. speed	4 °C

Accessory Specifications	n/a							
Accessory Item No.	n/a	30314893	30314894	30314895	30314896*	30314897*	30314898	30314899
Accessory Type	n/a	Adapter						
Max. RPM (FC5916/FC5916R)	15,000/16,000							
Quantity in Package	n/a	2/pk						
Max. RCF (FC5916/FC5916R)	23,685 / 26,331 × g	17,103 / 18,243 × g	16,902 / 18,028 × g	17,908 / 19,101 × g	17,304 / 18,457 × g	16,700 / 17,813 × g	15,091 / 16,097 × g	16,700 / 17,813 × g
Tube Specifications								
Tube Type	Round Bottom				Conical Bottom		Round Bottom	
Tube volume	85 ml	15 ml	30 ml	50 ml		15 ml		16 ml
Tubes per Rotor	4						8	4
Max. Tube Diameter (mm)	38	17	25	29		17		18
Tube Height (mm)	113	103/110	90/103	105	116	120	95/100	103/110

*Only without rotor lid

Rotors for FRONTIER™ FC5916 and FC5916R

	Angle Rotor 6 × 50 ml	
	Item No.	30314831
	Rotor Capacity	6 x 50 ml
	Rotor Type	Angle, 26°
	Permissible Net Weight	6 x 94 g
	Lowest Temp. at max. speed	-9 °C

Accessory Specifications	n/a				
Accessory Item No.	n/a	30130891	30130892	30130893	30314892*
Accessory Type	n/a	Adapter			
Max. RPM (FC5916/FC5916R)	13,000				
Quantity in Package	n/a	2/pk			
Max. RCF (FC5916/FC5916R)	15,869 × g	14,649 × g	13,777 × g	13,951 × g	13,428 × g
Tube Specifications					
Tube Type	Round Bottom Oakridge	Round Bottom			Conical Bottom
Tube Volume	50 ml	30 ml	16 ml	15 ml	
Tubes per Rotor	6				
Max. Tube Diameter (mm)	29	25	18	17	
Tube Height (mm)	95/115	92/95	100/105		120

*Only without rotor lid

	Angle Rotor 20 × 10 ml	
	Item No.	30314833
	Rotor Capacity	20 x 10 ml
	Rotor Type	Angle, 30°
	Permissible Net Weight	20 x 18 g
	Lowest Temp. at max. speed	-7 °C

Accessory Specifications	n/a
Accessory Item No.	n/a
Accessory Type	n/a
Max. RPM (FC5916/FC5916R)	12,000
Quantity in Package	n/a
Max. RCF (FC5916/FC5916R)	15,775 × g
Tube Specifications	
Tube Type	Round Bottom
Tube volume	10 ml
Tubes per Rotor	20
Max. Tube Diameter (mm)	16
Tube Height (mm)	80

*No Adapters

Rotors for FRONTIER™ FC5916 and FC5916R

	Angle Rotor 44 × 1.5/2.0 ml	
	Item No.	30372718
	Rotor Capacity	44 x 1.5/2.0 ml
	Rotor Type	Angle, 32°/55°
	Permissible Net Weight	44 x 3.4 g
	Lowest Temp. at max. speed	-3 °C

Accessory Specifications	n/a		
Accessory Item No.	n/a	30130884	30130885
Accessory Type	n/a	Adapter	
Max. RPM (FC5916/FC5916R)	16,000		
Quantity in Package	n/a	6/pk	
Max. RCF (FC5916/FC5916R)	24,325 × g	23,466 × g	21,463 × g
Tube Specifications			
Tube Type	Microtube		
Tube volume	1.5/2.0 ml	0.2/0.4 ml	0.5 ml
Tubes per Rotor	44		
Max. Tube Diameter (mm)	11	6	8
Tube Height (mm)	40	45	

	Angle Rotor 30 × 1.5/2.0 ml	
	Item No.	30314836
	Rotor Capacity	30 x 1.5/2.0 ml
	Rotor Type	Angle, 45°
	Permissible Net Weight	30 x 3.4 g
	Lowest Temp. at max. speed	-3 °C

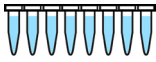
Accessory Specifications	n/a		
Accessory Item No.	n/a	30130884	30130885
Accessory Type	n/a	Adapter	
Max. RPM (FC5916/FC5916R)	15,000		
Quantity in Package	n/a	6/pk	
Max. RCF (FC5916/FC5916R)	23,643 × g	21,361 × g	19,719 × g
Tube Specifications			
Tube Type	Microtube		
Tube volume	1.5/2.0 ml	0.2/0.4 ml	0.5 ml
Tubes per Rotor	30		
Max. Tube Diameter (mm)	11	6	8
Tube Height (mm)	40	20	30

Rotors for FRONTIER™ FC5916 and FC5916R

Angle Rotor 24 × 1.5/2.0 ml ID BIOSEALS	
Item No.	83041238
Rotor Capacity	24 x 1.5/2.0 ml
Rotor Type	Angle, 45°
Permissible Net Weight	24 x 3.4 g
Lowest Temp. at max. speed	-5 °C

Accessory Specifications	n/a		
Accessory Item No.	n/a	30130884	30130885
Accessory Type	n/a	Adapter	
Max. RPM (FC5916/FC5916R)	16,000		
Quantity in Package	n/a	6/pk	
Max. RCF (FC5916/FC5916R)	24,325 × g	21,463 × g	23,466 × 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.	30314841
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	-2 °C

Accessory Specifications	n/a
Accessory Item No.	n/a
Accessory Type	n/a
Max. RPM (FC5916/FC5916R)	15,000
Quantity in Package	n/a
Max. RCF (FC5916/FC5916R)	15,343 × 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

*No Adapters