



# FRONTIER™ 5830R

High-Speed Multi-Pro Centrifuges



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

Frontier 5830R is designed for multipurpose use in various applications within research, industrial, and clinical laboratories. It can be combined with our range of rotors and accessories for customized use. The FC5830R is able to spin containers from 0.2 ml to 4 × 290 ml with swing-out and fixed angle rotors. It features high-speed performance at maximum volume, automatic rotor identification, and multiple safety features. This model 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 FC5830R delivers precise separation results achieving values up to 30000 rpm and 65395 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™ 5830R High-Speed Multi-Pro Centrifuges

## Maximum Application Flexibility

FC5830R centrifuge is designed for maximum application flexibility efficiently accommodate a wide variety of tubes and bottles, including microtubes, blood tubes, round bottom tubes, conical tubes, and microliter plates, ensuring versatile and reliable performance for diverse laboratory needs.

- Compatible with up to 11 optional rotors and 56 accessories
- Capacity of up to 6 x 250 ml with the ability to spin up to 40 blood tubes or 28 x 15 ml conical tubes and 12 x 50 ml conical tubes
- High-speed centrifugation: up to 30000 rpm for microtubes and up to 21000 rpm for 50 ml
- FC5830R 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

FC5830R was 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 65395
- 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

FC5830R centrifuge is 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
- The rotor cycle counter enhances safety by monitoring the number of centrifugation cycles, providing timely alerts for rotor replacement to prevent potential failure and ensure optimal performance.



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## Specifications


Model		FC5830R	
Order No.	230V: 83041584	120V: 83041585	
Speed Range	200 rpm – 30000 rpm; 10 rpm / increments Angle Rotor: 30000 rpm Swing out Rotor: 4000 rpm		
Maximum RCF	65395 x g; 10 x g / increments Angle Rotor: 65395 x g Swing out Rotor: 2987 x g		
Maximum Capacity (Rotor)	Angle Rotor: 6 x 250 ml Swing out: 4 x 290 ml		
Temperature Range	-20 °C to 40 °C, 1 °C / increments		
Refrigerant	R290 (Propane)		
Running Time	Quick Spin, 10 sec to 99 hr 59 min, or continuous		
Noise Level (depending on the rotor)	≤ 60 dB(A)		
Acc/Dec Levels	10/10		
Allowable Density at Maximum Speed	1.2 g/ml		
Allowable Kinetic Energy	30241 Nm		
AC Power	230 V/50-60 Hz	120 V/50-60 Hz	
Voltage Fluctuation	± 10%		
Current Consumption	7.2 A	15.8 A	
Power Consumption	1.6 kW	1.8 kW	
Dimensions (W x D x H)	721 x 516 x 412 mm		
Net Weight (without rotor)	91 kg		
Shipping Dimensions (W x D x H)	820 x 650 x 460 mm		
Shipping Weight (without rotor)	101 kg		
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.			

Tube Type	Tubes Type	Tube diamentions	Number of tubes per centrifuge
	Microtubes	0.2 – 2.0 ml (Ø 6 – 11 × 38 mm)	30
	Blood Collection Tubes	1.8 – 5 ml (Ø 13 × 75 mm)	40
		4 – 7 ml (Ø 13 × 100 mm)	40
		6 – 10 ml (Ø 16 × 100 mm)	32
	Conical Tubes	15 ml (Ø 17 × 120 mm)	28
50 ml (Ø 29 × 116 mm)		12	
175 ml (Ø 61 × 118 mm)		6	
225 ml (Ø 61 × 137 mm)		6	

Tube Type	Tubes Type	Tube diamentions	Number of tubes per centrifuge
	Vials & Bottles	15 ml Round Bottom (Ø 17 × 120 mm)	72
		50 ml Round Bottom (Ø 29 × 116 mm)	40
		100 ml Round Bottom (Ø 44 × 100 mm)	12
		250 ml Flat Bottom (Ø 62 × 122 mm)	8
		290 ml Flat Bottom (Ø 62 × 137 mm)	8
		500 ml Flat Bottom (Ø 98 × 114 mm)	4
		750 ml Flat Bottom (Ø 98 × 152 mm)	4
		1000 ml Flat Bottom (Ø 98 × 172 mm)	4

# FRONTIER™ 5830R High-Speed Multi-Pro Centrifuges

## Accessories

	Order No.	30314820
	Description	Rotor Swing out 4 x 290 ml ID
	Max. Speed	4000 rpm
	Max. RCF	2987 x g

### Accessories

Order No.	Description	Vol./Tube	Diameter	Tube Type	No. of Tubes/Rotor
<b>Round Bucket (can not be used with other accessories)</b>					
83041037	Bucket 1 x 290 ml D62 mm FB, 2 pk	290 ml	62 mm	Flat Bottom	4
<b>Accessories (used without bucket)</b>					
30314901	Screw cap Rack of 250 ml Rotor, 2 pk	-	-	-	-
30314902	O-Ring for rotor 30314820, 10 pk	-	-	-	-
30314903	Rack 1 x 250 ml D62 mm FB, 2 pk	250 ml	62 mm	Flat Bottom	4
30314904	Rack 1 x 100 ml D41 mm RB, 2 pk	100 ml	41 mm	Round Bottom	4
30314907	Rack 1 x 50 ml D34 mm RB, 2 pk V2	50 ml	34 mm	Round Bottom	4
30314905	Rack 3 x 50 ml D29 mm RB, 2 pk	50 ml	29 mm	Round Bottom	12
30314906	Rack 3 x 50 ml D29 mm FA, 2 pk	50 ml	29 mm	Conical Bottom	12
30314908	Rack 2 x 50 ml D29 mm Rim, 2 pk	50 ml	29 mm	Skirted Conical Bottom	8
30314909	Rack 1 x 50 ml D29 mm Rim, 2 pk V2	50 ml	29 mm	Skirted Conical Bottom	4
30314910	Rack 5 x 25 ml D24.5 mm RB, 2 pk	25 ml	24.5 mm	Round Bottom	20
30314911	Rack 3 x 25 ml D24.5 mm Rim, 2 pk	25 ml	24.5 mm	Skirted Conical Bottom	12
83041032▲	Adapter 1 x 25 ml D29 mm FA, 2 pk	25 ml	29 mm	Conical Bottom	4
30314912	Rack 9 x 15 ml D17 mm RB, 2 pk	15 ml	17 mm	Round Bottom	36
30314913	Rack 7 x 15 ml D17 mm FA, 2 pk	15 ml	17 mm	Conical Bottom	28
30314914	Rack 7 x 15 ml D17 mm Rim, 2 pk	15 ml	17 mm	Skirted Conical Bottom	28
30314915	Rack 8 x 10 ml D16 mm RB, 2 pk	10 ml	16 mm	Round Bottom	32
30304367	Rack 8 x 4-10 ml D16 mm Vac/Sar, 2 pk	4-10 ml	16 mm	Vacutainer®/ Sarstedt	32
83041590*	Rack 9 x 8 ml D16 mm Vac, 2 pk	8 ml	16 mm	Vacutainer®	36
30314916	Rack 14 x 5-7 ml D13 mm RB, 2 pk	5-7 ml	13 mm	Round Bottom	56
30314917	Rack 10 x 1,6-7 ml D13 mm Vac/Sar, 2 pk	1,6-7 ml	13 mm	Vacutainer®/ Sarstedt	40
30304368**	Adapter 9 x 1,5/2,0 ml D11 mm, 2 pk	1,5/2,0 ml	11 mm	Microtube	36

▲ Only possible with Rack 30314906


\*Only possible without screw cap

\*\*Only possible with Rack 30314903


## Cell Culture Package

Order No.	Description	Qty	Number of Tubes
83041627	Package Cell Culture for Rotor 30314820		
<b>Products Included in the Package</b>			
Order No.	Description	Qty	Number of Tubes
30314820	Rotor Swing out 4x290ml ID	1	-
30314901	Screw Cap Rack of 250ml Rotor, 2 pk	2	-
30314906	Rack 3x50ml D29mm FA, 2 pk	2	12
30314913	Rack 7x15ml D17mm FA, 2 pk	2	28

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	Order No.	30314821			
	Description	Rotor Angle 6 × 250 ml FB ID			
	Max. Speed	10000 rpm			
	Max. RCF	15650 x g			
<b>Accessories</b>					
Order No.	Description	Vol./Tube	Diameter	Tube Type	No.of Tubes/Rotor
Without Adapter	Rotor Angle 6 × 250 ml FB ID	250 ml	62 mm	Flat Bottom	6
30559414	Adapter 1 × 175/225 ml D61 mm FA, 2 pk	175/225 ml	61 mm	Conical Bottom	6
30304373	Adapter 1 × 50 ml D29 mm RB, 2 pk	50 ml	29 mm	Round Bottom	6
30304374	Adapter 1 × 50 ml D30 mm FA, 2 pk	50 ml	30 mm	Conical Bottom	6
30304372	Adapter 2 × 30 ml D26 mm RB, 2 pk	30 ml	26 mm	Round Bottom	12
83041032▲	Adapter 1 × 25 ml D29 mm FA, 2 pk	25 ml	29 mm	Conical Bottom	6
30304371	Adapter 4 × 15 ml D17 mm FA, 2 pk	15 ml	17 mm	Conical Bottom	24
30304370	Adapter 5 × 10 ml D16 mm RB, 2 pk	10 ml	16 mm	Round Bottom	30
30304369	Adapter 8 × 1.5/2.0 ml D11 mm, 2 pk	1.5/2.0 ml	11 mm	Microtube	48
30559412	Adapter 15 × 1.5/2.0 ml D11 mm MTB, 2 pk	1.5/2.0 ml	11 mm	Microtube	90

▲Only possible with Adapter 30304374

	Order No.	30314826			
	Description	Rotor Angle 6 × 85 ml RB ID			
	Max. Speed	13000 rpm			
	Max. RCF	21726 x g			
<b>Accessories</b>					
Order No.	Description	Vol./Tube	Diameter	Tube Type	No.of Tubes/Rotor
Without Adapter	Rotor Angle 6 × 85 ml RB ID	85 ml	38 mm	Round Bottom	6
30314895	Adapter 1 × 50 ml D29 mm RB, 2 pk V1	50 ml	29 mm	Round Bottom	6
30314896	Adapter 1 × 50 ml D29 mm FA, 2 pk	50 ml	29 mm	Conical Bottom	6
30314894	Adapter 1 × 30 ml D25 mm RB, 2 pk	30 ml	25 mm	Round Bottom	6
83041032▲	Adapter 1 × 25 ml D29 mm FA, 2 pk	25 ml	29 mm	Conical Bottom	6
30314899	Adapter 1 × 16 ml D18 mm RB, 2 pk	16 ml	18 mm	Round Bottom	6
30314897	Adapter 1 × 15 ml D17 mm FA, 2 pk	15 ml	17 mm	Conical Bottom	6
30314898	Adapter 2 × 15 ml D17 mm RB, 2 pk	15 ml	17 mm	Round Bottom	12
30314893	Adapter 1 × 15 ml D17 mm RB, 2 pk	15 ml	17 mm	Round Bottom	6

▲Only possible with Adapter 30314896


# FRONTIER™ 5830R High-Speed Multi-Pro Centrifuges

	Order No.	30314829
	Description	Rotor Angle 10 × 50 ml FA ID
	Max. Speed	10500 rpm
	Max. RCF	16022 x g

#### Accessories


Order No.	Description	Vol./Tube	Diameter	Tube Type	No.of Tubes/Rotor
Without Adapter	Rotor Angle 10 × 50 ml FA ID	50 ml	29 mm	Conical Bottom	10
83041032	Adapter 1 × 25 ml D29 mm FA, 2 pk	25 ml	29 mm	Conical Bottom	10
30472300	Adapter 1 × 15 ml D17 mm RB, 2 pk V1	15 ml	17 mm	Round Bottom	10
30472307	Adapter 1 × 15 ml D17 mm FA, 2 pk V1	15 ml	17 mm	Conical Bottom	10
30130889▲	Adapter 1 × 7 ml D13 mm RB/Vac/Sar, 2 pk	7 ml	13 mm	Round Bottom/Vacutainer®/Sarstedt	10
30130890▲	Adapter 1 × 5 ml D13 mm RB/Vac/Sar, 2 pk	5 ml	13 mm	Round Bottom/Vacutainer®/Sarstedt	10
30130886▲	Adapter 1 × 1.5/2.0 ml D11 mm, 6 pk	1.5/2.0 ml	11 mm	Microtube	10

▲Only possible with Adapter 30472300

	Order No.	30314832
	Description	Rotor Angle 30 × 15 ml RB/FA ID
	Max. Speed	4500 rpm
	Max. RCF	2830/2467 x g

#### Accessories


Order No.	Description	Vol./Tube	Diameter	Tube Type	No.of Tubes/Rotor
Without Adapter	Rotor Angle 30 × 15 ml RB/FA ID	15 ml	17 mm	Round Bottom/Conical Bottom	30
30130889	Adapter 1 × 7 ml D13 mm RB/Vac/Sar, 2 pk	7 ml	13 mm	Round Bottom/Vacutainer®/Sarstedt	30
30130890	Adapter 1 × 5 ml D13 mm RB/Vac/Sar, 2 pk	5 ml	13 mm	Round Bottom/Vacutainer®/Sarstedt	30
30130886	Adapter 1 × 1.5/2.0 ml D11 mm, 6 pk	1.5/2.0 ml	11 mm	Microtube	30

	Order No.	30314824
	Description	Rotor Swing out 2 × 3 MTP w/bucket ID
	Max. Speed	4500 rpm
	Max. RCF	2716 x g

#### Accessories

Order No.	Description	Vol./Tube	Diameter	Tube Type	No.of Tubes/Rotor
<b>MTP Bucket and accessories</b>					
Without Adapter	Rotor Swing out 2 × 3 MTP w/bucket ID	-	-	-	-
30314890	Bucket 3 × MTP, 2 pk	-	-	MTP	6
30314891	Adapter 48 × 1.5/2.0 ml D11 mm, 2 pk	1.5/2.0 ml	11 mm	Microtube	96


# FRONTIER™ 5830R High-Speed Multi-Pro Centrifuges

	Order No.	30314827
	Description	Rotor Angle 4 x 85 ml RB ID Hi
	Max. Speed	20000 rpm
	Max. RCF	41137 x g

#### Accessories


Order No.	Description	Vol./Tube	Diameter	Tube Type	No.of Tubes/Rotor
Without Adapter	Rotor Angle 4 x 85 ml RB ID Hi	85 ml	38 mm	Round Bottom	4
30314895	Adapter 1 x 50 ml D29 mm RB, 2 pk V1	50 ml	29 mm	Round Bottom	4
30314896*	Adapter 1 x 50 ml D29 mm FA, 2 pk	50 ml	29 mm	Conical Bottom	4
30314894	Adapter 1 x 30 ml D25 mm RB, 2 pk	30 ml	25 mm	Round Bottom	4
30314899	Adapter 1 x 16 ml D18 mm RB, 2 pk	16 ml	18 mm	Round Bottom	4
30314897*	Adapter 1 x 15 ml D17 mm FA, 2 pk	15 ml	17 mm	Conical Bottom	4
30314898	Adapter 2 x 15 ml D17 mm RB, 2 pk	15 ml	17 mm	Round Bottom	8
30314893	Adapter 1 x 15 ml D17 mm RB, 2 pk	15 ml	17 mm	Round Bottom	4

\*Only without rotor lid

	Order No.	30314831
	Description	Rotor Angle 6 x 50 ml RB ID Hi
	Max. Speed	21000 rpm
	Max. RCF	41410 x g

#### Accessories


Order No.	Description	Vol./Tube	Diameter	Tube Type	No.of Tubes/Rotor
Without Adapter	Rotor Angle 6 x 50 ml RB ID Hi	50 ml	29 mm	Round Bottom	6
30130891	Adapter 1 x 30 ml D26 mm, 2 pk	30 ml	26 mm	Round Bottom	6
30130892	Adapter 1 x 16 ml D18 mm, 2 pk	16 ml	18 mm	Round Bottom	6
30314892	Adapter 1 x 15 ml D17.5mm FA, 2 pk	15 ml	17.5 mm	Conical Bottom	6
30130893	Adapter 1 x 15 ml D17 mm, 2 pk	15 ml	17 mm	Round Bottom	6

	Order No.	30314833
	Description	Rotor Angle 20 x 10 ml RB ID Hi
	Max. Speed	16000 rpm
	Max. RCF	28045 x g

#### Accessories


Order No.	Description	Vol./Tube	Diameter	Tube Type	No.of Tubes/Rotor
Without Adapter	Rotor Angle 20 x 10 ml RB ID Hi	10 ml	16 mm	Round Bottom	20

# FRONTIER™ 5830R High-Speed Multi-Pro Centrifuges

	Order No.	30314836
	Description	Rotor Angle 30 × 1.5/2.0 ml ID
	Max. Speed	20000 rpm
	Max. RCF	30368 x g

#### Accessories

Order No.	Description	Vol./Tube	Diameter	Tube Type	No.of Tubes/Rotor
Without Adapter	Rotor Angle 30 × 1.5/2.0 ml ID	1.5/2.0 ml	11 mm	Microtube	30
30130885	Adapter 1 × 0.5 ml D8 mm, 6 pk	0.5 ml	8 mm	Microtube	30
30130884	Adapter 1 × 0.2/0.4 ml D6 mm, 6 pk	0.2/0.4 ml	6 mm	Microtube	30

	Order No.	30314839
	Description	Rotor Angle 12 × 1.5/2.0 ml ID
	Max. Speed	30000 rpm
	Max. RCF	65395 x g

#### Accessories

Order No.	Description	Vol./Tube	Diameter	Tube Type	No.of Tubes/Rotor
Without Adapter	Rotor Angle 24 × 1.5/2.0 ml ID	1.5/2.0 ml	11 mm	Microtube	12
30130885	Adapter 1 × 0.5 ml D8 mm, 6 pk	0.5 ml	8 mm	Microtube	12
30130884	Adapter 1 × 0.2/0.4 ml D6 mm, 6 pk	0.2/0.4 ml	6 mm	Microtube	12
30314900	Adapter 1 × 1.5 ml for over 23000 × g, 6 pk	1.5 ml	11 mm	Microtube	12

# FRONTIER™ 5830R *High-Speed Multi-Pro Centrifuges*

## Other Standard Features and Equipment

Microprocessor control, Imbalance switch-off, Audible signal at the end of each run with melody options, Emergency release, 99 memory sets, Ten acceleration and ten deceleration rates, Pre-selection of running time from 10 sec to 99 hr 59 min or continuous, Quick spin for short runs.

## Compliance

See Declaration of Conformity available CE Declarations | OHAUS

## \*Intended Use

This centrifuge and its accessories are an in vitro diagnostic medical device within the meaning of the In Vitro Diagnostic Medical Devices Regulation (EU) 2017/746. This centrifuge is intended for the separation of mixtures of substances of different densities, in particular for the preparation and processing of samples from the human body in the context of an in vitro diagnostic application, in order to enable the intended use of the in vitro diagnostic medical device.

These centrifuges are intended exclusively for use in closed rooms under supervision and for operation by trained specialist personnel.

Only the rotors and cups and other accessories specified in the instructions for use may be used. Any other use or use beyond this is considered improper use. We are not liable for any resulting damage. The contents of the operating instructions must be observed.

## Contraindication

This centrifuge and its accessories are intended exclusively for the above-mentioned purpose and must not be used to determine any measured values. After centrifugation, no components of human origin may be implanted or administered back into the body.