

### 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 17000 x 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.

## FRONTIER™5513&5513R High-Speed Micro Centrifuges

# 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 17317 x g for FC5513 and 17157 x g for FC5513R
- Speeds up to 13500 rpm in less than 15 seconds with 24 x 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°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 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 x 1.5/2.0 ml or 24 x 1.5/2.0 ml
- Compatible with up to 7 rotor option and maximum rotor capacity of 24 x 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™55I3&55I3R High-Speed Micro Centrifuges

### **Specifications**

| Model                                  |                        | FC5   | 513                      | FC55                     | 13R                 |  |
|--|------------------------|---|--------------------------|--------------------------|---------------------|--|
| Order No.                              |                        | 230V: 83041571  | 120V: 83041572           | 230V: 83041578           | 120V: 83041579      |  |
| Speed Range                            |                        | 200 rpm – 13500 rpm; 10 rpm / increments  |                          | 200 rpm – 14500 rpm;     | 10 rpm / increments |  |
| Maximum RCF                            |                        | 17317 x g; 10 x g / increments  |                          | 17157 x g; 10 x          | g / increments      |  |
| Maximum Capacity (Rotor)               |                        |   | Angle Rotor: 2           | 24 x 1.5/2.0 ml          |                     |  |
| Temperature Range                      |                        | Air co  | poled                    | -20 °C to 40 °C, 1       | °C/ increments      |  |
| Refrigerant                            |                        | N,  | /A                       | R290 (Pr                 | opane)              |  |
| Running Time                           |                        |   | Quick Spin, 10 sec to 99 | hr 59 min, or continuous |                     |  |
| Noise Level (depending o               | n the rotor)           | ≤ 60 +  | 2 dB(A)                  | ≤ 56 + 2                 | 2 dB(A)             |  |
| Acc/Dec Levels                         |                        |   | 10                       | /10                      |                     |  |
| Allowable Density at Max               | imum Speed             |   | 1.2 g/ml                 |                          |                     |  |
| Allowable Kinetic Energy               |                        | 2129 Nm   |                          | 2266 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                    |                        | 1.05 A  | 1.9 A                    | 1.8 A                    | 1.9 A               |  |
| Power Consumption                      |                        | 170 W   |                          | 320 W                    |                     |  |
| Dimensions (W x D x H)                 |                        | 277 x 351 x 231 mm  |                          | 280 x 555 x 287 mm       |                     |  |
| Net Weight (without roto               | r)                     | 14 kg   |                          | 33 kg                    |                     |  |
| Shipping Dimensions (W                 | x D x H)               | 370 x 460 x 360 mm  |                          | 390 x 690 x 390 mm       |                     |  |
| Shipping Weight (withou                | t rotor)               | 14 kg 38 kg   |                          | kg                       |                     |  |
|  | Environment            |   | For indoo                | r use only               |                     |  |
| Ambiant and ditions                    | Altitude               |   | Use up to an alt         | itude of 2000 m          |                     |  |
| Ambient conditions<br>(EN/IEC 61010-1) | Ambient temperature    |   | 5 °C up                  | to 35 ℃                  |                     |  |
|  | Max. relative humidity | Max. relative humidity 80 % for temperatures up to 31°C,<br>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 ha             | zardous environments   | 1   |                          |                          |                     |  |

### **Accessories**



| Order No.       | 30472302                                |           |  |  |
|-----------------|---|-----------|--|--|
| Description     | Rotor Angle 24 x 1.5/2.0 ml BIOSEALS V1 |           |  |  |
| Compatible with | FC5513                                  | FC5513R   |  |  |
| Max. Speed      | 13500 rpm                               | 13000 rpm |  |  |
| Max. RCF        | 17317 x g                               | 16058 x g |  |  |

| Accessories |   |
|-------------|---|
| Accessories | • |

| Order No.       | Description                             | Vol./Tube  | Diameter | Tube Type | No. of Tubes/Rotor |
|-----------------|---|------------|----------|-----------|--------------------|
| Without Adapter | Rotor Angle 24 x 1.5/2.0 ml BIOSEALS V1 | 1.5/2.0 ml | 11 mm    | Microtube | 24                 |
| 30130885        | Adapter 1 x 0.5 ml D8 mm, 6 pk          | 0.5 ml     | 8 mm     | Microtube | 24                 |
| 30130884        | Adapter 1 x 0.2/0.4 ml D6 mm, 6 pk      | 0.2/0.4 ml | 6 mm     | Microtube | 24                 |

## FRONTIER™55I3&55I3R High-Speed Micro Centrifuges



| Order No.       | 30472304                             |         |  |
|-----------------|--------------------------------------|---------|--|
| Description     | Rotor Hematocrit 24 x Capillaries V1 |         |  |
| Compatible with | FC5513                               | FC5513R |  |
| Max. Speed      | 13000 rpm                            | -       |  |
| Max. RCF        | 16058 x g                            | -       |  |

#### Accessories

| Order No.       | Description                          | Vol./Tube | Diameter | Tube Type   | No. of Tubes/Rotor |
|-----------------|--------------------------------------|-----------|----------|-------------|--------------------|
| Without Adapter | Rotor Hematocrit 24 x Capillaries V1 | -         | 1.9 mm   | Capillaries | 24                 |



| Order No.       | 30210898                            |         |  |  |
|-----------------|-------------------------------------|---------|--|--|
| Description     | Rotor Angle 24 x 2.0 ml Spin Column |         |  |  |
| Compatible with | FC5513                              | FC5513R |  |  |
| Max. Speed      | 13500 rpm                           | -       |  |  |
| Max. RCF        | 17317 x g                           | -       |  |  |

#### Accessories

| Order No.       | Description                         | Vol./Tube | Diameter | Tube Type   | No. of Tubes/Rotor |
|-----------------|-------------------------------------|-----------|----------|-------------|--------------------|
| Without Adapter | Rotor Angle 24 x 2.0 ml Spin Column | 2 ml      | 11 mm    | Spin Column | 24                 |



| Order No.       | 83041006                    |           |  |  |
|-----------------|-----------------------------|-----------|--|--|
| Description     | Rotor Angle 18 x 1.5/2.0 ml |           |  |  |
| Compatible with | FC5513                      | FC5513R   |  |  |
| Max. Speed      | -                           | 14500 rpm |  |  |
| Max. RCF        | -                           | 17157 x g |  |  |

#### Accessories

| Order No.       | Description                        | Vol./Tube  | Diameter | Tube Type | No. of Tubes/Rotor |
|-----------------|------------------------------------|------------|----------|-----------|--------------------|
| Without Adapter | Rotor Angle 18 x 1.5/2.0 ml        | 1.5/2.0 ml | 11 mm    | Microtube | 18                 |
| 30130885        | Adapter 1 x 0.5 ml D8 mm, 6 pk     | 0.5 ml     | 8 mm     | Microtube | 18                 |
| 30130884        | Adapter 1 x 0.2/0.4 ml D6 mm, 6 pk | 0.2/0.4 ml | 6 mm     | Microtube | 18                 |



| Order No.       | 83041014                             |           |  |  |
|-----------------|--------------------------------------|-----------|--|--|
| Description     | Rotor Angle 4 x 8-Place PCR Strip V1 |           |  |  |
| Compatible with | FC5513                               | FC5513R   |  |  |
| Max. Speed      | 13500 rpm                            | 13000 rpm |  |  |
| Max. RCF        | 14669 x g                            | 13602 x g |  |  |

#### Accessories

| Order No.       | Description                          | Vol./Tube | Diameter | Tube Type     | No. of Tubes/Rotor |
|-----------------|--------------------------------------|-----------|----------|---------------|--------------------|
| Without Adapter | Rotor Angle 4 x 8-Place PCR Strip V1 | 0.2 ml    | 6        | 8-w PCR Strip | 32                 |

Shortcut list:

ID – auto rotor identification FA – Conical bottom / Falcon® Hi – version with higher speed

FB – Flat bottom

Vac – Vacutainer® RB – Round bottom Sar – Sarstedt

Rim – Skirted conical bottom

### FRONTIER™55I3&55I3R High-Speed Micro 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.

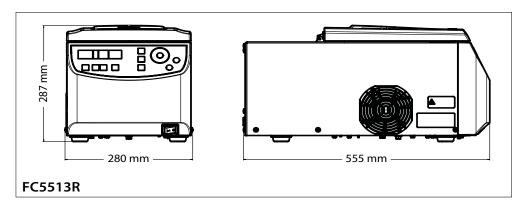
These centrifuges are intended exclusively for use in closed rooms under supervision and for operation by trained specialist personnel!

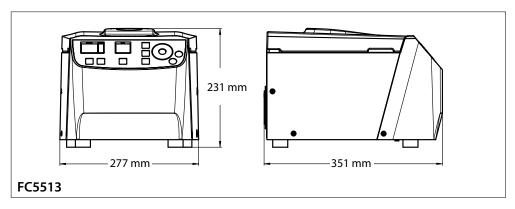
Only the rotors and cups and other accessories specified in the instructions for use may be used. Any other use or use beyond this is considered improper use. We are not liable for any resulting damage. The contents of the operating instructions must be observed.

#### 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.

#### **Outline Dimensions**





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



