Eppendorf[®] centrifuges guide



| | Microcentrifuges | | | | | | | |
|------------------------------------|------------------|-------------------|--------|--------|--------|--------|--------------|--|
| Centrifuges | | | | | | | | |
| Application | MiniSpin® | MiniSpin® plus | 5418 | 5424 | 5430 | 5415 R | 5417 R | |
| Refrigerated | - | - | - | - | - | ٠ | ٠ | |
| Page | 126 | 126 | 128 | 129 | 131 | 135 | 136 | |
| Fixed-angle rotor | | | | | | | | |
| rcf max. (x g) | 12,100 | 14,000 | 16,873 | 20,238 | 30,130 | 16,100 | 25,000 | |
| rpm max. | 13,400 | 14,500 | 14,000 | 14,680 | 17,500 | 13,200 | 16,400 | |
| Swing-bucket rotor | | | | | | | | |
| rcf max. (x g) | - | - | - | - | 2,204 | - | 10,600 | |
| rpm max. | - | - | - | - | 4,680 | - | 10,000 | |
| Drum rotor | | | | | | | | |
| rcf max. (x g) | - | - | - | - | - | - | - | |
| rpm max. | - | - | - | - | - | - | - | |
| Vessels/plates | | | | | | | | |
| 0.2–0.6 ml Eppendorf Tubes® | 12 | 12 | 18 | 24 | 30 | 36 | 30 | |
| 1.5 ml Eppendorf Tubes | 12 | 12 | 18 | 24 | 30 | 24 | 30 (F)/8 (A) | |
| 2.0 ml Eppendorf Tubes | 12 | 12 | 18 | 24 | 30 | 24 | 30 (F)/8 (A) | |
| 8-place PCR strips | 2 | 2 | - | 4 | 8 | - | 6 | |
| 15 ml Falcon® | - | - | - | - | 6 | - | - | |
| 50 ml Falcon | - | - | - | - | 6 | - | - | |
| 1.2–5 ml tubes (11 mm Ø) | - | - | - | - | - | - | - | |
| 2.6–7 ml tubes (13 mm Ø) | - | - | - | - | - | - | - | |
| 3–15 ml tubes (16 mm Ø) | - | - | - | - | - | - | - | |
| 7–17 ml tubes (17.5 mm Ø) | - | - | - | - | - | - | - | |
| 7–18 ml tubes (20 mm Ø) | - | - | - | - | - | - | - | |
| 18–30 ml tubes (26 mm Ø) | - | - | - | - | - | - | - | |
| 30–50 ml tubes (31 mm Ø) | - | - | - | - | - | - | - | |
| 50–75 ml tubes (35 mm Ø) | - | - | - | - | - | - | - | |
| 80–100 ml tubes (35 mm Ø) | - | - | - | - | - | - | - | |
| 180–250 ml tubes bottles (62 mm Ø) | - | - | - | - | - | - | - | |
| 20–30 ml Oak Ridge tubes (29 mm Ø) | - | - | - | - | - | - | - | |
| 50 ml Oak Ridge tubes (29 mm Ø) | - | - | - | - | - | - | - | |
| 85 ml Oak Ridge tubes (38 mm Ø) | - | - | - | - | - | - | - | |
| 400 ml bottles | - | - | - | - | - | - | - | |
| MTP / PCR-plates | - | - | - | - | 4*1 | - | - | |
| Deepwell plates (DWP) | - | - | - | - | - | - | - | |
| Filter plate systems | - | - | - | - | - | - | - | |

Microcentrifuges

F = Fixed Angle A = Swing Bucket T = Drum rotor * Note: the proper adapters are required to obtain maximum capacity; please check the appropriate rotor and/or adapter combination for proper capacity and sizing.

*1 М

*1 Max. loading height: 29 mm.

Eppendorf[®] centrifuges guide

| Small Medical Centrifuges | | | | Multipurpose Ber | chtop Centrifuges | | |
|---------------------------|-----------------|----------------------|----------------|------------------|-------------------|--------|----------|
| | | | | | | | |
| | 5702 | 5702 R | 5702 RH | 5804 | 5804 R | 5810 | 5810 R |
| | - | • | ●/Heated | - | • | - | • |
| | 139 | 139 | 139 | 148 | 148 | 148 | 148 |
| | | | | | | | |
| | 3,000 | 3,000 | 3,000 | 20,800 | 20,800 | 20,800 | 20,800 |
| | 4,400 | 4,400 | 4,400 | 14,000 | 14,000 | 14,000 | 14,000 |
| | | | | | | | |
| | - | - | - | 4,500 | 4,500 | 4,500 | 4,500 |
| | - | - | - | 5,000 | 5,000 | 5,000 | 5,000 |
| | | | | | | | |
| | - | - | - | 16,400 | 16,400 | 16,400 | 16,400 |
| | - | - | - | 14,000 | 14,000 | 14,000 | 14,000 |
| | | | | | | 00 (F) | (100 (T) |
| 24 (F)/16 (A) | | 30 (F)/ | | | /120 (T) | | |
| 24 (F)/16 (A) | | 30 (F)/96 | | | 6 (A)/60 (T) | | |
| 24 (F)/16 (A) | | 30 (F)/96 | | | 6 (A)/60 (T) | | |
| | | | 5 16 (A) | | 6 /48 (A) | | |
| 20 (F)/8 (A) 4 (A) | | | /8 (A) | | /20 (A) | | |
| | | + (~) | | 56 | | | 0 (A) |
| | 40 (A) (rectand | gular bucket)/16 (A) | (round bucket) | 36 | | | 0 (A) |
| | | 16 (A) (round bucket | | | | | 3 (A) |
| | | gular bucket)/16 (A) | | 48 (A) 24 (A) | | 64 (A) | |
| | | _ | , | 16 (A) | | 32 (A) | |
| | | - | | 8 (A) | | 16 (A) | |
| | | - | | 4 (A) | | 16 (A) | |
| | | - | | 4 (A) | | 8 (A) | |
| | | _ | | 4 | (A) | | (A) |
| - | | - | | 4 | (A) | | |
| - | | 6 | (F) | 6 | (F) | | |
| - | | 6 | (F) | | (F) | | |
| 4 | | 6 | (F) | | (F) | | |
| - | | | - | | (A) | | |
| | | - | | 10 (A) | | | 6 (A) |
| | | - | | | (A) | 4 (A) | |
| | | - | | 4 | (A) | 4 | (A) |

The Eppendorf 5702 family of centrifuges



Product features

- Very compact design
- Low access height
- Dials and digital display
- Automatic motorized locking of the lid
- Slow startup and braking through the SOFT function
- Stainless steel rotor chamber (rust-proof)
- Optimized airflow for proper cooling
- Conforms to the following safety and application requirements:

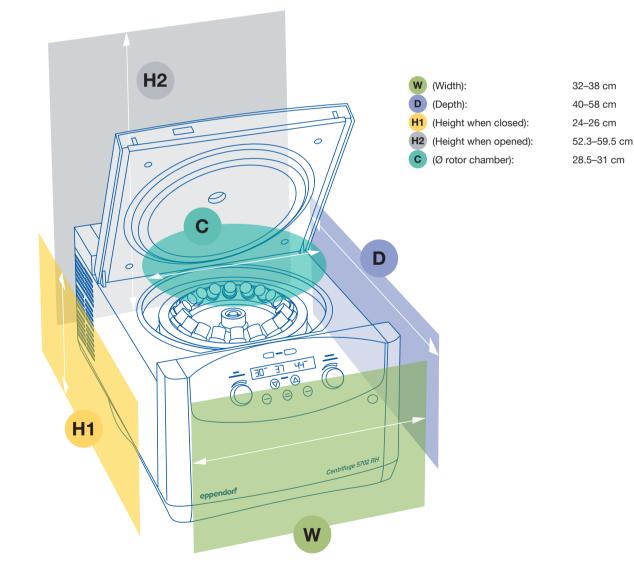
Description

Customer's needs are the reason we continue to advance our success story for the 5702 series.

We have expanded the line with the addition of two new models: the refrigerated **Centrifuge 5702 R** and the temperature controlled **Centrifuge 5702 RH**.

All 5702 models can be used in a range of settings, from the clinical lab to the cell culture lab. With various fixed-angle and swing-bucket rotors available, they can accommodate almost any kind of tube.

Another advantage is that we have designed all rotors within the 5702 line to be interchangeable.



Centrifugation | Instruments

Centrifuge 5702

Product feature

- Parameter locking
- Very silent
- "At Set" function starts timer when set speed is reached for reproducible results.
- Sight glass for quick calibration check 6 Rotor options

Description

The economical centrifuge for the clinical lab. With various fixed-angle and swing-bucket rotors and an extensive range of adapters, nearly all types of tubes can be used.



Technical specifications

| Description | Centrifuge 5702 |
|------------------------|-----------------|
| Dimensions (W x D x H) | 32 x 40 x 24 cm |
| Weight | 20 kg |
| Power supply | 230 V/50 Hz |
| Max. power requirement | 200 W |

Ordering information

| Description | Order no. |
|-------------------------------------------------------|--------------|
| Centrifuge 5702, 230 V/50 Hz, without rotor | 5702 000.019 |

Application example for Centrifuge 5702:

Rotor A-4-38,

including round bucket with adapter for Vacuette®*1, Monovette®*2 or Vacutainer®*3 2.6-7 ml for infectious samples (with aerosol-tight lid).



Clinical applications include:

- Routine centrifugation
- Plasma and serum purification

*1 Registered trademark of Greiner Bio-One.
 *2 Registered trademark of Sarstedt.
 *3 Registered trademark of Becton Dickinson.

Technical specifications subject to change.



Centrifuge 5702 R (refrigerated)

Product features

- Adjustable from
 -9 °C to 40 °C
- Standby refrigeration
- "Fast Cool" function
- Very silent

"At Set rpm" function
Two programming keys to store routine procedures (back-lit in blue)

Description

This model has all the product characteristics that make refrigerated Eppendorf centrifuges so outstanding:

You can quickly reach the desired temperature by using the "fast temp" function. Like-wise, standby refrigeration will maintain a particular temperature following use. Precise centrifugation is made possible through the "at set rpm" function, time is counted down once the set rpm is reached. As a result, different centrifugal runs can be more easily reproduced.



Technical specifications

| Description | Centrifuge 5702 R |
|------------------------|-------------------|
| Dimensions (W x D x H) | 38 x 58 x 26 cm |
| Weight | 36 kg |
| Power supply | 230 V/50 Hz |
| Max. power requirement | 380 W |

Ordering information

| Description | Order no. | |
|-----------------------------------------------------------------------|--------------|---|
| Centrifuge 5702 R, 230 V/50 Hz, without rotor, refrigerated | 5703 000.012 | 4 |

Application example for Centrifuge 5702 R:

Rotor F-35-30-17, including 30 steel sleeves for Falcon® 20 x 15 ml tubes



Molecular biology applications include:

- Centrifugation of cell cultures
- Safe holding at 4 °C
- Spin down centrifugation of bacterial suspension

Centrifuge 5702 RH (temperature-controlled)

Product features

Temperature adjustable from -9 °C to 42 °C
Immediately ready-for-use via standby heating/refrigeration
Temperature holds steady at 4 °C and at 37 °C ± 1 °C

Description

Active heating
 More precise temperature control, software-controlled (rotor-dependent)

For active cells, Eppendorf offers a centrifuge with unique temperature control capabilities. It is the first centrifuge from Eppendorf that can consistently maintain special temperatures above room temperature. Temperature-sensitive cells or cell cultures can be centrifuged at defined temperatures, particularly at 37 °C.



Technical specifications

| Description | Centrifuge 5702 RH |
|------------------------|--------------------|
| Dimensions (W x D x H) | 38 x 58 x 26 cm |
| Weight | 36 kg |
| Power supply | 230 V/50 Hz |
| Max. power requirement | 380 W |

Ordering information

| Description | Order no. |
|--------------------------------------------------------------------------------------|--------------|
| Centrifuge 5702 RH, 230 V/50 Hz, without rotor, refrigerated and heated | 5704 000.016 |

Application example for Centrifuge 5702 RH:

Rotor F-45-24-11 or F-45-18-17 Cryo, and adapter



Human medicine applications include:

- Gentle centrifugation of sperm (IVF labs)
- Safe holding at 4 °C
- Spin down centrifugation of
- temperature-sensitive human cells



Displays of the 5702 Centrifuges

All 5702 centrifuges have a user-friendly control panel with a small number of clearly-labeled function keys/knobs and an easy-to-read LCD display.



Simple operation

Large dials and an easy-to-read display
Switch between rpm/rcf
Speed can be set from 100 rpm to a max. of 4,400 rpm, increments of 100
Separate "short-spin" button
Timer can be set for up to 99 minutes
Continuous mode can be selected

Temperature control versions: Two programming keys to store routine procedures Separate "fast-temp" key

Display of Centrifuge 5702



Display of Centrifuges 5702 R and 5702 RH

Fixed-angle Angle of Ø Tube/ Ø tube/adapter **Rotor code:** Swing-bucket rotor adapter bore Adapter roto Т T 1 I All Eppendorf® rotors are identified a simple, alphanumeric format that represents the technical specifications in a uniform series of letters and numbers. F 45 30 P Α 8 Δ Т T Т Aerosol-tight Max. no. tubes/ Max. no. version adapters buckets/adapters

Swing-bucket rotors for Centrifuges 5702/5702 R/5702 RH

Swing-bucket rotor A-4-38

Maximum rcf: 3,000 x g
Aluminum rotor available with and without round buckets
Four aerosol-tight round

buckets with 85 ml capacity

Aerosol-tight lids*1
Optional: 4 rectangular buckets with 90 ml capacity
High g-forces even with short tubes

^{*1} Tested by the Centre for Applied Microbiology & Research (CAMR), Porton Down, Great Britain.

Swing-bucket rotor A-8-17

 Maximum rcf: 2,800 x g
 For centrifugation of
 15 ml Falcon[®] tubes and glass centrifuge tubes • Optional: inserts to fit test tubes (sold separately)



Ordering information

| Rotor models and accessories | Max. rotational speed (rpm) | Max. rcf (x g) | Order no. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------------------|--------------------------------------------------------------|
| A-4-38 | | | |
| with 4 x 85 ml round buckets without round buckets | 4,400 4,400 | 3,000 3,000 | 5702 720.003 5702 740.004 |
| 4 Round buckets, 85 ml 2 Round buckets, 85 ml 4 Rectangular buckets*², 90 ml 2 Rectangular buckets*², 90 ml | | | 5702 722.006 5702 761.001 5702 709.000 5702 762.008 |
| Aerosol-tight lids for 85 ml round buckets, set of 2 | | | 5702 721.000 |
| Rubber cushions for adapter 5702 737.003, set of 20 for adapter 5702 735.000, set of 20 for adapter 5702 724.009 (models before 2003), set of 16 | | | 5702 741.000 5702 742.007 5702 759.007 |
| A-8-17 | | | |
| 8 x 15 ml | 4,400 | 2,800 | 5702 700.002 |
| 8 Adapters, for 15 ml Falcon [®] tubes 8 Rubber cushions, for 15 ml | | | 5702 702.005 5702 701.009 |

*2 Not for use with aerosol-tight lids.

®: Falcon is a registered trademark of Becton Dickinson.

Fixed-angle rotors for Centrifuges 5702/5702 R/5702 RH

Fixed-angle rotor F-35-30-17

 Maximum rcf: 2,750 x g
 Aluminum rotor available with 10 or 30 steel sleeves, depending on the number of samples (max. 20 x 15 ml Falcons®) Centrifugation of 15 ml Falcon[®] tubes and glass test tubes
 Supplied inserts allow symmetrical heterogeneous loading



Fixed-angle rotor F-45-24-11

 Maximum rcf: 1,770 x g
 Low-noise centrifugation, even without rotor lid
 Centrifugation of 1.5 ml and 2 ml Eppendorf Tubes[®] Adapter for:
0.2 ml PCR tubes
0.4 ml centrifuge tubes
0.5 ml micro test tubes and
0.6 ml Microtainer[®] tubes
Rotor and adapter are autoclavable (121 °C, 20 min)



Fixed-angle rotor F-45-18-17-Cryo

 Maximum rcf: 1,840 x g
 Low-noise centrifugation, even without rotor lid
 Centrifugation of 1–2 ml Cryotubes[®] (max. 13 mm Ø, use with adapter) and screw-cap centrifugation tubes (max. 17 mm Ø, adapter not needed) Rotor and adapter are autoclavable (121 °C, 20 min)



Ordering information

| Rotor models and accessories | Max. rotational speed (rpm) | Max. rcf (x g) | Order no. |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------------------|----------------------------------------------|
| F-35-30-17 | | | |
| incl. 30 steel sleeves for 15 ml tubes with 20 Falcon [®] adapters and 30 rubber cushions | 4,400 | 2,750 | 5702 704.008 |
| incl. 10 steel sleeves for 15 ml tubes with 10 Falcon [®] adapters and 10 rubber cushions | 4,400 | 2,750 | 5702 705.004 |
| Steel sleeves for 15 ml tubes, set of 10 Adapters, for 15 ml Falcon [®] , conical, set of 10 Rubber cushion, for 15 ml round bottom tubes, set of 4 | | | 5702 707.007 5702 706.000 5702 708.003 |
| F-45-24-11 | | | |
| Fixed-angle rotor 24 x 1.5/2 ml, without lid | 4,400 | 1,770 | 5702 746.002 |
| F-45-18-17-Cryo | | | |
| without lid w/o adapters | 4,400 | 1,840 | 5702 747.009 |
| 6 Adapters, for 1–2 ml Cryotubes Ø 13 mm | | | 5702 752.002 |

®: Falcon is a registered trademark of Becton Dickinson.

Rotors and accessories for Centrifuges 5702/5702 R/5702 RH

| | & |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | t rotor A-4-38 |
| | und buckets*1 20.003 |
| | |
| | |
| Aerosol-tight lid | Round bucket*1 retrofit kit |
| 2 pieces | 4 buckets with 85 ml capacity |
| 5702 721.000 | 5702 722.006 |
| | |
| | |
| Swing-bucket rotor A-4-38 | Rectangular bucket*1 |
| | 4 buckets of 90 ml capacity |
| 5702 740.004 | 5702 709.000 |
| Registered trademark of Becton Dickinson. | |
| *1 Swing-bucket rotors are delivered with buckets of which together do not exceed a maximum weigh Rectangular bucket sets are delivered with buck tho together do not exceed a maximum of 0.2 The following applies to rotors with round bucket The total weight of a loaded bucket (including ac The weight given on the rotor applies to buckets | t of 0.19 kg, can be put in one round bucket. ets of one weight class. Adapters and tubes, 4 kg, can be put in one rectangular bucket. Is, as well as to rotors with rectangular buckets: lapter and filled tubes) may not exceed 0.38 kg. |

| Tube type | | | |
|--------------------------------------------------------------|--------------|--------------|--|
| | | | |
| Volumes (ml) | 1.5–2.0 | 1.1–1.4 | |
| Adapter | | | |
| Maximum tube length for all positions below the lid (mm)*2 | - | 100 | |
| Maximum tube length for all positions without the lid (mm)*2 | - | 100 | |
| Number of tubes per adapter/per rotor | 4/16 | 5/20 | |
| Adapter bore (Ø mm) | 11 | 8.5 | |
| Maximum rcf (g-force) | 2,900 | 2,850 | |
| Centrifugation radius (mm) | 134 | 132 | |
| Bottom shape | round | flat | |
| Order no. | 5702 745.006 | 5702 736.007 | |
| (set of 2 adapters) | | | |

| Tube type | | |
|--------------------------------------------------------------|--------------|--------------|
| Volumes (ml) | 5–7 | 9 |
| Adapter | | |
| Maximum tube length for aerosol-tight lid use (mm)*2 | 100 | 100 |
| Maximum tube length for all positions without the lid (mm)*2 | - | - |
| Number of tubes per adapter/per rotor | 10/40 | 8/32 |
| Adapter bore (Ø mm) | 13 | 14.5 |
| Maximum rcf (g-force) | 2,750 | 2,750 |
| Centrifugation radius (mm) | 127 | 127 |
| Bottom shape incl. rubber mat | flat | flat |
| Order no. | 5702 710.008 | 5702 711.004 |
| (set of 2 adapters) | | |

^{*2} If the maximum tube length is exceeded, the loading capacity of the adapter may be reduced. Please perform a manual swing test.

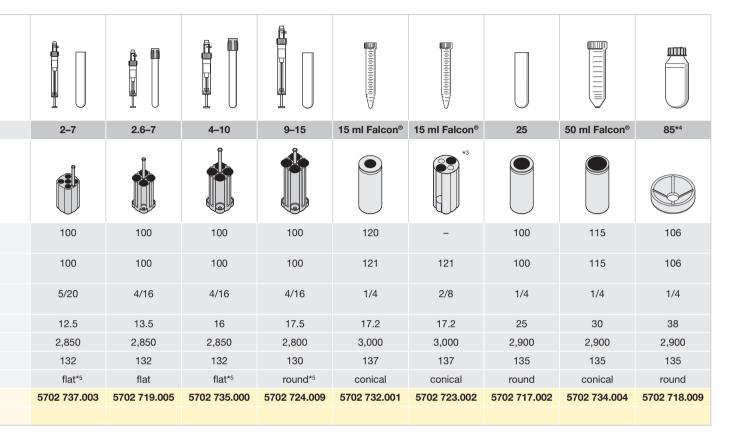
*3 Warning: Aerosol-tight centrifugation not possible.

*4 Nominal volume

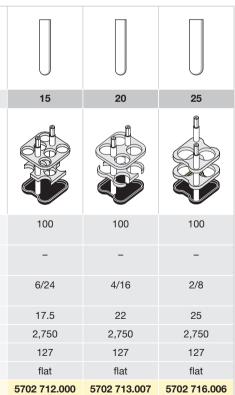
 $^{\ast 5}$ w/o rubber cushion. Rubber cushion available as accessories. See page 178.

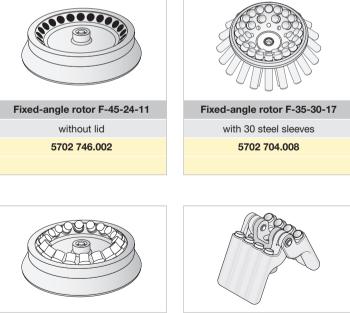
Adapter, caps and rotor are autoclavable at 121 °C 20 min.





Rotors and accessories for Centrifuges 5702/5702 R/5702 RH





Fixed-angle rotor F-45-18-11-cryo without lid

5702 747.009



