

Heraeus

# GENERAL PURPOSE CENTRIFUGES MEGAFUGE 1.0/1.0 R

Ideal for routine work



Quality Products – Lifetime Care

 Kenco  
Laboratory Products

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www.supplylab.pt

### Typical Applications

- Serological testing
- Cell biology testing
- Separating blood components
- Analyzing minute sample volumes
- Radioimmunoassays
- Preparing cell cultures
- Separating infectious and toxic suspensions
- Precipitating particles from medical and biological liquids (cyto centrifugation)

### Megafuges

- Induction drive
- Microprocessor control
- Max. RCF: 6,240 x g
- Max. capacity: 4 x 400 ml
- Swing-out rotor with extensive range of buckets
- Sealed rotor safely contains aerosols, bacteria and viruses
- Flexible CENTRI-LAB® systems for all sample volumes
- Cyto centrifugation
- Biocontainment accessories

### Refrigerated Megafuge

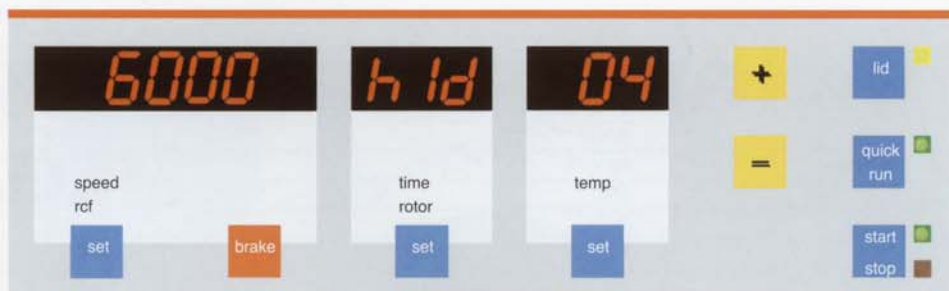
- Environmentally friendly CFC-free refrigerant
- Minimum sample temperature of 0 – 4 °C at maximum speed
- Maximum RCF of 17,860 x g for centrifuging microliter tubes



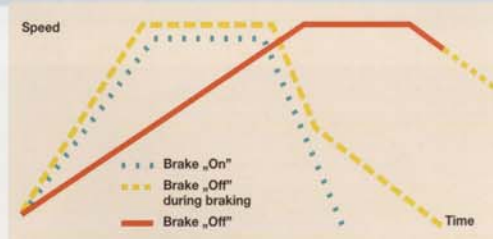
Megafuge 1.0 R – general purpose refrigerated tabletop centrifuge

## MEGAFUGES: THE IDEAL SOLUTION FOR ALL LABORATORY SEPARATION PROCESSES

Heraeus® Megafuge 1.0 and refrigerated Megafuge 1.0 R general purpose centrifuges are ideal for all routine laboratory separation processes.



The microprocessor controller MEGACONTROL II with digital display allows pre-selection of temperature (Megafuge 1.0 R), time, speed and RCF. The soft-start and soft-brake functions ensure gentle centrifugation of sensitive samples.



Megafuges 1.0 and 1.0 R can handle up to 48 blood collection tubes or 12 conical tissue culture tubes (50 ml).

### Maintenance Free

All Megafuges are driven by a frequency-controlled induction motor. This ensures extremely quick braking and acceleration and a long service life. The drive requires virtually no maintenance – there are no carbon brushes to be replaced, and dust build-up is low.

### Smooth Operation

In designing the Megafuge, our engineers used an innovative material for the base of the centrifuge housing. This material, called "Centricast", guarantees extremely smooth and quiet operation.

### Environmentally Friendly

The cooling system of the Megafuge 1.0 R uses the environmentally friendly CFC-free refrigerant R 134a.

### Convenient Operation

Thanks to the MEGACONTROL II microprocessor controller, Megafuges are extremely easy to use and permit results to be reproduced with a high degree of accuracy. The conveniently arranged control buttons and easy-to-read digital displays ensure simple operation and prevent errors.

With the push of a button, the centrifuge displays the current RCF value. The RCF value can also be preset.

A quick-run function has been included for short spins. When working with highly sensitive samples, the soft-brake function ensures gentle processing. The cut-off time for braking can be preset as well.

### Built-In Safety

All Megafuges are specially designed with the rotor chamber inside a protective housing, and are equipped with an automatic lid lock and lid interlock. Of course, they also meet all international safety standards.

### Easy to Service

Megafuges are designed for day-to-day laboratory use. The drive requires virtually no maintenance.

The centrifuges are equipped with a digital self diagnosis system for constant status monitoring. If a fault is detected, a signal immediately appears.



# EXTENSIVE RANGE OF ACCESSORIES

## Highly Versatile Swing-Out Rotor

Thanks to an exceptionally large range of accessories, Megafuges can be used for a wide range of applications. The 4-place swing-out rotor can be used with various carrier systems: round buckets with aerosol tight caps, carriers for microplates and two rectangular buckets.

## Biosafe Round Buckets

Aerosol-tight buckets and a variety of adapters are available for the high-volume swing-out rotor. The round buckets, tested using the Porton Down Test<sup>1)</sup>, offer a maximum capacity of 400 ml. All aerosol tight buckets are equipped with a transparent lid. The operator will therefore immediately notice if a tube has broken.

## Sealed Rotor

The 4-place sealed rotor safely contains aerosols, guaranteeing maximum operational safety. This means that infectious matter can neither enter the centrifuge nor escape into the environment. A broken tube can be detected immediately through the clear polycarbonate lid. In this situation, the entire rotor can be autoclaved while still closed.

The CENTRI-LAB type A tube rack can be used as a universal adapter system.

## CENTRI-LAB System

Kendro offers the flexible CENTRI-LAB system in various sizes and with uniform color coding. This system can be used with all round and rectangular buckets.

These racks distinguish themselves through high mechanical and chemical resistance, and can also be autoclaved.

Special adapters are available for centrifuging large tubes in round buckets.

## High-Speed Microliter Centrifugation

The refrigerated Megafuge can be equipped with an aerosol-tight 18-place 1.5/2.0 ml microliter rotor (15.000 rpm max.). The rotor is supplied complete with 3 adapter sets for safe centrifugation of all standard microliter tubes with volumes from 0.2 to 2.0 ml.

If you plan to use the microliter rotor on a regular basis, you may wish to consider our reasonably priced Biofuge fresco and Biofuge pico microliter centrifuges.

## Safety Trolleys

Safety trolleys for the Megafuges are available in two heights. As a result, it is possible to use them as underbench models or as mobile tabletop centrifuges. Both trolleys provide additional storage space.

## Cyto Centrifugation

Cyto accessories, used for centrifuging samples on microscopic slides, are compatible with all Megafuges. They can be used with both the sealed rotor and rectangular buckets 75002252 and 75008030.

For more information please refer to our "Cyto Accessories" brochure.

<sup>1)</sup> Porton Down Test: Microbiological test in which tubes are deliberately broken during centrifugation to determine the effectiveness of an accessory's aerosol tightness.

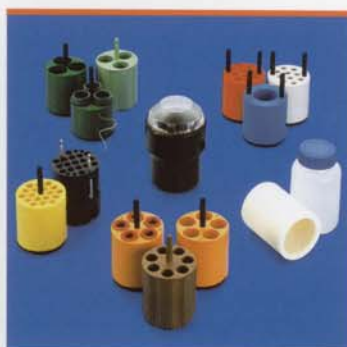


# Swing-Out Rotor for Megafuges 1.0/1.0 R

## Swing-out rotor 75002704 for Megafuges 1.0/1.0 R

Carrier system Order no.		Round bucket 75007570	Rectangular bucket 75002252	Rectangular bucket 75008030	Microplate carrier 75006447
Cap	order number	75007584	–	incl.	–
CENTRI-LAB	type	E	A	A	–
Max. capacity	ml	4 x 400	48 x 15	48 x 15	4 x 2 plate 50 mm height each
Max. speed	rpm	4,000	4,000	4,000	4,000
Max. RCF	x g	3,345	3,020	3,220	2,800
Min. temp at max. speed	°C	–/4 <sup>1)</sup>	–/0 <sup>1)</sup>	–/2 <sup>1)</sup>	–/0 <sup>1)</sup>
Max. acceleration time	s	50	45	55/50 <sup>1)</sup>	41
Min. braking time	s	45	45/55 <sup>1)</sup>	45/55 <sup>1)</sup>	65
Max. radius	cm	18.7	16.9	18.0	15.5

<sup>1)</sup> Values apply to non-refrigerated/refrigerated centrifuge.



Microplate carrier  
75006447



Round bucket 75007570 with  
aerosol tight cap 75007584 and  
adapters

## Type E Adapter for Round Bucket 75007570

### Accessories for swing-out rotor 75002704 with bucket 75007570<sup>1)</sup>

Nominal volume of tube	ml	1.5/2.0	7	7	15	15	15	25	25	50	50	100	250	400
No. of tubes per adapter	ea.	34	10	18	7	10	5	5	3	3	3	1	1	–
No. of tubes per rotor	ea.	136	40	72	28	40	20	20	12	12	12	4	4	4
Tube type <sup>2)</sup>		ML	Blood C.	DIN	Con.	DIN	US Urine	DIN	Univ.	DIN	Con.	DIN	Bottle	Bottle
Max. length of tube	mm	46	123	123	119	122	123	121	120	120	119	134	135	135
Bore of tube	mm	11	14	13	17	17	16.5	25	25.5	34.5	29	45	62	81
Diameter of cap	mm	–	18	14	23	18	27.5	29	32	36	37.5	59	–	–
Color of adapter		black	grey	yellow	brown	red	or./red	orange	green	green	green	blue	nat.	–
Tube order no. (7500XXXX) <sup>3)</sup>		1163 <sup>4)</sup>	–	9001 <sup>5)</sup>	2858 <sup>6)</sup>	9003 <sup>7)</sup>	–	9006 <sup>8)</sup>	– <sup>9)</sup>	9005 <sup>10)</sup>	2844 <sup>11)</sup>	9007 <sup>12)</sup>	7894 <sup>13)</sup>	7583 <sup>14)</sup>
Adapter order no. (7500XXXX) <sup>15)</sup>		7578	7579	7571	7576	7572	7581	7573	7580 <sup>16)</sup>	7574	7577	7575	7582	–
Shape of adapters														

## Typ A Adapter for Rectangular Buckets 75008030 and 75002252

### Accessories for swing-out rotor 75002704 with bucket 75008030 and 75002252

Nominal volume of tube	ml	1.5	7	7	15	15	15	25	25	50	50	50	50	100	150
No. of tubes per adapter	ea.	40	20	12	11	6	12	5	4	2	2	2	1	1	1
No. of tubes per rotor	ea.	160	80	48	44	24	48	20	16	8	8	8	4	4	4
Tube type <sup>2)</sup>		ML	DIN	Blood C.	Blood C.	Con.	DIN	DIN	Univ.	DIN	Con.	Univ.	Oil Test	DIN	DIN
Max. tube length for #8030	mm	45	115	117	117	120	115	115	120	115	120	120	–	120	110
Max. tube length for #2252	mm	45	100	100	100	–	100	100	100	100	117	–	–	110	110
Bore of tube	mm	11	13	14	17	17	17	25	25.5	35	29.5	29.5	–	45	55
Diameter of cap	mm	–	14	18	19.5	22	18	25.5	31	36	37.5	37.5	–	48	–
Color of adapter		black	yellow	grey	white	brown	red	orange	green	green	green/y.	green/y.	nat.	blue	grey
Tube order no. (7500XXXX) <sup>3)</sup>		1163 <sup>4)</sup>	9001 <sup>5)</sup>	–	–	2858 <sup>6)</sup>	9003 <sup>7)</sup>	9006 <sup>8)</sup>	– <sup>9)</sup>	9005 <sup>10)</sup>	2844 <sup>11)</sup>	–	3113 <sup>12)</sup>	9007 <sup>13)</sup>	1132 <sup>14)</sup>
Adapter order no. (7500XXXX)		5335	5321	5330	5327	5387 <sup>15)</sup>	5322	5323	5391	5324	5386	5389 <sup>16)</sup>	5339	5325	5326
Shape of adapters															

<sup>1)</sup> Aerosol tight cap (order no. 75007584) also available on request.

<sup>2)</sup> Tube types: ML = microliter tube; Blood C. = blood collection tube, e.g. "Vacutainer", "Monovette"; Con. = conical tissue culture tube; Oil Test = oil test tube;

Univ. = universal container type with vertical edge; US Urine = 12/15 ml conical US urine tubes; DIN = borosilicate glass tubes with dimensions in accordance with DIN.

<sup>3)</sup> Description of standard tubes: <sup>a)</sup> micro tubes; <sup>b)</sup> borosilicate glass; <sup>c)</sup> screw-capped tube (Nunc) 12 ml; <sup>d)</sup> screw-capped tube (conical tissue culture tube 50 ml);

<sup>e)</sup> oil test tube (pear-shaped); <sup>f)</sup> PP bottle incl. screw cap.

<sup>4)</sup> Adapter cannot be used with bucket 75002252; for 4 x 15 ml conical tissue culture tubes the adapter 75005388 can be used.

<sup>5)</sup> An additional pad is necessary for conical tubes (175 – 200 ml) which is obtainable from tube manufacturers.

<sup>6)</sup> Not available for sale in the U.S.

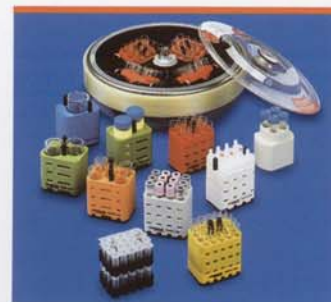
Adapters can be used with tubes featuring the following shaped bottoms: F = flat, C = conical, R = round, S = special.



# Sealed Rotor for Megafuge 1.0/1.0 R

## Sealed rotor 75003360

Sealed rotor incl. bucket		Megafuge 1.0	Megafuge 1.0 R
Max. capacity	ml	48 x 15	48 x 15
Max. speed	rpm	6,000	6,000
Max. RCF	x g	6,240	6,240
Min. temp. at max. speed	°C	–	0
Max. acceleration time	s	70	75
Min. braking time	s	90	100
Max. radius	cm	15.5	15.5



## Type A Adapter for Sealed Rotor 75003360

### Accessories for sealed rotor 75003360

Nominal volume of tube	ml	1.5	7	7	15	15	15	25	25	50	50	50	100
No. of tubes per adapter	ea.	40	20	12	11	4	12	5	4	2	2	1	1
No. of tubes per rotor	ea.	160	80	48	44	16	48	20	16	8	8	4	4
Tube type <sup>1)</sup>		ML	DIN	Blood C.	Blood C.	Con.	DIN	DIN	Univ.	DIN	Con.	Oil Test	DIN
Max. length of tube	mm	45	100	100	100	120	100	100	100	100	117	–	110
Bore of tube	mm	11	13	14	17	17	17	25	25.5	35	29.5	–	45
Diameter of cap	mm	–	14	18	19.5	22	18	25.5	31	36	37.5	–	48
Color of adapter		black	yellow	grey	white	brown	red	orange	green	green	green/y.	nat.	blue
Tube order no (7500XXXX) <sup>2) 3)</sup>		1163 <sup>4)</sup>	9001 <sup>5)</sup>	–	–	2858 <sup>6)</sup>	9003 <sup>7)</sup>	9006 <sup>8)</sup>	– <sup>9)</sup>	9005 <sup>10)</sup>	2844 <sup>11)</sup>	3113 <sup>12)</sup>	9007 <sup>13)</sup>
Adapter order no. (7500XXXX) <sup>3)</sup>		5335	5321	5330	5327	5388	5322	5323	5391 <sup>14)</sup>	5324	5386	5339	5325

Shape of adapters



<sup>1)</sup> Tube types: ML = microliter tube; Blood C. = blood collection tube, e.g. "Vacutainer", "Monovette"; Con. = conical tissue culture tube; Oil Test = oil Test tube; Univ. = universal container type with vertical edge; DIN = borosilicate glass tubes with dimensions in accordance with DIN.

<sup>2)</sup> Description of standard tubes: <sup>4)</sup> microtubes; <sup>5)</sup> borosilicate glass; <sup>6)</sup> screw-capped tube (Nunc) 12 ml; <sup>8)</sup> screw-capped tube (conical tissue culture tube) 50 ml, <sup>9)</sup> oil test tube (pear-shaped).

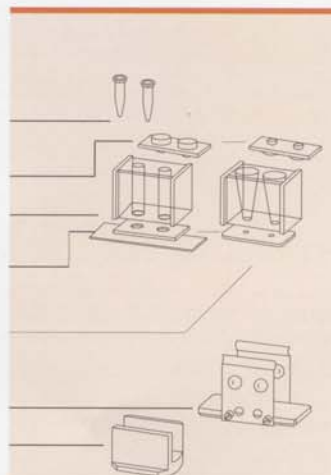
<sup>3)</sup> Not available for sale in the U.S.

Adapters can be used with tubes featuring the following shaped bottoms: F = flat, C = conical, R = round, S = special.

## Cyto Accessories for Megafuges 1.0/1.0 R

### Cyto accessories for sealed rotor 75003360 and bucket 75002252 or 75008030

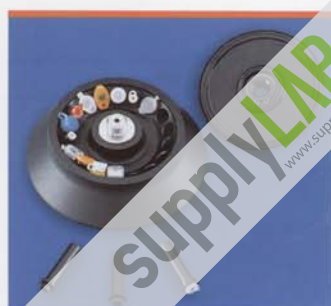
Type		Order no.
100 micro tubes	0.75 ml with 0.5 mm opening in bottom	75001153
100 micro tubes	1.5 ml with 0.5 mm opening in bottom	75001152
Lid	for working without micro-tubes	76003422
Cyto container	with 2 cylindrical bores	
	for approx. 1.5 ml sample volumes	75003415
100 filter cards	for cyto container 75003415	76003424
	for cyto container 75003416	76003425
Cyto container	with 2 conical bores	
	for approx. 3.0 ml sample volumes	75003416
Clip carrier	for holding a cyto container and a slide	75003414
Support insert	for using cyto accessories with buckets 75008030, 75002252 and rotor 75003360	75003417



## Microliter Rotor for Megafuge 1.0 R

### Microliter rotor 75003041

Microliter rotor		Megafuge 1.0 R
Max. capacity	ml	18 x 1.5/2.0
Max. speed	rpm	15,000
Max. RCF	x g	17,860
Min. temp. at max. speed	°C	< 4
Max. acceleration time	s	20
Min. braking time	s	30
Max. radius	cm	7.1



## TECHNICAL DATA

		Megafuge 1.0	Megafuge 1.0 R
Type		General purpose tabletop centrifuge	General purpose refrigerated tabletop centrifuge
Max. RCF	x g	6,240	6,240 (17,860) <sup>1)</sup>
Max. speed	rpm	6,000	6,000 (15,000) <sup>1)</sup>
Max. capacity	ml	4 x 400	4 x 400 (18 x 1.5/2.0) <sup>1)</sup>
Control		MEGACONTROL II	
Acceleration profiles		MEGACONTROL II: Normal or "Soft-run"	
Deceleration profiles		MEGACONTROL II: On/off brake, adjustable brake cut-off	
Run time		MEGACONTROL II: 1 – 99 min., continuous operation	
Program memory		MEGACONTROL II: The data last entered remains stored. Data is preserved even in the event of a power failure.	
Temperature range	°C	–	0 to 40
Safety		Lid lock and lid interlock, imbalance cut-out, armoured rotor	chamber, in compliance with IEC 1010
Design		Steel housing with plastic front panel	Steel housing with plastic front panel
		Centricast base	Centricast base, stainless-steel rotor chamber
Dimensions (HxWxD)	mm / inch	390 x 460 x 520 / 15.4 x 18.1 x 20.5	390 x 705 x 557 / 15.4 x 27.8 x 21.9
Weight (without rotor)	kg / lbs	Approx. 55 / 121	Approx. 104 / 228.8
Power consumption	kW	0.7	1.1

<sup>1)</sup> for microliter rotor

All values apply to the 230 Volt version

## ORDER NUMBERS

Centrifuge		Order no.* 230 V; 50/60 Hz	Order no. 110 – 120 V; 60 Hz
Megafuge 1.0	tabletop centrifuge without accessories	75003490	75003491
Megafuge 1.0 R	tabletop centrifuge with refrigeration without accessories	75003060	75003061

\* Not available for sale in the U.S.

Accessories					Order no.
Safety trolleys	for Megafuge 1.0	HxWxD: mm / inch	270x470x530 / 10.6x18.5x20.9	with 1 drawer	76000070
(as underbench unit)	for Megafuge 1.0 R	HxWxD: mm / inch	270x715x570 / 10.6x28.1x22.4	with 1 drawer	76000071
Safety trolleys	for Megafuge 1.0	HxWxD: mm / inch	590x470x530 / 23.2x18.5x20.9	with 2 drawers	76000080
(as mobile tabletop unit)	for Megafuge 1.0 R	HxWxD: mm / inch	590x715x570 / 23.2x28.1x22.4	with 2 drawers	76000081

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**Heraeus**

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