

**Thermo Scientific  
Heraeus® Multifuge® 1  
Benchtop Centrifuges**

**Versatile centrifugation for demanding laboratories**

## Versatility and Convenience

- Non-refrigerated and refrigerated centrifuges
- 1.6 liter capacity for high volume processing
- Thermo Scientific EASYset™ soft-touch keypad or Thermo Scientific QUIKset™ rotary knob control
- Wide choice of biocontainment approved rotors, with adapters for all popular tubes
- Thermo Scientific SMARTspin® Imbalance Detection System
- Automatic rotor recognition
- User-defined programs with EASYset models
- Ergonomic low profile and soft-touch lid closure mechanism
- Quiet, maintenance-free brushless drive
- Accessory trolleys allow operation away from or under the bench

### SMARTspin Thinks for You

The patented Imbalance Detection System, SMARTspin, provides optimum run stability for all rotors at all speeds and allows for eye balancing of sample tubes.

### Wonderfully Convenient

The Heraeus Multifuge 1 features a low working height of 31.6 cm (12.4 inch) for easier loading and unloading of samples and checking your sample results.

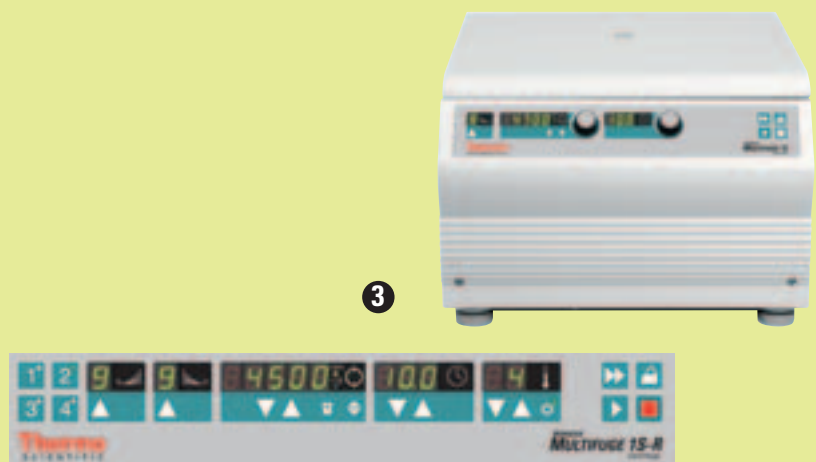


### **A** Automatic Closure

The Soft-Touch Lid Lock ensures safe operation with an easy-open/close mechanism. The lid can be opened and closed effortlessly with just one hand.

### **B** Everything in Sight

At a glance: the ergonomically designed operating panel is optimally angled so that LED displays can be read easily, even at a distance.



**C EASYset**

The EASYset Soft Touch Keypad offers a four program memory for standard runs, RCF programmability, Pretemp function for fast pre-cooling, nine braking and acceleration profiles with a continuous, easy-to-clean surface.

**1 Short on Space?**

Thanks to modular trolleys, the Heraeus Multifuge 1 can be used either as a space-saving kneewell instrument or as a portable benchtop instrument at an ergonomic user height.

**2 Refrigerated**

The refrigerated Heraeus Multifuge 1-R offers precise temperature control to meet the demands of high speed, low temperature protocols.

**3 Non-Refrigerated**

If your application calls for room temperature, then the space-saving air-cooled Heraeus Multifuge 1 is the right choice for you.

## Thermo Scientific Heraeus Multifuge 1 and 1-R Rotors and Accessories



### Buckets and Carriers for TTH-400 Swinging Bucket Rotor

Bucket type		Round bucket	Rectangular bucket	Multiple bucket	Multiple bucket
Cat No. (each)		75002002	75002001	75002027	75002028
Biocontainment lids (pair)	Cat No.	75002004	75002003	n/a	n/a
Max. bucket capacity	mL	1 x 400	1 x 150	14 x 15	5 x 50
Max. rotor capacity	mL	4 x 400	4 x 150	56 x 15	20 x 50
Max. speed 1/1-R, 230 V	rpm	4,700	4,700	4,700	4,700
Max. RCF 1/1-R, 230 V	x g	4,618	4,618	4,642	4,593
Max. speed 1/1-R, 120 V	rpm	4,700	4,500	4,500/4,600	4,500/4,600
Max. RCF 1/1-R, 120 V	x g	4,618	4,234	4,256/4,447	4,210/4,400
Min. temp. at max. speed refr. version 230 V (120 V)	°C	4	10 (12)	7	7
Max. radius	mm	187	187	188	186
Max. carrier height or tube length/diameter	mm	s. adapter table	s. adapter table	120/17	120/29.5
Thermo Scientific Centri-Lab®	type	E	A plus and A	For conical tissue culture tubes only. No adapters required.	

All buckets are autoclavable at 121 °C



### Trolleys

Model	Dimensions (H x W x D) mm (inch)	Cat No.
Safety cart (ergonomic) for Multifuge 1 S, 1 L	600 x 550 x 665 (23.6 x 21.7 x 26.2)	76000077
Safety cart (under bench) for Multifuge 1 S, 1 L	290 x 550 x 665 (11.4 x 21.7 x 26.2)	76000078
Safety cart (ergonomic) for Multifuge 1 S-R, 1 L-R	600 x 750 x 665 (23.6 x 29.5 x 26.2)	75000075
Safety cart (under bench) for Multifuge 1 S-R, 1 L-R	290 x 750 x 665 (11.4 x 29.5 x 26.2)	76000076



75002005



75002006



75002010



75003348

### Windshielded, Fixed Angle, Microplate and Microliter Rotors

Rotor		BIOshield® 600 Rotor	Highconic® Rotor	Microtestplate Rotor MP 3300	Microliter Rotor
Cat No.		75002005	75002006	75002010	75003348
Max. rotor capacity	mL	4 x 150	6 x 94 12/18 x 16 6 x 15/50 Falcon®	2 x 1 Deepwell-plate 2 x 4 Standard-micro-testplates	48 x 1.5/2
Max. speed (230 V and 120 V) (non-refrigerated / refrigerated)	rpm	5,700 / 6,000	10,150 / 10,350	4,400	15,000
Max. RCF (230 V and 120 V) (non-refrigerated / refrigerated)	x g	6,175 / 6,842	14,513 / 15,090	3,355	24,652 (outer ring) 21,885 (inner ring)
Min. temp. at max. speed. 230 V (120 V), 1-R only	°C	5 (8)	4 (6)	< 0	0 (4)
Max. radius	mm	170	126	155	98
Angle		—	45°	—	45°
Adapters (Centri-Lab)	type	A	n/a	n/a	n/a

### Miscellaneous

O-ring/gasket replacement	Cat No.	75002007	75003058	75002012	75002012
Metal plate handle (included with 75002010)		n/a	n/a	75002013	n/a
Biocontainment		Yes	Yes	With lids 75002011 (sold in pairs)	Yes



Indicates that the centrifuge accessory has been successfully tested for biological containment.

## Thermo Scientific Heraeus Multifuge 1 and 1-R Rotors and Accessories

### Adapters for TTH-400 with Round Bucket 75002002 Rotor

#### (Centri-Lab-Adapter Type E)

Tube volume	mL	1.5/2	7	7/5	15	15	25	25	25	50	50	100	250	400
No. of tubes per adapter	pieces	34	18	10	10	8	5	5	3	3	3	1	1	1
No. of tubes per rotor	pieces	136	72	64	40	32	20	20	12	12	12	4	4	4
Type of tube <sup>1)</sup>		ML	DIN	Blood-c.	DIN	con.	Urin US	DIN	Univ.	con.	DIN	DIN	bottle	bottle
Max. length of tube <sup>2)</sup>	mm	46	123	123	122	127	123	121	120	119	120	134	135	135
Max. tube Ø	mm	10.5	13	14	17.2	17	16.5	25.5	25	29	34.5	45	62	80
Max. cap Ø	mm	14	14	18.4	18.4	23	27.5	29	32	37.5	36	59	—	—
Color of adapters		Black	Yellow	Black	Red	Brown	Or./red	Orange	Green/y.	Green/y.	Green	Blue	Nature	Nature
Cat No. tube <sup>3)</sup> (7500xxxx)		—	—	—	—	—	—	—	—	—	—	—	—	7583
Cat No. adapter (7500xxxx)		7578	7571	7579	7524	7621	7581	7573	7580	7577	7574	7575	7622	—
Shape of adapter <sup>4)</sup>		F/C	F/R	R	F/R	C	C	F/R	F/R	F/C	F/R	F/R	F	F

1) Type of tube: ML = microliter tube; DIN = borosilicate glass with DIN dimensions; Blood coll. = blood collection tube; FL = flanged tube;

Con. = conical tissue culture tube; Misc. = miscellaneous; Round = round bottom glass; Univ. = universal container; us = urine;

2) Max. tube length when aerosol-tight lid is used.

3) Description of standard tubes: a) microtubes; b) borosilicate glass tubes with dimensions in accordance with DIN; c) Cat No. 780xxxxx, polypropylene or polycarbonate flanged tube; d) screw-capped conical tissue culture tube; e) polypropylene bottle with screw cap

4) F = flat; C = conical; R = round

### Miscellaneous

		Cat No.
Aerosol-tight caps for round bucket	Set of 2 incl. grease	75002004
O-ring replacement, for cap	Set of 4 incl. grease	75002009

### Adapters for TTH-400 with Rectangular Buckets

#### (Centri-Lab – adapter Type A plus and A)

Tube volume	mL	7	15	15	1.5	7	15	15	25	25	50	50	100	150
No. of tubes per adapter	pieces	14	12	8	40	20	12	6	4	5	2	2	1	1
No. of tubes per rotor	pieces	56	48	32	160	80	48	24	16	20	8	8	4	4
Type of tube <sup>1)</sup>		Blood c.	Blood c.	con.	ML	DIN	DIN	con.	Univ.	DIN	DIN	con.	DIN	DIN
Max. length of tube <sup>2)</sup>	mm	117	117	120	45	115	115	120	100	115	120	120	120	110
Max. tube Ø	mm	13	17	17	11	13	17	17	22.5	25	34	29.5	44	50
Max. cap Ø	mm	16.5	19.5	22	—	13	18.3	33	31	25.9	35.6	37.5	48.1	—
Color of adapters		Gray	White	Brown	Black	Yellow	Red	Brown	Green	Orange	Green	Green/y.	Blue	Gray
Cat No. adapter (7500xxxx)		2022	2021	2020	5335	5321	5322	5387	5391	5323	5324	5386	5325	5326
Type of adapter		A plus <sup>4)</sup>	A plus <sup>4)</sup>	A plus <sup>4)</sup>	A	A	A	A	A	A	A	A	A	A
Shape of adapter <sup>5)</sup>		F	F	C	C	F/R	F/R	C	F/R	F/R	F/R	F/C	R	R

1) Type of tube: ML = microliter tube; DIN = borosilicate glass with DIN dimensions; Blood c. = blood collection tube; FL = flanged tube; oil test. = oil test tube;

Con. = Conical tissue culture tube; Misc. = miscellaneous; Round = round bottom glass; univ. = universal container

2) Max. tube length when aerosol-tight lid is used.

3) Description of standard tubes: a) microtubes; b) borosilicate glass tubes with dimensions in accordance with DIN; c) screw-capped conical tissue culture tube; d) polypropylene bottle with screw cap

4) Adapter type A plus only for TTH-400 rotor with rectangular bucket 75002001

5) F=flat; C=conical; R=round

### Miscellaneous

		Cat No.
Aerosol-tight caps for rectangular bucket	Set of 2 incl. grease	75002003
O-ring replacement, for cap	Set of 4 incl. grease	75002008

## Adapters for BIOshield 600 Rotor

### (Centri-Lab – adapter Type A plus and A)

Tube volume	mL	1.5	7	7	15	15	15	25	25	50	50	100	150
No. of tubes per adapter	pieces	40	20	12	11	4	12	4	5	2	2	1	1
No. of tubes per rotor	pieces	160	80	48	44	16	48	16	20	8	8	4	4
Type of tube <sup>1)</sup>		ML	DIN	Blood c.	Blood c.	con.	DIN	Univ.	DIN	DIN	con.	DIN	DIN
Max. length of tube <sup>2)</sup>	mm	45	115	100	100	120	115	100	115	120	120	120	110
Max. tube Ø	mm	11	13	13	17	17	17	22.5	25	34	29.5	44	50
Max. cap Ø	mm	—	13	18	19.5	22	18.3	31	25.9	35.6	37.5	48.1	—
Color of adapters		Black	Yellow	Gray	White	Brown	Red	Green	Orange	Green	Green/y.	Blue	Gray
Cat No. adapter (7500xxxx)		5335	5321	5330	5327	5338	5322	5391	5323	5324	5386	5325	5326
Type of adapter		A	A	A	A	A	A	A	A	A	A	A	A
Shape of adapter <sup>4)</sup>		C	F/R	F	F	C	F/R	F/R	F/R	F/R	F/C	R	R

1) Type of tube: ML = microliter tube; DIN = borosilicate glass with DIN dimensions; Blood c.= blood collection tube; FL = flanged tube; oil test. = oil test tube;

Con. = Conical tissue culture tube; Misc. = miscellaneous; Round = round bottom glass; univ. = universal container

2) Max. tube length when aerosol-tight lid is used.

3) Description of standard tubes: a) microtubes; b) borosilicate glass tubes with dimensions in accordance with DIN; c) screw-capped conical tissue culture tube; d) polypropylene bottle with screw cap

4) F=flat; C=conical; R=round

## Adapters for Fixed Angle Rotors

Description	Cat No.
Microliter rotor, 48 x 1.5/2 mL	75003348
Adapter set, with 24 reducer sleeves for 0.6/0.5 mL microliter tubes	76003758
Adapter set, with 24 reducer sleeves for 0.4/0.25 mL microliter tubes	76003759
Adapter set, with 24 reducer sleeves for 0.2 mL PCR tubes	76003750
O-ring replacement, for microliter rotor 75003348 (set)	75002012

Description	Cat No.
Fixed-Angle 12.94 Highconic, 6 x 94 mL & 12 x 16 mL	75002006
O-ring replacement for rotor 75002006	75003058

Adapter for 94 mL cavities	Cat No.
Reducer insert, for 1 x 15 mL tissue culture conical tubes	75003095
Reducer insert, for 1 x 50 mL tissue culture conical tubes	75003103 <sup>1)</sup>
Reducer insert, from 94 mL to 4 x 1.5 mL	76002905
Reducer insert, from 94 mL to 4 x 3.5 mL	75003091
Reducer insert, from 94 mL to 2 x 6.5 mL	75003092
Reducer insert, from 94 mL to 2 x 12 mL	75003093
Reducer insert, from 94 mL to 1 x 16 mL	76002906
Reducer insert, from 94 mL to 1 x 38 mL	75003094
Reducer insert, from 94 mL to 1 x 50 mL	75003102
for 7 mL Vacutainer, adapters 76002906 and 76003225 required (1 Vacutainer per 94 mL cavity => total capacity 18 Vacutainer per run)	

Adapter for 16 mL cavities	Cat No.
Reducer insert, for 10 mL Vacutainer (16 x 100 mm) (set of 12)	75003763
Reducer insert, for 7 mL Vacutainer (13 x 100 mm) (set of 12)	76003225
Reducer insert, for 5 mL Vacutainer (13 x 75 mm) (set of 12)	76003226

1) Quantity of 6 adapter 75003103 is included with the Highconic rotor 75002006.



## Thermo Scientific Heraeus Multifuge 1 Specifications



Specifications		Multifuge 1 S / 1 L	Multifuge 1 S-R / 1 L-R
<b>Drive</b>		Brushless induction drive	Brushless induction drive
<b>Control</b>		Microprocessor controlled EASYset (Soft Touch Keypad) or QUIKset (Rotary Switch Control)	Microprocessor controlled EASYset (Soft Touch Keypad) or QUIKset (Rotary Switch Control)
<b>Speed range</b>	rpm	300 – 15,000, adjustable in 100 rpm increments (QUIKset) or in 10 rpm increments (EASYset)	300 – 15,000, adjustable in 100 rpm increments (QUIKset) or in 10 rpm increments (EASYset)
<b>Max. RCF</b>	x g	24,652	24,652
<b>Max. capacity</b>	fixed angle rotor	6 x 94 High-speed vessels or 6 x 15 / 50 ml type Falcon	6 x 94 High-speed vessels or 6 x 15 / 50 ml type Falcon
	swinging bucket rotor	4 x 400 ml or 12 x 50 mL / 32 x 15 ml type Falcon or 56 x 7 ml blood sampling	4 x 400 ml or 12 x 50 mL / 32 x 15 ml type Falcon or 56 x 7 ml blood sampling
<b>Accel./decel. profiles</b>		9/9 (1 S / 1 S-R), soft brake (QUIKset)	9/9 (1 S / 1 S-R), soft brake (QUIKset)
<b>Program memory</b>		4 + 1 pretemp program (EASYset)	4 + 1 pretemp program (EASYset)
<b>Run time</b>		0 – 9 h 59 min, hold	0 – 9 h 59 min, hold
<b>Temperature range</b>	°C	–9 to 40 (1 L-R / 1 S-R), CFC-free refrigerant	–9 to 40 (1 L-R / 1 S-R), CFC-free refrigerant
<b>Functions</b>		RCF-preselection, Quick-run, automatic rotor recognition and imbalance detection	RCF-preselection, Quick-run, automatic rotor recognition and imbalance detection
<b>Imbalance recognition</b>		Electronic, speed and rotor dependent	Electronic, speed and rotor dependent
<b>Design</b>		Galvanized steel chassis with armored chamber	Galvanized steel chassis with armored chamber
<b>Safety</b>		Lid lock and lid interlock (automatic lid locks)	Lid lock and lid interlock (automatic lid locks)
<b>Dimensions (H x W x D)</b>	mm (inch)	365 x 500 x 615 (14.4 x 19.7 x 24.2)	365 x 686 x 665 (14.4 x 27 x 26.2)
	working height	316 (12.4)	316 (12.4)
<b>Max. noise</b>	dB (A)	< 64	< 54
<b>Weight</b>	kg (lb)	ca. 92 (203)	118 (259)
<b>Power consumption</b>	W 230 V / 120 V	1,300 / 1,200	1,520 / 1,440
<b>Test standards</b>		Designed and tested in accordance with EN 61 010-1, EN 61 010-2-020, EN 50 081-1, EN 50 082-1	Designed and tested in accordance with EN 61 010-1, EN 61 010-2-020, EN 50 081-1, EN 50 082-1

Ordering Information	Multifuge 1	Multifuge 1-R
<b>Multifuge S models - with EASYset (Soft Touch Keypad)</b>		
230 V, 50/60 Hz, without accessories	75004311	75004331
120 V, 60 Hz, without accessories	75004315	75004335
<b>Multifuge L models - with QUIKset (Rotary Knob Control)</b>		
230 V, 50/60 Hz, without accessories	75004310	75004330
120 V, 60 Hz, without accessories	75004314	75004334

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