

**Thermo Scientific
Sorvall® Legend Mach 1.6
Tabletop Centrifuges**



High-volume processing on the benchtop

DJB Labcare - The UK's Leading Centrifuge Specialist
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01908 612598

Thermo Scientific Sorvall Legend Mach 1.6



Choice of quick-setting QUIKset® rotary knobs or easy-to-clean EASYset® soft-touch keypad control.



Large 1.6 liter capacity
For high volume processing

Fast separations
At speeds to 15,000 rpm (24,652 x g)

Unprecedented applications versatility
Microliter, microplate, Highconic® fixed-angle, swinging bucket and windshielded swinging bucket rotors

Wide range of adapters
For all popular tubes and bottles



Automatic Soft-Touch Lid Lock System
Ensures safe operation with an easy-open/close mechanism

User-defined programmability

Optional carts allow operation away from, or under the bench.

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Refrigerated and non-refrigerated Legend Mach 1.6 centrifuges offer the processing versatility, sample capacity and sheer value that today's busy laboratories demand.

Maximum Versatility

With five interchangeable biocontainment rotors available for a host of applications, Legend Mach 1.6 is equally at home in clinical testing, microbiology, biotechnology, pharmaceutical and general laboratory environments.

Excellent Performance

Featuring a 1.6 liter capacity for high-volume processing, the Legend Mach 1.6 features speeds up to 15,000 rpm – to rapidly spin more tubes at higher RCFs than competitive instruments.

Simple, Reliable Operation

Quick setting rotary knobs, soft-touch key pad and intuitive display ensure easy operation and automatic Soft-Touch Lid Lock delivers exceptional safety



Certified Biocontainment

All rotors and bucket assemblies independently certified (CAMR, Porton Down, UK)

Automatic rotor recognition

Detects incorrect parameter settings and ensures reproducible runs

Patented SMARTspin™ imbalance

Detection provides optimum run stability for all rotors at all speeds

Sample balancing by eye alone

Saves valuable time

Ergonomic low profile

Working height 12.41/13.13 m for ease of sample loading and unloading

Bright easy-to-read digital display

Whisper-quiet

Brushless induction drive system

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Thermo Scientific Rotors and Accessories



Buckets and Carriers for TTH-400 Swinging Bucket Rotor - 75002000

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 1.6/1.6R, 230 V	rpm	4,700	4,700	4,700	4,700
Max. RCF 1.6/1.6R, 230 V	x g	4,618	4,618	4,642	4,593
Max. speed 1.6/1.6R, 120 V	rpm	4,700	4,500	4,500/4,600	4,500/4,600
Max. RCF 1.6/1.6R, 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



Accessory Carts

Model	Dimensions (H x W x D mm (inch))	Cat No.
Accessory carts (ergonomic) for Legend Mach 1.6	600 x 550 x 665 (23.6 x 21.7 x 26.2)	76000077
Accessory carts (under bench) for Legend Mach 1.6	290 x 550 x 665 (11.4 x 21.7 x 26.2)	76000078
Accessory carts (ergonomic) for Legend Mach 1.6 -R	600 x 750 x 665 (23.6 x 29.5 x 26.2)	75000075
Accessory carts (under bench) for Legend Mach 1.6 -R	290 x 750 x 665 (11.4 x 29.5 x 26.2)	76000076

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BIOshield® 600 Rotor



Highconic® Rotor



**Microtestplate Rotor
MP 3300**



Microliter Rotor


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.	°C	5 (8)	4 (6)	< 0	0 (4)
230 V (120 V), 1.6R only					
Max. radius	mm	170	126	155	38
Angle		—	45°	—	45°
Adapters (Centri-Lab)	type	A	n/a	n/a	n/a

* Sealing lids purchased separately.

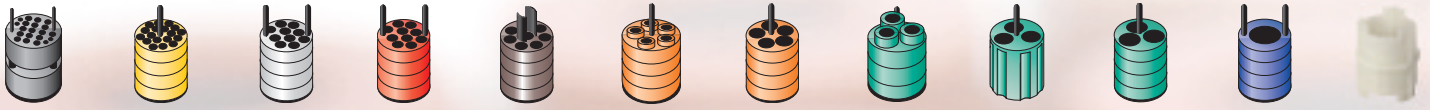
Miscellaneous

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

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

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Thermo Scientific Rotors and Accessories



Adapters for TTH-400 with Round Buckets - 75002002

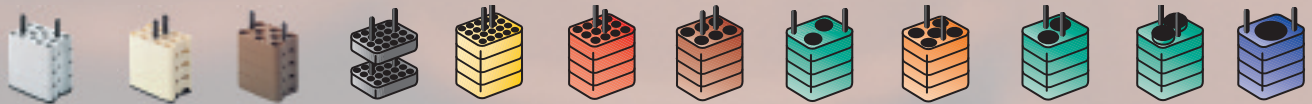
(Centri-Lab-Adapter Type E)

Tube volume	mL	1.5/2	7	7/5	10/15	15	25	25	50	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	40	40	32	20	20	12	12	12	4	4	4
Type of tube ¹⁾		ML	DIN	Blood-c.	DIN	con.	Urin US	DIN	Univ.	con.	DIN	DIN	bottle	bottle
Max. length of tube ²⁾	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 ³⁾ (7500xxxx)		—	—	—	—	—	—	—	—	—	—	—	—	7583
Cat No. adapter (7500xxxx)		7578	7571	7579	7572	7621	7581	7573	7580	7577	7574	7575	7622	—
Shape of adapter ⁴⁾		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. 780xxxx, 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 - 75002001

(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 ¹⁾		Blood c.	Blood c.	con.	ML	DIN	DIN	con.	Univ.	DIN	DIN	con.	DIN	DIN
Max. length of tube ²⁾	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	40
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 ⁴⁾	A plus ⁴⁾	A plus ⁴⁾	A	A	A	A	A	A	A	A	A	A
Shape of adapter ⁵⁾		F	F	C	C	F/R	F/R	C	F/R	F/R	F/R	F/R	F	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

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Adapters for BIOshield 600 Rotor - 75002005

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

Tube volume	mL	1.5	7	7	15	15	15	25	25	50	50	100
No. of tubes per adapter	pieces	40	20	12	11	4	12	4	5	2	2	1
No. of tubes per rotor	pieces	160	80	48	44	16	48	16	20	8	8	4
Type of tube ¹⁾		ML	DIN	Blood c.	Blood c.	con.	DIN	Univ.	DIN	DIN	con.	DIN
Max. length of tube ²⁾	mm	45	100	100	100	120	100	100	100	100	120	110
Max. tube Ø	mm	11	13	13	17	17	17	22.5	25	35	29.5	45
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
Cat No. adapter (7500xxxx)		5335	5321	5330	5327	5338	5322	5391	5323	5324	5386	5325
Type of adapter		A	A	A	A	A	A	A	A	A	A	A
Shape of adapter ⁴⁾		C	F/R	F	F	C	F/R	F/R	F/R	F/R	F/C	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

Reducer insert, for 1 x 15 mL tissue culture conical tubes	75003095
Reducer insert, for 1 x 50 mL tissue culture conical tubes	75003103 ¹⁾
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 blood collection tube, adapters 76002906 and 76003225 required

(1 blood collection tube per 94 mL cavity => total capacity 18 blood collection tubes per run)

Adapter for 16 mL cavities

Reducer insert, for 10 mL blood collection tube (16 x 100 mm) (set of 12)	75003763
Reducer insert, for 7 mL blood collection tube (13 x 100 mm) (set of 12)	76003225
Reducer insert, for 5 mL blood collection tube (13 x 75 mm) (set of 12)	76003226

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



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Thermo Scientific Sorvall Legend Mach 1.6



Specifications		Legend Mach 1.6	Legend Mach 1.6-R
Drive		Brushless induction drive	Brushless induction drive
Control		Microprocessor controlled EASYset (Soft Touch Keypad) or QUIKset (Rotary Switch Control)	Microprocessor controlled EASYset (Soft Touch Keypad) or QUIKset (Rotary Switch Control)
Speed range	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)
Max. RCF	x g	24,652	24,652
Max. capacity	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
Accel./decel. profiles		9/9 (1.6/1.6R), soft brake (QUIKset)	9/9 (1.6/1.6R), soft brake (QUIKset)
Program memory		4 + 1 pretemp program (EASYset)	4 + 1 pretemp program (EASYset)
Run time		0 – 9 h 59 min, hold	0 – 9 h 59 min, hold
Temperature range	°C	–9 to 40 (1.6R), CFC-free refrigerant	–9 to 40 (1.6R), CFC-free refrigerant
Functions		RCF-preselection, Quick-run, automatic rotor recognition and imbalance detection	RCF-preselection, Quick-run, automatic rotor recognition and imbalance detection
Imbalance recognition		Electronic, speed and rotor dependent	Electronic, speed and rotor dependent
Design		Galvanized steel chassis with armored chamber	Galvanized steel chassis with armored chamber
Safety		Lid lock and lid interlock (automatic lid locks)	Lid lock and lid interlock (automatic lid locks)
Dimensions (H x W x D)	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)
Max. noise	dB (A)	< 64	< 54
Weight	kg (lb)	ca. 92 (203)	118 (259)
Power consumption	W 230 V / 120 V	1,300 / 1,200	1,520 / 1,440
Test standards		Designed and tested in accordance with EN 61 010-1, EN 61 010-2-020, EN 50 081-1, EN 50 082-1 CSA and UL (120v only)	Designed and tested in accordance with EN 61 010-1, EN 61 010-2-020, EN 50 081-1, EN 50 082-1 CSA and UL (120v only)

Ordering Information	Legend Mach 1.6	Legend Mach 1.6-R
Legend Mach 1.6 models - with EASYset (Soft Touch Keypad)		
230 V, 50/60 Hz, without accessories	75004313	75004333
120 V, 60 Hz, without accessories	75004317	75004337
Legend Mach 1.6 models - with QUIKset (Rotary Knob Control)		
230 V, 50/60 Hz, without accessories	75004312	75004332
120 V, 60 Hz, without accessories	75004316	75004336



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