IEC Centra® CL3 Centrifuge Series

Safety, Convenience and Productivity

Thermo
ELECTRON CORPORATION

IEC Centra CL3 and CL3R Centrifuges

Safety, Convenience and Productivity for Research and Clinical Applications

The IEC Centra CL3 centrifuge series from Thermo Electron combines safety, convenience and productivity in a compact benchtop centrifuge. It also incorporates sophisticated programming features that save time and simplify the preparation of laboratory samples. Used in a variety of research applications, the Centra CL3 and CL3R offer these advantages:

Safe, Convenient Operation

- Lightweight, transportable Aerocarrier™ adapters ensure operator safety by providing a screw-on sealing mechanism for aerosol containment. Screw-tight lids can be easily manipulated with gloved hands.
- Adapters can be autoclaved or cleaned with common disinfectants without risk of corrosion.
- Multiple acceleration and deceleration settings protect fragile samples while preventing resuspension.
- Low profile design—measures only 12.5" high—provides easy access and rotor changes without added strain.

Efficiency

- High-capacity rotors—including a dedicated 12x50 mL rotor—make it possible to perform high-capacity runs in a small footprint.
- Rapid Condition program cools chamber to 4ºC within seven minutes.
- Quick-release rotor system enables rotor changes in < 5 seconds–saving valuable time.
- Fast acceleration/deceleration rates (~45 seconds) reduce run times and time between runs.
- The brushless motor is virtually maintenance-free.

Consistent Results from Run to Run

- The CL3's programmable controls allow storage and locking of up to 99 programs, eliminating accidental changes to proven protocols.
- At Speed™ timer begins timing the run when the sample load reaches the set operating speed. This ensures reproducible g-force effect on samples over a desired time period for every run, regardless of batch size.
- Programmed spin protocols start quickly with the press of a button.

Versatile and Cost-effective

- Processes a variety of samples with a wide range of speeds.
- Accepts a wide variety of popular tubes, including 15 mL, 50 mL, 225 mL conical; Vacutainer tubes to 15 mL (16 x 125 mm); microtubes, microplates (standard and deepwell), and an assortment of filtration devices.
- Accepts a wide range of rotors from existing models, eliminating the need to buy additional systems.

Ideally Suited for Everyday Research and Clinical Applications

With its sealed, autoclavable Aerocarrier adapters, the IEC Centra CL3 and CL3R centrifuge series is ideally suited for routine research applications such as tissue and cell culture and clinical testing. For added convenience, Thermo has created dedicated CL3 accessory packages to simplify ordering the required rotors and accessories for these applications. (See rotor tables for details).

Tissue and Cell Culture

The IEC Centra CL3 centrifuge series is ideal for subculturing applications, including preparing cultures for cryopreservation, thawing tissue cultures, and separating cellular components.

- High-capacity rotors and adapters spin popular formats, with selectable speed and tunable acceleration/deceleration ramps that treat samples gently
- O-ring sealed Aerocarrier system assures biocontainment with carriers that can be loaded and sealed quickly outside the centrifuge

Clinical Testing

As the price and performance leaders for blood separation and washing, the CL3 and CL3R centrifuges are proven workhorses for high-throughput testing including urinalysis, hematology and mononuclear cell separations.

- Autoclavable, lightweight Aerocarrier adapters contain all aerosols and biohazards in carriers, and are easily filled and sealed outside the centrifuge
- Aerocarrier adapters accommodate blood tube sizes from 2 mL to over 15 mL

Sealed, lightweight Aerocarrier adapters can be easily removed from the rotor for loading and unloading tubes on the lab bench. In addition, adapters can be autoclaved or cleaned with common disinfectants without the risk of corrosion.

The IEC Centra CL3 combines safe, consistent performance with high-end features to help you achieve maximum productivity.
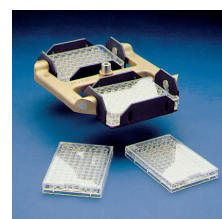
243 Rotor

Aerocarrier Adapters for 243 Rotor

244 Rotor

804S Rotor

243 Aerocarrier Rotor

Cat. No.	Description	Container Vol. (mL)	Capacity (rotor)	Max Speed	Max RCF
243	4 x 250 mL Aerocarrier Adapter Rotor, including 4 buckets	250	4	4000	3200
51138	Additional 250 mL Buckets	250	4		
52437	**Cell Culture Package:** Includes 243 rotor, 2 pr 2 x 50 mL Aerocarrier Adapters and 2 pr 5 x 15 mL Aerocarrier Adapters	50/15	4	4000	3150
52438	**Blood Tube Package:** Includes 243 rotor, 2 pr 9 x 5/7- 3/5 mL Aerocarrier Adapters and 2 pr 12 x 3/5 mL Aerocarrier Adapters	250	4	4000	3150

Sealed Aerocarrier Adapters for 243 Aerocarrier Rotor

Cat. No.	Description	Tube Dim. (mm)	Max Capacity (mL)	Qty.
6558E	250 mL bottles (Thermo Electron 2502)	60.8 x 124	4 x 250	2
	250 mL Corning glass bottles 1260-250	62 x 142	4 x 250	2
	80 mL Millipore Centricon® Plus 80 filtration device	62 x 125	4 x 80	2
6559E	175/225 mL Falcon® conical 352076/352075	60.8 x 118/137	4 x 175 / 225	2
6557E	100 mL Corning glass tube 8422-100	43 x 143	4 x 100	2
6556E	50 mL round bottom tubes	29 x 115	8 x 50	2
	20 mL Millipore Centricon Plus 20	28.6 x 123	8 x 20	2
6560E*	50 mL Falcon/Corning conical	29 x 115	8 x 50	2
6568E	25-30 mL Universals	25 x 107	12 x 25-30	2
6561E*	15 mL Falcon/Corning conical	17 x 120	20 x 15	2
	10 mL Kova/Urisystem	17 x 112	16 x 10	2
6563E	14 mL Falcon 35 2059 round bottom with cap	17 x 100	20 x 14	2
6567E	15 mL Pyrex® glass, black screw on cap tubes,	16 x 125	32 x 15	2
	9mL/10 mL Monovette™		32 x 9 / 10	2
6562E+	10/15 mL Vacutainer®	16 x 100/125	36 x 10/15	2
6566E+	5-7 mL Hemogard® Vacutainer	13 x 75-100	48 x 5-7	2
	3-5 mL RIA tubes	10-12 x 75	48 x 3-5	2
	5 mL Falcon 35 2063	13 x 75	48 x 5	2
6565E	1.5/2.0 mL microtubes, Microgard® Microtainers®	11 x 44	48 x 1.5/2.0	2
	0.5/0.7 mL PCR/Microtainer® (use 5763 adapters)	8 x 30	48 x 0.5/0.7	2
	0.25 mL/0.4 PCR (use 5764 adapters)	6 x 47.5	48 x 0.25/0.4	2

 * Included with 52437 rotor package   + Included with 52438 package

Other Adapters and Cushions for 243 and 215 Rotors

Cat. No.	Description	Max Capacity (mL)	Qty.
5763	Adapter for 1.5/2.0 mL to 0.5 mL 6mm tubes	48 x 1.5/2.0	12
5764	Adapter for 1.5 /2.0 mL to .25 /0.4 mL 8mm tubes	48 x 1.5/2.0	12
1106	Adapter for 1 x 50 mL to 1 x 15 mL	8 x 50	2
315	Cushion for 50 mL Falcon/Conical tubes	8 x 50	1
571	Cushion for 50 mL conical glass tubes (Corning 8300-50)	48 x 50	1
570	Cushion for 15 mL conical tubes	48 x 15	12
668	Cushion for 10/15 mL blood tubes	48 x 10/15	12
667	Cushion for 5/7 blood tubes	4 x 5/7	12
567	Cushion for 3/5 mL blood tubes	4 x 3/5	12

244 Horizontal Microplate Rotor

Cat. No.	Description	Capacity (rotor)	Max Speed	Max RCF
244	Horizontal Microplate Rotor, including 2 carriers (requires 50968 shaft adapter)	2 deepwell	4 standard or 4000	1800
49852	Microplate Deepwell Adapter			

804S Sealed Fixed-Angle Rotor

Cat. No.	Description	Container Vol. (mL)	Capacity (rotor)	Max Speed	Max RCF
804S	**4 x 50 mL Sealed Fixed-Angle Rotor package** for 50 mL conical tubes (requires 50968 shaft adapter)	50	200	4200	2270
50968	Tapered Shaft Quick Release Adapter				

224 Ultrac™ Rotor

Cat. No.	Description	Container Vol. (mL)	Capacity (rotor)	Max Speed	Max RCF
224	4 x 250 mL Ultrac Rotor, including 4 sealed buckets, transparent cups and O-ring closures (requires 50968 shaft adapter)	250	4	4000	2740
50968	Tapered Shaft Quick Release Adapter				

Ultrac Adapters for 224 Ultrac Rotor

Cat. No.	Description	Max Tube Size (mm)	Max Capacity (mL)	Qty.
7231	1 x 50 mL Falcon/Corning conical	29.4 x 137/125 mm	4 x 50 mL	2
7230	4 x 15 mL Falcon/Corning conical	17.2 x 120/120 mm	16 x 15 mL	2
7225	7 x 15 mL Vacutainer (16 x 125 mm)	16.1 x 131/- mm	28 x 15 mL	2
7225	7 x 7-10 mL Vacutainer (16 x 75-100 mm)	16.1 x 131/106 mm	28 x 10 mL	2
7238	8 x 5-7 mL Vacutainer (13 x 75-100 mm)	13.3 x 131/106 mm	32 x 7 mL	2
7226	12 x 3-5 mL Vacutainer (10-12 x 75)	12.1 x 131/106 mm	48 x 5 mL	2
7228	10 x 1.5 mL microtubes	10.9 x 131/106 mm	40 x 1.5 mL	2
7228	10 x .4/.25 mL microtubes	10.9 x 131/106 mm	40 x 0.4 mL	2
7228	10 x Microtainer or PCR microtubes (also order 4 pkg. 5764 adapters)	8.0 x 131/106 mm	40 x 0.7 mL	2

Economy Swinging Bucket Rotor Packages

Cat. No.	Description	Container Vol. (mL)	Capacity (rotor)	Max Speed	Max RCF
215	4-Place Economy Swinging Bucket Rotor (requires 50968 shaft adapter)	50	4	depends on adapter	
52151	**4 x 50 ml Falcon/Corning Rotor Package:** Includes 215 rotor, 325 trunnion ring, 320 buckets and 315 cushions	50	4	4100	2650
52152	**8 x 50 ml Falcon/Corning Rotor Package:** Includes 215 rotor 326 trunnion ring, 320 buckets and 315 cushions	50	8	3600	2050
52153	**4 x 50 ml Falcon/Corning Sealed Rotor Package:** Includes 215 rotor, 350 trunnion ring, 323 buckets and 571 cushions	50	4	3800	2050
59581	**6 x 50 mL Conical Rotor Package:** Includes 325 trunnion ring, 320 buckets and 315 cushions	50	6	2800	1475
59582	**12 x 50 mL Conical Rotor Package:** Includes 326 trunnion ring, 320 buckets and 315 cushions	50	12	2700	1475
59583	**6 x 50 mL Conical Sealed Bucket Rotor Package:** Includes 350 trunnion ring, 323 buckets and 571 cushions	50	6	2800	1475
52212	**6 x 15 mL Falcon/Corning Conical Rotor Package:** Includes 303 buckets and 668 cushions	15	6	4000	2800
50968	Tapered Shaft Quick Release Adapter				

215 Rotor

Accessories for Economy Swinging Bucket Rotor Packages*

Cat. No. Trunnion Ring	Bucket or Carrier	Capacity	Tube	Max Size (mm)	Max Speed	Max RCF	Radius
366	369	20 x 5 mL	10-12 x 75 mm	12.6 x 83	5200	3350	11.1
366	1018	16 x 7 mL	13 x 75 - 100 mm	14.2 x 103	4700	3150	12.8
366	1013	12 x 10 mL	16 x 75 - 100 mm	16.5 x 107	4600	3025	12.8
326	320	8 x 50 mL	Falcon/Corning conical (also order 314 cushions)	30 x 116	4100	2675	14.2
325	320	4 x 50 mL	Falcon/Corning conical (also order 315 cushions)	30 x 116	4600	3300	14
350	323	4 x 50 mL	Falcon/Corning conical	29.4 x 120	4300	3200	15.4
350	323	4 x 15 mL	Falcon/Corning conical (also order 1106 adapter and 571 cushions)	17.5 x 128	4300	3200	15.4

*See Adapters and Cushions listed under 243 rotor for additional Economy Swinging Bucket Rotor Package accessories

Ultrac Adapters for Economy Swinging Bucket Rotor Packages

Cat. No.	Description	Max Tube Size (mm)	Qty.
7245	1 x 10 mL to 6 x 100 mL	16 x 100	2
7256	1 x 7 mL to 13 x 100 mL	13 x 100	2
7246	1 x 5 mL to 12 x 15 mL	12 x 75	2
7248	3 x 3 mL to 10 x 75, 1.5 mL	10 x 75	2

IEC Centra CL3 and CL3R Centrifuge Specifications

Specifications	CL3 (ventilated)	CL3R (refrigerated)
Maximum capacity		
Swing out	1000 mL (4 x 250 mL)	1000 mL (4 x 250 mL)
Fixed angle	400 mL (8 x 50 mL)	400 mL (8 x 50 mL)
Maximum speed		
Swing out	4,000 rpm	4,000 rpm
Fixed angle	8,500 rpm	8,500 rpm
Maximum RCF		
Swing out	3,200 xg	3,200 xg
Fixed angle	6,650 xg	6,650 xg
Speed set / display		
RPM	500 to 8500 rpm by 50 rpm	500 to 8500 rpm by 50 rpm
Accuracy	50 rpm	50 rpm
RCF	50 to 6650 xg	50 to 6650 xg
Time set / display	1 sec to 1 min by 1 sec increments	1 sec to 1 min by 1 sec increments
	1 min to 5 min by 15 sec increments	1 min to 5 min by 15 sec increments
	5 min to 99 min by 1 min increments	5 min to 99 min by 1 min increments
	Hold to 99 min 99 sec	Hold to 99 min 99 sec
Temperature set / display		
Display range	NA	-9C to +40C
Control range	NA	Control: +4C to ambient
Accuracy	NA	1C
Refrigerant	NA	CFC free refrigerant
Timer features	Hold, At-Speed, regular timed mode	Hold, At-Speed, regular timed mode
Programs	99 user stored with locking capability	99 user stored with locking capability
		Rapid condition (cooling and warming)
Acceleration rates	2 (Fast < 45 seconds)	2 (Fast < 45 seconds)
Deceleration rates	3 (Fast < 45 seconds)	3 (Fast < 45 seconds)
Display	Bright LED displays	Bright LED displays
Heat output	430 W / 1470 BTU/hr	780 W / 2640 BTU/hr
Noise level	60 dBA	60 dBA
Drive system	Direct brushless	Direct brushless

Ordering Information	CL3 (ventilated)	CL3R (refrigerated)
Catalog Numbers		
120 V - 60 Hz	3750	3755
240 V - 50/60 Hz	3751	–
220 V - 50 Hz	–	3756
220 V - 60 Hz	–	3757
Product dimensions		
Height, work surface	32 cm / 12.5"	32 cm / 12.5"
Height, cover closed	37 cm / 14.5"	37 cm / 14.5"
Height, cover open	84 cm / 33.0"	84 cm / 33.0"
Width	49 cm / 19.3"	67 cm / 26.5"
Depth	53 cm / 21.0"	53 cm / 21.0"
Net weight	46 kg / 100 lbs	68 kg / 150 lbs
Packing dimensions		
Height	74 cm / 29"	74 cm / 29"
Width	89 cm / 35"	89 cm / 35"
Depth	79 cm / 31"	79 cm / 31"
Net weight	68 kg / 150 lbs	91 kg / 200 lbs
Certifications	CSA	CSA
	ISO 9001	ISO 9001
	IEC 1010-2-020	IEC 1010-2-020
	CE	CE

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