



# ENDEAVOR™ 5000

Light Duty Orbital Shakers



## ***Digital Light Duty Orbital Shakers You Can Trust for Everyday Shaking***

Endeavor™ Light Duty Shakers are available in 3 models: 3 mm orbit, 20 mm orbit, or dedicated microplate model. All models can be used in incubators and cold rooms. Stable, accurate, long-term shaking is ensured with the triple eccentric drive and maintenance-free brushless DC motor. Integrated overload and unbalanced detection to protect samples.

### ***Unique Features:***

- Budget-Friendly - no need to buy a separate tray. Ready to attach a wide variety of accessories to customize for low to mid volume applications.
- Programmable - save time and guarantee reproducible results. Simple on-board menu to set, store and recall multi-step programs.
- Data logging and control - remote function permits PC control and data transfer.

# ENDEAVOR™ 5000 *Light Duty Orbital Shakers*

## Specifications

Model	e-E51LD0403		e-E51LDMP03	e-E51LD0420	
Control	Digital				
Motion	Orbital 0.1 in / 3 mm			Orbital 0.8 in / 20 mm	
Speed Range	100 to 800 rpm		100 to 1200 rpm*	50 to 300 rpm	
Speed Steps	1 rpm increments				
Speed Accuracy**	Above 100 rpm ± 2% of set speed, Below 100 rpm ± 2 rpm				
Timer	Up to 99 hours 59 minutes				
Weight Capacity	8.8 lb / 4 kg at 400 rpm linearly down to 2.2 lb / 1 kg at 800 rpm		8.8 lb / 4 kg at 400 rpm linearly down to 2.2 lb / 1 kg at 800 rpm 1.1 lb / 0.5 kg at ≥900 rpm	8.8 lb / 4 kg at 300 rpm	
Volume Capacity	<b>Standard Tray</b>	<b>Universal Platform***</b>	4 Microplates or 2 x Microtube Racks or 2 x Microplates & 1 x Rack	<b>Standard Tray</b>	<b>Universal Platform***</b>
	7 x 10 ml	39 x 10 ml		7 x 10 ml	39 x 10 ml
	6 x 125 ml	12 x 125 ml		6 x 125 ml	12 x 125 ml
	6 x 250 ml	8 x 250 ml		6 x 250 ml	8 x 250 ml
	4 x 250 ml	6 x 500 ml		4 x 250 ml	6 x 500 ml
-	3 x 1 L	-	3 x 1 L		
Standard Tray Size (L x W)	11.75 x 8.75 in / 300 x 222 mm		11 x 7.75 in / 280 x 197 mm	11.75 x 8.75 in / 300 x 222 mm	
Tray Construction	Aluminum tray with 11 mounting points for accessories. Non-slip rubber mat included		Aluminum tray with hardware to secure Microplates and Deepwell plates	Aluminum tray with 11 mounting points for accessories. Non-slip rubber mat included	
Drive System	Brushless DC Motor, Triple Eccentric				
Communication	RS232				
Programming	On-board programming for 8 separate, 5-step programs				
Recall Feature	Retrieve last 5 recently used settings				
Protection	IP21				
Dimensions (L x W x H)	16.5 x 10.3 x 4.7 in / 420 x 262 x 119 mm				
Net Weight	16.5 lb / 7.5 kg				
Working Environment****	14 °F to 104 °F / -10 °C to 40 °C, 80% RH, non-condensing				
Power Input	24V DC, 1.25A				

\*Microplates and deepwell plates are available with a variety of skirt styles. Depending on the skirt style the maximum speed may need to be reduced.

\*\*Conditions permitting. Variations in measurement process, vessel(s), and sample(s) will impact actual performance.

\*\*\*Universal Platform 30770938 to be mounted on the standard tray to expand volume loading capacity. See Accessories table in the next page for details.

\*\*\*\*Avoid cold starts. Unit is not designed to start after being in a cold room environment. Bring unit into cold room from a room temperature environment, operate and remove unit from cold room as soon as operation is complete.

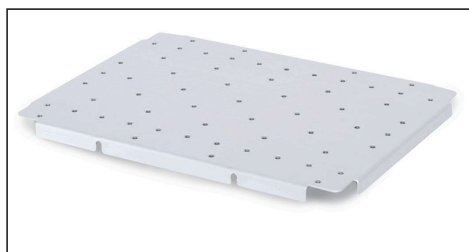
# ENDEAVOR™ 5000 *Light Duty Orbital Shakers*

## Accessories

Accessories for e-E51LD0403 and e-E51LD0420			
Item Number	Description	Standard Tray Max. per Shaker	Universal Platform 30770938 Max. per Shaker
30400084	Flask Clamp, 10 mL	7	39
30400085	Flask Clamp, 25 mL	7	24
30400086	Flask Clamp, 50 mL	7	24
30400087	Flask Clamp, 125 mL	6	12
30400088	Flask Clamp, 250 mL	6	8
30400089	Flask Clamp, 500 mL	4	6
30400090	Flask Clamp, 1L	--	3
30400097	500 mL Media Bottle Clamp	4	6
30400099	Flask Clamp PVC 125mL	6	12
30400100	Flask Clamp PVC 250mL	6	8
30400101	Flask Clamp PVC 500mL	--	4
30400114	Micro Tube Rack	2	2
30400115	Test Tube Rack 10-13 mm Diameter	2	2
30400116	Test Tube Rack 14-16 mm Diameter	2	2
30400117	Test Tube Rack 18-20 mm Diameter	2	2
30400118	Test Tube Rack 22-25 mm Diameter	2	2
30400119	Test Tube Rack For 15 mL Tubes	2	2
30400120	Test Tube Rack For 50 mL Tubes	2	2
30770938	Universal Platform 8.75 x 11.75 in. / 22 x 30 cm e-E51LD	1	--
30400121	Adjustable Platform 8.75 x 11.75 in. / 22 x 30 cm, 2 bars	1	--
30400122	Roller Bar, 8.6 in. / 22 cm (for Adjustable Platform only)	Variable	--
30400124	Dimpled Mat, 8.75 x 11.75 in./22 x 30 cm	1	--
30770935	Rubber Mat 11.4 x 8.75 in / 29 x 22 cm	1	--
30770939	Sticky Mat 8.75 x 7.0 in. / 22 x 18 cm	1	1
30770940	Universal Harness e-E51LD	1	--

### Accessories for e-E51LDMP03

Item Number	Description	Standard Tray Max. per Shaker
30400114	Micro Tube Rack	2
30772773	Deep Plate Kit, set of 4	1 (set of 4)



**Universal Platform**  
8.75 x 11.75 in. / 22 x 30 cm e-E51LD  
Part Number: 30770938



**Flask Clamp 250 mL**  
Part Number: 30400088



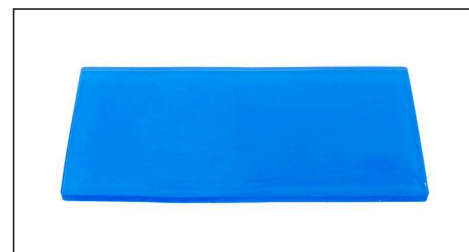
**Flask Clamp PVC 125 mL**  
Part Number: 30400099



**Adjustable Platform 8.75 x 11.75 in. / 22 x 30 cm, 2 bars**  
Part Number: 30400121



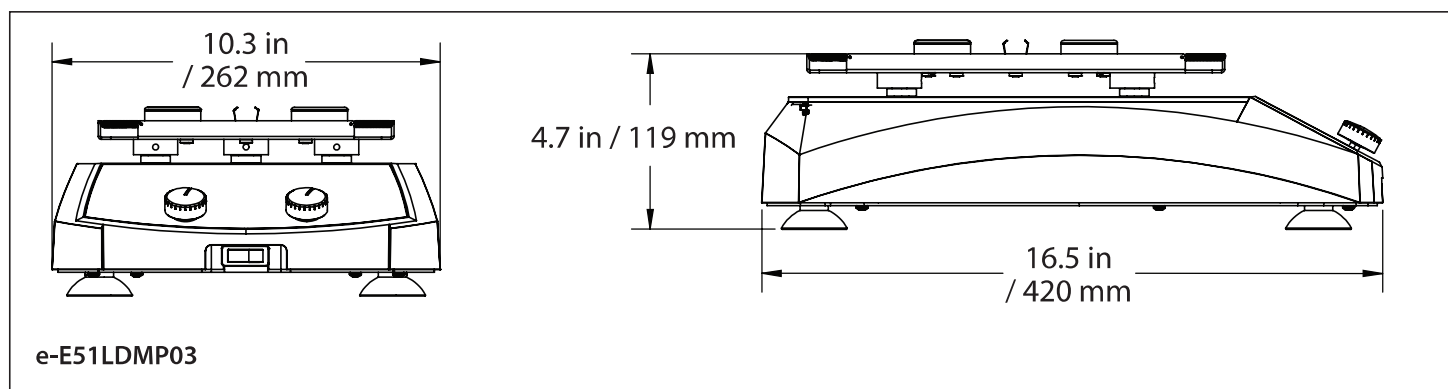
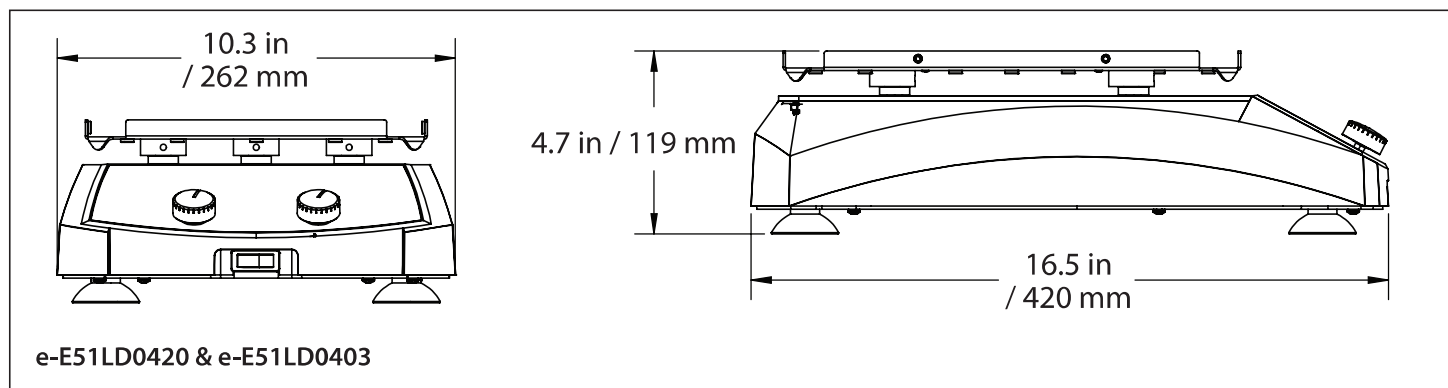
**Micro Tube Rack**  
Part Number: 30400114



**Sticky Mat 8.75 x 7.0 in. / 22 x 18 cm**  
Part Number: 30770939

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## Outline Dimensions



## Other Features and Equipment

Visual and audio alarm when timer counts down to zero or an error occurs, small footprint to save bench space, advanced microprocessor control slowly ramps the shaker tray up to the desired speed and avoids splashing, durable chemical-resistant polymer housing, sturdy easy-to-clean aluminum standard tray with attachment points for accessories, optional accessory platform to expand capacity, control knobs, ON/OFF switch

## Compliance

- **Product Safety:** CE, TUV, TÜV SÜD certified to CAN/CSA C22.2 61010-1 ; CAN/CSA C22.2 61010-2-051; UL 61010-1; UL 61010-2-051
- **Electromagnetic Compatibility:** Canada ICES-003 Class B; FCC Part 15 Class B
- **Other:** IP21

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*The management system governing the manufacture of this product is ISO 9001:2015 certified.*

