



# 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.

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## Specifications

Model	e-E51LD0403	e-E51LDMP03	e-E51LD0420
Control	Digital		
Motion	Orbital 3 mm		Orbital 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 $\pm$ 2% of set speed, Below 100 rpm $\pm$ 2 rpm		
Timer	Up to 99 hours 59 minutes		
Tray Capacity	4,0 kg 4 $\times$ 500 ml flasks 6 $\times$ 250 ml flasks 6 $\times$ 125 ml flasks From 39 $\times$ 10 ml up to 3 $\times$ 1 l flasks***	4 microplates	4,0 kg 4 $\times$ 500 ml flasks 6 $\times$ 250 ml flasks 6 $\times$ 125 ml flasks From 39 $\times$ 10 ml up to 3 $\times$ 1 l flasks***
Tray Size (L $\times$ W)	300 $\times$ 222 mm	280 $\times$ 197 mm	300 $\times$ 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 $\times$ W $\times$ H)	420 $\times$ 262 $\times$ 119 mm		
Net Weight	7,5 kg		
Working Environment****	-10 $^{\circ}$ C to 40 $^{\circ}$ 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 required for expanded capacity from 39  $\times$  10 ml up to 3  $\times$  1 l flasks

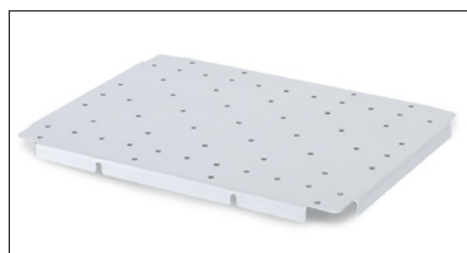
\*\*\*\*Avoid cold starts. Unit is not designed to start after being in a cold room environment. Bring unit into cold room from a room temperature environment, operate and remove unit from cold room as soon as operation is complete.

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## 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, 1 l	-	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 30 × 22 cm e-E51LD	1	-
30400121	Adjustable Platform 22 30 cm, 2 bars	1	-
30400122	Roller Bar, 22 cm (for adjustable platform only)	Variable	-
30400124	Dimpled Mat, 22 × 30 cm	1	-
30770935	Rubber Mat 29 × 22 cm	1	-
30770939	Sticky Mat 22 × 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 30 × 22 cm e-E51LD**  
Part Number: 30770938



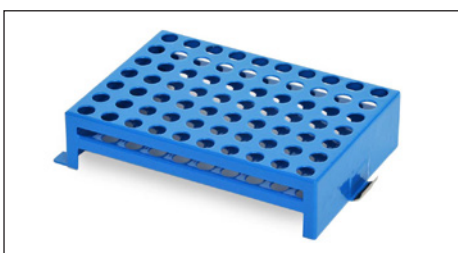
**Flask Clamp 250 ml**  
Part Number: 30400088



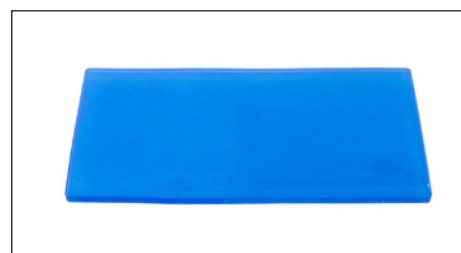
**Flask Clamp PVC 125 ml**  
Part Number: 30400099



**Adjustable Platform 22 × 30 cm, 2 bars**  
Part Number: 30400121



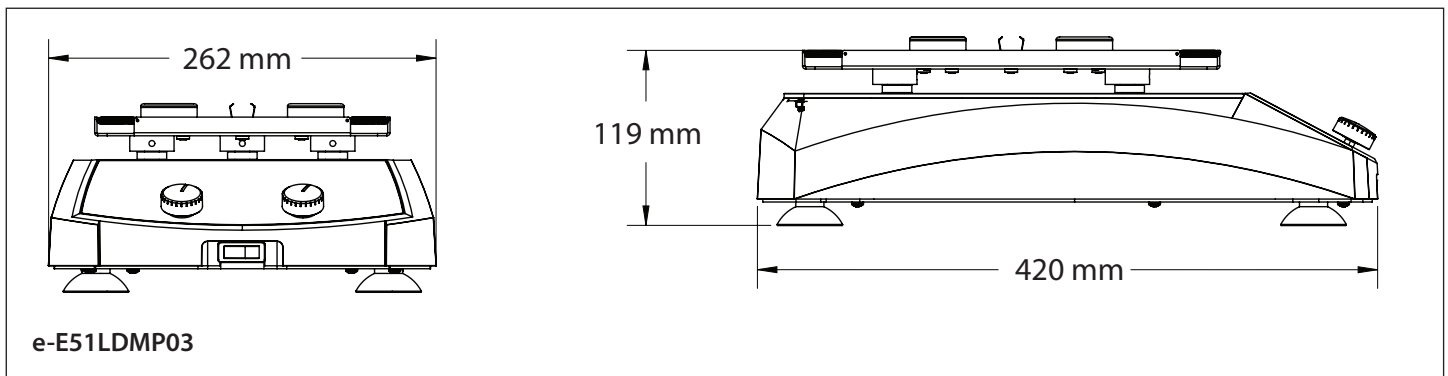
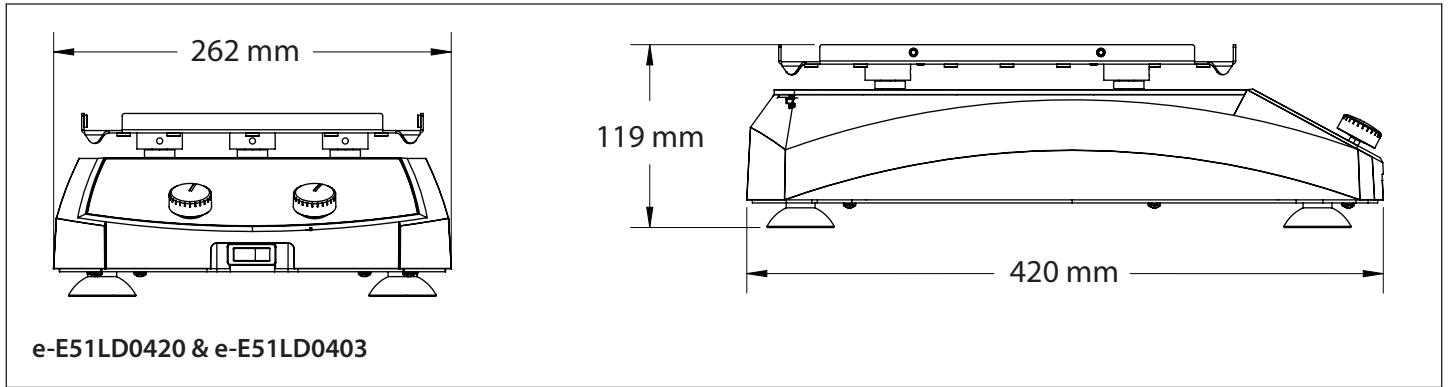
**Micro Tube Rack**  
Part Number: 30400114



**Sticky Mat 22 × 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:** IEC/EN 61010-1; IEC/EN 61010-2-051
- **Electromagnetic Compatibility:** IEC/EN 61326-1 Class B, Basic electromagnetic environment
- **Compliance Marks:** CE; UKCA; TÜV SÜD
- **Other:** IP21