

# Extreme Environment Shakers



Ideal for applications that require CO<sub>2</sub> and humidity for optimal cell growth, our Extreme Environment Shakers are designed for use in extreme environments such as CO<sub>2</sub> incubators. A remote controller (that magnetically attaches to the outside of most incubators) allows for external control of settings, and the shaker base is placed inside of the incubator. Microprocessor control ensures consistent shaking while safely ramping to the set speed.

- Patented Accu-Drive Shaking System Ensures Accuracy and Speed Control
- Control Settings Externally without Disturbing the Incubator Atmosphere
- Touchpad Control With Independent LED Displays for Speed and Time

## Extreme Environment Shakers

- Designed for use in CO<sub>2</sub> Incubators
- Can withstand extreme environments up to 100% humidity
- Remote controller magnetically attaches to most incubators

The OHAUS Extreme Environment Orbital Shaker is designed for a wide range of applications including cell cultures that require CO<sub>2</sub> and humidity for optimal cell growth. The microprocessor control provides consistent uniform shaking while safely ramping to the set speed.

### Operating Features:

**Accu-Drive Shaking System:** The exclusive patented Accu-Drive Shaking System delivers exceptional speed control, accuracy, and durability. The shaking system continuously monitors shaking speed and maintains set-point, even under changing loads. When unit is set to a speed above 100 rpm, the speed accuracy is  $\pm 1\%$  of set speed. When set under 100 rpm, speed accuracy is  $\pm 1$  rpm.

**Microprocessor Control:** The variable speed microprocessor control provides consistent uniform shaking action. Microprocessor will display last set-point and will restart if power is interrupted.

**Triple Eccentric Drive:** Permanently lubricated ball bearings and maintenance free, brushless DC motor provide reliable service and continuous duty operation.

**Remote Controller:** The control module is designed to sit outside of the incubator. Settings can be easily viewed or changed from outside of the incubator without disturbing the incubator's atmosphere. The thin ribbon cable is 1.68 m long and easily passes underneath an incubator door via incubator's utility port. Controller magnetically attaches to most incubator doors or can sit on a lab bench.

**LED Display:** Touch pad controls with easy-to-read, independent LED displays for speed and time allow operator to view both settings at once. Provides repeatable and accurate results every time and is easily visible across lab benches. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off.

**RS232 Interface:** Provides two-way communication for data logging and unit control.

**Speed Calibration Mode:** Allows user to automatically recalibrate speed display.

### Safety Features:

**Overload Protection:** Audible and visual signals will activate when system detects an obstruction.

**Speed Ramping Feature:** Slowly increases speed to desired set-point to avoid splashing.

**Audible Alarm:** In timed mode, alarm will sound when the time reaches zero. Alarm has optional mute function which can be set from the touch pad control.

**Spill-Resistant Design:** Channels fluids away from internal components.

### Operating Conditions:

Unit can be run in cold rooms, incubators, and CO<sub>2</sub> environments from -10 to 60°C, up to 100% humidity.

### Applications:

Cell cultures, solubility studies, and extraction procedures.

### Ordering Information:

Unit includes a detachable, 3-wire cord and plug. Unit is also supplied with an 27.9 x 33 cm non-skid rubber mat.



Specifications		
Speed Range	15 to 500 rpm	
Speed Accuracy	above 100 rpm $\pm 1\%$ of set speed below 100 rpm $\pm 1$ rpm	
Timer	1 second to 160 hours	
Orbit	19 mm	
Maximum Weight Capacity	16 kg	
Tray Material	Aluminum	
Tray Dimensions (L x W)	27.9 x 33 cm	
Overall Dimensions (L x W x H)	Shaker	29.4 x 35.5 x 14.9 cm
	Remote	15.0 x 35.6 x 11.2 cm
Ship Weight	22.2 kg	

Description	Model	Item Number
Extreme Environment Shaker	SHEX1619DG	30391816