

Section 3 General Specifications

Catalog Number	SHKA4450, SHKA4450CC	SHKA4450-1CE, SHKA4450CC-1CE	SHKE4450, SHKE4450CC	SHKE4450-1CE, SHKE4450CC-1CE
Electrical				
Voltage AC	120	220-240	120	220-240
Amperage	4.5	2.5	4.5	2.5
Wattage	500	500	500	500
Frequency (Hz)	50/60	50/60	50/60	50/60
Speed Accuracy	40 to 400 RPM, ± 10	40 to 400 RPM, ± 10	15 to 500 RPM, ± 1	15 to 500 RPM, ± 1
Timer	Continuous or timed operation from 1 minute to 60 minutes	Continuous or timed operation from 1 minute to 60 minutes	Continuous or timed operation from 0.1 hour up to 999 hours or 0.1 minute to 999 minutes	Continuous or timed operation from 0.1 hour up to 999 hours or 0.1 minute to 999 minutes
Display	LED display indicates temperature in 0.1°C increments. Analog tachometer displays speed in rpm	LED display indicates temperature in 0.1°C increments. Analog tachometer displays speed in rpm	3 individual LED displays indicate temperature, time and speed simultaneously. 3 characters, height 1/2 inches (1.27 cm)	3 individual LED displays indicate temperature, time and speed simultaneously. 3 characters, height 1/2 inches (1.27 cm)
Mutable Alarms	None	None	Audible portion of the alarm can be silenced for a period of 1 hour without deactivating the actual alarm condition by depressing any key.	Audible portion of the alarm can be silenced for a period of 1 hour without deactivating the actual alarm condition by depressing any key.

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Alarm Speed	None	None	Audible with flashing led indicate when speed deviates more than 10% of set point	Audible with flashing led indicate when speed deviates more than 10% of set point
Speed Shut Off	None	None		
Timer	Continuous operation (hold) or timed operation from 1 to 60 minutes.	Continuous operation (hold) or timed operation from 1 to 60 minutes.	Beeps twice when time has expired. Shaking motion stops.	Beeps twice when time has expired. Shaking motion stops.
Unbalanced Load	None	None	If the unit is running in an unbalanced condition, an alarm will sound and the shaker will stop until the end user corrects the condition. The speed display will flash "bAL" on speed panel LED.	If the unit is running in an unbalanced condition, an alarm will sound and the shaker will stop until the end user corrects the condition. The speed display will flash "bAL" on speed panel LED.
Motor	Permanent Magnet DC	Permanent Magnet DC	Solid State Brushless DC	Solid State Brushless DC
Soft Start Feature	None	None	Software algorithms prevent sudden start/stops.	Software algorithms prevent sudden start/stops.

Intended Use

Orbital shakers are designed to provide increased aeration in a stable temperature environment.

Unintended Use

- 1) Not intended for use in Class I or II applications as defined in 21 CFR
- 2) Not intended for mixtures of flammable materials

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RS232 Interface*	None	None	Monitor speed, temperature and time with a computer	Monitor speed, temperature and time with a computer
Recorder Output* (Located on left side rear of shaker)	None	None	10mv/C output monitors temperature with external chart recorder	10mv/C output monitors temperature with external chart recorder
Optional Platform Dimensions L X W	13" x 11" (33.0 x 27.9 cm)	13" x 11" (33.0 x 27.9 cm)	13" x 11" (33.0 x 27.9 cm)	13" x 11" (33.0 x 27.9 cm)
Exterior Dimensions L x W x H	27.16" x 14.09" x 15.75" (69.0 x 35.8 x 40.0 cm)	27.16" x 14.09" x 15.75" (69.0 x 35.8 x 40.0 cm)	27.16" x 14.09" x 15.75" (69.0 x 35.8 x 40.0 cm)	27.16" x 14.09" x 15.75" (69.0 x 35.8 x 40.0 cm)

Environmental Operating Conditions

Pollution Degree 2**

Installation Category II**

Altitude 2000 meters MSL (Mean Sea Level)

Relative Humidity . . 20% to 80% maximum, non-condensing

Electrical Supply 120 VAC or 240 VAC

Voltage Tolerance ±10% of normal rated line

Temperature 15°C to 32°C

Product Usage Indoor use only

**Interface cables not to exceed 9.8' (3 m) in length.*

***Refer to IEC 664-1*

Caution Operation of a shaker in a CO₂ enriched atmosphere is not recommended. The formation of carbonic acid could cause electrical failures. ▲

Declaration of Conformity available on request.