

Section 5 Specifications

Shaking

Range 25-400 RPM
Accuracy 1 RPM
Motion One inch/orbital
Indicator LCD in 1 RPM increments

Temperature

Range:
SHKE8000 & SHKE8000-1CE
. 10°C (50°F) above ambient to 60°C (140°F)
SHKE8000-7 & SHKE8000-8CE
. 5°C (41°F) or 20°C below ambient, to 60°C (140°F)
Control ±0.15°C
Uniformity ±0.3°C (in flask)
Indicator LCD in 0.1°C increments

Timer

Range . . . Programmable from 1 minute to 199 hours 59 minutes,
or for continuous operation
Indicator LCD in 1 minute increments
Run Time . . . LCD counts down for a timed run or counts up when in
“hold” function in 1 minute decrements/increments

Alarms

Temperature Software independent overtemperature and
undertemperature shutdown circuit
Platform Speed Software independent speed control circuit
Platform Stall Software independent motor overcurrent protection
circuit
Time Cycle complete
Power Failure Loss of input power

Safety

Temperature Independent over and under temp
Speed Independent platform motion

LCD (Liquid Crystal Display)

Top line displays actual elapsed run time, speed and temperature; bottom line displays user time, speed and temperature setpoints alternating with any active alarm messages.

Mechanical Drive System

Triple counterbalanced. Compensates for unbalanced platform loads

Drive Motor

1/3 HP brushless DC, permanently lubricated ball bearing

Door

Fold-down door with pneumatic dampers and spring assisted closure.

Automatic Restart

Microprocessor retains all programming in non-volatile memory. In the event of a power outage, the shaker restarts automatically.

Construction

Cabinet

Interior Stainless steel with coved corners

Exterior Cold rolled steel

Finish . . . Powder coated for a durable, easily maintained surface

Platform Anodized brushed aluminum

Door

Powder coated stainless steel

Tempered thermal pane window (Heated window - refrigerated units)

Dimensions

Exterior - SHKE8000 46.5”W x 25.0”H x 33.3”F-B
. (118.1cm x 63.5cm x 84.6cm)

Exterior - SHKE8000-7JPN . . 56.5”W x 25.0”H x 33.3”F-B
. (143.5cm x 63.5cm x 84.6cm)

Exterior - door open 46.6” (118.4cm) F-B

Interior 33.4” W x 11.8” H x 23.8” F-B
. (84.8cm x 30.0cm x 60.5cm)

Electrical

SHKE8000

Nominal 120VAC, 60Hz, 1 PH, 6.4 FLA

SHKE8000-1CE

Nominal 230VAC, 50Hz, 1 PH, 3.0 FLA

SHKE8000-7

Nominal 120VAC, 60Hz, 1 PH, 9.0 FLA

SHKE8000-8CE

Nominal 230VAC, 50Hz, 1 PH, 4.5 FLA

Data Output RS-232 standard

Remote Alarm Contacts

Certifications

Declaration of Conformity available upon request.

Capacity

Flasks From (91) 25ml up to (6) 2.8L

Weights

Net

SHKE8000 & SHKE8000-1CE545 lbs. (247.2kg)

SHKE8000-7 & SHKE8000-8CE . . 610 lbs. (276.7kg)

Shipping

SHKE8000 & SHKE8000-1CE 658 lbs. (298.5kg)

SHKE8000-7 & SHKE8000-8CE . . .723 lbs. (328.0kg)

Maximum Product Weight (equally distributed) Per Platform *

71 lbs (32.2kg)

Optional Platforms

Size 30" x 18" (76.2cm x 45.7cm)

Clips . . .25ml, 50ml, 125ml, 250/300ml, 500ml, 1L, 2L, 2.8L

Racks . . Adjustable angle test tube holder with rack, 10-30mm

Chamber Air Filter

Rated 95% efficient at 0.3 microns

11.0" x 20.0" x 1.5" (27.9cm x 50.8cm x 3.8cm)

Ambient Operating Conditions

Indoor use only

Temperature 5°C (41°F) to 32°C (89.6°F)

Humidity 80% RH at or below 31°C, decreasing linearly to 50% RH at 32°C

Sound Level Not to exceed 64db

Caution Running Maximum Product Weight and Maximum RPM may not be possible. ▲

Intended Use

Orbital shakers are designed to provide increased aeration in a stable 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

Safety Specifications

Indoor Use Only

Altitude 2,000 meters

Temperature 5°C to 32°C

Humidity 80% RH at or below 32°C,
decreasing linearly to 50% RH at 32°C

Mains Supply Fluctuations ±10%

Installation Category II ¹

Pollution Degree 2 ²

Class of Equipment I

Climatic Condition - ST (EN 60335, Subtropical)

Fluorinated Greenhouse Gases

Compliant with REGULATION (EU) No 517/2014 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on fluorinated greenhouse gases.

This product contains fluorinated greenhouse gases in a hermetically sealed system. This product contains foam blown with fluorinated greenhouse gas, R-245fa. If a leak in the sealed system is detected, the operator shall repair without undue delay.

The following model is designed with the following amounts of fluorinated greenhouse gases:

Model	Refrigerant	Amount (kg)	GWP
SHKE8000-8CE	R-134a	0.298	1430

1 Installation category (overvoltage category) defines the level of transient overvoltage which the instrument is designed to withstand safely. It depends on the nature of the electricity supply and its overvoltage protection means. For example, in CAT II which is the category used for instruments in installations supplied from a supply comparable to public mains such as hospital and research laboratories and most industrial laboratories, the expected transient overvoltage is 2500V for a 230V supply and 1500V for a 120V supply.

2 Pollution Degree describes the amount of conductive pollution present in the operating environment. Pollution Degree 2 assumes that normally only non-conductive pollution such as dust occurs with the exception of occasional conductivity caused by condensation.