VORTEX-GENIE® PULSE

OPERATING INSTRUCTIONS

Models SI-P236 through SI-P296

Scientific Industries, Inc.™

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The VORTEX-GENIE® PULSE Mixer is a unique Pulsing Vortex Mixer produced by Scientific Industries. VORTEX-GENIE mixers are the "Gold Standard" for laboratory mixers. The quality and reliability, that you have come to know so well, are characteristics that are, by design, an integral part of all “GENIE™” products.

APPLICATIONS

The 3-inch Platform accepts single or multiple test tubes, beakers and various flasks. The removable cover, made of thermoplastic rubber, is highly impervious to chemicals. It is, however, recommended that spills be blotted quickly. Do not attempt to use the 3-inch Platform without the thermoplastic cover.

The Pop-off Cup can accommodate tubes of virtually any size or shape from micro-tubes to those up to 40mm in diameter and 200mm in length. In most instances, tubes without caps may be mixed with proper speed control. Tubes must be capped when potential aerosols may be hazardous.

In addition, you may use any of the accessory attachments that are available for the your VORTEX-GENIE® PULSE Mixer. ***Review instruction 3.0 before attempting to change attachments***.

OPERATING INSTRUCTIONS

We recommend you retain the original packaging for 90 days in case you need to return the product for any reason to your distributor or Scientific Industries.

1.0 - Plug the line cord into a properly grounded electrical outlet. ***(120 VAC for the SI-P236 model; 230/240 VAC for the SI-P246 – SI-P276 and SI-P296 models; 100 VAC for the SI-P286 model)***. Illuminated numbers will appear in the **TIME** and **SPEED** windows indicating that the unit is ON and ready for use***.***

2.0 - The VORTEX-GENIE PULSE Mixer has the following features:

2.1 - TIMED VORTEXING

The VORTEX-GENIE PULSE may be used as a normal (non-pulsing) vortex mixer. Press the PULSE button so that pulse is “OFF”.
The left display is set time (in minutes) till automatic stopping of the unit.
The right display is set speed.

“UP” represents the top end speed of the mixer. To activate the **“UP”** speed setting, press the UP arrow button beneath the **SPEED** window until maximum speed is displayed (3000 RPM for 60 hz, 2850 RPM for 50 hz.). Release the UP arrow button and press it again. **“UP”** will appear in the display window. Press the START/STOP button to initiate a mixing cycle.

Press “START/STOP” button to start the unit.
When the unit is running, actual speed will be displayed which can vary based on load.
Note: For heavier loads on unit, maximum speed may not be achievable.

2.2 – CONTINUOUS VORTEXING

Set TIME to “0” for continuous (non-timed) operation. Display will read **“--“**
The unit will run until the START/STOP button is pressed.
Set the speed by pressing the UP/DOWN arrow buttons beneath the SPEED window.

2.3 – PULSED VORTEXING

The PULSED VORTEXING will work in CONTINUOUS or TIMED modes.

To initiate the PULSE “ON” mode, press the **PULSE** button until **ON** is illuminated beneath the word **PULSE**. The TIME and SPEED displays will begin flashing. When display is flashing, you are setting the Pulse “RUN” time (left display) and the Pulse “STOP” time (right display).

The TIME setting can range from 1/10th of a second to 99 minutes. When the rightmost decimal point is displayed, the setting is in seconds. When the rightmost decimal point is **not** displayed, the setting is in minutes. A setting of 0-1 second is adjusted in 1/10th of a second increments; 1-60 seconds are adjusted in 1 second increments; 1-10 minutes are adjusted in .5 minute (30 second) increments; 10-99 minutes are adjusted in 1 minute increments. (See Figure 1 for display readouts and corresponding time settings).

Set the desired PULSE “RUN” time. Next set the desired PULSE “STOP” time. Wait for the TIME and SPEED displays to stop blinking.

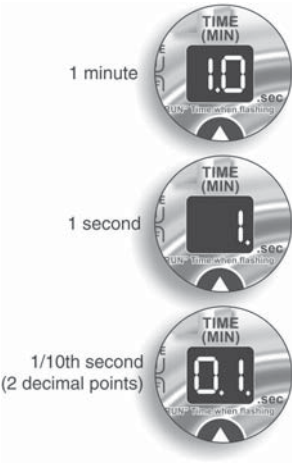


Fig. 1

It is recommended to set the **SPEED** to **“UP”** when using the PULSE mode with “RUN” times of less than 5 seconds (all speeds will work, however time/speed regulation is best at the **“UP”** setting). **“UP”** represents the top end speed of the mixer. To activate the **“UP”** speed setting, press the UP arrow button beneath the **SPEED** window until maximum speed is displayed (**3000** RPM for 60 hz, 2850 RPM for 50 hz.). Release the UP arrow button and press it again. **“UP”** will appear in the display window. Press the START/STOP button to initiate a mixing cycle.

Important note: When using the PULSE mode with “RUN” times of less than 5 seconds, SET speed will be displayed when the unit is running, instead of actual speed (Minimum of five seconds is required to display a stable speed).

2.4 – “SLEEP”
The mixer will automatically go into a “SLEEP” mode if the mixer is plugged in but not used for 10 minutes. The **TIME** and **SPEED** illuminated displays will go blank and the PULSE **ON/OFF** illuminated display will blink. Press the **START/STOP** button to “WAKE UP” the mixer.

Note: The speed control can be adjusted up or down during the mixing cycle, however, the TIME can only be adjusted before the cycle begins.

3.0 – To change accessory mixing attachments, the following sequence is to be followed explicitly.

3.1 – Turn the power OFF by unplugging the unit from the outlet.

3.2 – Grasp the installed attachment and pull straight up until it releases from the shaft. A technique of lifting the attachment with your finger tips while using your knuckles as a fulcrum will give you the leverage to remove the installed component smoothly.

3.3 – Hold the attachment you wish to install so the "flat" part of the shaft is aligned with the "flat" of the receptacle in the attachment component. Alternatively, you may place the attachment component on the shaft and turn it until you feel the "flats" aligning.

3.4 – Press attachment component firmly downward until it "snaps" into place. The VORTEX-GENIE® PULSE Mixer is now ready to use with the newly installed accessory attachment. Plug the unit back into the electrical outlet. Follow instructions 1.0 through 2.4 for proper use of the mixer.

4.0 – With prolonged use, your VORTEX-GENIE PULSE Mixer may become warm to the touch. The motor (ETL Listed) will radiate a certain amount of heat that will be dissipated by the cast zinc housing.

⚠CAUTION! Do not lift your VORTEX-GENIE® PULSE Mixer by its attachments.
All attachments, including the Pop-off Cup and the 3-inch Platform are removable. They will pop off easily if you lift them, and snap back on again just as easily by aligning the flats and pressing down firmly.

⚠CAUTION! Failure to follow operating instructions can compromise the user's safety.

Care and Handling
Your VORTEX-GENIE PULSE Mixer should be given the care normally required for any electrical appliance. Avoid wetting or unnecessary exposure to fumes. The finish can be washed with water (after unplugging) and soap or detergents, using a cloth or sponge. Keep the unit clean by immediately blotting any spills. Replacement parts are available through most laboratory equipment distributors or directly from Scientific Industries. Refer to "Parts Assembly List" and enclosed multi-fold brochure.

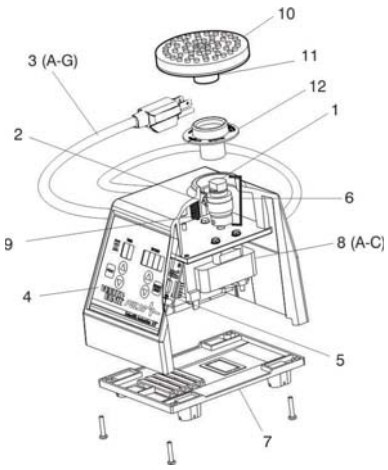
⚠CAUTION! Unplug from power before cleaning. Do not immerse.

SPECIFICATIONS
The VORTEX-GENIE PULSE Mixer is classified as "Installation Category 2"
Environmental: 0°C – 38°C (32°F-100°F), 95% Humidity max.

MODEL	POWER REQUIRED	AMPS	MODEL	POWER REQUIRED	AMPS
SI-P236	120V	0.65	SI-P276	230V	0.50
SI-P246	230V	0.50	SI-P296	240V	0.50
SI-P256	230V	0.50	SI-P286	100V	1.0
SI-P266	230V	0.50			

Weight: 4 Kg (8.8 lbs.) - Zinc casting with specially designed feet.
Base Dimensions:(D x W x H) 165 X 122 X 165mm (6.5 X 4.8 X 6.5in)

PARTS ASSEMBLY LIST
To order parts for the VORTEX-GENIE PULSE Mixer:
Contact your local distributor or visit www.scientificindustries.com. Please specify Part No., quantity and electric voltage.



Indicator No.	Part No.	Description
1	0K-0236-902	Bearing Retainer Kit
2	0K-0236-903	Eccentric Clamp
3A	318-0510-02	120V Line Cord
3B	0K-0246-901	230V Line Cord, without Plug
3C	0K-0256-901	230V Line Cord, European Plug
3D	0K-0266-901	230V Line Cord, British Plug
3E	0K-0276-901	230V Line Cord, Swiss Plug
3F	0K-0286-901	100V Line Cord
3G	ECP0021	Australian Plug (only)
4	EL-P236-575	Control Panel
5	EB-P236-500	Digital Pulse Board
6	0K-A236-904	Digital Eccentric with Clamp Assembly
7	0K-0236-408	Bottom Closure with feet
8A	0K-DD36-915	Motor 120V Assembly
8B	0K-DD46-915	Motor 230V Assembly
8C	0K-DD86-915	Motor 100V Assembly
9	566-0028-00	Spring, Extension, Eccentric
10	580-2013-00	Rubber Cover for 3-inch Platform
11	0K-0500-901	3-inch Platform
12	146-3011-00	Pop-off Cup

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