

INSTRUCTION MANUAL

CAT. 71838-12, 71838-20, 71838-EU, 71838-BR, 71838-SW, 71838-AU, 71838-10

Vortex Genie 2 Digital



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The Digital Vortex-Genie® 2 is a technologically advanced vortex mixer designed to give the operator true speed feedback. To prevent any confusion, please note that displayed speed is **ACTUAL** speed, which may differ slightly from **SET** speed due to load. There is no error with your mixer.

APPLICATIONS

The 3-inch Platform is compatible with single or multiple test tubes, beakers and various flasks. The removable cover, made of thermoplastic rubber, has a high level of resistance to chemicals. We do recommend, however, that spills be blotted quickly to avoid any damage. Do not attempt to use the 3-inch Platform without the thermoplastic cover.

The Pop-off cup can be used with tubes of virtually any size or shape from micro-tubes to those up to 40mm in diameter and 200mm in length. In most cases, tubes without caps may be mixed with proper speed control. If handling hazardous aerosols, insure that the tubes are capped properly.

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 Electron Microscopy Sciences.

- 1.0 - Plug the line cord into a properly grounded electrical outlet. Illuminated numbers will appear in the **TIME** and **SPEED** windows indicating that the unit is ON and ready for use.
- 2.1 - The DIGITAL VORTEX-GENIE 2 Mixer has the following modes of operation:
 - 2.2 - "TT" (TIMED TOUCH - 1 to 99 seconds)
For procedures that require **short duration vortex** mixing from 1 to 99 seconds. Or, for procedures that require **accurate and repetitive vortex mixing sequences** of 1 to 99 seconds each.

To initiate the "TT" mode, press the **MODE** button until **SEC** is illuminated beneath the word **TOUCH**. Press the UP/DOWN arrow buttons beneath the **TIME** window to set the desired mixing time. Next, set the speed control by pressing the UP/DOWN arrow buttons beneath the **SPEED** window.

When you touch a tube or other vessel to the 3-inch Platform or Pop-off Cup, the mixer will start and run for 1 to 99 seconds, depending on the **TIME** setting. The mixer



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will automatically turn off at the end of the 1 to 99 second cycle. Releasing the pressure on the 3-inch Platform or Pop-off Cup and then re-applying the pressure will initiate another 1 to 99 second cycle. The mixing cycles will be precisely timed and you may initiate as many mixing cycles as you wish.

2.3 - "CT" (CONTINUOUS TOUCH)

The "CT" mode allows for operation that will continue indefinitely until you release pressure on the 3-inch Platform or Pop-off Cup.

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To initiate the "CT" mode, press the **MODE** button until **SEC** is illuminated above the **START/STOP** text. Next, press and hold the DOWN arrow button beneath the **TIME** window until the illuminated display reaches "0". Upon releasing the button, the display will have two dash marks (--), indicating that *no time limit* is set. Set the speed by pressing the UP/DOWN arrow buttons beneath the **SPEED** window. Apply pressure to the 3-inch Platform or Pop-off Cup to initiate mixer. Release pressure to stop mixer.

2.4 - "FT" (HANDS FREE TIMED - 1 to 99 minutes)

The "FT" mode allows for unattended operation that is timed from 1 to 99 minutes. In this mode, you may use any of the accessory attachments that are available for the DIGITAL VORTEX-GENIE® 2 Mixer. Review instruction 3.0 before attempting to change attachments.

To initiate the "FT" mode, press the **MODE** button until **MIN** is illuminated above the **START/STOP** text. Next, press the UP/DOWN arrow buttons beneath the **TIME** window to set the desired mixing time. Next, set the speed control by pressing the UP/DOWN arrow buttons beneath the **SPEED** window. Press the **START/STOP** button to begin the mixing action. The mixer will run until the set time has elapsed. To stop the cycle before the set time has elapsed, press the **START/STOP** button. To initiate a new timed cycle, press the **START/STOP** button again.

2.5 - "FC" (HANDS FREE CONTINUOUS)

The "FC" mode allows for unattended operation that will continue indefinitely until you stop the cycle by pressing the **START/STOP** button. In this mode, you may also use any of the accessory attachments available for the DIGITAL VORTEX-GENIE 2 Mixer.

To initiate the "FC" mode, press the **MODE** button until **MIN** is illuminated above the **START/STOP** text. Next, press the DOWN arrow beneath the **TIME** window until the illuminated display reaches "0". Upon releasing the button, the display will have two dash marks (--), indicating that *no time limit* is set. Next, set the speed control by pressing the UP/DOWN arrow buttons beneath the **SPEED** window. Upon pressing the **START/STOP** button, the mixer will start and continue to run, unattended, until you once again press the **START/STOP** button. To restart the cycle, press the **START/STOP** button again.

2.6 - "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 **SEC** or **MIN** 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.

3.1 - To change accessory mixing attachments, the following sequence is to be followed explicitly.

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- 3.2 - Grasp the installed attachment and pull straight up until it releases from the shaft. A technique of lifting the attachment with your fingertips while using your knuckles as a fulcrum will give you the leverage to remove the installed component smoothly.
- 3.3 - Hold the part you wish to install so the "flat" part of the shaft is aligned with the "flat" of the receptacle in the attachment. Alternatively, you may place the attachment on the shaft and turn it until you feel the "flats" aligning.
- 3.4 - Press attachment firmly downward until it "snaps" into place. The DIGITAL VORTEX-GENIE 2 is now ready to use with the newly installed accessory attachment. Follow instructions 1.0 through 2.5 for proper use of the mixer.
- 4.1 - With prolonged use, your DIGITAL VORTEX-GENIE 2 Mixer may become warm to the touch. The motor will radiate a certain amount of heat that will dissipate by the cast zinc housing.

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⚠ CAUTION! Do not lift your DIGITAL VORTEX-GENIE® 2 Mixer by its attachment.
 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 DIGITAL VORTEX-GENIE 2 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 Electron Microscopy Sciences. Refer to "Parts Assembly List" and enclosed multi-fold brochure.

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

SPECIFICATIONS

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



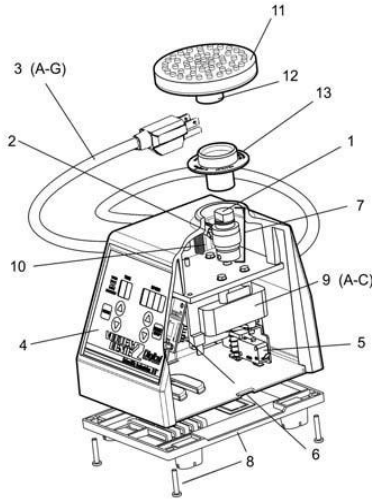
Weight: 4 Kg (8.8 lb) - Zinc casting with shock absorbing feet
 Base Dimensions: (DxWxH) 165x122x165mm (6.5x4.8x6.5in)

PARTS ASSEMBLY LIST

To order parts for the DIGITAL VORTEX-GENIE 2 Mixer:

Contact your local distributor or visit www.emsdiasum.com. Please specify Part No., quantity and electric voltage.

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