

# GYROMAX™ Orbital Open-Air Shakers

## Models 818, 828, & 838



Model 818



Model 838

The 800 series of open-air shakers offer a choice of three shakers with four platform sizes. The largest model, 818, is a large-capacity heavy-duty shaker with a 38" x 24" platform. The mid-size 828 has a 24" x 19" platform while the 838 offers two platform sizes. While a compact unit, the 838 is large enough carry a significant load.

The shakers feature microprocessor control and separate digital RPM and timer readouts. The microprocessor regulates the speed to within  $\pm 1$  RPM of the set point. The drive system includes a triple-eccentric drive that is dynamically balanced with counter weights. This feature eliminates the need to make adjustments as the load increases, and together with a low-profile design, ensures a smooth, stable and quiet operation. A fan cools the drive motor to ensure a long life. In the event of a power failure, the shaker will resume shaking automatically from where it last stopped on restoration of power.

A brushless, maintenance-free, drive motor generates digitally displayed speeds from 40 to 400 RPM. The standard shaking orbit of 25 mm provides a higher oxygen transfer rate (OTR) compared to shakers with a 19-mm orbit because OTR is directly proportional to orbit size.

The programmable timer affords a choice of switching between a continuous run, and a timed run. The timer is settable up to 99 hours and 59 minutes in 1 minute increments. For longer runs, you can program up to 8 timed runs to run sequentially. For example, automatically run 80 hours 3 or 8 for a total of 240 or 640 hours, respectively. You also can change the RPM and the direction of rotation. For example, you can program a timed run consisting of a sequence of up to eight timed segments such as shaking for 60 minutes at 200 RPM in a clockwise direction, next at 250 RPM for 120 minutes counter clockwise, and then for 180 minutes at 275 RPM clockwise, etc. For applications such as mixing of two immiscible liquids or extraction, you can set the direction of rotation to change every minute for optimum mixing.

Accessories include a universal platform, clamps, spring rack for tubes in an angled or vertical position tubes in addition to flasks without the need for clamps, tube racks and universal rack holders, and a holder for micro and deep-well plates.

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## Specifications of Models 818, 828, 838

- Maintenance-free, brushless motor cooled by a fan for long life.
- Dynamically balanced, triple-eccentric drive for long life and smooth, stable, and quiet operation. Eliminates the need for adjustments as the speed changes.
- Shaking speed: 40 to 400 RPM (60 Hz).
- Multi-step programmability of speed.
- Maximum load at 100 RPM: 818 = 200 lb, 828 = 140 lb, 838 = 70 lb.
- Digital RPM setting and display in 1 RPM increments.
- In case of power failure, the timer will count from where it last stopped when the shaker automatically resumes running.
- Timer and display: 99 hours 59 minutes in 1-minute increments.  
Maximum number of timed runs up to 99 hours 59 minutes each to run sequentially: 8  
Maximum number of iterations of a sequence of timed runs: 999
- Power source: 120V, 50/60Hz, 2A, \*220V available upon request.
- **Overall dimensions**  
Model 838: 15.75"W x 13"D x 6.5"H (400mmW x 330mmD x 165mmH)  
Model 838: (Oversized) 18.9"W x 15"D x 6.5"H (480mmW x 380mmD x 165mmH)  
Model 828: 24"W x 19"D x 8.5"H (610mmW x 483mmD x 215mmH)  
Model 818: 38"W x 24"D x 8.5"H (965mmW x 610mmD x 215mmH)
- **Platform dimensions**  
Model 838: 15.75"W x 11.8"D (400mmW x 300mmD)  
Model 838: (Oversized) 18.9"W x 15.0"D (480mmW x 380mmD)  
Model 828: 24"W x 19"D (610mmW x 483mmD)  
Model 818: 38"W x 24"D (965mmW x 610mmD)
- **Accessories:** Platforms, clamps, plate holder, tube racks and stainless steel spring racks for flasks or tubes of different sizes.

### Flask Capacity

Flask Size (mL)	125	250	500	1000	2000	2800	4000	6000
Model 838	20	12	8	6	3	1	1	1
Model 838 (Oversize)	30	20	12	8	5	2	2	1
Model 828	48	30	20	12	6	3	3	3
Model 818	96	60	40	24	15	8	8	8



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