



Operations Manual

Item: R2020 and R2024 (-E) V1.0



I. Specifications:

Speed:

R2020 Fixed 24 RPM (20RPM for 230V, 50Hz)

R2024 Adjustable from 1 to 70rpm

Max Capacity: 6 x 50ml / 20 x 15ml / 44 x 1.5-2.0ml

Dimensions: (wxdxh) 27.5x15.2x16.5cm (10.8x6x6.5 in.)

Weight: 3lbs / 1.4kg

Electrical:

R2020 120V, 60HZ or 230V, 50Hz 0.25A 5W

R2024 100 to 240V, 50-60Hz, 0.25A 5W

Operating environment: 4°C (cold room) to 65°C

Warranty: 2 years

II. Product Set-Up:

Place the rotator on a clean and stable surface. (Ensure that there is at least 3 inches of open space both in front of and behind the instrument.) Plug the instrument into an outlet of the appropriate voltage.

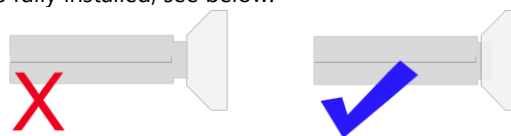
III. Tube Holder Installation / Exchange:

The instrument includes an assortment of tube holders and posts.

1.5/2.0, 5, 7, 10 and 15ml Tubes:

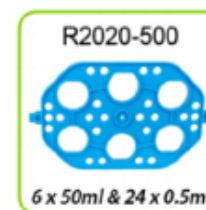


Attach the tube holders (above) to the included post with two arms. Press holders on firmly to prevent them from coming loose during use. Once pressed on firmly, attach the post to the rotator by inserting the post into the left side of the rotator first and then into the main body (right side). Once inserted, rotate the post until it is fully installed, see below:



To adjust the angle of which the tubes rotate, simply rotate the position of the tube holders by hand until the desired rotational angle is achieved.

0.5 and 50ml Tubes



Attach the large tube holder directly to the rotator (without posts.) Insert the holder into the left side of the rotator first and then into the main body (right side).

Once inserted, rotate the post until it is fully installed (similar to diagram above).

To rotate tubes horizontally (rolling/hybridization motion), first attach the 2 small posts to the center of the large tube holder. (One post has a small flat that can be inserted to correspond to the flat located in the center of the tube holder). Thread the 2 posts together by turning the post (without flat) clockwise until fully tightener. Then insert posts into the rotator as described above.

To load test-tubes, press them firmly into the appropriate holder. ALWAYS ensure a balanced load across both sides of the rotational axis. (When mixing 15 and 50ml tubes, always load a similar quantity of tubes on each side of the rotational axis.)

IV. Product Operation:

R2020

The speed of the R2020 is fixed (not adjustable) Once tubes are properly loaded, press the switch to the on position to start the rotation. When mixing is completed, press the switch into the off position.

R2024

Set the Rotational Speed:

The rotational speed can be selected by pressing the up and down keys to adjust the display to the desired speed setting (5 to 70rpm)

Choose the Mixing Mode:

The R2024 offers three additional mixing modes, Mix, Pause and Rock.

To activate, press the “Mode” key, an LED for the activate mode is illuminated. To toggle between modes, press the “Mode” key again. **To return to the standard rotating mode, press the “Mode” key until all LED indicators are off.**

IV. Care and Maintenance:

No routine maintenance is required other than to keep the unit clean. Cleaning can be done with a damp cloth. Avoid the use of harsh solvents.

Service and Contact: In the event that service or technical support is required, please contact **Benchmark** by phone at **1-908-769-5555** or by email at info@benchmarkscientific.com.