



Maxi Rotators

Model No.
4631Q
4631 JPNQ
4631-1CEQ
4631-1CECN

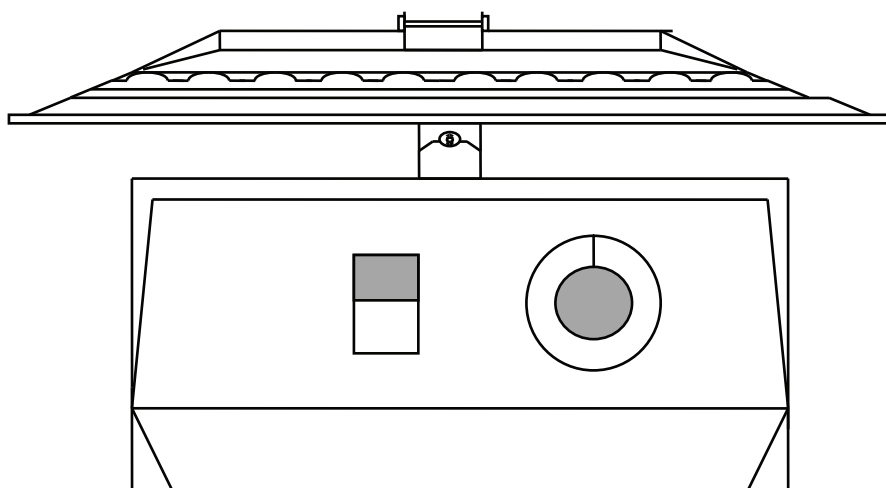
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Description

The Maxi Rotator is a compact unit ideal for hybridization blotting, staining and destaining gels, serological and other laboratory procedures that require a smooth, consistent mixing action. With a bi-directional movement, the mixing motion is a horizontal and vertical orbital rotation through a 6° angle at speeds from 0 to 25 rpm.

The lightweight body makes for easy portability and its compact size permits use in areas with limited space. The non-skid platform surface holds containers in place and the rotator's rubber feet provide stability.



Safety Information

Alert Signals



Warning

Warnings alert you to a possibility of personal injury.



Caution

Cautions alert you to a possibility of damage to the equipment.



Note

Notes alert you to pertinent facts and conditions.



Hot Surface

Hot surfaces alert you to a possibility of personal injury if you come in contact with a surface during use or for a period of time after use.

Your Thermo Scientific Lab-Line Maxi Rotator has been designed with function, reliability, and safety in mind. It is your responsibility to install it in conformance with local electrical codes. It is most important that the user follow installation instructions exactly as written. Failure to do so is likely to lead to improper operation, erroneous calibrations and possible damage to the equipment. Do not attempt operation without this information.

Specifications

Power Requirements

Model 4631Q:	120 VAC, 50/60 Hz, 0.4 Amps, 48 Watts
Model 4631 JPNQ:	100 VAC, 50/60 Hz, 0.5 Amps, 48 Watts
Model 4631-1CEQ:	220-240 VAC, 50/60 Hz, 0.2 Amps, 50 Watts
Model 4631-1CECN	220-240 VAC, 50/60 Hz, 0.2 Amps, 50 Watts

Shaker Motion

A bi-directional movement, a horizontal and vertical orbital rotation through a 6° angle.

Shaker Speed

0 to 25 revolutions-per-minute.

Platform Dimensions

16"W x 14"D (41 x 36 cm)
13-1/8"W x 10"D x 4-3/16"H (33 x 25 x 11 cm)

Net Weight

14 lbs. (6 kg)

SPECIFICATIONS

Declaration of Conformity

(For 220 to 240 volt, CE models only)

We hereby declare under our sole responsibility that this product conforms with the technical requirements of the following standards:

EMC: EN 61000-3-2 Limits for harmonic current emissions
EN 61000-3-3 Limits for voltage fluctuations and flicker
EN 61326-1 Electrical equipment for measurement, control, and laboratory use;
Part I: General Requirements

Safety: EN 61010-1 Safety requirements for electrical equipment for measurement, control, and
laboratory use; Part I: General Requirements
EN 61010-2-051 Part II: Particular requirements for laboratory equipment for mixing and stirring

per the provisions of the Electromagnetic Compatibility Directive 89/336/EEC, as amended by 92/31/EEC and 93/68/EEC, and per the provisions of the Low Voltage Directive 73/23/EEC, as amended by 93/68/EEC.

The authorized representative located within the European Community is:

Thermo Fisher Scientific
419 Sutton Road
Southend On Sea
Essex SS2 5PH
United Kingdom

Copies of the Declaration of Conformity are available upon request.

Units Environmental Operating Conditions

Pollution Degree*: 2
Installation Category*: II
Altitude: 2000 Meters MSL (Mean Sea Level)
Humidity: 80% maximum, non-condensing
Electrical Supply: 120VAC or 240VAC
Voltage Tolerance: $\pm 10\%$ of normal rated line
Temperature: 15°C to 40°C
Product Usage: This product is intended for use indoors only

*Refer to IEC 664-1

Unpacking and Installation

Shipping Carton

This should be inspected upon delivery. When received, carefully examine for any shipping damage before unpacking. If damage is discovered, the delivering carrier should both specify and sign for the damage on your copy of the delivery receipt.

Open the carton carefully making certain that all parts are accounted for before packaging materials are discarded—after unpacking, if damage is found promptly report it to the carrier and request a damage inspection promptly.

IMPORTANT: Failure to request an inspection of damage within a few days after receipt of shipment absolves the carrier from any liability for damage: you must call for a damage inspection promptly.

Unpacking

Use the packing list below when unpacking to verify that the complete unit has been received. Do not discard packing materials until all is accounted for.

- Operation Manual
- Volt Warning-240V
- Registration Card
- Inspection Card

Electrical Requirements

120 VAC models require a 120 VAC, 50/60 Hz power source. They are supplied with a 3-wire line cord. It should be plugged into an outlet designed for 3-prong plugs. If an extension cord is used, it also should be the 3-wire grounded type. For an outlet designed to accept 2-prong plugs (ungrounded), it is required that a qualified electrician replace the outlet with a new grounded type.

240 VAC models require a 240 VAC, 50/60 Hz power source and are supplied with a European cord set.



Note

Leave rotator disconnected when not in use.

**Note**

Position rotator so that in case of emergency the plug is within easy to be quickly disconnected from the power outlet.

100 VAC models require a 100 VAC, 50/60 Hz power source. Because of the variety of plug configurations in use worldwide for 100 VAC power, the unit is furnished with the plug removed. The user must install a plug to conform with local code and configuration requirements.

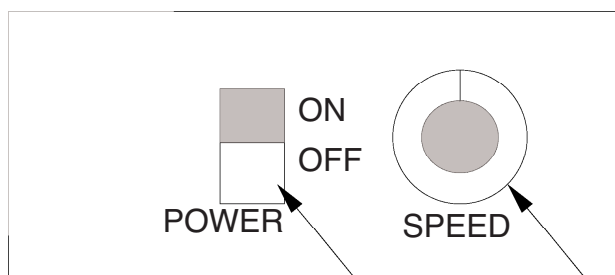
If a plug must be installed, use only the 3-prong grounded type, rated for the unit load requirements and matching the power outlet. Make sure the green ground wire is secured to the plug ground terminal.

Location

For optimum performance, place the unit on a level, stable surface and in an area free from drafts, extraneous heat sources and vibration. Be sure to provide clearance on all sides so as to avoid contact of the moving platform with any surrounding equipment or objects.

- Do not use in a room with a temperature higher than 40°C.
- Do not use in a room with a temperature lower than 0°C.
- Do not use in a damp atmosphere.

Operation



POWER SWITCH

#440-359-00 (120V UNIT)
#440-292-00 (240V UNIT)**

SPEED CONTROL

#227-841-00 (SPEED CONTROL)
#560-225-00 (KNOB)**



Warning

Do not use in the presence of flammable or combustible materials or explosive gases. Do not use in the presence of pressurized or sealed containers—fire or explosion may result, causing death or severe injury.



Note

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

- Check that the power switch is in the **OFF** position.
- Rotate the speed control to the **0** position.
- Place glass slides, microtiter plates and other vessels on the platform. Arrange the materials so as to avoid any possibility of contact with each other while the rotator is in motion.
- Turn the power switch to the **ON** position.
- Rotate the speed control to a point where the platform is just moving. At this level of rotation, determine that the vessels on the platform are secure and that no liquids are in danger of escaping. Slowly increase the speed of rotation to the level desired, continuing to observe that all materials are secure.
- In the event that gases may be emitted from any reactions taking place, the rotator should be placed in a properly vented hood.
- Observe all rules of your organization or laboratory regarding the wearing of safety gloves, glasses and protective clothing.
- After mixing action has completed, return speed control to **0** and turn unit off.
- To lengthen life of unit, it is recommended that unit be disconnected from its power source when not in use.

*As listed on upcoming replacement parts list



Caution

Do not operate rotator without platform in place. Exposed rotating parts can be a hazard to fingers and/or clothing such as shirt cuffs, ties, buttons and similar items.



Note

This symbol means a high-power warning; found on yellow warning label on bottom of unit.



Caution

Protection provided by the equipment may be impaired if not correctly used in the manner specified.

Power Mains Protection

If a fuse blows, have a qualified person replace it with a properly rated fuse. The internal primary of the transformer fuse is:

5 AMP, Littlefuse® #313.005, 3AG, Slo-Blo Type (Thermo Scientific Part #330-273-00).

Maintenance



Note

Make no attempt to service or repair a Thermo Scientific product under warranty before consulting your distributor. After the warranty period, such consultation is still advised, especially when the repair may be technically sophisticated or difficult.

If assistance is needed beyond what the distributor can provide, please call the customer service department at 1-800-553-0039. No merchandise, however should be returned without prior approval.



Caution

Disconnect plug from electrical outlet before attempting any maintenance or repair of this unit.

Neutralizing Spills

In the event of any spills on the surfaces of the unit, carry out appropriate neutralization procedures and/or wash off with a cleaning solution made of warm water and a mild detergent. Rinse off with clean water and dry thoroughly. Do not use abrasive cleaners on surfaces.

Replacing the Power Switch and the Speed Control

Replacing the power switch and/or speed control requires removal of the bottom cover. Turn unit over and remove 4 screws holding the bottom cover and lift cover from the housing.

- **Power Switch:** Disconnect wiring from switch. Grasp the switch on its top and bottom, depress the locking spring sufficiently to free the switch from the unit. Withdraw from the front. Reverse procedure to install new switch.
- **Speed Control :** Replace the speed control by removing 2 setscrews and a retaining nut to separate it from the panel. Disconnect the wiring from the speed control and reconnect to the replacement speed control.
- Reverse the sequence to put speed control into position on the panel.
- Replace bottom cover and tighten the 4 screws previously removed.

Replacement Parts

Description	Part Number
Bearing	140-030-00
Bearing Housing	584-961-00
Circuit Breakers, 1 Amp (2)	330-158-00
Cordset (for 4631Q)	470-187-00
Cordset (for 4631-1CEQ)	470-299-00
Cordset, CE (Euro)	470-299-00
Fuse, 5 Amp	330-273-00
Knob	560-225-00
Power Switch, 100/120V Unit	440-359-00
Power Switch, 240V Unit	440-292-00
Mat, Vinyl	790-316-01
Motor	370-371-00
Rod End, Male	803-610-00
Rod End, Female	803-611-00
Rubber Feet (4)	790-214-00
Speed Control	227-841-00
Transformer, 240V Unit	460-242-00
Wiring Schematic, 100/120V Unit	228-541-00
Wiring Schematic, 240V Unit	228-558-00
Wiring Schematic, (4631-1CEQ)	229-121-00
Wiring Schematic, (4631-1CEQ)	228-817-00

Ordering Procedures

Please refer to the Specification Plate for the complete model number, serial number, and series number when requesting service, replacement parts or in any correspondence concerning this unit.

All parts listed herein may be ordered from the **Thermo Scientific** dealer from whom you purchased this unit or can be obtained promptly from the factory. When service or replacement parts are needed we ask that you check first with your dealer. If the dealer cannot handle your request, then contact our Customer Service Department at 563-556-2241 or 800-553-0039.

Prior to returning any materials, please contact our Customer Service Department for a "Return Materials Authorization" number (RMA). Material returned without an RMA number will be refused.

One Year Limited Warranty

This Thermo Scientific product is warranted to be free of defects in materials and workmanship for one (1) year from the first to occur of (i) the date the product is sold by the manufacturer or (ii) the date the product is purchased by the original retail customer (the "Commencement Date"). Except as expressly stated above, the MANUFACTURER MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, WITH RESPECT TO THE PRODUCTS AND EXPRESSLY DISCLAIMS ANY AND ALL WARRANTIES, INCLUDING BUT NOT LIMITED TO, WARRANTIES OF DESIGN, MERCHANT ABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

An authorized representative of the manufacturer must perform all warranty inspections. In the event of a defect covered by the warranty, we shall, as our sole obligation and exclusive remedy, provide free replacement parts to remedy the defective product. In addition, for products sold within the continental United States or Canada, the manufacturer shall provide free labor to repair the products with the replacement parts, but only for a period of ninety (90) days from the Commencement Date.

The warranty provided hereunder shall be null and void and without further force or effect if there is any (i) repair made to the product by a party other than the manufacturer or its duly authorized service representative, (ii) misuse (including use inconsistent with written operating instructions for the product), mishandling, contamination, overheating, modification or alteration of the product by any customer or third party or (iii) use of replacement parts that are obtained from a party who is not an authorized dealer of Thermo Scientific products.

Heating elements, because of their susceptibility to overheating and contamination, must be returned to the factory and if, upon inspection, it is concluded that failure is due to factors other than excessive high temperature or contamination, the manufacturer will provide warranty replacement. As a condition to the return of any product, or any constituent part thereof, to the factory, it shall be sent prepaid and a prior written authorization from the manufacturer assigning a Return Materials Number to the product or part shall be obtained.

IN NO EVENT SHALL THE MANUFACTURER BE LIABLE TO ANY PARTY FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, OR FOR ANY DAMAGES RESULTING FROM LOSS OF USE OR PROFITS, ANTICIPATED OR OTHERWISE, ARISING OUT OF OR IN CONNECTION WITH THE SALE, USE OR PERFORMANCE OF ANY PRODUCTS, WHETHER SUCH CLAIM IS BASED ON CONTRACT, TORT (INCLUDING NEGLIGENCE), ANY THEORY OF STRICT LIABILITY OR REGULATORY ACTION.

For the name of the authorized Thermo Scientific product dealer nearest you or any additional information, contact us:

North America: USA/Canada +1 866 984 3766 (866-9-THERMO) www.thermo.com

Europe: Austria +43 1 801 40 0, Belgium +32 2 482 30 30, France +33 2 2803 2180, Germany national toll free 08001-536 376,

Germany international +49 6184 90 6940, Italy +39 02 02 95059 434-254-375, Netherlands +31 76 571 4440, Nordic/Baltic countries +358 9 329 100,

Russia/CIS +7 (812) 703 42 15, Spain/Portugal +34 93 223 09 18, Switzerland +41 44 454 12 12, UK/Ireland +44 870 609 9203

Asia: China +86 21 6865 4588 or +86 10 8419 3588, India toll free 1800 22 8374, India +91 22 6716 2200, Japan +81 45 453 9220,

Other Asian countries +852 2885 4613 Countries not listed: +49 6184 90 6940 or +33 2 2803 2180