



# Multi Tube Rotator

Model No.  
4632Q  
4632-1CE  
4632-1CECN

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# Safety Information

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## 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.



### **Risk of Electric Shock**

Disconnect unit from power source before removing cover.

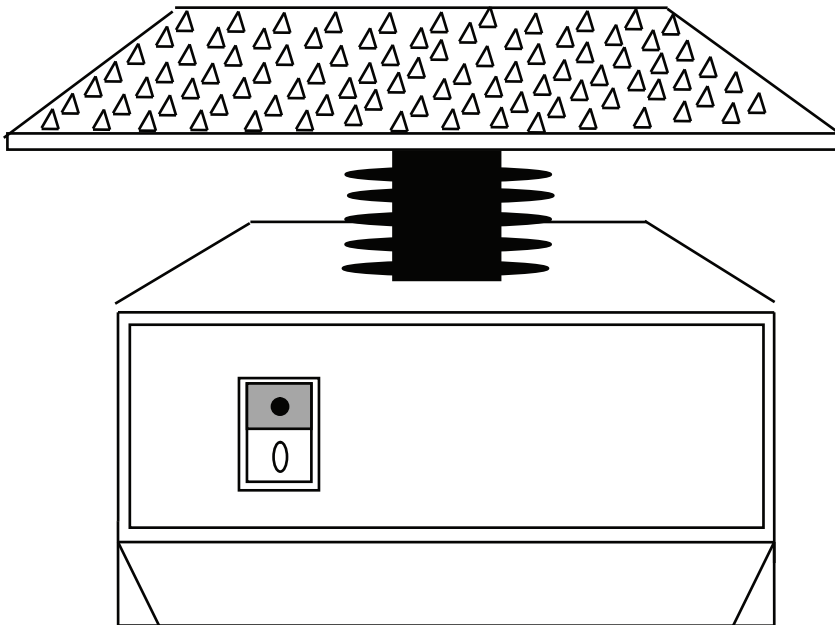
Your Thermo Scientific Lab-Line Multi Tube Rotator has been designed with function, reliability, and safety in mind. It is your responsibility to install it in conformance with local electrical codes. It is most important that the user follow installation instructions exactly as written. Failure to do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

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# Description

The model 4632Q Multi Tube Rotator mixes the contents of blood tubes and other vessels making it ideal for use in hematology, blood chemistry and other laboratory applications where a continuous, gentle motion is necessary. The mechanical action of the unit provides a circular motion coupled with a rocking pattern that keeps liquids and solutions gently mixed without the potential for shearing or other damage.

The portable, lightweight metal body is durable and easy to clean. The rotator's compact size permits easy transportability and use in areas with limited space. The white silicone rubber, non-skid, double sided platform surface holds 7ml, 10ml or 15ml tubes firmly in place. The rocker's four rubber feet provide additional stability.



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# Specifications

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## Power Requirements

Model 4632Q:

120 VAC, 60 Hz, 0.03 Amps, 4.0 Watts

Model 4632-1CE & 4632-1CECN:

220-240 VAC, 50 Hz, 0.03 Amps, 4.0 Watts

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## Shaker Motion

Bi-directional rotation.

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## Shaker Speed (fixed)

30 revolutions-per-minute.

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## Angle of Rotation

20° from the horizontal plane

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## Platform Dimensions

8-13/16" W x 5-3/8"D (22.5 x 13.8 cm)

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## Unit Dimensions

6-7/8"W x 8-3/8"D x 8"H (17 x 21.3 x 20.3 cm)

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## Net Weight

6 lbs. (3 kg)

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## SPECIFICATIONS

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### 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;<br>Part I: General Requirements                         |
| Safety: | EN 61010-1     | Safety requirements for electrical equipment for measurement, control, and<br>laboratory use; Part I: General Requirements |
|         | EN 61010-2-010 | Part II: Particular requirements for laboratory equipment for the heating of<br>materials                                  |
|         | 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.

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### Unit's 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:     | ±10% of normal rated line                     |
| Temperature:           | 15°C to 40°C                                  |
| Product Usage:         | This product is intended for use indoors only |

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# Unpacking and Installation

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## 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.



### Note

Leave unit disconnected when not in use.

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## Electrical Requirements

Model 4632Q requires a 120 VAC, 60 Hz power source. It is 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.

Models 4632-1CE and 4632-1CECN require 220-240 VAC, 50 Hz power source. 4632-1CE is furnished with a European cord set, and 4632-1CECN is furnished with a China cord set.

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.

**Note**

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

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## 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.

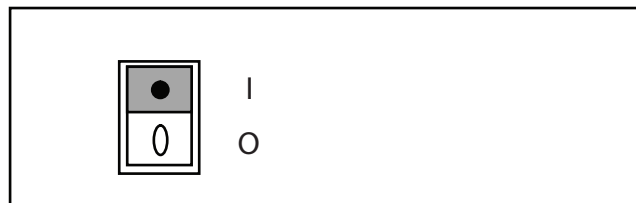
Do not use in a room with a temperature lower than 15°C.

Do not use in a damp atmosphere.



# Operation

*Control Panel*



**Warning**

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



**Warning**

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.



**Warning**

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



**Note**

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

Choose one side of platform mat that matches the size of the vessels being used.

- Place tubes on rubber mat and secure them by firmly pressing them between supports. Vessels may be changed while platform is rotating. Arrange the tubes so as to avoid any possibility of contact with each other while the rotator is in motion.
- Plug power cord into appropriate three prong grounded outlet whose characteristics match those on the rotator's data plate.
- Turn power on by placing power switch in the I position. Green LED should light.
- 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, turn power off by placing power switch in the O position. Green LED should be off. Remove all vessels.
- To lengthen life of unit, it is recommended that rotator be disconnected from its power source when not in use.

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# 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.

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## Neutralizing Spills

In the event of any spills on the surfaces of the unit, carry out appropriate neutralization procedures and wiped off using a clean cloth dampened with a cleaning solution made of warm water and a mild detergent. Surfaces should then be wiped with a second cloth dampened with clean water and dried thoroughly. Do not use abrasive cleaners on surfaces.

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## Replacing the Power Switch

Replacing the power switch 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.
- Replace bottom cover and tighten the 4 screws previously removed.

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## Routine Cleaning

Cleaning of the surfaces should be performed using a clean cloth dampened with solution of warm water and a mild detergent. Surfaces should then be wiped with a second cloth dampened with clean water and dried thoroughly.

For cleaning in the event of a spill or dried contamination, the **Neutralizing Spills** procedure shall be followed.

Do not use abrasive cleaners on any surfaces as damage to surface finish will result.

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# Replacement Parts

| <u>Description</u>          | <u>Part Number</u> |
|-----------------------------|--------------------|
| Bearing                     | 140-258-00         |
| Bellows                     | 790-408-00         |
| Cordset, 4632Q              | 470-187-00         |
| Cordset, 4632-1CE           | CRX77              |
| Cordset, 4632-1CECN         | CRMX10             |
| Fuse, 0.5 Amp               | 330-291-00         |
| Motor 120V, 60 Hz           | 370-317-00         |
| Motor 240V, 50 Hz           | 370-318-00         |
| Rotator Spindle             | 659-058-00         |
| Rubber Feet (4)             | 790-214-00         |
| Rubber Mat                  | 790-405-00         |
| Switch                      | 440-359-00         |
| Wiring Schematic, 120V unit | 229-095-00         |

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# 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.

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# 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](http://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,

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