



Type M79700 Platform Vari-Mix[®] Rocker

Operation Manual
and Parts List

<u>Model No.</u>	<u>Voltage</u>	<u>Hertz</u>	<u>Amps</u>	<u>Watts</u>
M79735	100-120	50/60	0.10	12
M79730-33	220-240 (European only)	50/60	0.06	12
M79730-33CN	220-240	50/60	0.06	12

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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.

Congratulations on your purchase of a Thermo Scientific Type M79700 Platform Vari-Mix Rocker. It has been designed with function, reliability, and safety in mind. It is your responsibility to install it in conformance with local electrical codes. For safe operation, please pay attention to the alert signals throughout the manual.

This manual contains important operating and safety information. You must carefully read and understand the contents of this manual prior to using this equipment.

Warnings

To avoid electrical shock, always:

1. Use a properly grounded electrical outlet of correct voltage and current handling capacity.
2. Disconnect from the power supply prior to maintenance and servicing.

To avoid personal injury:

1. Do not use in the presence of flammable or combustible materials; fire or explosion may result. This device contains components which may ignite such materials.
2. Use appropriate hand, eye, face and apron protection when rotating labware containing hazardous chemicals.
3. Refer servicing to qualified personnel.

Introduction



Note

The motor in this rocker will contribute some heat to an incubator or cold room environment.

Your Platform Vari-Mix Rocker has been designed and engineered as a general purpose laboratory rocker. Intended uses include mixing solutions in various labware vessels and trays. The rocker may be used at temperatures from 0°C to 65°C.

Principles of Operation

The Platform Vari-Mix Rocker has an electronically controlled DC gear motor drive which is linked to the rotator platform. Speed is adjusted by varying the DC voltage supplied to the motor.

Declaration of Conformity

(for 220-240 volt, -33 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
	EN61010-2-051	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
Robert-Bosch-Strasse 1, D-63505
Langenselbold, Germany.

Copies of the Declaration of Conformity are available upon request.

Technical Specifications

Overall Dimensions: 12 5/8" W x 7 1/4" H x 12" D

Platform Working Dimensions: 10 5/8" x 12 5/8"

Platform Angle Variation (Pitch): 0 to ± 24 angle

rpm (No Load Condition): 5-30 rpm \pm 2 rpm

Maximum Load:

Centered: 15 lbs.

On Double-Tier Platform: 15 lbs.

Ambient Operating Range: 0°C to 65°C

Relative Humidity Operating Range:

20-80% non-condensing

Timer Range:

0-2 hrs. (60 Hz.)

0-3 hrs. (50 Hz.)



Warning

Use a properly grounded electrical outlet of correct voltage and current handling capacity.

Installation

Remove your Platform Vari-Mix Rocker from the carton. Inspect to ensure that the unit has not been damaged during shipment. Set the rocker on a flat, stable surface and plug into an appropriate outlet. Remove the white silicone rubber top from the protective plastic packaging and place the top on the metal platform.

Set the power toggle switch into the "ON" position. The green power switch will illuminate to indicate that the unit is "ON." Set the pitch and the speed and the timer control knobs.

Operation



Note

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

Place the timer control knob in the hold position for constant operation. The platform should rock in a quiet, smooth motion.

Setting the Speed

Set the speed control knob to the desired speed within the 5-30 rpm range. The speed control reference scale is laid out in 1 rpm increments.

Setting the Pitch

Loosen the knob securing the rocking arm to the drive wheel. Slide the rocking arm in the groove on the drive wheel to your desired rocking angle, as indicated on the drive wheel. Tighten the knob finger tight to secure the rocking arm.

Setting the Timer

Set the timer control knob to the time required, within the time range provided (2 hrs for 60 Hz. models, 3 hrs. for 50 Hz. models). Carefully observe the timer reference scale. The timer reference scale is laid out in 10 minute increments with 30 minute, 1 hour, 90 minute and 2 hour positions noted. The outer perimeter scale is referenced for 120/240 volt, 60 Hertz timer motor operation. The inner reference scale is for 120/240 volt, 50 Hertz timer motor operation. (It is necessary to provide a dual scale as this rotator is sold worldwide.) The timer does not include an audible alarm, so the rotator will simply stop operating when the set time has elapsed.

Once the pitch, speed and time control knobs have been set, the platform should rock in a quiet, smooth motion.

Operating Tips

1. It is safer to mix reagents and chemicals in small mouth labware to avoid splashing. Test vessel stability to ensure vessel will not tip, teeter, walk or slide. Improvised tie downs or trays may be used to hold unstable vessels in position if you prefer.
2. The white silicone rubber top is removable. Lift one corner to remove top. The top must remain clean to maintain its friction-gripping quality. Wash with soap and water, dry and reinstall.
3. It is recommended that partial loads be centered on top to evenly distribute weight for longer life.
4. When the Platform Vari-Mix Rocker is used within an incubator, the incubator temperature must be stabilized with the rocker on, as the motor generates heat.

Your rocker requires minimal maintenance. The drive motor is permanently lubricated.

Maintenance and Servicing



Note

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

Timer Verification

The timer settings may be verified by setting the indicator line on the timer knob to a specified reference mark and timing the elapsed time with a calibrated elapsed timer.

Adjusting the Calibration of the Speed Control

1. With the speed control knob set at the 10 rpm setting and the power switch off, plug the unit into an outlet with the proper voltage.
2. Turn the power switch on and check the rocking speed of the top with a tachometer. The rocking speed should be 10 rpm \pm 1 rpm. If it's not, continue with step 3.
3. Locate the calibration potentiometer on the back panel. Remove the cap. Insert a screwdriver and turn the screwdriver clockwise to increase the rpm and counterclockwise to decrease the rpm. The maximum speed correction is 2-4 rpm. If more adjustment is necessary, contact customer service at [800-553-0039](tel:800-553-0039).

Your Platform Vari-Mix Rocker will operate within the specified operating range of 5-30 rpm under a no-load condition. You may calibrate the rpm with a specific load using this procedure. However, loads heavier or lighter than your specific load may cause an rpm variation.

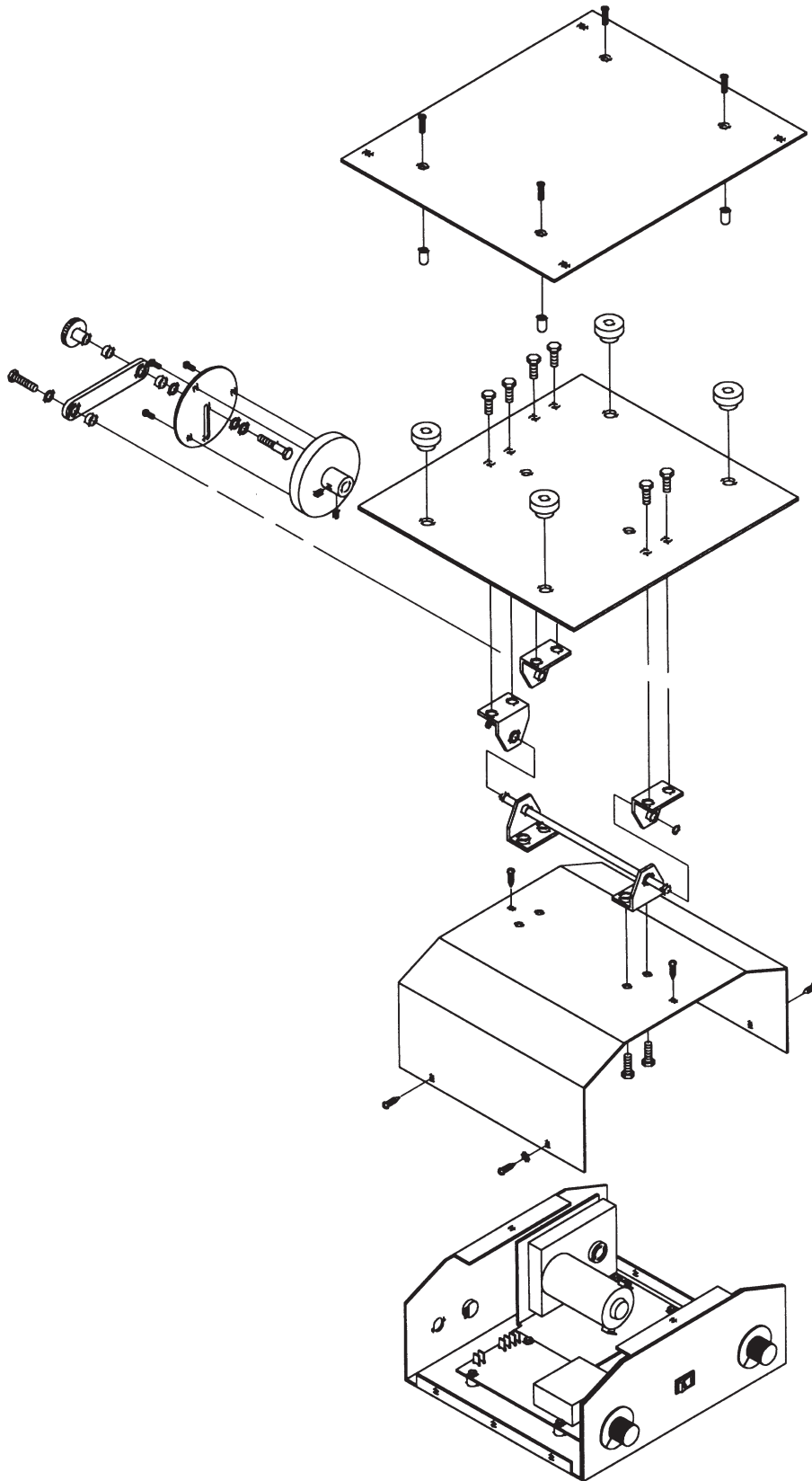
Disassembling the Platform Vari-Mix Rocker

1. Unplug unit.
2. Remove the nut securing the driver arm to the rocking platform.
3. Slide the pivot bar out of its sleeve bearings. Remove the rocking plate.
4. Remove the screws securing the top cover (2 per side and 2 on top). Remove the top cover.
5. All the components in the lower case are easily accessible for replacement and removal. However, some assembly tips are given as follows:
 - a. Remove the four Phillips head screws holding the motor to the mounting plate to remove motor.
 - b. Removing the timer control knob requires resetting the red line indicator to the point where the time elapses and tightening the set screws. Check timing with a calibrated elapsed timer.
6. Reassembly may be completed by reversing the disassembly procedure.

Troubleshooting

Problem	Cause	Solution
Unit will not rock (though power light illuminates).	Timer is defective.	Replace timer.
	Defective motor, printed circuit board or speed control.	Replace appropriate part.
	Fuse blown on PC board.	Replace fuse.
Unit will not rock (power light does not illuminate).	Unit is unplugged or power supply does not illuminate).	Verify that unit is plugged into a is bad. working power supply.
	Cord set defective.	Replace cord set.
Rocker speed has decreased.	Gears in gear motor failing.	Replace motor.
	Carbon buildup in motor.	Operate at maximum speed for 1 hour.
	Excessive loading.	Reduce load weight.
	Calibration changed.	Recalibrate unit.
Timer does not function.	Defective timer.	Replace timer.
	Knob setscrew loose.	Tighten setscrew and recalibrate.
Timer does not turn off after elapsed time has expired.	Defective timer.	Replace timer.
Timer inaccurate.	Knob slipped on shaft.	Replace knob or tighten setscrew.
	User reading wrong Hz scale.	Use the 60 Hz scale for 60 Hz power supplies or the 50 Hz scale for 50 Hz power supplies.
Internal components are corroded.	Excessive humidity.	Decrease humidity.
	Corrosive atmosphere.	Remove from corrosive atmosphere.
Fuse on PC board repeatedly blowing.	Wrong size fuse installed.	Use correct size fuse.
	Defective motor.	Replace motor.
	Rocking platform jammed.	Remove obstruction.

Exploded View



Replacement Parts

Model Type: M79700
Product Name: Platform Vari-Mix Rocker
Series Number: 2030

<u>Part Number</u>	<u>Description</u>
BC797X2A	Drive bushing, Link
BC797X1A	Support bushing, Nylon
CR843X1	Cord set, 100/120V
CR500X2	Cord set, 240V
CRM2030X1	Cord set
5120-0016	Fuse (on PCB)
MTX94	DC motor
PC797X2A	Printed circuit board (all components mounted)
PT717X1	Silicon platform cover (White)
RSX322	Calibration port (on rear of unit)
RSX264	Potentiometer (speed control)
SWX135	Switch, 100/120V
SWX136	Switch, 240V
TM797X1A	Timer
380-570-00	Strain Relief (All models)
FZX49	Fuse

Accessories

<u>Part Number</u>	<u>Description</u>
AY797X1	Double Tier Platform

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 800-943-2006 or 800-926-0505.

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,

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