

**OPERATING MANUAL**

**COLE-PARMER  
ROTO-TORQUE™ HEAVY DUTY  
ROTATING MIXERS**

**MODEL NOS. 07637-21 AND 07637-22**

**DOCUMENT NUMBER RT50-1**

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## **1. INTRODUCTION**

Congratulations on your purchase of a Cole-Parmer Rotating Mixer. Please read the instructions carefully to insure that you receive the maximum benefit from it. Also, be sure to fill out and return the enclosed warranty registration card.

## **2. WARRANTY**

Cole-Parmer warrants this unit to be free from defects in material and workmanship for a period of one year from the date of purchase. If repair or adjustment is necessary and has not been the result of abuse or misuse within the one-year period, please return-freight prepaid-and correction of the defect will be made without charge.

## **3. RETURN OF ITEMS**

AUTHORIZATION MUST BE OBTAINED FROM OUR CUSTOMER SERVICE DEPARTMENT BEFORE RETURNING ITEMS FOR ANY REASON. When applying for authorization, please include data regarding the reason the item is being returned. For your protection, items must be carefully packaged to prevent damage in shipment and insured against possible damage or loss. Cole-Parmer will not be responsible for damage resulting from careless or insufficient packing. A 15% restocking charge will be made on all unauthorized returns.

Note: Cole-Parmer reserves the right to make improvements in design, construction, and appearance without notice.

## **4. LABELS**

There are two warning labels on this unit. Listed below is the label and its meaning.

This symbol means "Attention. The instruction Manual should be consulted for further information.

This symbol is the WE mark. This means this unit is To be disposed of in accordance with WE guidelines.

## **5. CAUTIONS**

This unit uses a bench top universal power supply that provides 12 volts DC to the unit. The power supply plugs into the AC line with the cord provided. Be certain that the cord is not placed where it can be damaged by heat or traffic.

Also, the unit can spin the sample disk as high as 60 rpm. Be sure the sample disk is secured to the rotator and that the samples are secured to the disk.

## **6. GENERAL DESCRIPTION**

The Cole-Parmer Roto-Torque Rotator is supplied with the motor/control housing, stand, power supply and AC line cord. However, the unit is used with one of three rotating disks that are purchased as accessories. The rotator unit contains a motor, speed control with ON/OFF detent fully counter-clockwise, indicator LED, DC input jack, and a shaft coupler for the disks. The Multipurpose disk (No. 07637-23) includes small clips, large clips and mounting hardware.

The Roto-Torque Rotator combines functional features with its attractive packaging. It can be used for very low to moderate agitation. It has a stepless electronic speed control, which can vary the speed from about 3 to about 80rpm. Even with heavier loads on and around the rotating disk, the disk will have a smooth rotation without cogging. The unit has an adjustable tilt housing that can be set by the operator to the correct angle desired for a particular test.

The Multipurpose disk can accept different sizes of clips. They can hold test tubes, flasks and bottles. Clips around the periphery of the disk are placed at an angle. And the user may adjust the angle. Any test tube placed in this clip will move through a figure 8 motion causing a sloshing effect and mixing of its contents.

The unit can be tilted forward or backward to about 45 degrees. Stops are placed on the stand to prevent the rotator module from tipping too far forward or backward for safety.

## **7. ASSEMBLY AND GENERAL INFORMATION**

Install the motor/control housing assembly on the base bracket using the top slots in the sides of the base bracket. Be sure to orient the base so that the side bracket with the pointer/stop pin on it is to the side of the base with the two stopper-pins. It may be necessary to pull the sides of the base bracket apart for this installation.

Place the fiber washer and the curved washer on the threaded shaft (side axle) outside of the base bracket. Use the side knob on the threaded shaft (axle). Determine the required tilt of the housing and tighten the side knob. The tilt angle of the housing can be changed by loosening the side knob.

Now the rotator disk can be mounted on the shaft on the top of the unit. Be sure to align the guide pin and the mounting hole, and then tighten the disk to the shaft until snug. An Allen wrench can be used to tighten the screw more.

Two sizes of clip are supplied with the disk. They can grip diameters of 10 to 20mm. The clamping diameters can be varied somewhat by slightly bending the clips. An extra large clip (20-25mm) and giant clip (20-40mm) are available as accessories.

The clips can be attached on the periphery or the flat surface of the disk. Thirty mounting holes on the periphery and sixteen holes on the front of the disk are provided for the mounting clips.

## **8. SOME APPLICATIONS**

The Rotator can be used for:

- Micro-diffusions determinations
- Semi-micro extractions
- Washing precipitates
- Blood reconstruction
- Dissolving of separations from chromatography paper
- Gas saturation of blood
- Moderate agitation in tubes, flasks and bottles

## **9. OPERATING CHARACTERISTICS**

The rotator comes with a powerful DC gear motor that provides high torque even at low speeds. It is designed to run smoothly, but it is still a good idea to try to balance the load on the disk. The dial graduations on the control are for reference only and are not calibrated to any set speed. The speed control has an OFF detent fully counterclockwise. This also turns-off power to the unit.-

**Note:** Cole-Parmer reserves the right to make improvements in design, construction and appearance of this unit without notice.

## 8. ACCESSORIES

Extra Large Clips (20-25mm)	07637-61
Giant Clips (25-40mm)	07637-71
Multipurpose Disk	07637-23
Test Tube Basket	07637-24
Serum Bottle Disk	07637-25