

## CMCP601 Series Demonstration Rotor Kits



### Features:

- Simulates General Machinery Faults
- Precision Speed Controller
- Stands with Sleeve Bearings Included
- Stands with Ball Bearings Optional
- Short Base Kit for Single Plane Balancing
- Long Base Kit for Dual Plane Balancing
- Balance Weight Kit Provided
- Downloadable Training Manual
- 110/220VAC 50/60 Hz Power

### Product Overview

The CMCP601 Series Rotor Kits simulate the dynamic motion of a rotating machine in a compact and easy to use package. The CMCP601 Series are ideal for class room or laboratory use and can be used to demonstrate the phenomena found in large rotating equipment by altering parameters such as speed and weight and to induce malfunctions such as unbalance, shaft bow or rub and misalignment. Results can be viewed on a variety of portable instrumentation or continuous monitoring systems but they are not included. The CMCP601 comes in two versions; a 16" (406.4mm) short base kit and a 31" (787.4mm) long base kit. Both version come with a precision speed controller and a rotor kit complete with a motor, sleeve bearing stands, shaft, coupling, mass and probe mounting brackets. The CMCP601-01 Short Base kit allows for single plane balancing while the CMCP601-02 Long Base kit allows for dual plane balancing. Accessories such as ball bearing stands, thrust and eccentricity measurement brackets, travel cases, safety covers and sensors kits are also available.

Measurements that can be obtained from the CMCP601 Series Rotor Kits include but not limited to, Frequency and Time Based Signals, Orbital Analysis, Shaft Runout, Shaft Bow, Critical Speed Identification, Resonance Amplitude Factor, Phase Analysis, Balancing, Shaft Relative and Case Absolute, Rotor Dynamic Studies and Misalignment.

### Standard Motor/Controller Specifications:

Power:	110-220VAC 50/60 Hz (Supplied with Standard USA Power Cable)
Current:	1.5A
Motor Type:	Brushed DC Motor
Speed:	0-11,500 RPM (Shown as 0-100%)
Adjustments:	Acceleration and Deceleration Rate, Minimum and Maximum RPM

### Short Base Rotor Kit Specification:

Overall Dimensions:	16" x 4" x 5" (406.4 x 101.6 x 127mm)
Weight:	28 Lbs (12.7 kg)
Max. Distance Between Bearing Stands:	8.75" (222.25mm)
Parts Included:	16" Short Base Frame, 2x Sleeve Bearing Stands, 10.25" (260.35mm) Short Shaft, Mass (Balancing Wheel), Coupling with Keyway, Single Probe Bracket, Dual Probe Bracket, Motor, Controller and Balancing Weight Kit

### Long Base Rotor Kit Specification:

Overall Dimensions:	31" x 4" x 5" (787.4 x 101.6 x 127mm)
Weight:	36 Lbs (16.32kg)
Max. Distance Between Bearing Stands:	23.25" (590.55mm)
Parts Included:	31" Long Base Frame, 2x Sleeve Bearing Stands, 25.25" (641.25mm) Long Shaft, 2x Mass' (Balancing Wheels), Coupling with Keyway, Single Probe Bracket, Double Probe Bracket, Motor, Controller and Balancing Weight Kit

**Sleeve Bearing Stand Specification:**

Overall Height: 3.0" (76.2mm)  
Shaft Centerline: 2.0" (50.8mm)  
Width: 1.0" (25.4mm)  
Weight: 0.65 Lbs (0.295kg)  
Shaft Clearance: 5 mils (0.127mm) ±0.001"  
Bearing Material: Oil Embedded Oilite® Flanged Sleeve Bearing  
Lubrication Type: SAE 30 Oil  
Sensor Mounting Holes: Three ¼"-28 UNF x 0.5" Deep, 45° Apart  
Mounting: Two 10-32x1.0" Allen Screws (Included with Kit)

**Anti-Friction Bearing Stand Specification:**

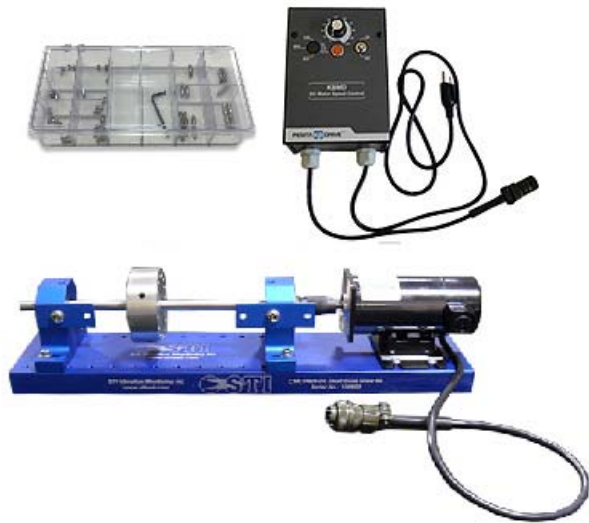
Overall Height: 3.0" (76.2mm)  
Shaft Centerline: 2.0" (50.8mm)  
Width: 1.0" (25.4mm)  
Weight: 0.78 Lbs (0.354kg)  
Shaft Clearance: 2 mils (0.051mm) ±0.001"  
Bearing Material: 6002 Steel Single Row Double Shielded Ball Bearing  
Maximum Speed: 24,000 RPM  
Bearing Lubrication: Mobil Polyrex EM Grease Filled  
Sensor Mounting Holes: Three ¼"-28 UNF Through Holes, 45° Apart  
Mounting: Two 10-32x1.0" Allen Screws (Included)

**Thrust and Eccentricity Block Specification:**

Overall Height: 3.0" (76.2mm)  
Shaft Centerline: 2.0" (50.8mm)  
Width: 0.75" (19.0mm)  
Thrust Mounting Hole: ¼"-28 UNF Through Hole  
Intended Thrust Position Target: Balancing Wheel (Perpendicular to Wheel)  
Eccentricity Mounting Hole: ¼"-28 UNF Through Hole  
Intended Eccentricity Target: Shaft (Perpendicular to Shaft)  
Weight: 0.5 Lbs. (0.227kg)  
Mounting: Two 10-32x1.0" Allen Screws (Included with Kit)

**Images:**

**Complete CMCP601-01 Short Base Rotor Kit**



**Complete CMCP601-02 Long Base Rotor Kit**



**Ordering Information:**

CMCP601	-XX	Description
	-01	Complete Short Base Rotor Kit
	-02	Complete Long Base Rotor Kit

**Accessories:**

CMCP601-REB Rolling Element (Ball) Bearing Stand



CMCP601-TEB Thrust/Eccentricity Measurement Bracket



CMCP601-PP Proximitors Mounting Plate with -24V Power Supply and BNC Output Interface



CMCP601-CC-S Hard Travel Case for Short Base Kit



CMCP601-CC-L

Hard Travel Case for Long Base Kit



CMCP601-C-SB

Plexiglass Safety Cover for Short Base Kit



CMCP601-C-LB

Plexiglass Safety Cover for Long Base Kit



CMCP601-SB

Spare Short Probe Bracket

CMCP601-LB

Spare Long Probe Bracket



CMCP601-EP-1

Eddy Probe Set, 200mV/mil, 5mm  
Includes Proximator and Eddy Probe with  
1 Meter Cable



CMCP780A

Compact Accelerometer, Side Exit,  
100mV/g, 2 Pin MS 5015 Connector



CMCP602LST-05

Accelerometer Extension Cable, 1 Meter  
Long, Blunt Cut (See CMCP602 Catalog for  
More Options)



CMCP602LST  
Seal Tight

CMCP601-WKF

Weight Kit Refill

