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

![Image of CMCP601-01 Short Base Rotor Kit](image-url)
Complete CMCP601-02 Long Base Rotor Kit

Ordering Information:

<table>
<thead>
<tr>
<th>CMCP601-XX</th>
<th>Description</th>
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<tbody>
<tr>
<td>-01</td>
<td>Complete Short Base Rotor Kit</td>
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<tr>
<td>-02</td>
<td>Complete Long Base Rotor Kit</td>
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Accessories:

- CMCP601-REB: Rolling Element (Ball) Bearing Stand
- CMCP601-TEB: Thrust/Eccentricity Measurement Bracket
- CMCP601-PP: Proximitior Mounting Plate with -24V Power Supply and BNC Output Interface
- CMCP601-CC-S: Hard Travel Case for Short Base Kit
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<tr>
<th>Part Number</th>
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<tbody>
<tr>
<td>CMCP601-CC-L</td>
<td>Hard Travel Case for Long Base Kit</td>
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<tr>
<td>CMCP601-C-SB</td>
<td>Plexiglass Safety Cover for Short Base Kit</td>
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<tr>
<td>CMCP601-C-LB</td>
<td>Plexiglass Safety Cover for Long Base Kit</td>
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<tr>
<td>CMCP601-SB</td>
<td>Spare Short Probe Bracket</td>
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<tr>
<td>CMCP601-LB</td>
<td>Spare Long Probe Bracket</td>
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<tr>
<td>CMCP601-EP-1</td>
<td>Eddy Probe Set, 200mV/mil, 5mm</td>
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<td></td>
<td>Includes Proximitr and Eddy Probe with 1 Meter Cable</td>
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<tr>
<td>CMCP780A</td>
<td>Compact Accelerometer, Side Exit, 100mV/g, 2 Pin MS 5015 Connector</td>
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<tr>
<td>CMCP602LST-05</td>
<td>Accelerometer Extension Cable, 1 Meter Long, Blunt Cut (See CMCP602 Catalog for More Options)</td>
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<tr>
<td>CMCP601-WKF</td>
<td>Weight Kit Refill</td>
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