203
Vibration Analysis Demonstrator

Product Dimensions
(L x W x H)
13.5” x 30” x 13” (343 x 762 x 330 mm)

Shipping Dimensions
(L x W x H)
41” x 37” x 32” (1041 x 940 x 813 mm)
168 lbs (76 kg)

FEATURES AND SPECIFICATIONS
- 1/3 HP, 3450 RPM, inverter-duty, 3-phase, AC motor.
- SCR speed control.
- Digital RPM indicator with magnetic pick-up.
- Heavy-duty, formed-steel sub-base, with adjustable feet.
- Three precision-machined, split pillow blocks allowing for bearing removal.
- Two 6" precision-machined rotors, allowing for single plane, dual plane and overhung balancing.
- Provision for creating rotor imbalance using set screws/washers or clay on inner rotor rim.
- Three, ½” diameter, precision-ground shafts (allows for re-configuration).
- Precision, helical beam coupling (other coupling types available as options).
- Provision for attachment of vibration pick-ups via 1/4-28 threaded studs.
- Steel top-surface mounting bars allowing for attachment of accessories, and modular guards.
- Instructor key switch.
- Motor mounting sub-base with tapered alignment pins, allowing for ease of alignment/mis-alignment.
- T-slotted aluminum mounting surface allowing for convenient reconfiguration, and attachment of optional accessories.
- Motor jacking bolts.
- High-durability powder-coated and anodized surfaces throughout.

GENERAL DESCRIPTION
A versatile, precision-machined device for demonstration of the causes and effects of vibration in industrial rotating machinery. The device allows for isolation of individual, vibration causing, variables in order to demonstrate their individual signatures. A permanent magnet DC motor with RPM pick-up and display is included. A system of indexing pins and CNC-machined pillow blocks allows for convenient and accurate reconfiguration. The device and its associated course/exercise guide allows for introductory training in vibration cause/effect, balancing and data collection. Optional equipment can expand the training aids usefulness.

OPTIONS
#203-002 - Gear/Belt Drive Accessory
#203-003 - Vibration Meter, Basic
#203-010 - Bearing Fault Kit
#203-012 - Resonance and Elastic Shaft Kit
#203-015 - Supplemental Coupling Kit
#203-019 - Mechanical Rub Kit
#208-001 - Shaft Alignment Tool Kit
#208-003 - Standard Shim Kit
#208-015 - Magnetic Base/Dial Indicator Set
#570-000 - IPT Rotating Equipment Training Manual
#570-001 - IPT Rotating Equipment Handbook
#902 - Electromechanical Workstation
#903 - Electromechanical Workstation, Extended
#203-001 - Heavy-Duty, Foam-Lined Reusable Packing Container
#203-009 - Expanded T-Slotted Baseplate
#203-011 - Eccentric/Cocked Rotor Kit
#203-013 - Replacement Bent Shaft Kit
#203-014 - Journal Bearing Kit
#203-016 - Replacement Thomas Flexible Disk Coupling (No Helical Supplied)
#203-018 - Supplemental Rotor Kit, 2-Piece
#203-021 - Crack Demonstrator Kit
#203-023 - Fan Demonstrator Kit
#203-024 - Motor Fault Kit
#203-025 - Load/Brake Device Accessory, Mechanical
#203-500 - Use/Exercise Guide (Additional)
#203-PAC - Vibration Analysis Demonstrator, Quick-Start Package (includes: #203, #203-003, #203-002, #203-010)
#208-002 - Economy Shim Kit (plastic)

VARIETIES
#203D - Vibration Analysis Demonstrator, Downsized
Modular polycarbonate guards.
Packaging for shipment via motor freight.

SERVICE REQUIREMENTS

110/220/VAC Single Phase

COURSE CONTENT

An introductory course for the maintenance technician including: vibration fundamentals, vibration measurement, vibration causes, data collection, and balancing.

Exercises include:
- Effects of frequency and displacement.
- Illustrating resonance.
- Understanding critical speed.
- Proper pickup mounting.
- Understanding imbalance.
- Understanding vibration caused by misalignment.
- Witnessing vibration from bearing faults.
- Witnessing the effects of looseness.
- Calculating imbalance.
- Single plane balancing, the four-run method.

Warning!! Vibration in rotating equipment can cause dangerous results.

These devices have been designed for professionals for use under controlled circumstances for training only. DAC assumes no liability for injury resulting from the use or misuse of this product.

In accordance with DAC's established policy of continuous improvement, these specifications and product descriptions are subject to change without notice. This information is the latest technical information as of the time of viewing or printing.