



# MACHINERY DIAGNOSTICS BASE UNIT & INSTRUMENTATION

## HTM90



### Features

- Introduces students to the concept of shaft and bearing vibration
- The effect that alignment of motors and coupling have on vibrations
- How to use a vibration analyser as part of a diagnostics process
- Base unit works with a suite of eight accessories each designed to reinforce specific areas of vibration analysis

### Description

The HTM90 series enables students to conduct a variety of vibration and mechanical fault testing experiments on a range of 'real life' scenario setups. The modular nature of the unit allows optional extras to be added as and when budgets permit. The apparatus enables students to recognise the characteristic vibrations of particular faults and apply these to fault diagnosis, important for any student involved in fault-finding and repair. The unit also helps students to understand how several common vibration faults occur and how to prevent them. Safety features include safety guard with micro-switch cut-off, emergency cut-off and instructor key lock to prevent unsupervised use of the apparatus.

### Learning capabilities

- Familiarization with vibration signals
- Understanding different ways of measuring vibrations/ vibration types
- Measurement of rotation speed, vibration travel, vibration velocity and acceleration
- Assessment of the vibration state of a machine from induced faults
- Listening to vibrational faults
- Positioning of sensors and directions of vibrations

### Technical Specification

- Polycarbonate Safety Guard with micro-switch safety cut-off
- Adjustable Motor Base plate
- Heavy Duty Industrial DC Motor - • Max RPM (unloaded) 3450
- Instructor Key (safety feature)
- Gear and sensor (for speed monitoring)
- Three bearing pillars (bearings are changeable)
- Two balance rotors with a number of screws and washers for unbalancing the system.

#### Recommended Ancillaries

- HTM90A - Enhanced Instrumentation Module
- HTM90B - Roller Bearing Module
- HTM90C - Couplings Module
- HTM90D - Load And Brake Module
- HTM90E - Elastic Shaft Module
- HTM90F - Fan Vibration Module
- HTM90G - Belt, Brake and Crank Module
- HTM90H - Gear Damage Module

#### What's in the Box?

- 1 x HTM90 Base Unit incorporating 1/3hp, 3450RPM, inverter-duty, 3 phase AC motor
- SCR speed controller
- Digital RPM indicator with magnetic pick-up
- Three (3) precision-machined split pillow blocks, allowing for bearing removal
- Guard incorporating inline RCD + microswitch
- Fitted 1/2" Diameter Shaft (18" Long)

#### Supporting Software

- Software is supplied with the HTM90 vibration analyser, however if no computer is locally available results can be read directly from the analyser display

#### Minimum System Requirements

- Host Computer Recommended for use with Vibration Analyser (not supplied).
- Recommended Minimum: Pentium 1 GHz or higher with 512 MB RAM or more, running Windows®8 or above

#### Weights & Dimensions

- Approximate Gross Packed Weight: 76kg
- Approximate Packed Dimensions: 900mm x 400mm x 350mm

#### Essential Services

- 220-240 Volts, Single Phase, 50Hz (With earth/ground). Line current up to 6A at 230v or
- 110-120 Volts, Single Phase, 60Hz (With earth/ground). Line current up to 10A at 110v

#### Ordering information

To order this product, please call PA Hilton quoting the following codes:  
HTM90/230V - Machinery Diagnostics Base Unit & Instrumentation  
HTM90/115V - Machinery Diagnostics Base Unit & Instrumentation

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COUNTRY OF ORIGIN - UK WARRANTY PERIOD - 5 YEARS