



Vibrations Mat Instrument

# BALANCING MACHINE BM 2300

## Technical Specification

### 1. GENERAL DESCRIPTION

#### 1.1. Balancing Machine

The balancing machine is a dynamic soft bearing machine with horizontal axis. An AC motor, with variable speed, drives the balancing machine through a belt drive system.



#### 1.2. Support and bearings

- The BM 2300 Balancing Machine can be used for rotor weight up to 2300 kg;
- Entek-IRD Modular Suspension Work Support with Mounting Hardware;
- Roller Bearing Work Support;
- 3 inches Dia. Entek-IRD Bearing and Hub Assembly.

#### 1.3. Transducers

The vibration transducers are velocity sensors (Entek-IRD, model 546DP) with a measurement sensitivity of 1100 mV/IPS.

The speed and phase sensor is a reflection proximity switch, type Sensopart FT20. This sensor has a scanning range between 10 and 300 mm.

#### 1.4. Speed controller

The VMI Speed Control Panel is equipped with an Altivar frequency converter. The motor speed can be adjusted continuously between 0 and 3000 RPM. The recommended balancing speed is 200 to 600 RPM.

#### Optional Accessories:

- 5 inches Dia. Entek-IRD Bearing and Hub Assembly;
- Rotor Safety Hold Down Assembly;
- Negative Load Hold Down Assembly.

### 2. SPECIFICATIONS

#### Rotor Mass and Unbalance Limitations

- Maximum Weight Capacity 2268 kg
- Maximum Weight per Support 1134 kg
- Minimum Weight 30 kg

#### Rotor Dimensions

• Maximum Rotor Diameter with Maximum Journal Diameter, D	mm	2050
• Maximum Distance between Rotor Bearing Centrelines, L1 <sub>max</sub>		depends upon the position of the base frame extension
• Minimum Distance between Rotor Bearing Centrelines, L1 <sub>min</sub>	mm	310
• Shaft journal diameter range	mm	19 to 260

**Unbalance under ideal rotor conditions**

0.003 mm mass center displacement per plane at minimum rotor weight;  
95%

**Unbalance Reduction Ratio**

**Drive System**

- Type of Drive Belt;
- Motor 2.2 kW AC-Variable Speed Controlled;
- Supply Voltage 380 VAC +/- 10%, 3 Phase, 50/60 Hertz.

**Balancing Speed**

Variable from 200 RPM;  
Lower speeds obtainable with reduction in minimum achievable residual unbalance;  
Balancing Speeds depends upon journal diameters, rotor diameters, and pulley ratios.

**Belt Speed**

30 to 1200 m/min.

**MACHINE COMPONENTS**

**Machine Dimension**

- Length 3000 mm (together with the base frame extension)
- Width 1265 mm
- Height 1000...1020 mm
- Work Supports

Both pedestals can be positioned along the base to accommodate various rotor lengths - manually operated.

**Belt Drive Assembly**

- Drive motor with drive pulley.
- Manually operated belt tensioning with three idler pulleys.
- Drive frame mounted on rollers for positioning along the base – manually operated.

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