

VIBRATION ANALYSER cum DYNAMIC BALANCER

FEATURES

- Vibration Measurement, frequency analysis and Field Balancing in a single, compact and portable instrument.
- True rms measurements as per ISO 2372 and IS 11724; including Overall measurements for varying vibration levels.
- Two-channel automatic scanning, storage of spectra on pen drive, and peaks finding .
- Single- plane and Two- plane dynamic field balancing vector calculations built-in.
- Spectra transfer via pen drive to a PC. Use with Windows based software VS23 for a powerful condition monitoring plant-wide program.
- User- friendly interface with 4 line backlit display.
- Two inputs for Accelerometer sensors.
- Lightweight, sturdy, portable and rechargeable battery operated.



DESCRIPTION

Vibration measurement, Condition Monitoring based on frequency- analysis and In- position dynamic balancing of rotors: these are the three most commonly faced applications of vibration in machinery. The 6060 offers solutions to all these three applications in a single, portable, rechargeable battery operated unit which fits into a briefcase. The microprocessor controlled unit makes all these tasks easy for the user. It has an 80 character alphanumeric LC display, on which the message appears in plain, easy to understand English.

MEASUREMENT:

Velocity & Displacement can be measured with the 6060.

ANALYSIS:

The 6060 features automated full frequency analysis. Frequency Analysis can be done over the frequency range 4Hz to 10 kHz (240 rpm to 600,000 rpm). Its microcontroller scans the entire frequency range looking for spectral peaks. Each peak contains valuable information: range magnitude of the peak is the severity of the vibration and the frequency is related to the nature of the defect. If imbalance is the dominant cause of vibration, a peak will be found at the rotation frequency with a magnitude comparable to the overall vibration, with the PC software VS23, the spectra can be quickly transferred to the PC through pen drive, where the spectra can not only be saved, and printed on the PC, but also post-processed. Enveloping is one such powerful tool, where limits can be placed on a good spectrum to mark the upper safety level. One can also view the history of the spectra and thus find out how a spectral peak has grown over time. The system is implemented in MS- windows, and assumes only a very fundamental knowledge of computers.

Vibration on machinery can be scanned at two points simultaneously and results saved on a pendrive for later transfer to PC. There is virtually no limit on the spectra saved.

BALANCING:

Two- plane and single- plane dynamic balancing can be performed in- situ with the 6060. it has all the required vector calculation algorithms built- into its program. Thus the operator is freed from the task of determining the weights by calculations or hit – and –try methods, resulting in vastly improved, quick and accurate results. A sharp auto tracking filter synchronizes automatically to the rotational speed and filters out all extraneous vibrations. It is also possible to compare the Overall and Synchronous vibration readings to confirm unbalance as being the dominant cause of vibration.

The unit is supplied as a complete kit with one sensor, lead, infra- red reference sensor and magnetic mounting stand as standard. Those requiring 2 sensor for 2 plane balancing can be order an extra sensor.

The unit runs of rechargeable batteries and has no moving parts. It employs the latest surface-mount technology for ensuring a lightweight, compact and reliable design.

NPL traceable calibration is furnished with each unit, and recalibration is also offered after the specified period. ISO 9000 organizations find this service very useful.

APPLICATIONS:

- *Quality checking of rotating equipment as an QC check.*
- *Vibration troubleshooting based on spectrum- analysis. Interface with PC for downloading and printing of spectra.*
- *Condition monitoring of rotating machines by spectral trending and enveloping in the PC*
- *In- position 1-plane and 2-plane dynamic balancing with inbuilt computation algorithms.*

USERS:

- *Process plants – Cement, Petrochemicals, Chemicals, Steel, Glass, Rayon and Yarn.*
- *Conventional and nuclear power plants.*
- *Air- conditioning plants.*
- *Oil industry- prospecting and refining.*
- *Automobile and others using CNC machines.*
- *OEM manufacturers of motors, pumps, blowers, impellers, and industrial fans.*
- *Railways*
- *Research and educational.*

Manufactured in India by Baseline Technologies, New Delhi, an ISO 9001:2000 company



SPECIFICATIONS

VIBRATION ANALYSER cum DYNAMIC BALANCER 6060:

Inputs	: Two inputs for accelerometers, one for reference tachosensor
Measurement Modes	: Velocity (RMS-mm/sec); Displacement (PK-Pk microns) in two channels.
Measurement Ranges	: Two manually selectable ranges and Auto-ranging. Range applies to both channels.
Velocity	: 0-25 to 0-250 mm/sec True RMS in 2 scales.
Displacement	: 0-250 to 0-2500 microns Pk-Pk in 2 scales.
Frequency Range	: ISO 10Hz-1kHz; 4Hz-1kHz ; 4Hz-10kHz; 10Hz-10kHz
Measurements	: Overall Vibration measurement as per selected mode For 2 channels simultaneously Vector measurement of 1X vibration as per selected mode
Frequency Analysis	: Two Channel simultaneous scanning. Microprocessor controlled frequency analysis over 4 Hz-10kHz with constant percentage bandwidth filter . Automatic Peak finding . Saving in Data in pen drive to transfer to PC and using with software VS23 on PC
Balancing	: Single Plane Balancing Two-plane Balancing (Requires 2 sensors) Option to split correction mass over blades Option to leave intact trial mass. Optional printing of Balancing Report on Thermal Printer (Optional) and saving of Balancing Report on Pendrive. Easy to follow procedure with prompting of steps.
Dimensions	: 236 mm (W) x 181mm (L) x 68mm (H) Supplied fitted in a foam-lined briefcase
Battery	: Internal rechargeable Li-Ion battery. Approx charge life of 10 hours continuous use, and a life of approx 500 deep cycles.
Battery charger	: Separately supplied as standard accessory
Temperature range	: 0-45 Deg C upto 90% humidity (non-condensing)
Weight	: 1 Kgm approx. without carrying case
Standard Accessories	: 1 Sensor with 3m lead, 1 Magnetic base, 1 reference sensor, 1 magnetic stand, 1 battery charger, Briefcase type carrying case, and 1 Operation Manual NOTE: 2 Plane balancing requires 2 sensors.
Optional Accessories	: 360 degree protractor set. Mini Thermal Printer. Printer rolls.

Note1 : The above stated item is designed and manufactured exclusively by Baseline Technologies, New Delhi, India. Baseline Technologies reserves the right to amend the above specifications at any time in the interest of improvement of the product or its process. The above specifications do not constitute a contract unless accompanied with a formal offer from Baseline Technologies.