Important information

VibChecker is a handheld instrument for fast and easy measurement of machine condition in preventive maintenance. It is based on the recommendations of ISO2372 and ISO10816 standards for broad band measurements of vibration. These standards make the assumption that limited information, obtained easily and at a low cost, is often as useful as a detailed analysis using expensive equipment and elaborate techniques.

- The instrument is intended for professional, industrial process, and educational use only while taking into consideration the technical specifications.

- Charge the battery within the charging temperature range (0° to +45 °C) in a dry office environment, otherwise it can become damaged.

- Charge the battery before storing the VibChecker for a longer period of time (>6 months). The reason for this is that the cells can not withstand being fully discharged.

- The instrument must be sent to a certified SPM Instrument service and calibration partner for replacement of a discharged battery.

- When measuring, ensure that no cables etc. can be caught in rotating parts which can cause injury.

- For safety reasons, the instrument must only be operated and maintained by properly trained personnel.

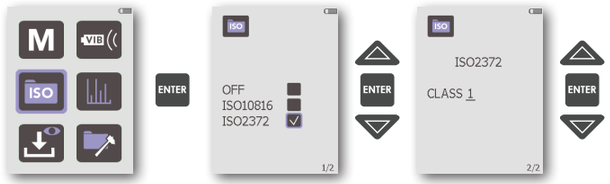
- Service and repairs of the instrument may only be performed by SPM Instrument authorized service technicians.

- Never use alcohol or ammonia-based cleaning fluid to clean the instrument screen.

Technical specifications

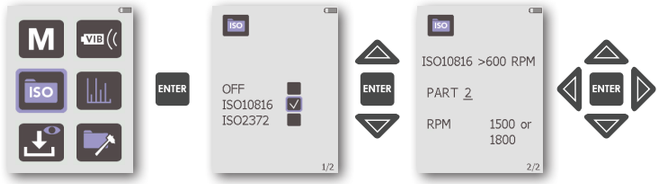
Dimensions, VC200:	207x74x41 mm, 335 g (8.1x2.9x1.6 in, 11.8 ounces)
Dimensions, VC250:	184x74x41 mm, 300 g (7.2x2.9x1.6 in, 10.6 ounces)
Protection class:	IP65
Power supply:	3.63 V Lithium Ion, mini-B USB rechargeable
Battery life:	> 25 hours of normal use
Charger, 90647:	100-240 V, 50-60 Hz, 6 W
Charging temperature:	0° to +45 °C (32° to 113 °F)
Operating temperature:	–10° to +50 °C (14° to 122 °F)
Input connector:	mini coax, for external sensors
Readings:	RMS/peak/peak-to-peak
Spectrum:	linear, 200/400/800 lines, Hanning window, Hz/cpm, zoom, RPM markers
Time signal:	512/1024/2048 samples, zoom, marker
Sensor type:	TRM100/TRM120 or IEPE (ICP®) type sensors with voltage output

ISO standards



Class I Individual parts of machines, integrally connected to the machine
Class II Medium size machines without special supports
Class III Large size machines on rigid supports
Class IV Turbomachines and large machines on flexible supports
Class V Drive systems on stiff foundations with unbalanceable inertia effects
Class VI Drive systems on soft foundations with unbalanceable inertia effects

RMS mm/s	I	II	III	IV	V	VI	RMS in/s
71							2.80
45							1.77
28							1.10
18							0.71
11							0.44
7.1							0.28
4.5							0.18
2.8							0.11
1.8							0.071
1.1							0.044
0.71							0.028
0.45							0.018
0.28							0.011



Part 2 Large land-based steam turbine generator set in excess of 50 MW. Machine speed either 1500/1800 RPM or 3000/3600 RPM.

Part 3 This part treats most of the common industrial machines and is divided into four groups:

Group 1 Large machines with rated power above 300 kW and not more than 50 MW; electrical machines with shaft height above 315 mm.
Group 2 Medium machines with rated power above 15 kW up to and including 300 kW; electrical machines with shaft height from 160 mm to 315 mm.
Group 3 Pumps with multivane impeller with separate driver (centrifugal, mixed flow or axial flow) with rated power above 15 kW.
Group 4 Pumps with multivane impeller with integrated driver (centrifugal, mixed flow or axial flow) with rated power above 15 kW.

Part 4 Gas turbine driven sets excluding aircraft derivates with power output of at least 3 MW. Limit value table depends on RPM of the turbine.

make
MAINTENANCE
A PROFITABLE
PART OF YOUR
PRODUCTION

VIB CHECKER
vibration monitoring to go™

QuickStart

Instrument overview

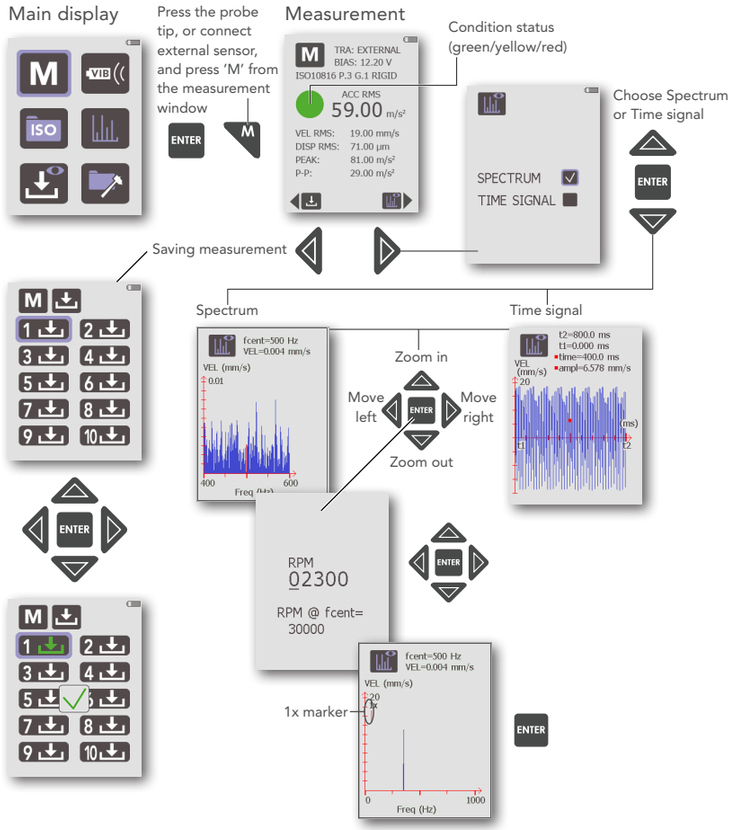
A. Optional: built-in measuring probe
B. Graphical display with LED backlight
C. MEASURE key
D. Navigation keys
E. ENTER key
F. BACK key and power on
G. Mini-B USB output
H. Sensor input for optional sensors and measuring cables

Spectrum settings

Sensor settings

View stored readings

Measurement



Measuring:

1. Hold the BACK key to switch on the instrument.
2. Select acceleration, velocity or displacement, and what results to show, in the AVD menu under General settings.
3. Select ISO standard (off, ISO2372 or ISO10816) for evaluation of machine condition in the ISO menu.
4. **When measuring with built-in probe:**
   Point the VibChecker straight at the measuring point and hold it steady during measurement. Press the probe tip until the rubber sleeve is in contact with the surface, and then press the MEASURE key from the measurement window.
   When measuring with external sensor:
   Connect the external sensor to the input at the top of the VibChecker. Place the external sensor in accordance with the user guide and then press the MEASURE key from the measurement window.

The green, yellow or red symbol indicates the machine condition. For further analysis, use the right arrow to view spectrum or time signal.

General settings