

Vibrometer CM-21

With stethoscope, pyrometer, tachometer functions

Vibration and operation parameters are the most frequently measured magnitudes for the condition monitoring applications. Multifunctional vibrometer CM-21 allows all these measurements.

CM-21 is used for periodic monitoring of vibration according to ISO 10816 in all standard frequency bands. Additionally it allows measurements of additional parameters for condition monitoring in rotating machines. These are high frequency vibration levels, temperature, peak factor.

Vibration measurements (RMS, peak equivalent, peak-peak equivalent).

- acceleration
- velocity
- displacement,

Additional measurements of high frequency vibration parameters (RMS acceleration, peak, peak-factor)

The required low- or high frequency band can be selected for vibration measurements

Non contact temperature measurements by integrated pyrometer

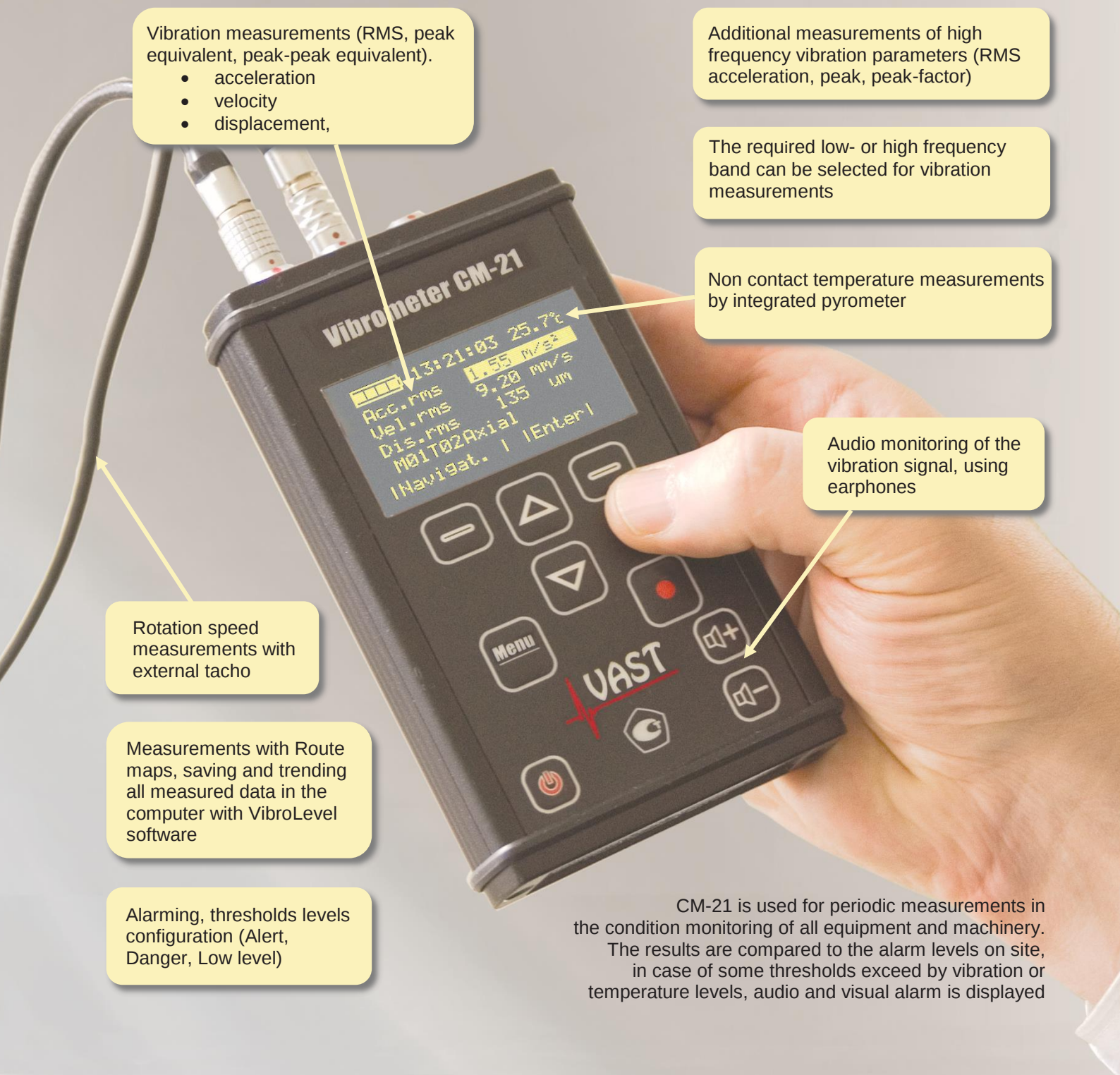
Audio monitoring of the vibration signal, using earphones

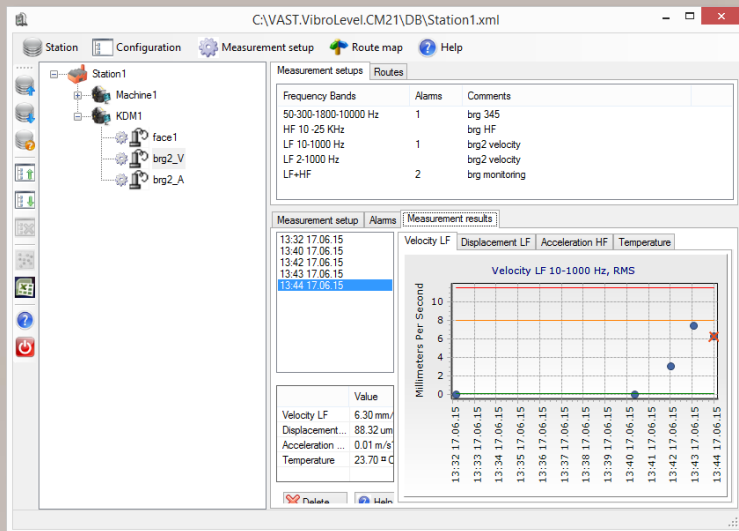
Rotation speed measurements with external tachometer

Measurements with Route maps, saving and trending all measured data in the computer with VibroLevel software

Alarming, thresholds levels configuration (Alert, Danger, Low level)

CM-21 is used for periodic measurements in the condition monitoring of all equipment and machinery. The results are compared to the alarm levels on site, in case of some thresholds exceeded by vibration or temperature levels, audio and visual alarm is displayed





VibroLevel software

The CM-21 includes the VibroLevel software. The software is used to:

- Configure machinery
- Setup ,measurements for each measurement point
- Setup alarm thresholds
- Configure Route maps
- Load Routes to the CM-21
- Unload and store measured data
- Compare data to the alarm levels
- Trend data
- Issue reports al measurements and machinery condition

CM-21 Specifications

Sensors	
Types of sensors	External: accelerometer, Tacho probe Integrated: pyrometer
Vibration	
Magnitude	Displacement, Velocity, Acceleration
Detector	RMS, peak, peak-peak, peak factor (true peak divided by RMS)
Frequency range	0,5 - 25600 Hz
Accuracy	+ 5%
Passbands for vibration Measurements:	
- ISO 10816 standard	2..1000, 10..1000, 10..2000 Hz
- additional	10-5000Hz 6.4 - 25 kHz, 10 - 25 kHz, 15 - 25 kHz Combined Low + High frequency band 50-300Hz + 8-10 kHz
Temperature	
Range	from -40 °C up to +350 °C
Accuracy	+/- 4 °C
Stethoscope	
Volume	Adjustable in 9 steps
Audio output	Vibration signal
Headphones	3.5 mm jack connector (advanced kit)
Rotation speed	
RPM range	60 – 40000 rpm
Accuracy	+ 1%
Tacho probe range	Up to 200 mm
General	
Display	128X64OLED, can work at freezing temperatures
Keypad	membrane, tactile effect
Data exchange	USB
Data storage	More than 10000 measurements
Route hierarchy	Machine, Measurement point, Direction
Environmental protection	IP65
Working temperatures	- 20 up to +70 °C
Weight	300 gramms.
Dimensions	126 x 80 x 24 mm excluding external sensors. pocket size
Working time from batteries	10 hours (1750 mAh battery)
Battery type	Internal Li-Ion 1750 mAh
Charging time	2 hours – mains supply charger, 8 hours – from USB port

CM-21 Kit

The CM-21 can be supplied in the following kits:

CM-21 Basic kit:

- CM-21
- Accelerometer with magnet and cable
- Charger
- Carrying and protective case

CM-21 Advanced kit:

- CM-21
- Accelerometer with magnet and cable
- Tacho probe with cable
- Connector to earphones
- USB cable
- VibroLevel software
- Charger
- Carrying and protective case

The Basic kit is used just as a measurement device, it cannot connect to the computer or work with Routes. Affordable pocket size instrument to check vibration and temperature

The advanced kit works with Routes and can be used as a condition monitoring tool with full advantages of trending techniques.



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