

VIBRATION ROUTE COLLECTOR

OPTIONS

SHOCK PULSE / TEMPERATURE / BALANCING



107vf-T

**FFT, Bearing Shock Pulse,
Kurtosis Measurement and RPM
for comprehensive vibration
analytics**



VIBRATION ROUTE COLLECTOR 107VF-T

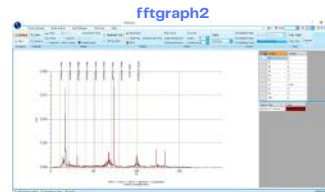
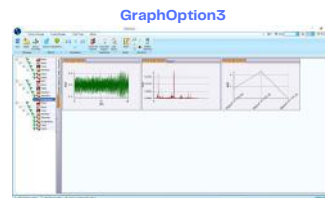
VIBRATION ANALYSER WITH OPTIONS FOR SHOCK PULSE , TEMPERATURE AND BALANCING

Overview

The 107VF-T Vibration Route Collector (Device, Analyzer) is a compact yet powerful, vibration analyzer designed to measure overall vibration parameters, FFT spectrum analysis of the rotating machinery, immediate evaluation against **ISO 10816 standard**, balancing of rotating machinery, condition monitoring by route-based measurements and data collection. Route files and data files exchange via email makes it ideal for data collection at remote sites. **Simple in use, with free firmware upgrades**, comes with data management and reporting software.

Features

- Possibility to obtain trends of vibration variation with the help of "ConSpect" software.
- Time waveform Analysis.
- Display Peak-peak, RMS, and peak vibration values.
- Non-contact infrared tachometer for measuring the rotational speed.
- Built-in rechargeable battery.
- Fast, easy, and reliable diagnosis of bearing condition.
- Easy-to-understand condition evaluation in :
 - **green-yellow-red scales**
- Precision analysis of oil film condition in the interface between the outer and inner races
- Spectrum Analysis to verify the source of high shock pulse
- Optional- temperature measurement and advanced route management software VibAnalyst.



Non-contact optical tachometer, IR thermometer

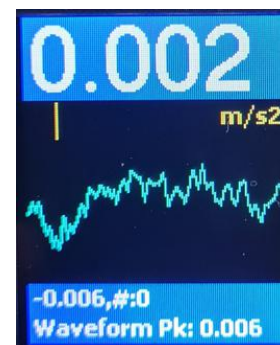


SPECIFICATIONS

- **Inputs:** IEPE or charge-type accelerometers with known sensitivity, switchable. Optical RPM transducer with IR pyrometer sensor
- **Supply Voltage, V:** 9
- **AD conversion:** 24 bits
- **Dynamic range:** 106 dB
- **Frequency range:** 1...10000 Hz
- **Vibration measurement range:**
 - **Acceleration:** 200 m/s²
 - **Velocity:** 200 mm/s
 - **Displacement:** 2000 μ m
- **Accuracy:** $\pm 5\%$
- **Shock pulse measurement range:** 99 dBa
- **Kurtosis Measurement:** Bearing Condition Indicators Green, yellow and red
- **FFT spectrum resolution:** 400, 800, 1600 lines
- **Data storage:** 4GB micro SD card, built-in
- **PC interface:** USB
- **Display:** color, sunlight readable 128x160 dots
- **Battery:** Li-Po rechargeable, up to 8 hrs continuous operation
- **Operating Temperature:** 0°C to 50°C
- **Storage Temperature:** -20°C to 60°C
- **Operating Humidity:** up to 80%
- **Dimensions:** 132 x 70 x 33 mm
- **Weight:** 150 g



In use	Sensor1
Type	AC input
S.N.	0000001101
Units	mV/ μ m
Sens. Z	10.000
Y	0.000
X	0.000



STANDARD DELIVERY

- Vibration Analyser/Bearing Tester
- battery- LiPo



USB charger with cable



OPTIONAL

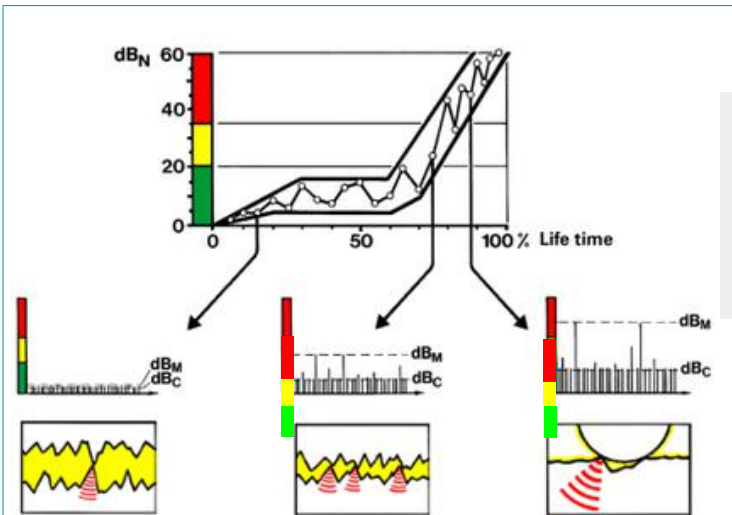
P77 bearings probe



SHOCK PULSE & KURTOSIS

Distinguishes and measures two characteristic values of the shock pulse amplitude – the carpet value - dBc, and the maximum - dBm values.

Amplitude of the impact acceleration representing maximum values - dBm, relates to bearing damage, and the value of dBc depends on the state of lubrication which increases with lack of lubrication. Graphical representation in time helps to monitor the health and to predict the condition of bearing. Measurement results can be stored in the device memory.



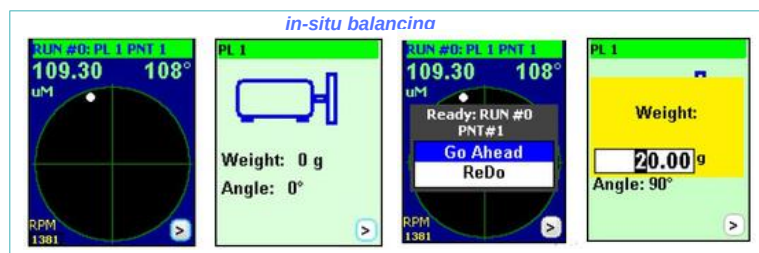
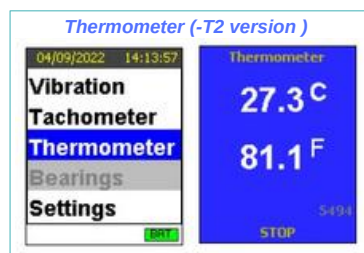
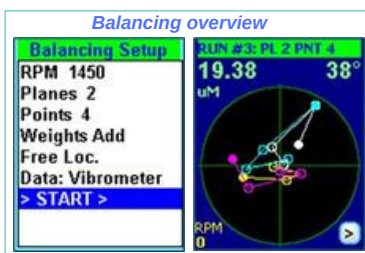
As defects in the bearing develop, the amplitude of shock pulses increases. Value exceeding the dBc characterizes the damage and is used to assess the condition of the bearing:

- 0..20 - good condition
- 20..35 – satisfactory condition
- >35.. - Poor condition, risk of failure

Kurtosis Advantage

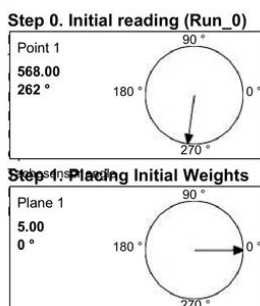
The generation of defects leads to a change in the shape of the probability density curve $p(x)$ and, accordingly, to a change in the numerical value of the kurtosis coefficient E . The more developed the defect, the sharper the density curve. Following threshold values of the kurtosis coefficient were established:

- $Ku < 3$ – corresponds to the good condition of the bearing;
- $Ku > 3$ – the bearing can be operated until the next replacement;
- $Ku > 5$ – the bearing is not allowed to be used.

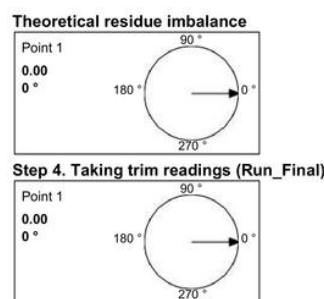
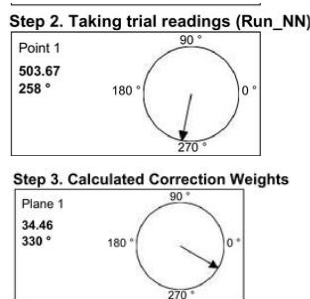


Balancing

File name		info/OneDrive/Desktop/701 (230307_114634 - Balancing)															
Plane	Point	0_Run		Trial_Run		Initial Wght Info		Compens. Value		Influence Coefficients		Theoretical residue		Correction Wghts Info		Run_Final Value	
		Amp.	Deg	Amp.	Deg	Wght	Deg	Amp.	Deg	Amp.	Deg	Amp.	Deg	Wght	Deg	Amp.	Deg
1	1	567.9969	262°	503.6707	258°	5		503.6707	258°	14.6145	108°			34.4639	330°		



230307_114634 - Balancing
No
M/S^2
1
1
1
0
0
0
07.03.2023 11:46:34



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