# PORTABLE CONDITION MONITORING SYSTEMS





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### VSHOOTER+® AUTO VIBRATION ANALYZER

# PREDICTIVE MAINTENANCE HAS NEVER BEEN EASIER!

#### • Machine Condition Picture (MCP) at a glance

- High quality wired 100 mV/g ICP&IEPE sensor with strong magnet
- Overall RMS values FFT spectrum Time signal Trend curve T°
- Li-lon battery with 6 hours autonomy
- Embedded IR thermal camera (160x120 FLIR Lepton)
- Embedded 5 MP digital visible camera
- AUTO ANALYSIS capabilities : Unbalance Misalignment -Looseness - ??? - Bearing lubrication - Bearing shock
- BALISHOOTER® firmware for severity checking of only Unbalance or Misalignment defaults
- Reporting capabilities with PC via USB
- Stereo headphone output

0 1560 RPH



#### Unique BALISHOOTER® program for Unbalance & Misalignment default severity detection:





Unbalance is critical in fan installations (direct coupled or with belt pulley transmission)

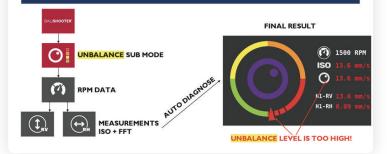
Misalignment is critical in direct coupled machines (with coupling)

#### Neglecting **Unbalance & Misalignment** can be catastrophic: **BREAKAGE - MTBF DECREASE - BEARING FAILURE - PRODUCTION LOSS - SEAL WEAR...**

**Unbalance & Misalignment** (direct coupling) represent about **70% of vibration problems** on a rotating machine like an electrical motor, a pump, a fan (blower)...

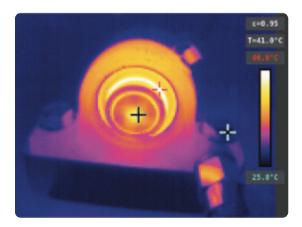
Unbalance & Misalignment (direct coupling) defaults can easily be repaired (Balancing and Alignment job).

#### VIBRATION - BALISHOOTER® MODE (4)



V**SHOOTER**•® will automatically analyze UNBALANCE or MISALIGNMENT defaults levels and will let you know what's happened on your machine at a glance.

VSHOOTER+® also includes an infrared thermal camera (160x120 pixels FLIR LEPTON) program with Emissivity setting, Central cursor, Max Auto cursor, Min Auto cursor. Thermal pictures can be taken and downloaded to PC via USB.



### $\forall \mathsf{SHOOTER}^{*} \text{ technical specifications}$

Weight	3.2kg with case - 0.7kg for device only					
Size	310x165x65mm for device only					
	IP54 for device only (ABS plastic) - 6H Li-Ion rechargeable battery					
Camera	Digital 5MP					
IR camera	FLIR LEPTON 160x120 px					
Display	5.7" 640x480 px touchscreen					
Sensor	ICP/IEPE accelerometer - 100 mV/g with strong magnet					
Output	Stereo headphone for "mechanical" listening					
Measurements	10(2)-1000 Hz ISO RMS in mm/s					
	1000-14000 Hz RMS in g & CREST					
	T° from -10°C > +400°C					
	2-400 Hz in mm/s & 2-14000 Hz in g FFT & TIME					
	TRENDING mm/s & g					
Memory	Micro USB output for PC reporting and memory saving					
Power charger	Universal 12VDC-1.5A					





# VSHOOTER-3-WL

WIRELESS VIBRATION ANALYZER

### TRIAXIAL PREDICTIVE MAINTENANCE

- Rugged smartphone (IP68 MIL STD 810G)
- Li-PO battery with high continuous 12H capacity
- Overall RMS, FFT, TREND (mm/s & g)
- Large memory (64 GB)
- Data transfer to PC via USB-C
- Multimeter & MCP mode (Machine Condition Picture)
- Auto analysis of defaults:
- Unbalance Misalignment Looseness Bearing Lubrication & Shock
- 2 versions available: VSHOOTER®-3-WL standard version & VSHOOTER®-3-WL-IR with thermal camera

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#### NEW: A UNIQUE VIBRATION ANALYSIS EXPERIENCE WITH THE VSHOOTER®-3-WL AND ITS WIRELESS TRIAXIAL SENSOR!



Bluetooth connectivity

For more security!



Large autonomy About 2 years!



Rugged & Waterproof

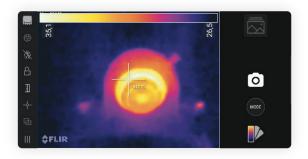
For more efficiency!

#### **TRIAXIAL Sensor**

- Faster measurements.
- Only 1 place for 3 vibration axes measurements.



VSHOOTER®-3-WL-IR has an embedded thermal camera (80x60 pixels FLIR LEPTON) where you can view the hottest and the coldest temperatures of the scene (Automatic) but also a fixed central cursor. Thermal pictures can be saved and reported to PC. Adjustable emissivity.



### $\vee$ SHOOTER<sup>®</sup>-3-WL spécifications techniques

Weight	1.5 kg with case - 0.3 kg without case
Size	159x80x18mm smartphone only – 235x180x106mm case only
	IP68 for smartphone (MIL STD 810G) - Rechargeable Li-Po battery
Camera	Digital 16+8 MP
Thermal Camera	FLIR LEPTON 80x60 px & MSX
Screen	5.7" 1440x720 px touchscreen
Sensor	IP67 Triaxial MEMS Bluetooth® (Li-SOCl2 battery) with magnet
Measurements	10(2) - 1000 Hz ISO10816 RMS in mm/s
	1000 – 8000 Hz RMS in g & CREST
	2-400 Hz in mm/s & 2-8000 Hz in g FFT spectrum & TIME & TREND
Memory	USB-C output for PC reports and data saving
Power	Universal USB-C charger



SYNERGYS TECHNOLOGIES has been established in 1996 in France, to offer innovative and professional solutions for preventive and predictive maintenance.

SYNERGYS TECHNOLOGIES is the inventor of the ultrasonic visualization concept with the LEAKSHOOTER®, of the MCP (Machine Condition Picture) concept with the VSHOOTER® and of the thermal contour concept with the TSHOOTER®.

We are present worldwide with professional and trained distributors.