DO YOU KNOW?

VSHOOTER® measurement capabilities:

OVERALL VALUE (metric & imperial) and TREND CURVE with:

- Vibration Rms Velocity 2 (10)-1000 Hz (mm/s or inch/s) according to ISO 10816-3&7
- Vibration Rms Acceleration 1000-10000 Hz (g)
- Vibration Crest Acceleration 1000-10000 Hz (no units)
- Vibration Peak-Peak Displacement 2-1000 Hz (µm or mil)
- Non-contact infrared Temperature (°C or °F)
- Stroboscope or manual input Speed (RPM or Hz)

ALERT&ALARM FFT SPECTRUM (metric & imperial) with:

- Vibration Rms Velocity 2-500 Hz (mm/s or inch/s)
- Vibration Rms Acceleration 2-10000 Hz (g)

SYNERGYS TECHNOLOGIES

VSHOOTER® NEWS
N°1 - 09/2016

MEASUREMENT CAPABILITIES

OVERALL VALUE
TREND CURVE
FFT SPECTRUM

ISO 10816-3&7

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DO YOU KNOW?

VSHOOTER® Auto Diagnostic capabilities (MAX3 detection):

POTENTIAL VIBRATION DEFAULTS (RMS-mm/s or inch/s):

Unbalance (H1 (x1RPM), often max in radial horizontal)

Offset Misalignment (H2 (x2RPM), often in radial)

Angular Misalignment (H1 (x1 RPM), often in axial)

Looseness (H3 to H8 (x3 to x8 RPM), often in radial)

Other else (?), is ≠ than H1 to H8 (x1 to x8 RPM)

> Frequency and amplitude values are detailed for "?" default

POTENTIAL BEARING DEFAULTS (RMS-g & CREST):

S-Bearing shock if CREST >4

L-Bearing lubrication if CREST <4

> S & L is shown in the Bearing icon

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VSHOOTER® NEWS
N°2 – 09/2016

AUTO DIAGNOSTIC CAPABILITIES

UNBALANCE
MISALIGNMENT
LOOSENESS
OTHER ELSE (?)

BEARING SHOCK
BEARING LUBRICATION

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DO YOU KNOW?

VSHOOTER® MCP (Machine Condition Picture) - What is it?

A **MCP** is a new easy way to do Vibration Analysis for Predictive Maintenance program (PdM program). No need of special PC Software!

This new concept invented by **SYNERGYS TECHNOLOGIES** consists to automatically see the machine vibration condition in a one shoot photo.

What can you see on the **MCP**?

Machine photo with name & date

Measurement points locations with name (RV-RH-AX)

Measurement points condition status (color indications ● ● ● ●)

to view all data (OVERALL - FFT - TREND)

to view the detected machine defaults

This **MCP** is stored in the V**SHOOTER®** memory and can be downloaded to PC for reporting. This **MCP** can also be updated in time to create TRENDS.

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VSHOOTER® NEWS
N°3 – 09/2016

***MCP* - WHAT IS IT ?**

MACHINE PHOTO
+ MEASUREMENTS
+ AUTO DIAGNOSE
= *MCP*

A NEW WAY TO DO VIBRATION ANALYSIS FOR PREDICTIVE MAINTENANCE

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DO YOU KNOW?

VSHOOTER® AUTO FFT Spectrum – What is it?

A **FFT Spectrum** is a digital processing technique to analyze a signal waveform to have information of its frequency and amplitude parts. It is helpful to find the vibration defaults we could have on a machine.

In the V**SHOOTER®**, **SYNERGYS TECHNOLOGIES** has included an AUTO FFT spectrum which is taken under vibration Alert (●) or Alarm (●).

What can you see on the **FFT (both V (mm/s) and A (g))**?

Machine name, date & Measurement point name (RV-RH-AX)

Detail of each Max3 amplitude in V-FFT:

> RMS-FFT Amplitude value (mm/s)

> Default type- **?**

(depending if it is harmonic (H1 to H8) or other else ? (F1 to F3)

Detail of Bearing default in A-FFT (S for shock, L for Lubrication)

V (mm/s)-FFT is from 2 to 500 Hz, A (g)-FFT is from 2 to 10.000 Hz.

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VSHOOTER® NEWS
N°4 – 09/2016

AUTO FFT SPECTRUM (V&A)

MACHINE SPEED
+ MEASUREMENT
+ ALARM (● ●)
= *AUTO FFT*

AUTO DIAGNOSIS WITH ALARM FFT SPECTRUM
&
MACHINE SPEED

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DO YOU KNOW?

VSHOOTER® ISO STANDARD settings – How it works?

SYNERGYS TECHNOLOGIES has included the last vibration **ISO STANDARD (ISO 10816:2009)** settings in the V**SHOOTER®**.

ISO STANDARD settings are useful to evaluate the (2)10-1000 Hz RMS velocity vibration (mm/s) importance a machine can have.

For rotating machines, there are two **ISO STANDARD settings**:

ISO 10816-3 for electrical motor, fan, blower, bearing housing…

> Group1 for large machine (>300kW), **Group2** for small and medium (<300kW); **R&F** settings for rigid, flexible foundation.

ISO 10816-7 for centrifugal rotodynamic pump

> Category1 for critical machine, **Category2** for less critical machine; **L&H** settings for Low (<200kW), High (>200kW) power.

Vibration of newly commissioned machines

Acceptable for unrestricted long-term operation

Unsatisfactory for long term continuous operation

Vibration of sufficient severity to cause damage to machine

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VSHOOTER® NEWS
N°5 – 09/2016

ISO STANDARD SETTINGS

ISO 10816-3
ISO 10816-7

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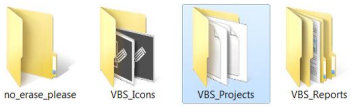
DID YOU KNOW?

VSHOOTER® PC FILES TRANFERT – How it works?

After connecting the V**SHOOTER®** to your PC via USB cable, you can see project files (.prj) and report files (.html) opened by WINDOWS.



Project files can be **downloaded** from V**SHOOTER®** to PC for data saving but also can be **uploaded** from PC to V**SHOOTER®** for data exchanging between different V**SHOOTER®** users**.**

For example, you can send your project file to anyone who has a V**SHOOTER®** by email, he will be able to open and analyze it.

This advantage can be useful for a data exchange between End user customer and Expert service provider or for another need.

Report files can be downloaded from V**SHOOTER®** to PC to be saved or printed or modified or sent by email to anyone.

HTML report can be opened with WORD to be edited and customized.

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VSHOOTER® NEWS
N°6 – 09/2016

PC FILES TRANSFERT

PROJECTS FILES REPORT FILES

USB ↔ PC

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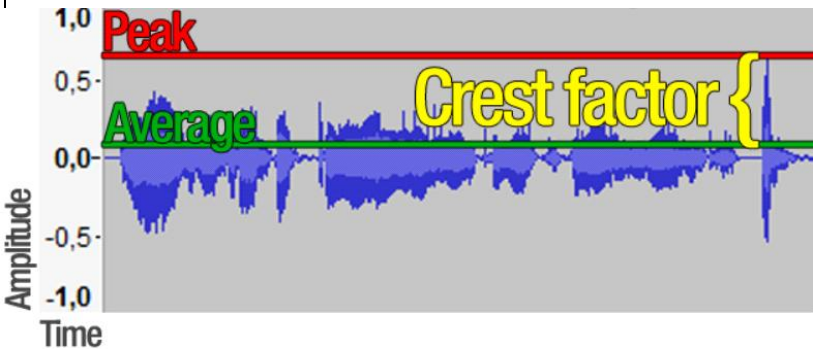
DID YOU KNOW?

CREST global value (w/o unit) is the PEAK / RMS calculation with:

Overall A-Rms (Average) on 1000-10000 Hz (g)

Overall A-Peak in Acceleration on 1000-10000 Hz (g)



CREST global value is very useful for bearing condition "analysis"

Detection of lubrication problem (deficiency) for CREST < 4

Detection of shocks (flaking problems) for CREST > 4

> CREST is checked when you have A-Rms problems (Alert or Alarm)

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VSHOOTER® NEWS
N° 7- 11/2016

CREST
MEASUREMENT - WHAT IS IT ?

BEARING SHOCKS
BEARING LUBRICATION

OVERALL VALUE (LEVEL1)

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