

# THE FLUKE 805 VIBRATION METER

**FLUKE®**

**Cal Power**

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**Forget the pens.  
Think METER.**



**The Fluke 805 is not a vibration pen; it's a meter. A Fluke meter that eliminates the confusion of vibration screening and provides reliable measurements you can trust to make critical go or no-go maintenance decisions.**

**FOOLPROOF** instead of false alarms  
**REPEATABLE** instead of random  
**EASY** instead of confusing

You told us about your frustrations with vibration pens and other similar devices. We listened, and the Fluke 805 Vibration Meter is our answer—a more reliable, more user friendly tool to improve your routine maintenance checks. To demonstrate how our vibration meter solves the problems commonly found with other screening tools, we matched actual customer quotes with Fluke 805 functions. Read on below and see if we make a believer out of you.

#### The **PROBLEM** with vibration pens

##### **UNRELIABLE**

*"Vibration pens are fine for what they are. We check whether the machine exceeds the alarm level or not. But that is pretty much it. It does not provide us a clear picture of machine condition. They do not provide enough data to provide good value to a 'true' reliability program."*

##### **INCONSISTENT**

*"The pens only work well when applied exactly correctly and they've caused a lot of false alarms mostly because of technician error. I want a measurement I know will be consistently reliable, no matter which of my guys is taking it."*

##### **MANUAL**

*"The data from the pen needs to fit into our existing operator rounds tracking program, which means I need to be able to upload it to Excel—easily."*

##### **CONFUSING**

*"I don't understand what the numbers mean. What indicates a problem?"*

##### **DIFFICULT**

*"They're a pain to use—I have to input a lot of data—not just RPM range and type of equipment but shaft diameter and actual RPM."*

#### The **SOLUTION** The Fluke 805

##### **RELIABLE**

A meter—not a pen—that measures overall vibration as well as specific variables like bearing condition and temperature to provide a more complete picture.

##### **REPEATABLE**

A combination vibration and force sensor tip that compensates for user variance (force or angle) yielding accurate, repeatable readings.

##### **AUTOMATED**

Data management capabilities for matching existing equipment IDs and exporting data to Microsoft® Excel for trending over time.

##### **STRAIGHT-FORWARD**

A four-level severity scale for both overall vibration and bearing condition using textual alerts (Good, Satisfactory, Unsatisfactory, Unacceptable).

##### **EASY**

One tool with sensor sensitivity to a wide range of frequencies (overall vibration 10 Hz to 1,000 Hz, bearing condition 4,000 Hz to 20,000 Hz) covering most machine and component types, and a straight-forward user interface that minimizes the user inputs to RPM range and equipment type.

## Features and benefits

- Innovative sensor design minimizes measurement variations caused by device angle or contact pressure
- Consistent data quality at both low and high frequency ranges
- Four-level scale indicates severity of problems for overall vibration and bearing condition
- Exportable data via USB
- Trending in Microsoft® Excel using built-in templates
- Overall vibration measurement (10 Hz to 1,000 Hz) for acceleration, velocity and displacement units of measurement for a wide variety of machines
- Crest Factor+ technology provides reliable bearing assessment using direct sensor tip measurements between 4,000 Hz and 20,000 Hz
- Colored lighting system (green, red) and on-screen comments indicate how much pressure needs to be applied to take measurements
- Infrared temperature sensor increases diagnostic capabilities
- On-board memory holds up to 3,500 measurements
- Audio output for listening to bearing tones directly
- External accelerometer support for hard to reach locations
- Flashlight for viewing measurement locations in dark areas
- Large screen with high resolution for easy navigation and viewing



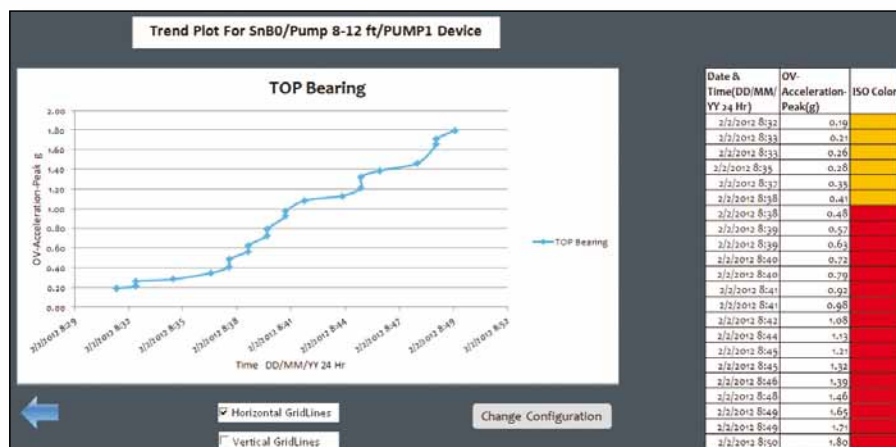
## Export and trend in Microsoft® Excel

Trending vibration measurements over time is the best method to track machine health.

With the Fluke 805 you can easily:

- Export your results to Microsoft® Excel through a USB connection
- Trend the readings with the built-in templates and plot graphs
- Compare the overall vibration readings to ISO Standards (10816-1, 10816-3, 10816-7)

Import measurements from the Fluke 805 Vibration Meter to an Excel template on your PC in order to trend the bearing parameters: overall vibration, CF+ and temperature. The user can now see a clear picture of the changing bearing condition and deteriorating health of the machine.





## Crest Factor+ (High Frequency Measurement)

The original Crest Factor technology is used by vibration analysts to identify bearing faults. It is defined as the ratio of the peak value/RMS value of a time domain vibration signal.

A key limitation of using Crest Factor to identify bearing faults is that the Crest Factor does not increase linearly as the bearing degrades. In fact, the Crest Factor can actually decrease as a bearing nears catastrophic failure due to large RMS values.

In order to overcome this limitation, Fluke uses a proprietary algorithm known as Crest Factor + (CF+). CF+ values range from 1 to 16. As the bearing condition worsens, the CF+ value increases. To keep things simple, Fluke has also included a four-level severity scale that identifies the bearing health as Good, Satisfactory, Unsatisfactory or Unacceptable.

High frequency 4,000 Hz to 20,000 Hz	<div>17/12/2011 09:10 AM</div> <div><b>Bearing</b></div> <div><b>3</b> <b>CF+</b></div>	Bearing vibration (CF +)
Overall vibration frequency range 10 Hz to 1,000 Hz	<div><b>GOOD</b></div> <div><b>Overall Vibration</b></div> <div><b>0.06</b> <b>g</b> (pk)</div>	Overall vibration
Temperature -20 °C to 200 °C	<div><b>GOOD</b></div> <div><b>Temperature</b></div> <div><b>20.7 °C</b></div> <div>ID : Reci_Chiller_1</div> <div>TYPE : Recip Chiller</div> <div>RPM : &gt;600</div>	IR Temperature

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External sensor not included

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Tools in the World.*

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Printed in U.S.A. 4/2012 4177551A\_EN  
Pub\_ID: 11901-eng

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