



GLOBAL SOLUTIONS, LOCAL SERVICE



ACOEM Group

BEARING DEFENDER Bearing Health status in seconds

The wireless Bearing Defender offers instant advice on the health of your rotating machinery. Easy to use and incredibly fast, common machines can be managed by all levels of personnel. It provides a simple and cost effective improvement to your reliability program, especially when your reliability experts are fully focused on the most critical assets.

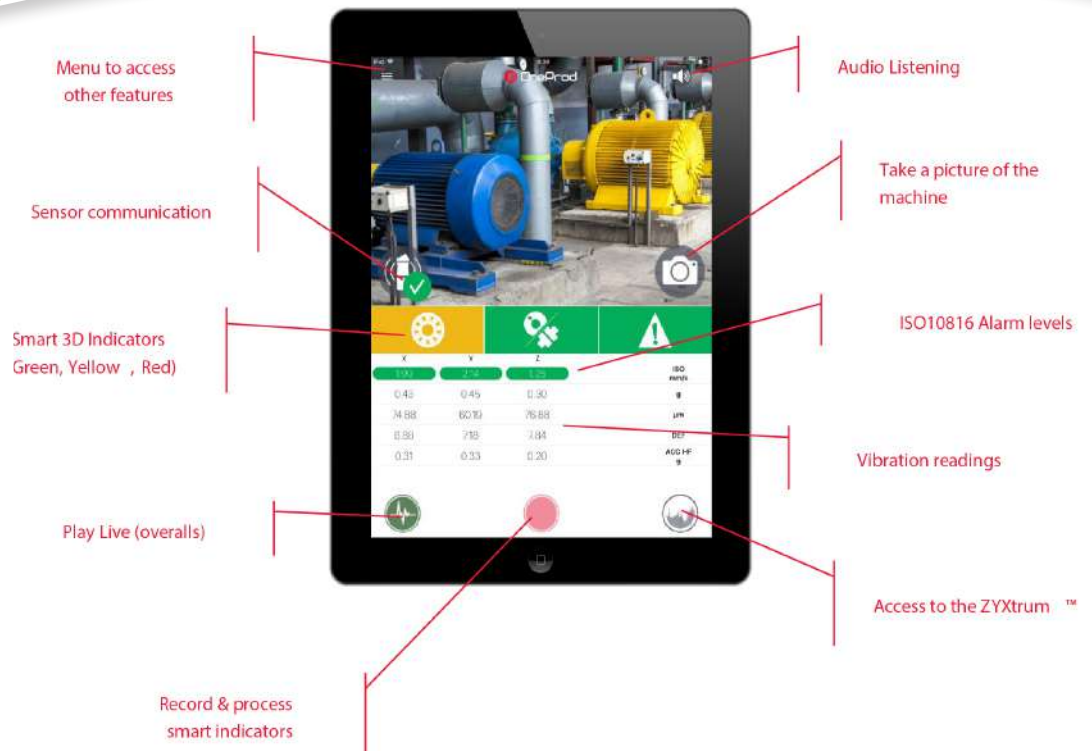
Patented Wireless Measurement

With its unique metrological performances, the Bearing Defender makes sure that your machinery keeps rotating without the risk of failure. A first level warning indicates automatically an abnormal behavior resulting from bearing defects, unbalance, misalignment, or other faults. Combining data from three directions, even faults occurring in a single axis can be detected with one measurement.



SMART VIBRATION SENSOR

Main Screen Ergonomics



Smart indicators computed from X, Y, and Z directions

- 3D Bearing Health Indicator
- 3D Misalignment or Unbalance Indicator
- 3D Miscellaneous defect Indicator

Tri-axial vibration readings

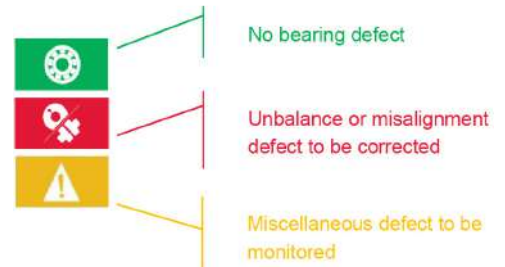
- Vibration Velocity, Acceleration, Displacement
- Bearing Defect Factor™ (DEF)
- High frequency acceleration
- ISO Standard compliance
- Acquisition mode
- Measurement duration
- Audio listening

Easy setup

- RPM
- Power
- Mounting

Reporting

- Report format
- Illustration
- Communication



- RMS values averaged on 5s
- Bearing health grade - absolute value (0 to 12)
- RMS value filtered from 3kHz to 20kHz (averaged on 5s)
- ISO10816-3
- Live reading of overall values or recorded mode
- 8s typical (affected by distance and communication quality)
- listen to live measurement (e.g. while greasing)

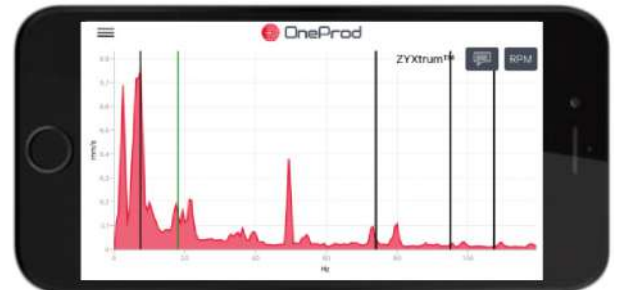
- <600 RPM, >600 RPM or > 2000RPM
- <300kW or > 300kW
- Rigid or Flexible

- Screenshot available from any screen
- Machine picture
- Through native function of smartphone or tablet (Email, MMS)

ONEPROD BEARING DEFENDER

ONEPROD ZYXTRUM™: THE TRI-AXIAL FFT DISPLAY

In addition to the vibration reading and smart indicators, the ONEPROD ZYXtrum™ combines the vibration from three directions into a single FFT display. This display accentuates the fault frequencies that can be observed in the signals. It can then be easy to confirm the presence of a bearing fault with the automatic positioning of frequency markers, but also ease the communication with your experts when they are required.



Example of bearing defect: one of the bearing fault frequency matches with a peak on the ZYXtrum™

ZYXtrum™	FTTs measured in X, Y and Z are combined into single display
Resolution	3200 lines
Frequency range	2 Hz to 2000 Hz
Scale	Linear or Logarithmic
Zoom	Touchscreen zoom capabilities
Cursor	Single cursor with frequency, amplitude, and direction of the
max value (X,Y or Z)	
Bearing fault frequencies display	Markers on the ZYXtrum™
Rotation speed adjustment	Real rotation speed automatically setup from the ZYXtrum™

WIRELESS SENSOR SPECIFICATIONS

Hardware type

Reference CAC1008000

Metrology

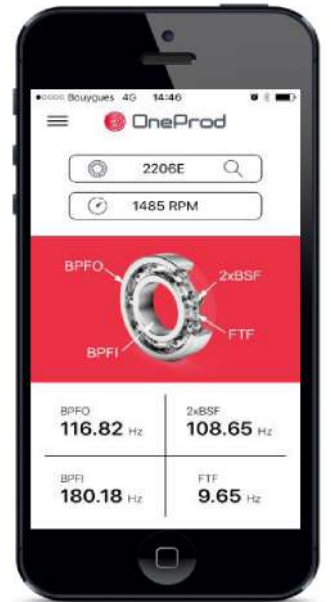
Three axial measurements	Synchronous acquisition in X, Y and Z directions
Sampling frequency	51.2 kHz on all axes (Fmax 20kHz)
Sensing element	Piezoelectric / Annular shear mode
Sensing element internal sensitivity, 24°C	100mV/g (numerically converted)
Sensitivity adjustment	Factory-calibrated and adjusted
Full scale	80 g
Signal-to-Noise ratio	> 80dB
Amplitude non-linearity	1% max
Frequency response after triaxial mechanical assembly:	
± 3 dB (Z)	0.4 Hz – 15 kHz
± 3 dB (XY)	0.4 Hz – 6 kHz
Full bandwidth	20 kHz on all axes
Accuracy	+/- 5% @ 120 Hz, 1g
Transverse response sensitivity (120Hz, 1g)	< 5% (< -26dB)
Electrical noise, nominal:	
Broadband 0 Hz–5 kHz	< 5 mg
> 1 Hz	< 20µg/√Hz
Peak velocity (after 1 integration on the time signal)	< 0.13 mm/s

Battery

Type	Li-Ion
Operating lifetime	8 hours
Rechargeable	By USB (power supply adapter in standard delivery)
Charging time.	~8 hours with the standard 500 mA charge current.

BEARING FREQUENCY CALCULATOR

Bearing references	30.000+ bearing references
Search tool	Based on the OEM and/or bearing reference
Fault frequencies calculation	Automatic calculation of bearing fault frequencies: BPFO, BPFI, FTF, BSF
Rotation speed input	Manual input or set up from the ZYXtrum™
Fault frequency display	Values, markers on the ZYXtrum™



WA	Kewdale WA (National H/Office) 67 Kewdale Road Kewdale WA 6105 Ph: (08) 9352 2200 Belmont Ph: (08) 9478 2444 Kalgoorlie Ph: (08) 9091 4111	Bunbury Bearings Ph: (08) 9721 3522 Bunbury Ph: (08) 9724 9100 Karratha Ph: (08) 9144 2333 Wangara Ph: (08) 9303 6900	Albany Ph: (08) 9842 2488 Collie Ph: (08) 9734 1624 Linear Head Office Ph: (08) 9475 5000	Bibra Lake Ph: (08) 9434 9555 Geraldton Ph: (08) 9964 4655 Naval Base Ph: (08) 9410 1800
QLD	Coopers Plains (State H/Office) 902 Beaudesert Road Coopers Plains QLD 4108 Ph: (07) 3717 4444 Virginia Ph: (07) 3265 2666	Coopers Plains Linear dept Ph: (07) 3717 4452 Mackay Ph: (07) 4952 6660	Cairns Ph: (07) 4035 1800 Rockhampton Ph: (07) 4927 2677	Townsville Ph: (07) 4758 8855
NSW	Smithfield (State H/Office) Unit 4, 8 Cooper Street Smithfield NSW 2164 Ph: (02) 9616 0000	Beresfield (Newcastle) Ph: (02) 4041 6444	Smithfield Linear dept Ph: (02) 9616 0066	Wollongong Ph: (02) 4272 2377
VIC	Dandenong South (State H/Office) 84 Greens Road Dandenong Sth VIC 3175 Ph: (03) 8710 9777	Dandenong South Linear dept Ph: (03) 9755 6044	Somerton Ph: (03) 9308 0055	Traralgon Ph: (03) 5172 3000
SA	Wingfield 13 Streiff Road Wingfield SA 5013 Ph: (08) 8260 6299	Wingfield Linear dept Ph: (08) 8260 6299	TAS Hobart 39 Sunderland Street Derwent Park TAS 7009 Ph: (03) 6216 6999	
	INDONESIA Ph: (62) 542 7031166			

