

## SHORT-FORM PRODUCT CATALOG

# VIBRATION MONITORING SOLUTIONS





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Wilcoxon Sensing Technologies



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An Amphenol Company

# Everything you need for vibration monitoring

Wilcoxon has what you need for monitoring your plant machinery. You'll find our catalog a useful resource all year long, and don't forget – you can always download our short-form catalog from our website.

## Introducing new solutions

Our 2018 catalog showcases several new products, including:

- Cost-effective VLL enclosures
- New line of intelligent vibration transmitters
- Wider variety of hazardous area certified sensors
- HART-enabled vibration sensors with hazardous area options



Sensors

Cables & connectors

Mounting

Enclosures

Instrumentation

Process solutions

# About Wilcoxon

All of us at Wilcoxon Sensing Technologies are focused on helping you succeed. Whether you're new to the field of vibration monitoring or have decades of experience, we're here to provide great products, expert technical guidance and excellent customer support.

## Get started

Let's have a conversation. As you look through the products featured on these pages, we also invite you to contact us. Our selection of high quality, affordable products, along with expert technical help and personalized service, are key reasons why customers start with and continue to rely on Wilcoxon as their provider of choice. We want to make sure you have exactly what you need to experience the best outcomes.

Guaranteed in stock. Our most popular sensors, cables, and accessories are guaranteed to be in stock at the time of order. View the products this applies to at [wilcoxon.com/products/guaranteed-in-stock](http://wilcoxon.com/products/guaranteed-in-stock).

## Experience

Since 1960, Wilcoxon has been making breakthroughs in vibration monitoring technology. We're proud to have made innovative advances in accelerometer design and forged expansion into new markets and applications.

In 2017, the Wilcoxon brand became part of Amphenol Corporation, joining an impressive group of companies dedicated to industrial improvement. Today, we continue to invest in research and development to bring our customers the high-quality, reliable products you've come to expect from us.

As an ISO 9001:2015 certified company, we are committed to setting the industry standard for quality of design, manufacture, assembly and distribution of vibration sensors, underwater acoustic sensors and related equipment.



### WHY WILCOXON

Wilcoxon is committed to providing the best in machinery monitoring.

- Reliability
- High quality
- Best value
- Outstanding customer support
- Broad offering, one-stop shopping



## How to shop

You don't have to shop around to find the best value. Save yourself time. Go to our website to source solutions 24/7.

- Online at [buy.wilcoxon.com](http://buy.wilcoxon.com)
- Contact our sales team
- Our global network of representatives and distributors

# Premium high performance

Our customer favorite high performance sensors have tighter sensitivity tolerance for more precise measurements.



Wilcoxon model	• 786A	• 787A	786LF	• 780A
<b>Description</b>	Premium top-exit accelerometer	Premium side-exit accelerometer	Low frequency accelerometer	Compact accelerometer
<b>Sensitivity</b>	100 mV/g	100 mV/g	100 mV/g	100 mV/g
<b>Sensitivity tolerance</b>	± 5%	± 5%	± 5%	± 5%
<b>Frequency response</b> ± 3 dB, Hz	0.5 - 14,000	0.5 - 10,000	0.1 - 13,000	0.5 - 14,000
<b>Resonance frequency</b>	30 kHz	22 kHz	30 kHz	30 kHz
<b>Electrical noise</b> 100 Hz	5 µg/√Hz	5 µg/√Hz	3 µg/√Hz	5 µg/√Hz
<b>Max temperature</b>	120° C	120° C	120° C	120° C
<b>Temperature response</b>	-25° C: -10% +120° C: +10%	-25° C: -10% +120° C: +10%	-25° C: -10% +120° C: +15%	-25° C: -10% +120° C: +10%
<b>Bias output voltage</b>	12 VDC	12 VDC	13 VDC	12 VDC
<b>Grounding</b>	case isolated	case isolated	case isolated	case isolated
<b>Mounting</b>	1/4-28 tapped hole	1/4-28 captive screw	1/4-28 tapped hole	1/4-28 tapped hole
<b>Output connector</b>	2-pin MIL-C-5015 or 4-pin M12	2-pin MIL-C-5015 or 4-pin M12	2-pin MIL-C-5015	2-pin MIL-C-5015



## ADVANTAGE

Wilcoxon's premium high performance sensors have an industry-leading MTBF of up to 25 years. You'll retire before they do.

- Hazardous area options available on models 786A, 787A and 780A (see page 29 for full certification requirements)

# General purpose

General purpose accelerometers can be used across a broad frequency range to monitor a wide variety of rotating industrial machinery.



Wilcoxon model	786B-10	787B	780B	785A
<b>Description</b>	Standard top-exit accelerometer	Side-exit, low profile accelerometer	Compact accelerometer	Low profile industrial accelerometer
<b>Sensitivity</b>	100 mV/g	100 mV/g	100 mV/g	100 mV/g
<b>Sensitivity tolerance</b>	± 10%	± 10%	± 10%	± 10%
<b>Frequency response</b> ± 3 dB, Hz	0.5 - 14,000	0.7 - 10,000	0.5 - 14,000	1 - 12,000
<b>Resonance frequency</b>	30 kHz	22 kHz	30 kHz	30 kHz
<b>Electrical noise</b> 100 Hz	5 µg/√Hz	5 µg/√Hz	5 µg/√Hz	6 µg/√Hz
<b>Max temperature</b>	120° C	120° C	120° C	120° C
<b>Temperature response</b>	-25° C: -10% +120° C: +10%	-25° C: -10% +120° C: +10%	-25° C: -10% +120° C: +10%	-50° C: -10% +125° C: +7%
<b>Bias output voltage</b>	12 VDC	12 VDC	12 VDC	12 VDC
<b>Grounding</b>	case isolated	case isolated	case isolated	case isolated
<b>Mounting</b>	1/4-28 tapped hole	1/4-28 captive screw	1/4-28 tapped hole	1/4-28 captive screw
<b>Output connector</b>	2-pin MIL-C-5015 or 4-pin M12	2-pin MIL-C-5015 or 4-pin M12	2-pin MIL-C-5015	2-pin MIL-C-5015



Types of rotating machinery most commonly monitored include:

- Motors
- Fans
- Blowers
- Pumps
- Compressors
- Gearboxes

ONLINE



We offer even more general purpose sensors online. See our wide selection. Most are in stock, ready to ship. Visit [buy.wilcoxon.com](http://buy.wilcoxon.com).

## Extended temperature range

Wilcoxon's new HT series, the next generation of our signature FireFet sensors, provides superior long-lasting performance in 150° C environments.



Wilcoxon model	HT780A	HT786A	HT787A	376/CC701HT
<b>Description</b>	High temperature, compact accelerometer	High temperature accelerometer	High temperature, side-exit accelerometer	Accelerometer/charge amplifier system
<b>Sensitivity</b>	100 mV/g	100 mV/g	100 mV/g	100 mV/g
<b>Sensitivity tolerance</b>	± 5%	± 5%	± 5%	± 10%
<b>Frequency response</b> ± 3 dB, Hz	0.5 - 14,000	0.5 - 14,000	0.7 - 10,000	1 - 15,000
<b>Resonance frequency</b>	30 kHz	30 kHz	22 kHz	30 kHz
<b>Electrical noise</b> 100 Hz	at 25° C: 5 µg/√Hz at 150° C: 7 µg/√Hz	at 25° C: 5 µg/√Hz at 150° C: 7 µg/√Hz	at 25° C: 5 µg/√Hz at 150° C: 7 µg/√Hz	Broadband: 0.001 g peak
<b>Max temperature</b>	150° C	150° C	150° C	376: 260° C CC701HT: 100° C
<b>Temperature response</b>	-25° C: -10% +150° C: +15%	-25° C: -10% +150° C: +15%	-25° C: -10% +150° C: +15%	-50° C: -10% +260° C: +20%
<b>Bias output voltage</b>	at 25° C: 13 VDC at 150° C: 12 VDC	at 25° C: 13 VDC at 150° C: 12 VDC	at 25° C: 13 VDC at 150° C: 12 VDC	12 VDC
<b>Grounding</b>	case isolated	case isolated	case isolated	case isolated
<b>Mounting</b>	1/4-28 tapped hole	1/4-28 tapped hole	1/4-28 captive screw	1/4-28 tapped hole
<b>Output connector</b>	2-pin MIL-C-5015	2-pin MIL-C-5015	2-pin MIL-C-5015	BNC



### DID YOU KNOW

Temperature range is the temperature span, given by the temperature extremes, over which the sensor will perform without failure.



376/CC701HT system

# Integral cable

Wilcoxon's IP68 rated integral cable sensors can be used with confidence in submerged applications of 30 feet or more.



Wilcoxon model	• 786F	787F	712F	780FM-2-J88C
<b>Description</b>	General purpose, integral cable accelerometer	Low profile, side-exit integral cable accelerometer	High frequency, side-exit integral cable accelerometer	Compact sensor with coiled integral cable and magnetic mount
<b>Sensitivity</b>	100 mV/g	100 mV/g	100 mV/g	100 mV/g
<b>Sensitivity tolerance</b>	± 5%	± 5%	± 10%	± 15%
<b>Frequency response</b> ± 3 dB, Hz	0.5 - 13,000	0.7 - 10,000	3.0 - 25,000	0.4 - 12,000
<b>Resonance frequency</b>	30 kHz	22 kHz	>45 kHz	30 kHz
<b>Electrical noise</b> 100 Hz	5 µg/√Hz	5 µg/√Hz	10 µg/√Hz	4 µg/√Hz
<b>Max temperature</b>	120° C	120° C	120° C	120° C
<b>Temperature response</b>	-50° C: -5% +120° C: +5%	-50° C: -5% +120° C: +5%	-50° C: -10% +120° C: +10%	-25° C: -10% +120° C: +10%
<b>Bias output voltage</b>	12 VDC	12 VDC	12 VDC	12 VDC
<b>Grounding</b>	case isolated	case isolated	case isolated	case isolated
<b>Mounting</b>	1/4-28 tapped hole	1/4-28 captive screw	8-32 captive screw or M4 captive screw	1/4-28 tapped hole, 2-pole magnet
<b>Output connector</b>	integral cable, blunt cut	integral cable, blunt cut	integral cable, blunt cut	integral cable, BNC



- Hazardous area options available on model 786F (see page 29 for full certification requirements)

## DID YOU KNOW



Wilcoxon developed the first underwater accelerometer in 1965 and introduced an ultra low-noise detection model in 1976.

# High sensitivity / low frequency

With an extended low-end frequency response, Wilcoxon's high sensitivity / low frequency sensors detect both high- and low-speed vibrations, making them ideal for critical slow-turning machinery.



Wilcoxon model	• 786-500	• 787-500	786LF-500	799LF
<b>Description</b>	Low frequency accelerometer	Side-exit, low frequency accelerometer	High sensitivity, low frequency accelerometer	Low frequency, low noise, filtered accelerometer
<b>Sensitivity</b>	500 mV/g	500 mV/g	500 mV/g	500 mV/g
<b>Sensitivity tolerance</b>	± 5%	± 5%	± 5%	± 5%
<b>Frequency response</b> ± 3 dB, Hz	0.2 - 14,000	0.2 - 10,000	0.1 - 13,000	0.1 - 2,500
<b>Resonance frequency</b>	30 kHz	22 kHz	30 kHz	18 kHz
<b>Electrical noise</b> 100 Hz	1.5 µg/√Hz	1.5 µg/√Hz	2 µg/√Hz	1 µg/√Hz
<b>Max temperature</b>	120° C	120° C	120° C	120° C
<b>Temperature response</b>	-25° C: -10% +120° C: +10%	-25° C: -10% +120° C: +10%	-25° C: -10% +120° C: +15%	-50° C: -7% +120° C: +5%
<b>Bias output voltage</b>	12 VDC	12 VDC	13 VDC	8 VDC
<b>Grounding</b>	case isolated	case isolated	case isolated	case isolated
<b>Mounting</b>	1/4-28 tapped hole	1/4-28 captive screw	1/4-28 tapped hole	1/4-28 tapped hole
<b>Output connector</b>	2-pin MIL-C-5015 or 4-pin M12	2-pin MIL-C-5015 or 4-pin M12	2-pin MIL-C-5015	2-pin MIL-C-5015



ONLINE

Built for excellent performance. Shop for even more quality sensors online. Choose what you need at [buy.wilcoxon.com](http://buy.wilcoxon.com).

**Note:** Model 786LF-250 also available with 250 mV/g sensitivity.

- Hazardous area options available on models 786-500 and 787-500 (see page 29 for full certification requirements)

# High g sensors

Accelerometers with a 500 g or greater range for high-impact applications, ideal where there are high-speed components with higher harmonics or blade pass frequencies greater than 60,000 CPM.



Wilcoxon model	786A-I	997	• 793-10	732A
Description	Accelerometers with high amplitude range			
	500 g range	600 g range	500 g range	500 g range
Sensitivity	10 mV/g	10 mV/g	10 mV/g	10 mV/g
Sensitivity tolerance	± 5%	± 10%	± 5%	± 5%
Frequency response ± 3 dB, Hz	0.5 - 14,000	0.5 - 29,000	1 - 15,000	0.5 - 25,000
Resonance frequency	30 kHz	>45 kHz	25 kHz	60 kHz
Electrical noise 100 Hz	23 µg/√Hz	9 µg/√Hz	40 µg/√Hz	3 µg/√Hz
Max temperature	120° C	120° C	120° C	120° C
Temperature response	-25° C: -10% +120° C: +10%	-50° C: +1% -25° C: -1% +120° C: +8%	-50° C: -10% +120° C: +5%	-50° C: -10% +120° C: +5%
Bias output voltage	12 VDC	12 VDC	12 VDC	10 VDC
Grounding	case isolated	case isolated	case isolated	case grounded
Mounting	1/4-28 tapped hole	8-32 captive screw or M4 captive screw	1/4-28 tapped hole	10-32 tapped hole
Output connector	2-pin MIL-C-5015	integral cable, blunt cut	2-pin MIL-C-5015	10-32 coaxial



## DID YOU KNOW



The gravitational constant  $g$  is the standard unit of acceleration equal to earth's gravity at mean sea level – one "g" equals 32.17 ft/sec<sup>2</sup> or 9.81 m/s<sup>2</sup>.

- Hazardous area options available on model 793-10 (see page 29 for full certification requirements)

# Seismic

Our seismic sensors are recognized as setting the standard. They are used in a variety of applications ranging from earthquake detection systems and structural monitoring to construction zone observation and isolation tables.



Wilcoxon model	731A/P31	735T	731-207	799M
<b>Description</b>	Ultra quiet, ultra low frequency accelerometer/power amplifier system	Ultra quiet, ultra low frequency accelerometer with temperature sensor	Compact, ultra low frequency accelerometer	High sensitivity, filtered accelerometer
<b>Sensitivity</b>	10 V/g	10 V/g	10 V/g	1 V/g
<b>Sensitivity tolerance</b>	± 10%	± 10%	± 10%	± 5%
<b>Frequency response</b> ± 3 dB, Hz	0.05 - 450	0.01 - 350	0.2 - 1,300	0.2 - 2,500
<b>Resonance frequency</b>	750 Hz	700 Hz	2.4 kHz	18 kHz
<b>Electrical noise</b> 100 Hz	0.004 µg/√Hz	3.5 ng/√Hz	0.03 µg/√Hz	1 µg/√Hz
<b>Max temperature</b>	65° C	65° C	70° C	80° C
<b>Temperature response</b>	-10° C: -12% +65° C: +5%	-10° C: -20% +65° C: +50%	0° C: -14% +70° C: +14%	-50° C: -7% +80° C: +5%
<b>Bias output voltage</b>	9 VDC	8 VDC	10 VDC	8 VDC
<b>Grounding</b>	case isolated	case isolated	case grounded	case isolated
<b>Mounting</b>	3/8-16 tapped hole	M6x1 tapped hole	10-32 tapped hole	1/4-28 tapped hole
<b>Output connector</b>	2-pin MIL-C-5015	4-pin M12	10-32 coaxial	2-pin MIL-C-5015



## FAST FACT

Seismic accelerometers are high sensitivity sensors for measuring low level, low frequency motion of buildings, bridges and other structures.

# Dual output and triaxial sensors

Dual output (vibration and temperature) and triaxial sensors provide more data all in one, simplifying your monitoring set-up.



Wilcoxon model	• 786T / 787T	793T-3	797T-1	• 993B-7-M12
<b>Description</b>	Top-exit / Side-exit accelerometers with temperature sensor	Accelerometer with internal temperature sensor	Side-exit accelerometer with temperature sensor	Hermetic triaxial accelerometer
<b>Sensitivity</b>	100 mV/g	100 mV/g	100 mV/g	100 mV/g
<b>Sensitivity tolerance</b>	± 5%	± 5%	± 5%	± 10%
<b>Frequency response</b> ± 3 dB, Hz	0.5 - 12,000	0.5 - 15,000	1 - 12,000	2 - 10,000 (Z axis) 2 - 7,000 (X, Y axes)
<b>Resonance frequency</b>	30 kHz / 22 kHz	24 kHz	26 kHz	>35 kHz
<b>Electrical noise</b> 100 Hz	5 µg/√Hz	5 µg/√Hz	5 µg/√Hz	2 µg/√Hz
<b>Max temperature</b>	120° C	120° C	120° C	120° C
<b>Temperature response</b>	-25° C: -10% +120° C: +10%	-50° C: -10% +120° C: +5%	-50° C: -5% +120° C: +5%	-50° C: -12% +120° C: +12%
<b>Bias output voltage</b>	12 VDC	12 VDC	12 VDC	12 VDC
<b>Grounding</b>	case isolated	case isolated	case isolated	case isolated
<b>Mounting</b>	1/4-28 tapped hole / 1/4-28 captive screw	1/4-28 tapped hole	1/4-28 captive screw	10-32 captive screw
<b>Output connector</b>	3-pin MIL-C-5015	3-pin MIL-C-5015	3-pin MIL-C-5015	4-pin M12 (integral cable option available)



DO MORE



Double-duty. Extra functionality. Defined by Wilcoxon quality and reliability to do more.

- Hazardous area options available on models 786T and 993B-7-M12 (see page 29 for full certification requirements)

# Specialty sensors

Wilcoxon offers sensors for a variety of specialized applications with unique requirements. It's all in the details. Built for durability, superior quality and great value.



Wilcoxon model	HV100/200 series	HV100LF/200LF	732-1D	746	• LPA100T
<b>Description</b>	High EMI resistance accelerometers	Low frequency accelerometers with high EMI resistance	High frequency, compact accelerometer with 500 g range	Underwater accelerometer with 650 psi pressure rating	Low power, low voltage accelerometer
<b>Sensitivity</b>	100 mV/g	100 mV/g (see note)	10 mV/g	100 mV/g	50 mV/g
<b>Sensitivity tolerance</b>	± 5%	± 5%	± 5%	± 5%	± 5%
<b>Frequency response</b> ± 3 dB, Hz	0.5 - 12,000	0.1 - 11,000	0.4 - 22,000	1 - 15,000	0.3 - 15,000
<b>Resonance frequency</b>	25 kHz	28 kHz	28 kHz	30 kHz	30 kHz
<b>Electrical noise</b> 100 Hz	5 µg/√Hz	5 µg/√Hz	4 µg/√Hz	0.8 µg/√Hz	16 µg/√Hz
<b>Max temperature</b>	120° C	120° C	120° C	80° C	120° C
<b>Temperature response</b>	-40° C: -10% +120° C: +10%	-25° C: -10% +120° C: +15%	-50° C: -10% +120° C: +5%	-50° C: -10% +80° C: +4%	-25° C: -10% +120° C: +10%
<b>Bias output voltage</b>	12 VDC	13 VDC	10 VDC	10 VDC	1.5 VDC ± 5%
<b>Grounding</b>	case isolated	case isolated	base isolated	isolated	case isolated
<b>Mounting</b>	1/4-28, M8 or M6 integral stud	1/4-28, M8 or M6 integral stud	10-32 tapped hole	10-32 tapped hole	1/4-28 tapped hole
<b>Output connector</b>	HV100: 4-pin M12 HV200: 2-pin MIL-C-5015	HV100LF: 4-pin M12 HV200LF: 2-pin MIL-C-5015	BNC	integral cable, blunt cut	4-pin M12



## SPECIALTY

**HV series sensors** provide over 6,000 volts of isolation between the connector and base. They offer improved EMI resistance in areas with high EM interference, such as wind turbines.

**746** has a 650 psi pressure rating, allowing use in demanding underwater applications.

**732-1D** is ideal for high-impact or high-speed applications where space is minimal.

**LPA100T** operates with <300 µWatts, providing 100x the energy savings of a traditional accelerometer. It is ideal for wireless, battery-operated or energy harvesting applications.

**Note:** HV100LF/200LF also available with 500 mV/g sensitivity as models HV100LF-500 and HV200LF-500.

- Hazardous area options available on model LPA100T (see page 29 for full certification requirements)

# Piezovelocity sensors

Piezoelectric velocity sensors offer the convenience and performance of a direct velocity output without the drawbacks of other styles of velocity sensors.



Wilcoxon model	 • 793V	793V-5	• 797V	893V
<b>Description</b>	Piezoelectric velocity transducers		Low profile piezo-velocity transducer	Industrial velocity sensor
<b>Sensitivity</b>	100 mV/in/sec	500 mV/in/sec	100 mV/in/sec	100 mV/in/sec
<b>Sensitivity tolerance</b>	± 10% (see note)	± 10%	± 10%	± 5%
<b>Frequency response</b> ± 3 dB, Hz	2.5 - 7,000	5.0 - 7,000	1.6 - 7,000	4.5 - 5,000
<b>Resonance frequency</b>	15 kHz	15 kHz	18 kHz	15 kHz
<b>Electrical noise</b> 100 Hz	1.0 µin/sec/√Hz	0.4 µin/sec/√Hz	0.8 µin/sec/√Hz	1.5 µin/sec/√Hz
<b>Max temperature</b>	120° C	120° C	120° C	120° C
<b>Temperature response</b>	-50° C: -5% +80° C: +3% +120° C: -5%	-50° C: -5% +80° C: +3% +120° C: -5%	-50° C: -15% +120° C: +10%	-50° to +120° C: ± 5%
<b>Bias output voltage</b>	10 VDC	10 VDC	10 VDC	12 VDC
<b>Grounding</b>	case isolated	case isolated	case isolated	case isolated
<b>Mounting</b>	1/4-28 tapped hole	1/4-28 tapped hole	1/4-28 captive screw	1/4-28 tapped hole
<b>Output connector</b>	2-pin MIL-C-5015	2-pin MIL-C-5015	2-pin MIL-C-5015	2-pin MIL-C-5015



**Note:** Model 793V is available with ± 5% sensitivity tolerance as model 793V100-5.

- Hazardous area options available on models 793V and 797V
-  Radiation resistant option available on model 793V (see page 29 for full certification requirements)

## FAST FACT



Piezoelectric velocity sensors employ traditional accelerometer structure with internal signal conditioning to transduce mechanical motion into an electrical signal proportional to velocity.

# Traditional

These legacy products provide a way to retain your long-standing test procedures without the need for rewrites or specification changes.



Wilcoxon model	 • 793	 • 797	793-6	797-6
<b>Description</b>	PiezoFET® accelerometers		High temperature FireFet accelerometers	
<b>Sensitivity</b>	100 mV/g	100 mV/g	100 mV/g	100 mV/g
<b>Sensitivity tolerance</b>	± 5%	± 5%	± 10%	± 10%
<b>Frequency response</b> ± 3 dB, Hz	0.5 - 15,000	1 - 12,000	1 - 12,000	1 - 11,000
<b>Resonance frequency</b>	25 kHz	26 kHz	25 kHz	18.5 kHz
<b>Electrical noise</b> 100 Hz	5 µg/√Hz	5 µg/√Hz	at 25° C: 3 µg/√Hz at 150° C: 10 µg/√Hz	at 25° C: 3 µg/√Hz at 150° C: 10 µg/√Hz
<b>Max temperature</b>	120° C	120° C	150° C	150° C
<b>Temperature response</b>	-50° C: -15% +120° C: +20%	-50° C: -15% +120° C: +15%	-50° C: -5% 0° C: +2% +150° C: -5%	-50° C: -5% 0° C: +2% +150° C: -5%
<b>Bias output voltage</b>	12 VDC	12 VDC	at 25° C: 12 VDC at 150° C: 11 VDC	at 25° C: 12 VDC at 150° C: 11 VDC
<b>Grounding</b>	case isolated	case isolated	case isolated	case isolated
<b>Mounting</b>	1/4-28 tapped hole	1/4-28 captive screw	1/4-28 tapped hole	1/4-28 captive screw
<b>Output connector</b>	2-pin MIL-C-5015	2-pin MIL-C-5015	2-pin MIL-C-5015	2-pin MIL-C-5015



## GET STARTED

Built for long use, performance and reliability.  
Get started, shop now. See more options online  
and order anytime!

- Hazardous area options available on models 793 and 797
-  Radiation resistant options available on models 793 and 797  
(see page 29 for full certification requirements)

# Cable assemblies



## APPLICATION SUPPORT

Selecting the right cable assembly is highly dependent on the environment in which the sensor will operate. Wilcoxon offers a wide variety of rugged cables and connectors to ensure data reliability.

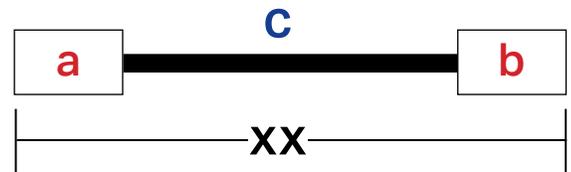
Not sure what your requirements are? We can help. Email [info@wilcoxon.com](mailto:info@wilcoxon.com) or call (301) 330-8811 for technical assistance.

## How to order



### CUSTOM CABLE ASSEMBLY CHECKLIST

- a**  Find the correct mating connector\*
- b**  Choose termination connector\*
- c**  Select compatible cable type
- xx**  Cable length (ft or m), including connectors
- d**  Optional:
  - armor (A)
  - stainless steel braid (S)
  - safety connector (SC)



\* See pages 16-17 for details on connector specifications.



## CUSTOM CABLES

Wilcoxon offers custom cable assemblies to meet your individual needs. Visit [buy.wilcoxon.com/cables](http://buy.wilcoxon.com/cables) to learn more.

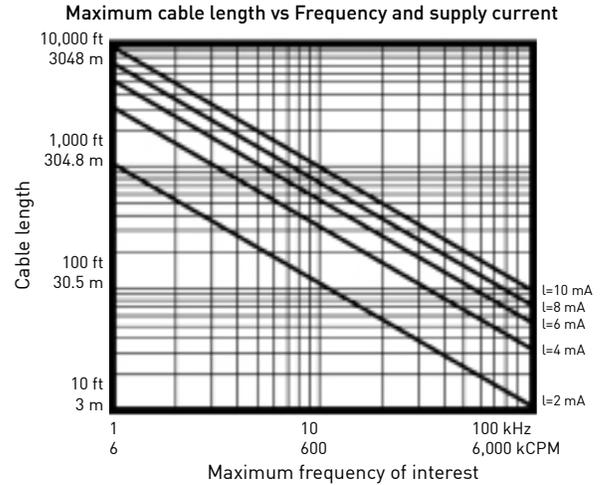
<b>C</b>	Cable options	
	Cable model	Compatible connectors
Coaxial	J1	1, 1A, 2
	J3	1, 1A, 2, 6
	J5A	2, 2F, 6, 6Q/6QI, 6SL/6SLI, 6W
Shielded, twisted pair	J9T2	6QN/6QNI
	J9T2A	2, 20, 6, 6D2, 6H/6HI, 6HD2 6Q/6QI, 6SL/SLI, 6W, 6WR
	J9T2AS	6SL/6SLI
	J9T2S	9W, 6QN, 6QNI, 6SL/SLI
	J88	2, M12, 20, 6, 6Q/6QI, 6WR
	J88C	2, M12, 20, 6, 6Q/6QI, 6WR
	J10	2, M12, 20, 6, 6D2, 6H/6HI, 6HD2, 6Q/6QI, 6SL/6SLI, 6W, 6WR
	J9F	6QA/6QAI, 6W, 6WR
Shielded, multi-conductor	J9T3	6GSL/6GSLI, 6SL/6SLI
	J9T3A	2, 6GD2, 6GQ/6GQI, 6GSL/6GSLI, 6SL/6SLI
	J9T4	2, 9W, 6GSL/6GSLI, 6SL/6SLI
	J9T4A	9W
	J95	19SL/19SLI
	J84	2, M12, 20, 6, 6GQ/6GQI, 9W
	J84C	2, M12, 20, 6, 6GQ/6GQI, 9W

# Cables & connectors – considerations



## CABLE LENGTH

An accelerometer cable can be run 100 feet without losing signal content. The maximum length is a function of supply current and the highest frequency of interest. The chart to the right helps determine maximum cable lengths.

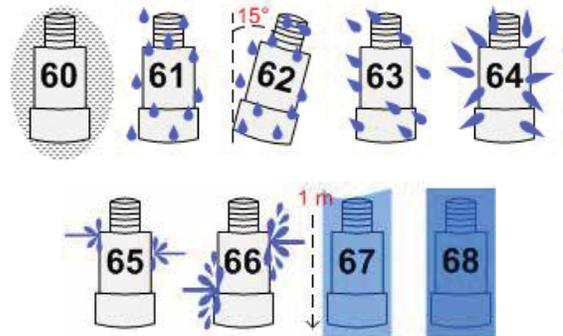


Note: Graph values assume cable capacities of 30 pF/ft and an available swing of 5 V p-p. The current available is represented by I.

## IP RATINGS



Protection against solids	Protection against liquids	
No protection	0	No protection
Objects >50 mm	1	Vertically dripping water
Objects >12.5 mm	2	Angled dripping water
Objects >2.5 mm	3	Sprayed water
Objects >1.0 mm	4	Splashed water
Dust-protected	5	Water jets
Dust-tight	6	Pressure jets
	7	Immersion to 1 meter
	8	Indefinite immersion



IP ratings – protection against liquids

## Connector tool kits

Wilcoxon provides High Temperature Crimp (HTC) and High Temperature Solder (HTS) toolkits for field assembly of the 6Q series of connectors. The HTC kit is used to make a crimp connection to a socket, while the HTS kit is for applications where the socket will be soldered to the wire.



Our connector toolkits come with everything you need to prepare connectors and cables in the field, including

- high temperature epoxy
- epoxy applicator gun, plunger and nozzles
- plastic and metal socket insertion tools
- crimp tool

# Connectors



Wilcoxon model	Connector	Description	Max temperature	Field assembly	IP rating
6	2 socket	Amphenol, metallic	125° C	Yes	50
6D2	2 socket	Class I, Div 2 suitable	125° C	No	67
6GD2	3 socket		125° C	No	67
6GQ/GQI*	3 socket	High temp Viton® B boot	200° C	Yes	68
6GSL/GSLI*			125° C	Yes	67
6H/6HI*	2 socket	potted backshell, HART-compatible	125° C	No	67
6HD2		HART-compatible, Class I, Div 2 suitable	125° C	No	67
6Q/6QI*		High temp Viton® B boot	200° C	Yes	68
6QN/QNI*		Radiation resistant, Neoprene boot	105° C	Yes	68
6SL/SLI*		Viton® B boot	125° C	Yes	67
6W		Isolated shield, molded	125° C	No	67
1		Microdot 10-32 coaxial	straight plug	200° C	No
1A	right angle		200° C	No	50
2/2F/2T	BNC	male/female/twin axial	165° C	No	50
M12P	M12	4 pin	85° C	No	67
M12S		5 socket	85° C	No	67
45		5 pin	85° C	No	67
9W		4 socket	threaded, waterproof Bendix	125° C	No

\* I indicates electrical isolation between shield and transducer housing.



**ONLINE**

Don't see what you're looking for? Shop our entire line of cables and connectors at [buy.wilcoxon.com](http://buy.wilcoxon.com).

# Cables



Model	J9T2A	J9T2AS	J9T2S	J9T2	J9T3	J9T3A
Description	Twisted, shielded pair				Three conductor	
	Yellow Teflon® jacket	Yellow Teflon® jacket with stainless steel braid	White Tefzel® jacket with stainless steel braid	White Tefzel® jacket	White Tefzel® jacket	Yellow Teflon® jacket
Max temperature	200° C	200° C	150° C	150° C	150° C	200° C
Diameter (in.)	0.190	0.210	0.210	0.190	0.190	0.190
Capacitance (pF/ft)	27	27	27	27	27	27



Model	J9T4	J9T4A	J84	J84C	J88	J88C
Description	Four conductor, shielded			Twisted, shielded pair		
	Red Teflon® jacket	Yellow Teflon® jacket	Kevlar® reinforced, black polyurethane jacket	Coiled, Kevlar® reinforced, polyurethane jacket	Black polyurethane jacket	Black polyurethane jacket, coiled with 6" straight ends
Max temperature	200° C	200° C	80° C	80° C	80° C	80° C
Diameter (in.)	0.190	0.190	0.210	0.210	0.175	0.175
Capacitance (pF/ft)	30	27	44	44	60	60



Model	J1	J3	J5A	J95	J9F	J10
Description	Coaxial			Five conductor	Twisted, shielded pair	
	Low noise, orange PVC jacket	Low noise, high temperature, red Teflon® jacket	RG 58, black PVC jacket	Shielded, black polyurethane jacket	Foil shielded with drain wire, red Teflon® jacket	Gray Enviroprene jacket
Max temperature	80° C	260° C	105° C	90° C	200° C	125° C
Diameter (in.)	0.088	0.085	0.190	0.240	0.174	0.190
Capacitance (pF/ft)	30	30	30	22	51	30

# Mounting accessories



Shop [buy.wilcoxon.com](http://buy.wilcoxon.com) for our full range of mounting hardware and accessories.

Wilcoxon model		Description and available models			
MD series		<b>Two-pole magnetic mounting bases</b>			
		<b>MD020</b> 0.75" diameter, 20 lb force, 1/4-28 tapped hole, non-isolated	<b>MD035</b> 1.00" diameter, 35 lb force, 1/4-28 tapped hole, non-isolated	<b>MD055</b> 1.25" diameter, 55 lb force, 1/4-28 tapped hole, non-isolated	<b>MD130</b> 2.00" diameter, 130 lb force, 1/4-28 tapped hole, non-isolated
MF series		<b>Flat magnetic mounting bases</b>			
		<b>MF015</b> 0.75" diameter, 15 lb force, 10-32 tapped hole, non-isolated	<b>MF040</b> 1.00" diameter, 40 lb force, 1/4-28 tapped hole, non-isolated	<b>MF075</b> 1.25" diameter, 75 lb force, 1/4-28 tapped hole, non-isolated	<b>MF120</b> 1.50" diameter, 120 lb force, 1/4-28 tapped hole, non-isolated
MT series		<b>Two-pole magnetic mounting bases for triaxial sensors</b>			
		<b>MT075</b> 1.50" diameter, 75 lb force, 1/4-28 tapped hole, non-isolated		<b>MT075A</b> 1.50" diameter, 75 lb force, 10-32 tapped hole, non-isolated	
SF6		<b>SF6 mounting stud</b> 1/4-28 UNF both ends Stainless steel	<b>SF6M mounting stud</b> 1/4-28 UNF to M8 x 1.25 Stainless steel	<b>SF6M-1 mounting stud</b> 1/4-28 UNF to M6 x 1.00 Stainless steel	
SF8		<b>SF8 cementing pad</b> 1/4-28 integral stud 1.00" diameter Stainless steel		<b>SF8-2 cementing pad</b> Includes tapped hole and key notch for consistent axis orientation Use with 993A triaxial sensors	
SF11		<b>Magnet landing pad</b> 1.00" diameter provides surface for sensor attachment using a magnetic mounting base			
SF21		<b>SF21 isolator mounting base</b> 1.00" hex across flats Isolation protection up to 1,500 volts 1/4-28 to 1/4-28 integral stud		<b>SF22</b> 1.000" diameter, 1/4-28 to M8 integral stud	
				<b>SF23</b> 1.125" diameter, 1/4-28 to 1/4-28 integral stud	
				<b>SF24</b> 1.125" diameter, 1/4-28 to M8 integral stud	
TC1B		<b>Triaxial mounting cube</b> 1.00" on each side Three 1/4-28 tapped holes fit a variety of threaded adapter stud sizes, including M6, M8, 3/8 and 10-32 Additional sizes available for different sized sensors			
VERSIL406		<b>Mounting epoxy</b> Enough glue for up to 5 sensors/mounting pads Package contains both epoxy components separated by a pull tab Max temperature: 150° C			
ST101		<b>Spot face tool</b> 1.25" diameter, pilot drill for 1/4-28 hole, drill depth adjustable			

# Mounting considerations

Evaluation of the mounting location of each sensor must be based on the specific machine and vibration source to be monitored. The mounting configuration depends primarily upon dynamic measurement requirements, such as frequency and amplitude range. The closer the contact between sensor and machine, the better the ability to couple and measure high frequency signals.

## Permanent mounting: threaded stud, cementing pad

Threaded stud mounting allows the widest dynamic measurement range and is recommended for permanent monitoring systems, high frequency testing and harsh environments.

Cementing pads approach the high frequency capabilities of stud mounts when used properly, without the need for drilling into the structure. Adhesive selection is critical for long-term reliability.

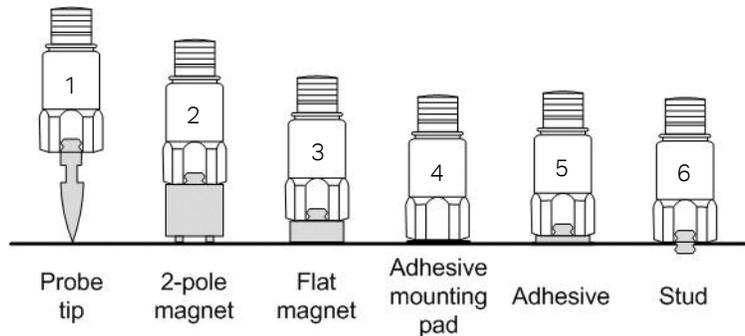
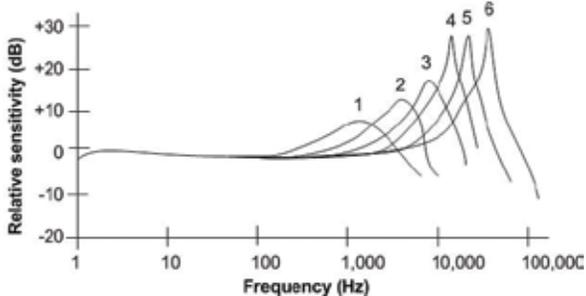


### TECH TIP

Use a silicon grease with permanently mounted sensors to increase mounting stiffness and enhance frequency response.

## Adhesives

If the machine cannot be drilled, adhesive mounting can be used, although this method will usually damage the accelerometer if removal is required. An adhesive mounting pad is the best alternative to stud mounting.



## Magnets and probe tips

Magnetic mounts and probe tips can be used for walkaround monitoring programs. The frequency range of using either mounting method is dramatically reduced when compared to stud or adhesive mounts.

Magnetic mounts are available with flat surfaces for flat locations or two-pole configurations for curved surfaces.

Probe tips should be made of steel and be no longer than six inches.



### PROBE TIP

The PT2 probe tip can be used to take readings in hard-to-reach areas or on surfaces that aren't conducive to mounting, and connects to any vibration meter via 1/4-28 integral stud.



# Enclosures

Designed with the user in mind, enabling quick and safe data acquisition in the harshest industrial environments. Visit [buy.wilcoxon.com](http://buy.wilcoxon.com) to shop and for more information.

## VibraLINK® (VL) series

Enclosures serve as a central data collection point and streamline walkaround routes. Wilcoxon's VL series offers a variety of customizable options to meet the requirements of your application.

### VLS and VLD enclosures

VLS and VLD switchboxes allow the user to choose between single or dual output and feature an industry-first data ready LED that indicates BOV levels have stabilized. Decrease active collection time, eliminate ski-slope data and increase efficiency in data collection.

 Industry first

**Data ready light**  
unbeatable accuracy,  
reliable readings



- Base or expandable enclosure size for up to 48 channels
- Compatible with single or dual output IEPE sensors
- Online connectivity for continuous monitoring
- Organized terminals for clean cable runs
- Customizable cable access holes
- 55% more interior space
- NEMA 4/4X and IP66 ratings
- Increased noise immunity



Base model: 6-12 channels



Expandable model: 12-48 channels

Enclosures

VLS / VLD configuration options		
<b>X</b>	<b>S:</b> single output	<b>D:</b> dual output
<b># of channels</b>	6, 8, 12	12, 24, 36, 48
<b>Y (inches)</b>	<b>B</b> = 10 x 8 x 6	<b>E</b> = 20 x 16 x 8
<b>a</b>	<b>F:</b> fiberglass <b>S:</b> stainless steel	
<b>b</b>	<b>C:</b> conduit <b>G:</b> cable grip	
<b>cc</b>	<b>N:</b> no online connectivity <b>OC:</b> conduits <b>OG:</b> cable grips <b>OP:</b> removable plugs	
<b>d</b>	<b>S:</b> screw <b>Q:</b> quickconnect	

### HOW TO ORDER | VLS and VLD

**VL** X # Y **a - b - cc - d**

<b>X</b> <input type="checkbox"/> Choose single or dual output	<b>a</b> <input type="checkbox"/> Material
<b>#</b> <input type="checkbox"/> Select number of channels	<b>b</b> <input type="checkbox"/> Cable interface
<b>Y</b> <input type="checkbox"/> Choose size	<b>cc</b> <input type="checkbox"/> Online connectivity
	<b>d</b> <input type="checkbox"/> Terminal type

# Enclosures



**NEW PRODUCT**

## VLL enclosures

Wilcoxon's new VibraLINK Lite (VLL) enclosures are a cost-effective solution where simplicity of design fulfills your requirements. With many of the same configurable features of VLS and VLD models, VLL enclosures can be tailored to a variety of industrial applications.

Convenient, customizable, cost-effective.

### HOW TO ORDER

### VLL

Channels	Cable interface	Terminals
6, 12, 24, 36, 48	<b>C:</b> conduit <b>G:</b> cable grip	<b>S:</b> screw

<b>VLL</b>	<b>#</b>	<b>Y</b>	<b>a - b - S</b>
------------	----------	----------	------------------

Size	Material
<b>B:</b> 10x8x4 <b>E:</b> 20x16x8	<b>F:</b> fiberglass <b>S:</b> stainless steel



**ONLINE**

Go to [buy.wilcoxon.com](http://buy.wilcoxon.com) to see all VL configuration options, or contact us for technical assistance.

## VLT enclosures

VLT models offer simpler configuration and are designed for use with triaxial sensors.

- 6 channels
- Stainless steel or fiberglass housing
- Cable grips or M12 connectors (for compatibility with data collectors)
- NEMA 4/4X rated for harsh industrial environments



## Cable termination boxes

Low-cost, compact CB series enclosures provide compatibility with data collectors and are rated for indoor applications. Triaxial compatible model also available.

CB2	2 channel BNC, termination junction box, cable grips
CBT2-M12-G	2 channel M12, triaxial termination junction box, cable grips
CB4	4 channel BNC, termination junction box, cable grips



# Instrumentation

## ReferenceMate® portable reference source



ReferenceMate  
REF2510R

Quickly and easily check operation and set-up of accelerometers and velocity sensors in the field. Check acceleration and velocity measurements with no imperial-metric conversions. Frequency and measurement type can be selected with the push of a button.

### Features

- User selectable operating frequencies: 61.4 Hz, 100 Hz, 159.2 Hz
- Max load: 8.8 oz (250 grams)
- Switch-selectable RMS or peak
- Operating temperature range: -15 to +130° F (-10 to +55° C)
- 4x standard AA batteries
- Up to 40 hours of battery life
- DC power input
- Protective thermoplastic boot
- Threaded base for magnet

### Accessories



Triaxial adapter  
**TAA01**



Metric mounting kit  
**REF001**



Metric mounting kit  
**REF002**

## Portable power supplies

Wilcoxon model	P702B	P703B	P704B
Channels	1	3	1
Power	(3) 9 VDC	(3) 9 VDC	(3) 9 VDC
Filter	Selectable	-	-
Amplifier gains	1, 10, or 100	-	-
Output	Acceleration or velocity	Acceleration	Acceleration

Dynamic sensors requiring IEPE power utilize industry-standard CCD power supplies. The power supply contains a voltage source with CCD sufficient to support sensor installations using several hundred feet of cable. Options include battery- or AC-operated, selectable integration, gain or triaxial configurations.



P702B



P703B



P704B

# Instrumentation

## MachineryMate® handheld vibration meters

Wilcoxon's easy-to-use meters record, analyze and display bearing conditions and vibration values color-coded to ISO 10816-3 alarm levels, enabling quick and reliable machinery health monitoring. Built-in filter bands provide a clear picture of machine problems, including unbalance, misalignment and looseness.

MachineryMate kits			Accessories
MAC800	MAC810	MAC820	
X	X	X	MAC800 meter and DataMate software
X	X	X	USB docking cradle
X	X	X	Protective boot
X	X	X	Carrying case
	X	X	Strobelight attachment
	X	X	DataMate PRO software
		X	Bluetooth headphones
		X	Headphones case

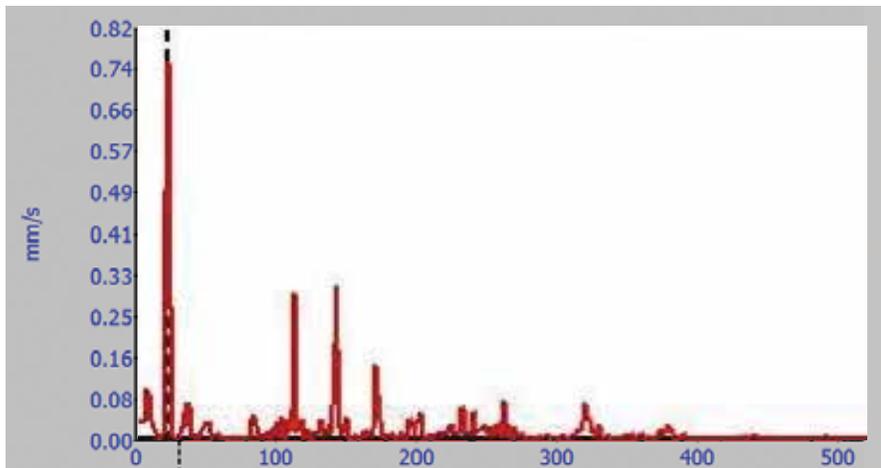


MachineryMate  
MAC800



### NEW TO VIBRATION?

Economical entry into vibration data collection. View more at [buy.wilcoxon.com](http://buy.wilcoxon.com).



### DataMate® software

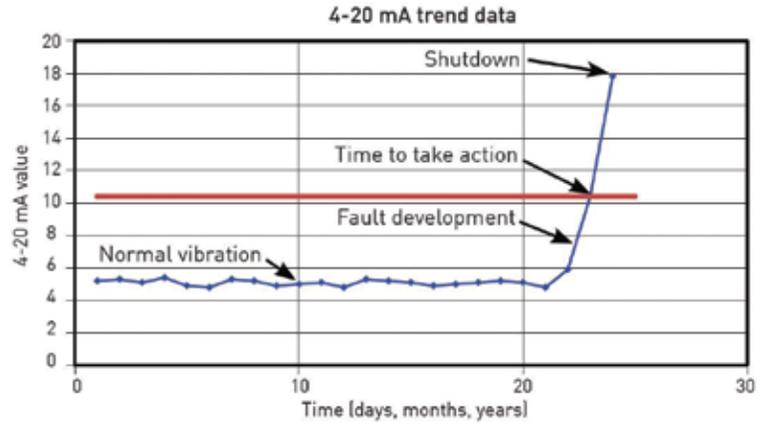
DataMate is the powerful vibration and analysis software tool designed for use with the MAC800 handheld vibration meter.

DataMate PRO works across computer networks to allow access to remote databases and readings that are stored on other computers. This advanced feature enables users to monitor machinery at more than one site.

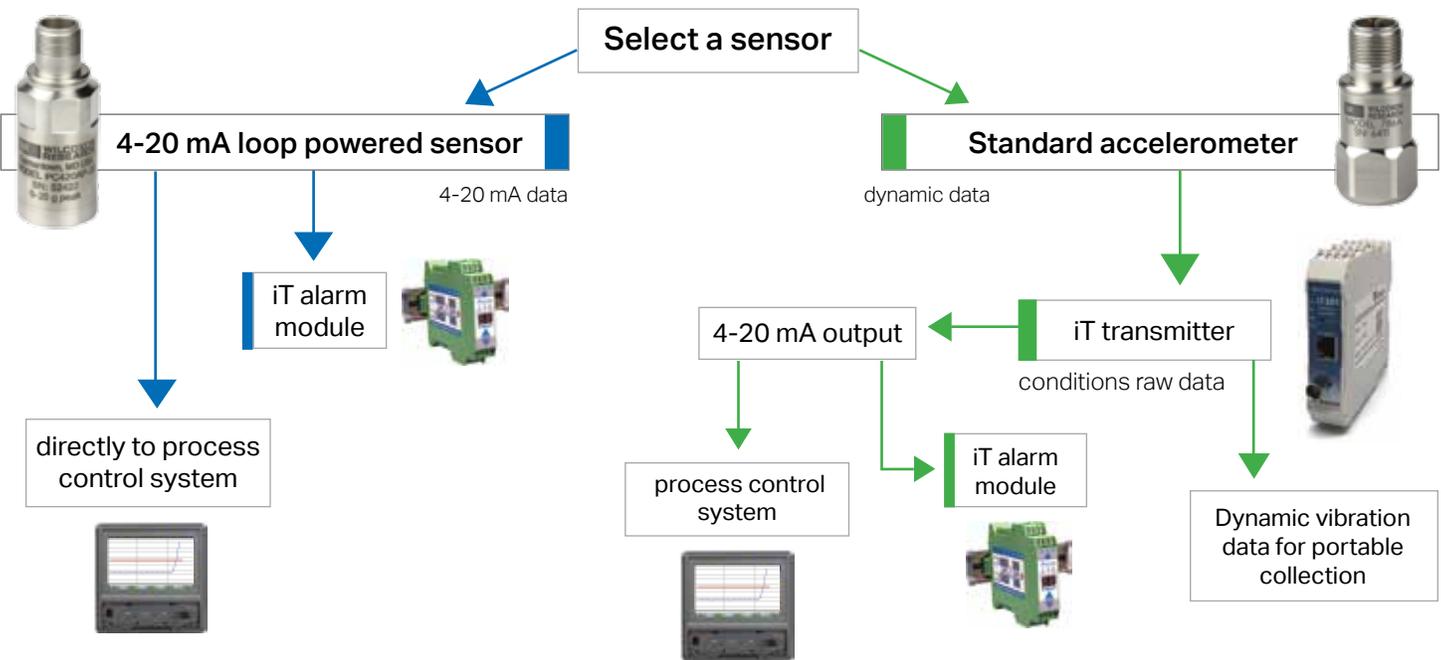
# Complete process solutions

Vibration monitoring is essential to predictive maintenance, providing 24/7 trend data for fault detection. It allows you to monitor machinery more effectively. Many process control systems already accept 4-20 mA inputs, making it easy to integrate vibration data into condition-based monitoring programs.

- 4-20 mA outputs directly to process control system for clearly visible trend data
- Changing vibration levels provide warning prior to equipment failure
- Optimize plant efficiency by focusing only on problematic machines



## 4-20 mA monitoring options



### BENEFITS

- Lower total cost of monitoring set-up
- Simple trend data for continuous monitoring
- Multiple output types (RMS, peak, true peak)

### BENEFITS

- More detailed information on machine condition
- Enables accessibility to dynamic data
- Wider sensor selection for a more varied range of applications

# 4-20 mA sensors

- Hazardous area options available on PC420 and PC420-EX models (see page 29 for full certification requirements)



Wilcoxon model	• PC420	PCC421	PC420DPP	• PC420-EX
<b>Description</b>	Top-exit loop powered sensor	Side-exit loop powered sensor	Loop powered displacement sensor	Explosion-proof loop powered sensor
<b>Loop output options</b>	RMS, peak, true peak*	RMS, peak	RMS	RMS, peak, true peak
<b>Acceleration scaling, g</b>	5, 10, 20, 50	5, 10, 20	Displacement only 40 mils	5, 10, 20
<b>Velocity scaling, ips</b>	0.5, 1.0, 2.0, 3.0, 5.0	0.5, 1.0, 2.0, 3.0, 5.0		0.5, 1.0, 2.0, 3.0, 5.0
<b>Frequency range</b>	Accel: 1.0 Hz - 2.0 kHz Vel: 3.5 Hz - 2.0 kHz	Accel: 1.0 Hz - 2.0 kHz Vel: 3.5 Hz - 2.0 kHz	4.0 Hz - 2.0 kHz	Accel: 4.0 Hz - 2.0 kHz Vel: 3.5 Hz - 2.0 kHz
<b>Max temperature</b>	105° C	105° C	85° C	85° C
<b>Grounding</b>	case isolated	case isolated	case isolated	case isolated
<b>Mounting</b>	1/4-28 tapped hole	1/4-28 captive screw or M6 captive screw	1/4-28 tapped hole	3/8-24 tapped hole
<b>Output connector</b>	2 pin MIL-C-5015	2 pin MIL-C-5015 or 4 pin M12	2 pin MIL-C-5015	18 AWG flying leads

\* 50 g scaling not available on true peak models; max temperature on true peak models is 85° C.



NEW, industry exclusive

## Digital sensor with HART protocol



PCH420V-M12

### Features

- Field-configurable parameters
- 3 programmable filter bands
- Allows for multi-drop installation
- Greater control over fault monitoring



Rugged 6H/6HI and 6HD2 connectors are designed for use with PCH420V sensors.

• PCH420V	
<b>Models</b>	PCH420V-R6, PCH420V-M12, PCH420V-R6-HZ, PCH420V-M12-HZ
<b>Loop output options</b>	RMS, peak, true peak
<b>User configurable</b>	Yes
<b>Velocity scaling, ips</b>	0.5 - 5.0, user configurable
<b>Frequency range</b>	Vel: 3.0 Hz - 1.95 kHz
<b>Programmable filter bands</b>	3
<b>Max temperature</b>	105° C
<b>Grounding</b>	case isolated
<b>Mounting</b>	1/4-28 tapped hole
<b>Output connector</b>	2-pin MIL-C-5015 or 4-pin M12

- Hazardous area options available (see page 29 for full certification requirements)

# Intelligent transmitters



## PRODUCT SPOTLIGHT

Wilcoxon's intelligent vibration transmitters measure and process dynamic vibration signals. iT modules are a powerful means to connect standard vibration sensors to process control systems.

Get more information on our intelligent transmitters at [wilcoxon.com/vibration-transmitters-it-series](http://wilcoxon.com/vibration-transmitters-it-series).



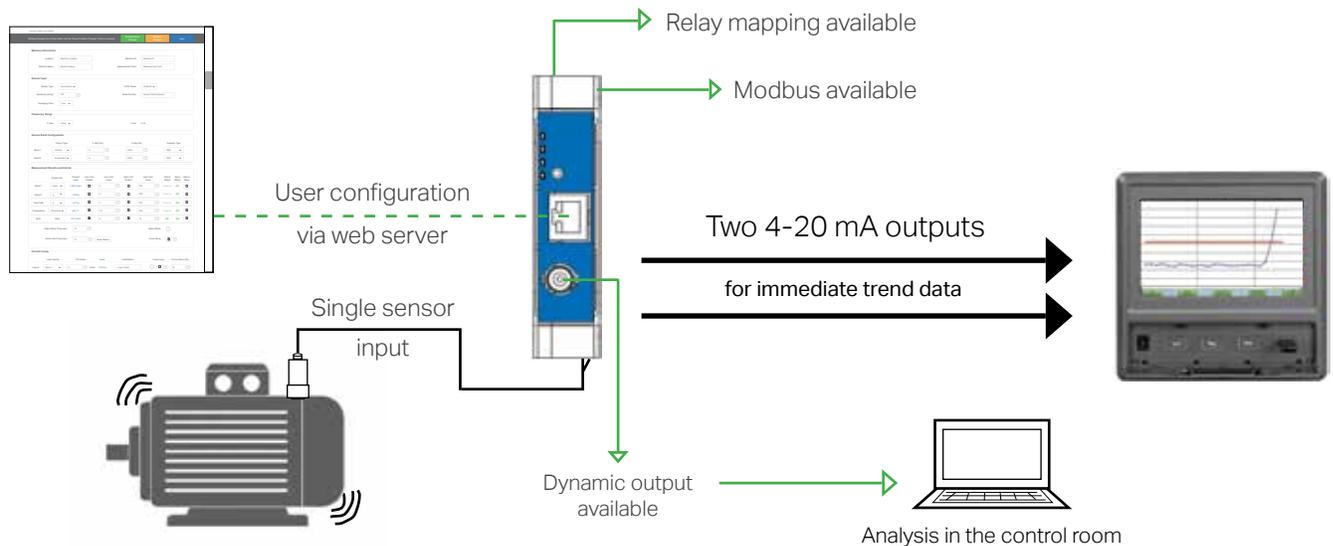
## iT300

NEW, industry exclusive

The next generation transmitter for your vibration monitoring needs.

- Easily configurable in the field via internal web server – no stand-alone software needed
- Two processing bands for optimized frequency ranges, more control over fault monitoring and greater flexibility
- Dual mappable 4-20 mA outputs provide access to more information from single sensor input

## How iT works



## iT301

NEW, industry exclusive

All the features of the iT300, plus:

- Modbus/RS-485 enabled, allowing multiple communication methods to plant infrastructure
- Configurable high/low alarms for better control over fault monitoring
- Low and high alarms are mappable to a single NC/NO relay

# Intelligent transmitters and alarm modules



## iT150

**NEW PRODUCT**

New cost-effective transmitter with easy plug-and-play capability.

- Multiple pre-configured units to choose from, tailored to the most common applications
- Compatible with dual output sensors to measure both vibration and temperature
- True peak detection band measures acceleration signals out to 25 kHz

## iT series comparison

Feature	iT150	iT300	iT301
DIN-rail mountable	X	X	X
Accepts accelerometers, velocity sensors	X	X	X
20V peak-peak sensor input	X	X	X
Primary 4-20 mA output	X	X	X
0.2 Hz - 20 kHz bandwidth	X	X	X
24-bit A/D converter	X	X	X
Accepts dual-output sensors	X	X	X
Secondary 4-20 mA output	X	X	X
Field configurable full-scale range		X	X
Field configurable vibration bands (2X)		X	X
Modbus TCP/RS-485			X
Low alarm limits (5X)			X
High alarm limits (5X)			X
Relay/alarm source mapping			X

### TECH TIP



iT150 models must be factory configured. Go to [buy.wilcoxon.com](http://buy.wilcoxon.com) or call for more information.



## iT401 alarm module

Compares 4-20 mA input against configurable alarm limits to provide local notification of potential problems.

- Accepts input from iT transmitter or 4-20 mA sensor
- Three field-programmable relays: high or low setpoints with time delay
- Front panel LED readout and push button softkeys
- Programmable time and hysteresis delay prevent false alarms
- Back panel TBUS connection eliminates external wiring between units



Process solutions

# Complete process solutions

Wilcoxon offers everything you need for your installation.



iT401 alarms in an IT051 DIN box

## iT DIN-rail enclosures

### Transmitter enclosures – IT series

Model	Description
IT051	DIN-box, single rail, holds approximately 7 IT transmitters and power supply
IT051C	DIN-box, single-rail, clear cover, same size as IT051
IT052	DIN-box, dual-rail, holds approximately 25 IT transmitters and power supply



## STREAMLINE YOUR PROCESS

Comprehensive solutions for every condition-based monitoring program.

## PROCESS PRODUCT CHECKLIST

Make sure you have everything you need.

- Sensors
- Cable assemblies
- iT transmitters
- Enclosures
- Mounting hardware
- Accessories

### Cable assemblies

- IP68 rated options
- Class I, Div 2 suitable options
- Temperature ratings up to 200° C
- Shielded, twisted pair, multiconductor and coaxial



### Mounting hardware

- Mounting bases and studs
- Fin mounts
- Isolators
- Magnetic bases
- Mounting pads

### Accessories for iT products

- TBUS connectors
- Terminal blocks
- Fuses

### Power supplies

- 24 VDC power supplies
- Models iT001, iT002, iT004

# Hazardous area sensors



Model	North American certification	ATEX certification	IECEx certification
780A-IS, 786-500-IS, 786-500-M12-IS, 786A-IS, 786A-M12-IS, 786F-IS, 786T-IS, 787-500-IS, 787-500-M12-IS, 787A-IS, 787A-M12-IS, 787A-M8-IS	CL I Div 1 Groups A B C D; CL II Div 1 Groups E F G; CL III; CL I Zone 0 Ex ia IIC T4; CL I Zone 0 AEx/Ex ia IIC T4 Ta = -50° to +120° C	II 1 G Ex ia IIC T4 Ga Ta = 120° C	Ex ia IIC T4 Ga Ta = 120° C
780A-D2, 786-500-D2, 786-500-M12-D2, 786A-D2, 786A-M12-D2, 786F-D2, 786T-D2, 787-500-D2, 787-500-M12-D2, 787A-D2, 787A-M12-D2, 787A-M8-D2	CL I Div 2 Groups A B C D; CL I Zone 2 Ex na II T4 Ta = -50° to +120° C	II 3 G Ex na IIC T4 Gc Ta = 120° C	
LPA100T-D2	CL I Div 2 Groups A B C D; CL II Div 2 Groups E F G; CL III; CL I Zone 2 AEx/Ex nL IIC T5 Ta = -50° to +85° C	II 3 G Ex na nC IIC T5 Gc Ex ic IIC T5 Gc Ta = -50° to +85° C	
PC420xx-yy-IS PC421xx-yy-IS PC423xx-yy-IS	CL I Div 1 Groups A B C D T3C Ta = 85° C max	II 1 G Ex ia IIC T4 Ga -40° < Tamb < +85°	Ex ia IIC T4 Ga
PC420xx-yy-EX (Updated certifications pending)	CL I Div 1, 2 Groups A B C D T3C Ta = 85° C max	II 3 G Ex na nC II T3	
PCH420V-R6-HZ, PCH420V-M12-HZ	CL I Div 2-Groups A B C D CL I Zone 2 AEx/Ex na nC T4 Ta = 105° C max	II 3 G Ex na nC IIC T4 Gc -40° C < Ta < +105° C	Ex na nC IIC T4 Gc -40° C < Ta < +105° C

Model	US certification	Canadian certification	ATEX certification
793E, 793LE, 797E, 797LE	CL I, II, III, T4, Div 1 Groups A B C D E F G; Nonincendive for Div 2 Groups A B C D F G		
793VE, 797VE	CL I, II, III, T4, Div 1 Groups C D F G; Nonincendive for Div 2 Groups A B C D F G		
793-33, 793L-33, 793V-33, 793V-5-33, 797-33, 797L-33		Ex ia CL I, Div 1 Groups A B C D	
993B-5-33, 993B-6-33, 993B-7-33, 993B-7-M12 [CERT]		CL I Div 1 Groups A, B, C, D T4A Ta = 85° C max	
793-10-35, 793-35, 797-35, 797L-35			II 1 G Ex ia IIC T4 Ga Tamb = -50° to +120° C
793V-35			II 1 G Ex ia IIA T4 Ga Tamb = -50° to +120° C

# Sensor selection chart

\*Due to continued research and product development, the manufacturer reserves the right to amend this specification without notice.

Wilcoxon model	Sensitivity	Sensitivity tolerance, ±	Frequency response @ ±3 dB	Resonance	Exit type / connector	Max temp	Mounting thread	psd noise @ 100 Hz	Acceleration range	Weight grams	Haz. area option
			Hz	kHz		°C		/Hz	g peak		
<b>Premium high performance</b>											
780A	100 mV/g	5%	0.5 - 14k	30	top, R6	120	1/4-28	5 µg	80	62	Y
786A	100 mV/g	5%	0.5 - 14k	30	top, R6	120	1/4-28	5 µg	80	90	Y
786LF	100 mV/g	5%	0.1 - 13k	30	top, R6	120	1/4-28	3 µg	50	90	
787A	100 mV/g	5%	0.5 - 10k	22	side, R6	120	1/4-28	5 µg	80	145	Y
<b>General purpose</b>											
780B	100 mV/g	10%	0.5 - 14k	30	top, R6	120	1/4-28	5 µg	80	62	
785A	100 mV/g	10%	1.0 - 12k	30	side, R6	120	1/4-28	6 µg	80	85	
786B-10	100 mV/g	10%	0.5 - 14k	30	top, R6	120	1/4-28	5 µg	80	90	
787B	100 mV/g	10%	0.7 - 10k	22	side, R6	120	1/4-28	5 µg	80	145	
<b>Extended temperature range</b>											
HT780A	100 mV/g	5%	0.5 - 14k	30	top, R6	150	1/4-28	7 µg	80	62	
HT786A	100 mV/g	5%	0.5 - 14k	30	top, R6	150	1/4-28	7 µg	80	90	
HT787A	100 mV/g	5%	0.7 - 10k	22	side, R6	150	1/4-28	7 µg	80	145	
376/CC701HT	100 mV/g	10%	1.0 - 15k	30	top, R1/ inline, R2	260	1/4-28	broadband: 0.001 g	50	75 / 40	
<b>Integral cable</b>											
786F	100 mV/g	5%	0.5 - 13k	30	top, integral cable	120	1/4-28	5 µg	80	90	Y
787F	100 mV/g	5%	0.7 - 10k	22	side, integral cable	120	1/4-28	5 µg	80	145	
712F	100 mV/g	10%	3.0 - 25k	>45	side, integral cable	120	8-32	10 µg	60	35	
780FM-2-J88C	100 mV/g	15%	0.4 - 12k	30	top, integral cable	120	1/4-28	4 µg	80	150.5	
<b>High sensitivity / low frequency</b>											
786-500	500 mV/g	5%	0.2 - 14k	30	top, R6	120	1/4-28	1.5 µg	10	90	Y
786LF-500	500 mV/g	5%	0.1 - 13k	30	top, R6	120	1/4-28	2 µg	10	90	
787-500	500 mV/g	5%	0.2 - 10k	22	side, R6	120	1/4-28	1.5 µg	10	145	Y
793L	500 mV/g	5%	0.2 - 2.3k	15	top, R6	120	1/4-28	0.2 µg	10	142	Y
797L	500 mV/g	5%	0.2 - 3.7k	18	side, R6	120	1/4-28	0.2 µg	10	148	Y
799LF	500 mV/g	5%	0.1 - 2.5k	18	top, R6	120	1/4-28	1 µg	10	205	
<b>High g sensors</b>											
786A-I	10 mV/g	5%	0.5 - 14k	30	top, R6	120	1/4-28	23 µg	500	90	
732A/732AT	10 mV/g	5%	0.5 - 25k	60	side/top, R1	120	10-32	3 µg	500	13	
793-10	10 mV/g	5%	1.0 - 15k	25	top, R6	120	1/4-28	40 µg	500	110	Y
997	10 mV/g	10%	0.5 - 29k	>45	side, integral cable	120	8-32	9 µg	600	35	
<b>Specialty sensors</b>											
HV100/200	100 mV/g	5%	0.5 - 12k	25	top, R6	120	1/4-28, M6 or M8	5 µg	80	122 - 126	
HV100LF/200LF	100 mV/g	5%	0.1 - 11k	28	top, R6	120		5 µg	80		
732-1D	10 mV/g	5%	0.4 - 22k	28	top, BNC	120	10-32	4 µg	500	28	
LPA100T	50 mV/g	5%	0.3 - 15k	30	top, M12	120	1/4-28	16 µg	25	90	Y

Wilcoxon model	Sensitivity	Sensitivity tolerance, ±	Frequency response @ ±3 dB	Resonance	Exit type / connector	Max temp	Mounting thread	psd noise @ 100 Hz	Acceleration range	Weight grams	Haz. area option
			Hz	kHz		°C		/√Hz	peak		
<b>Seismic</b>											
731A	10 V/g	10%	0.05 - 450	0.75	top, R6	65	3/8-16	0.004 µg	0.5 g	760	
731A/P31	10 - 1,000 V/g	10%	0.05 - 450	0.75	BNC	65	3/8-16	0.004 µg	0.5 g	760 / 600	
735T	10 V/g	10%	0.01 - 350	0.7	top, M12	65	M6x1	0.0035 µg	0.5 g	380	
731-207	10 V/g	10%	0.2 - 1.3k	2.4	top, R1	70	10-32	0.03 µg	0.5 g	50	
799M	1 V/g	5%	0.2 - 2.5k	18	top, R6	80	1/4-28	1 µg	5 g	205	
<b>Dual output (vibration + temperature) and triaxial sensors</b>											
786T	100 mV/g	5%	0.5 - 12k	30	top, R6G	120	1/4-28	5 µg	80 g	90	Y
787T	100 mV/g	5%	0.5 - 12k	22	side, R6G	120	1/4-28	5 µg	80 g	145	
793T-3	100 mV/g	5%	0.5 - 15k	24	top, R6G	120	1/4-28	5 µg	80 g	115	
797T-1	100 mV/g	5%	1.0 - 12k	26	side, R6G	120	1/4-28	5 µg	80 g	135	
797LT	100 mV/g	5%	0.2 - 3.7k	18	side, R6G	120	1/4-28	5 µg	10 g	160	
993B series	25, 50 or 100 mV/g	10%	Z: 2 - 10k X, Y: 2 - 7k	>35	top, integral cable	120	10-32	3.2, 2.0, 1.4 µg	160, 80 or 40 g	134	Y
993B-7-M12	100 mV/g	10%	Z: 2 - 10k X, Y: 2 - 7k	>35	top, M12	120	10-32	2 µg	60 g	124	Y
<b>Piezovelocity transducers</b>											
793V	100 mV/in/sec	10%	2.5 - 7k	15	top, R6	120	1/4-28	1.0 µin/sec	50 in/sec	145	Y
793V-5	500 mV/in/sec	10%	5.0 - 7k	15	top, R6	120	1/4-28	0.4 µin/sec	10 in/sec	145	
797V	100 mV/in/sec	10%	1.6 - 7k	18	side, R6	120	1/4-28	0.8 µin/sec	50 in/sec	148	Y
893V	100 mV/in/sec	5%	4.5 - 5k	15	top, R6	120	1/4-28	1.5 µin/sec	50 in/sec	145	
<b>Traditional</b>											
793	100 mV/g	5%	0.5 - 15k	25	top, R6	120	1/4-28	5 µg	80 g	112	Y
797	100 mV/g	5%	1.0 - 12k	26	side, R6	120	1/4-28	5 µg	80 g	135	Y
793-6	100 mV/g	10%	1.0 - 12k	25	top, R6	150	1/4-28	10 µg	50 g	135	
797-6	100 mV/g	10%	1.0 - 11k	18.5	side, R6	150	1/4-28	10 µg	50 g	145	
<b>Underwater accelerometers</b>											
746	100 mV/g	5%	1.0 - 15k	30	top, integral cable	80	10-32	0.8 µg	50 g	45	
754	100 mV/g	10%	2.0 - 25k	60	side, integral cable	90	adhesive	4 µg	250 g	4	
<b>4-20 mA output vibration sensors</b>											
PC420 series acceleration, velocity, RMS and peak	4-20 mA	5%	1.0 - 2k	N/A	top, R6	105	1/4-28	N/A	5, 10, 20 g	162	Y
PC420DPP displacement, peak-to-peak	4-20 mA	5%	10 - 1k	N/A	top, R6	85	1/4-28	N/A	40 mils	162	
PC420-EX	4-20 mA	5%	4.0 - 2k	N/A	flying leads	85	3/8-24	N/A	5, 10, 20 g	380	Y
PCC421 acceleration, velocity, RMS and peak	4-20 mA	5%	4.0 - 2k	N/A	side, R6	105	1/4-28	N/A	5, 10, 20 g	140	
PCH420, HART-enabled	4-20 mA	5%	3.0 - 1.95k	N/A	top, M12	105	1/4-28	N/A	5, 10, 20, 50 g	115	Y

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# Machinery and applications

Your manufacturing process relies on the health of your critical machinery. Measuring vibration helps maintenance personnel understand machine condition, avoiding unexpected shutdowns and keeping operations running smoothly.

Vibration monitoring is useful on the most common rotating machines, including:



Pumps



Motors



Gearboxes



Fans

## DETECT FAULTS

Early detection of changes in vibration signature of machinery is critical in understanding machine condition, helping you avoid unnecessary downtime.

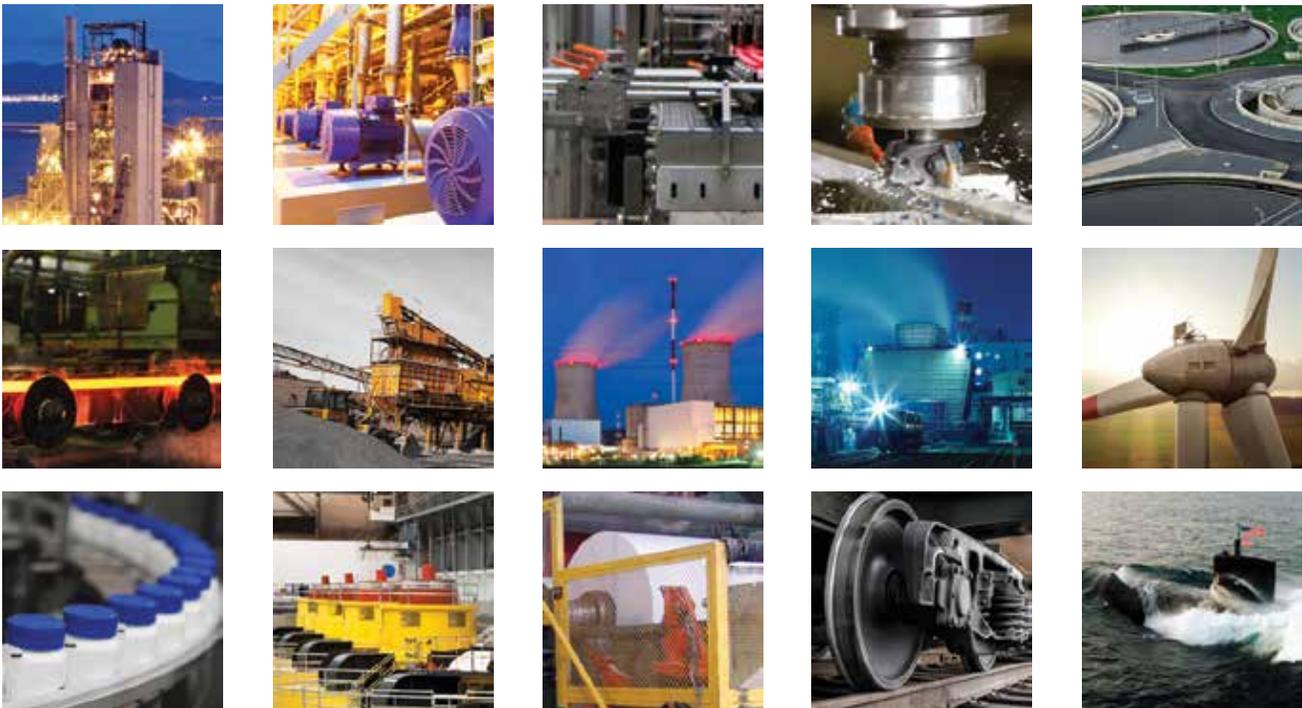
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- Imbalance
- Misalignment
- Cavitation
- Wear

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