

# VIBRATION MONITORING & MACHINERY PROTECTION

Our mission is to offer the widest variety of vibration analysis hardware products that are compatible with data collectors and online monitoring systems, as well as the tools for installation.

Our products reflect the inputs of our customers and distributors around the country and around the world.

#### WHAT WE CAN OFFER

- VIBRATION SENSORS
- CABLES AND CONNECTORS
- JUNCTION BOXES
- MOUNTING HARDWARE





## MINING

## **Critical Assets**

Monster Machines, Massive Miners, Big Rigs, and Trains are all critical assets to the mining industry. These jumbo machines are built on wheels, tracks, or articulating pads and rely on motors, generators, gearboxes, pumps, and fans to keep them running at peak capacity. When one of these critical machines go down, production is decreased, and profits suffer. Reliability never had a bigger job, and industrial vibration analysis plays a key role in machinery uptime. Predicting a possible failure through vibration analysis provides time to source spare parts, schedule an outage, and minimize production loss at the mine site.

### Accelerometers For Machines With Rolling Element Bearings

Vibration of rolling element bearings, gears, and common faults such as unbalance, misalignment, blade pass, vane pass, and motor generator frequencies are typically handled with 100 mV/g accelerometers. Low frequency applications require 500 mV/g for better signal to noise ratios. Both sensitivities come in top exit and side exit configurations. Dual output sensors combining vibration and temperature measurements are also available providing both critical measurements in one hermetically sealed package.







#### **Proximity Probes For Machines** With Fluid Film Bearings

Many large motors, generators, and gear boxes will incorporate fluid film bearings. The rotating shafts of these machines are supported on an oil film or oil wedge, and require the measurement of actual shaft vibration. The best method of making this measurement is through the use of X and Y radial proximity probes. These PRO probes are non-contact eddy current sensors that measure the vibration of the shaft relative to the case of the machine, and the location (gap) of the shaft in the bearing. They can be mounted externally to the bearing using threaded or clamping probe brackets. The most common size has an 8 mm tip diameter and comes in 3/8-24 or M10x1 threads. There are various case lengths and cable lengths to choose from,



and these are typically integrated with an extension cable and driver (electronics) to form a sensor set providing an output of 200 mV/mil or 8 V/mm. Armored cables are preferred in the mining industry. Junction boxes and local displays with relays are available to distribute and measure the vibration and gap.

	PROXIMTY PROBES		EXTENSION CABLES		DRIVERS		ENCLOSURES	
PRODUCTS	DP100102-00-40-10-01-00		DC100130-080-03-00		DD100180-91-00		PXE150P	
Proximity Probes for Fluid Film Bearings			$\mathbf{O}$				+	
	MOTORS/G	MOTORS/GENERATORS		GEAR BOXES		PUMPS/FANS		EYORS
(GTE))	VIBRATION	VIBRATION & TEMPERATURE	VIERATION	VIBRATION & TEMPERATURE	VIBRATION	VIBRATION & TEMPERATURE	VIBRATION	VIBRATION & TEMPERATURE
Accelerometers for Rolling Element Bearings	AC102 SERIES AC104 SERIES AC192 SERIES AC194 SERIES AC135 SERIES AC136 SERIES	TA102 SERIES TA104 SERIES	AC102 SERIES AC104 SERIES AC192 SERIES AC194 SERIES AC135 SERIES AC136 SERIES	TA102 SERIES TA104 SERIES	AC102 SERIES AC104 SERIES AC192 SERIES AC194 SERIES AC136 SERIES	TA102 SERIES TA104 SERIES	AC102 SERIES AC104 SERIES AC192 SERIES AC194 SERIES AC135 SERIES AC136 SERIES	TA102 SERIES TA104 SERIES
Cables	CB111 CB206	CB112 CB218 CB119	CB111 CB206	CB112 CB218 CB119	CB111 CB206	CB112 CB218 CB119	CB111 CB206	CB112 CB218 CB119
Connectors	A2A/B2A A2N/B2N D2H	A3A/B3A A3N/B3N	A2A/B2A A2N/B2N D2H	A3A/B3A A3N/B3N	A2A/B2A A2N/B2N D2H	A3A/B3A A3N/B3N	A2A/B2A A2N/B2N D2H	A3A/B3A A3N/B3N
Cable & Connector Sets	V2N + CB111	V2N + CB119	V2N + CB111	V2N + CB119	V2N + CB111	V2N + CB119	V2N + CB111	V2N + CB119
Junction Boxes	SB102/202 CR102/202 SSB1000/2000 MX102/202 MMX1000/2000	SB142/242 DSB1000/2000	SB102/202 CR102/202 SSB1000/2000 MX102/202 MMX1000/2000	SB142/242 DSB1000/2000	SB102/202 CR102/202 SSB1000/2000	SB142/242 DSB1000/2000	SB102/202 CR102/202 SSB1000/2000 MX102/202 MMX1000/2000	SB142/202 DSB1000/2000
	Mounting Hardware Stud Mounting, Quick Disconnect, Zerk Adaptor, Adhesive Mounting Pads and Fin Mounts for Motors and Generators							
							RR	

# SENSORS

Accelerometer	Sensitivity	Frequency Response	Dynamic Range	Cable Exit	
AC102 Series	100 mV/g +/- 10%	0.5 - 15,000 Hz	+/- 50 g	Тор	
AC104 Series	100 mV/g +/-10%	0.5 – 10,000 Hz	+/- 50 g	Side	
AC192 Series	100 mV/g +/-10%	0.4 – 13,000 Hz	+/- 80 g	Тор	
AC194 Series	100 mV/g +/-10%	0.5 – 10,000 Hz	+/- 80 g	Side	
AC135 Series	500 mV/g +/-10%	0.2 – 3,000 Hz	+/- 10 g	Тор	
AC136 Series	500 mV/g +/-10%	0.2-3,000 Hz	+/- 10 g	Side	
TA102 Series	100 mV/g +/-10% 10mV/°C	0.5 – 15,000 Hz	+/- 50 g 3-121°C	Тор	
TA104 Series	100 mV/g +/-10% 10mV/°C	0.5 – 10,000 Hz	+/- 50 g 3-121°C	Side	

### Sensors





### **Junction Boxes**

Large gains in safety and efficiency can be realized by implementing junction boxes in your condition monitoring program at the mine. Multiple sensors can be wired from the machine to the junction boxes for safe local measurements, or the transmission of data to online vibration monitoring systems. CTC never limits you to a local measurement, as all junction boxes offer current and future connections for switched outputs during manual route data collection of the vibration signals. All junction boxes are available in fibreglass or stainless steel and feature well organized sensor management and measurement access in a NEMA 4X enclosure.





# **PAPER INDUSTRY**

### **Tough Environment**

Hot, wet, dry and chemically challenging for cables and connectors. Paper Mills require vibration analysis hardware that is robust and reliable.

Paper breaks, mis-guided felts, and unfortunately, fires, can all create havoc for vibration condition monitoring programs. Selection of the proper accelerometers, cables, connectors, and junction boxes can relieve many of these troubling problems and assist you in maintaining a functional and reliable vibration program for years to come.





	WET END		WET PRESS		DRYER		FINISHING	
	Headbox Dolly Slice Roller Breast Wre Suction Couch Roller Wesh Boxes Roller		Pettopyer		Heated Top Felt Pelt Dryer Oryer Oryer Oryer Bottom Felt Dryer			
	VIBRATION	VIBRATION & TEMPERATURE	VIBRATION	VIBRATION & TEMPERATURE	VIBRATION	VIBRATION & TEMPERATURE	VIBRATION	VIBRATION & TEMPERATURE
Sensors	AC102 SERIES AC104 SERIES AC192 SERIES AC194 SERIES	TA102 SERIES TA104 SERIES	AC102 SERIES AC104 SERIES AC192 SERIES AC194 SERIES	TA102 SERIES TA104 SERIES	AC207 SERIES AC208 SERIES	TA102 SERIES (<121°C) TA104 SERIES (<121°C)	AC102 SERIES AC104 SERIES AC192 SERIES AC194 SERIES	TA102 SERIES TA104 SERIES
Cables	CB111 CB206	CB112 CB218	CB111 CB206	CB112 CB218	CB111 CB206	CB112 CB218	CB111 CB206	CB112 CB218
Connectors	A2R/B2R A2N/B2N	A3R/B3R A3N/B3N	A2R/B2R A2N/B2N	A3R/B3R A3N/B3N	A2R/B2R A2N/B2N	A3R/B3R A3N/B3N	A2R/B2R A2N/B2N	A3R/B3R A3N/B3N
Junction Boxes	SB102/202 CR102/202 SSB1000/2000	SB142/242 DSB1000/2000	SB102/202 CR102/202 SSB1000/2000	SB142/242 DSB1000/2000	CRHT102/202	SB142/242 (<82°C) DSB1000/2000 (<82°C)	SB102/202 CR102/202 SSB1000/2000	SB142/202 DSB1000/2000
Mounting Hardware	Stud Mounting Quick Disconnect		Stud Mounting Quick Disconnect		Stud Mounting Quick Disconnect		Stud Mounting, Quick Disconnect and Adhesive Mounting Pads	
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# **PROBES & ACCESSORIES**

## **Proximity Probes**

We are proud to offer our customers API Standard 670 and Bently compatible Proximity Probes, constructed with durable stainless steel and backed by our industry leading lifetime warranty.

- Multiple case & thread lengths available
- •8 mm probe tip diameter with 3/8-24 or M10x1 threaded body
- •5 & 9 Meter System Lengths Available

#### Standard Mount







**Pin & Panel Mount** 

Armor Jacketed

\* Proximity Probes are designed to be mounted on fluid film bearings using PRO Proximity Probe Mounts. It is important that they are mounted correctly to provide the most accurate measurements.

### **Driver Enclosure**



Driver enclosures allow you to protect up to six proximity probe drivers from dirt, dust, oil and water.

Optional, factory installed DC power supply, pre-wired to drivers.

## **Connector Protect Options**









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	67 Kewdale Road
	Kewdale WA 6105
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	Polmont

Ph: (08) 9478 2444

Naigoonie Ph: (08) 9091 4111

QLD Coopers Plains (State H/Office) 902 Beaudesert Road Coopers Plains QLD 4108 Ph: (07) 3717 4444

Ph: (07) 3265 2666

- NSW Smithfield (State H/Office) Unit 4, 8 Cooper Street Smithfield NSW 2164 Ph: (02) 9616 0000
- VIC Dandenong South (State H/Office) 84 Greens Road Dandenong Sth VIC 3175 Ph: (03) 8710 9777
- TAS Hobart 39 Sunderland Street Derwent Park TAS 7009 Ph: (03) 6216 6999
- SA Wingfield 13 Streiff Road Wingfield SA 5013 Ph: (08) 8260 6299

Bunbury Bearings Ph: (08) 9721 3522

Bunbury Ph: (08) 9724 9100

Karratha Ph: (08) 9144 2333

Wangara Ph: (08) 9303 6900

Coopers Plains Linear dept Ph: (07) 3717 4452

Mackay Ph: (07) 4952 6660

#### Beresfield (Newcastle) Ph: (02) 4041 6444

Dandenong South Linear dept Ph: (03) 9755 6044

INDONESIA Ph: (62) 542 7031166

Wingfield Linear dept Ph: (08) 8260 6299 Albany Ph: (08) 9842 2488 Collie Ph: (08) 9734 1624 Linear Head Office Ph: (08) 9475 5000

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Somerton Ph: (03) 9308 0055 Bibra Lake Ph: (08) 9434 9555

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#### Townsville Ph: (07) 4758 8855

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