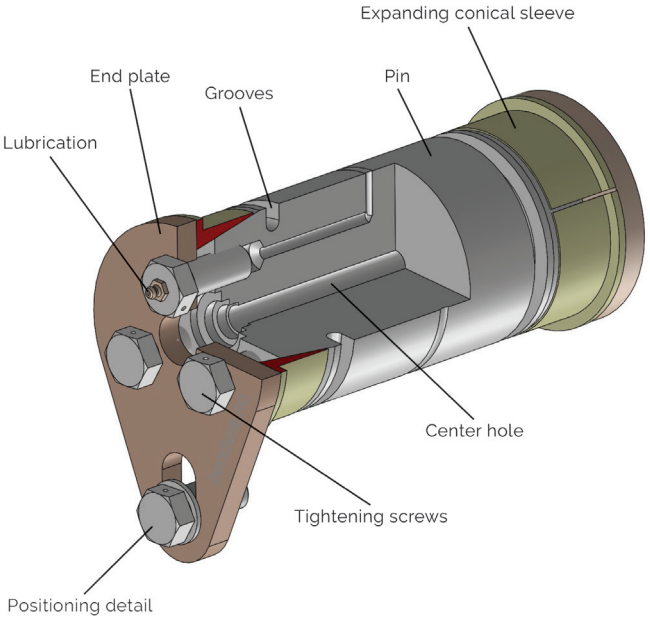
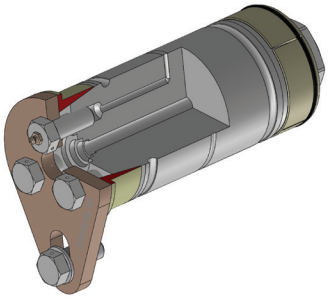
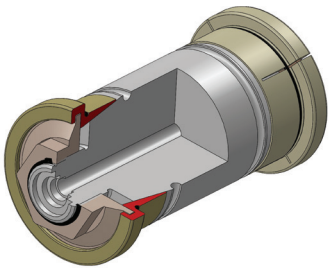
bondura® technology has developed a Load Monitoring Pin together with the world's longest established load cell manufacturing company - Strainstall, based in the UK







The final Load Monitoring PIN contains a combination of a specially designed bondura® expanding PIN solution with high quality load monitoring electronics from Strainstall.

By joining the best of our two companies we have created the very best product you can get within Load Monitoring PIN technology. Our load tests confirm that the accuracy of our PIN is amongst the most accurate available with up to 0.3% accuracy of full scale expected. Normally the PIN material will be of quality 17-4ph / S165M / 1.4418 or similar, but other material qualities can be discussed. The combined bondura® – Strainstall Load Monitoring PIN solution has both DnV GL Type Approval and ABS PDA certificate.

We are looking forward to offer you the best there is within Load Monitoring equipment.

bondura® technology

bondura® technology has more than 30 years of experience with expanding PIN technology within the most challenging environments world-wide.

We are located on the Norwegian south-west coast, close to Stavanger, and serves both national and global industries, within off-shore, on-shore, mining, amusement parks, heavy machineries, sub-sea and others.

bondura® technology AS
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Strainstall

Strainstall is a James Fisher and Sons company. We are a world leader in the development of innovative monitoring solutions to enhance the safety and performance of your assets. We specialise in the design and manufacture of standard and bespoke load cells, strain gauges and integrated systems which are proven to perform year on year in hostile and hazardous environments.

Strainstall UK Ltd
www.strainstall.com
+44 (0)1983 203600 / sales@strainstall.com

TECHNICAL INFORMATION

bondura® PIN Type 6.6, 6.2 and 3.3 available as a Load Monitoring PIN

Minimum diameter 114mm

Subcon Wet-Mateable Connector supplied as standard

Cabled or Wireless Variant available

Cabled mV, 4-20mA or 0-10V outputs available

Single bridge, dual bridge and X-Y variants available

Cabled Handset, Wall-Mount Display or Integration into an existing or bespoke system available

Wireless Handset, Wall-Mount Display or Windows Software with Wireless USB Dongle options available

Wireless variant includes battery-operated Data-Logger as standard, capable of storing 17 years of data and over 6 months battery life (in logging-only mode)

Wireless variant has up to 350m range to a Handset or optional Long-Range Wireless USB Dongle

Wireless Handset can view up to 4 Load Monitoring Pins simultaneously with sum and average load values

Wireless Wall-Mount Display can output 4-20mA, RS-232, RS-422, RS-485, Ethernet or Canbus as standard for remote integration into an existing system

High and low temperature compensated Load Monitoring Pins available

Pin suitable for minimum 24 months subsea use as standard. Long term subsea variant available. Subsea Data-Logger also available

Zone 1 and Zone 2: ATEx, IECEx and North American/Canadian Hazloc Hazardous Area Load Monitoring Pins, Handsets and Wall-Mount Displays available

Typical Specifications	mV output	mA output	Wireless output
Rated Load	As required		
Proof Load	150% of rated load		
Accuracy	+/- 0.3% of full scale		
Environmental protection	IP67 / IP 68		
Safety factor	Minimum 3:1 (or as required)		
Operating temperature	-25°C to +70°C (or as required)		
Storage temperature	-30°C to +80°C (or as required)		
Output signal	mV	4-20mA	Wireless
Electrical connection	4 core	2 or 3 wire	N/A
Cable connection	Connector	Connector	Connector
Cable length	As required	As required	As required
Recommended excitation voltage	10V	N/A	N/A
Maximum excitation voltage	15V	N/A	N/A
Recommended supply voltage	N/A	24V	N/A
Maximum supply voltage	N/A	30V	N/A
Bridge resistance	700 Ohm	N/A	N/A
Sensitivity	1.0 to 2.0 mV	N/A	N/A
Data logging	N/A	N/A	As standard
Battery type	N/A	N/A	2 or 4 (AA or D)
Active battery life	N/A	N/A	Up to 350hrs (AA)
Standby battery life	N/A	N/A	Up to 1700hrs (AA)
Logging only battery life	N/A	N/A	6 months+ (D)
Telemetry frequency	N/A	N/A	2.4GHz ISM
System range	N/A	N/A	Up to 350m
Sampling rate	N/A	N/A	10Hz (500Hz max)