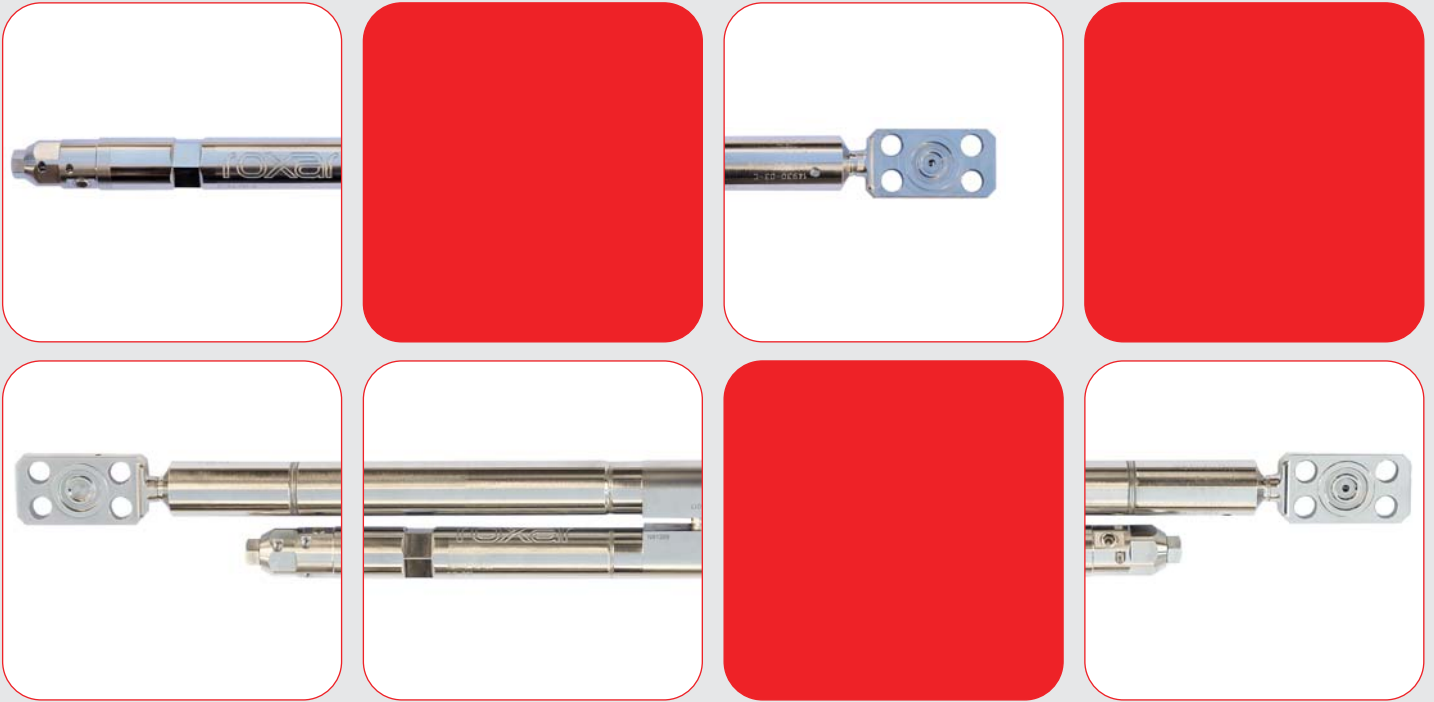


# Roxar downhole Pressure & Temperature gauges

Roxar HS Series Gauges

Data Sheet



## Roxar downhole Pressure and Temperature gauges

The pressure and temperature data from the Roxar downhole HS Series gauges, are used, among other things, to help update reservoir models and optimise production rates. Roxar has been installing downhole pressure and temperature gauges since 1987 in locations all over the world.

The Roxar HS gauge is Roxar's latest generation of gauge and is designed for the most extreme well conditions.

The reliability and accuracy of the Roxar gauges help operators around the world to make better decisions throughout the lifetime of the well.

All gauges make use of Quartz crystals for measurement which provides accurate low drift readings of the bottom-hole temperature and pressure year after year.

Quartz crystal measurement is widely accepted as the most reliable way to get long term accurate readings.

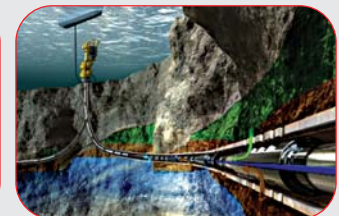
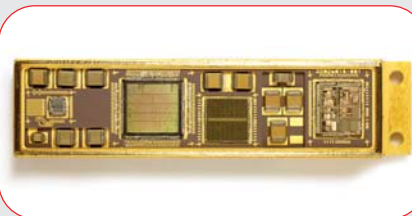
The Roxar HS gauge makes use of Silicon-On-Insulator (SOI) technology. This enables the gauge to go well beyond the traditional temperature limits of hybridized electronics. The Roxar HS gauge is rated to 225°C.

The SOI technology further enhances the physical capabilities with respect to a significant reduction in size, better shock resistance and increased data rate.

Y-blocks are used to combine multiple gauges onto a single cable. Electron beam welds join the HS and Y-block into a single unit, minimizing leak paths and increasing system reliability. For highly corrosive environment we also provide our HSX version gauge system with PREN values exceeding 40.

Gauge Performance Characteristics	Roxar HS and HSX gauge	
	SI units	Imperial units
Maximum Working Pressure:	1,400 bar	20,000 psi
Maximum Working Temperature:	225 °C	437 °F
Standard Calibration Pressure Range:	1 - 1,000 bar	15 - 15,000 psi
Extended Calibration Pressure Range:	1 - 1,400 bar	15 - 20,000 psi
Standard Calibration Temperature Range:	20 - 177 °C	68 - 351 °F
Extended Calibration Temperature Range:	20 - 200 °C	68 - 392 °F
Initial Pressure Accuracy (Mean value in brackets) :	<±0.175 / 0.21 bar	<±2.5 / 3 psi
Initial Temperature Accuracy (Mean value in brackets):	<±0.1 °C	<±0.18 °F
Pressure Resolution (for standard calibration):	0.0009 bar	0.013 psi
Temperature Resolution:	0.0017 °C	0.002988 °F
Pressure Reproducibility:	0.01 bar	0.15 psi
Temperature Reproducibility:	0.05 °C	0.09 °F
Long-term Pressure Stability:	<0.14 bar / year	<2 psi / year
Long-term Temperature Stability:	<0.1 °C / year	<0.18 °F / year
Maximum Sample Rate:	10 / second / gauge	
Maximum number of gauges per cable:	32 w/twisted pair, 8 with monocable	
Power Requirement:	30-40mA @ 10VDC	
Gauge Physical Properties	Roxar HS and HSX gauge	
Maximum outer diameter:	25.2 mm	1"
Overall length including cable head:	439 mm	17.3"
Material of wetted parts:	HS gauge: Inconel 718. HSX gauge: Inconel 625	
Electronics:	Silicon-On-Insulator	
Mechanical Shock Test performed:	Minimum 100 g, 11 ms half sinus	
	Drop 1,000 g @ 0.5 ms	
Random Vibration Test performed:	Exceeding 20 grms @ 20 - 2,000 Hz	
Mechanical Seals:	Dual Metal to Metal	
Sour Service compatibility:	NACE MR-0175 compliant	

## Roxar downhole Pressure & Temperature gauges



[www.roxar.com](http://www.roxar.com)

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