

# SS2350 SA

Sapphire Hybrid Permanent Downhole Gauge,  
Standard Service

## PRODUCT DESCRIPTION

BlueFin's Standard Service Sapphire Permanent Downhole Gauge (PDG) has been designed to provide high-resolution pressure and temperature data in the hostile down hole oil and gas well environment.

The SS2350 series PDG electronics utilizes hybrid electronic packaging technology to minimize electronic aging and ensure long-term reliability. Proprietary signal processing techniques are used to maximize accuracy, stability, and resolution. The electronics and sensors are packaged in a pressure vessel made of 17-4 PH stainless steel<sup>3</sup>. The system is filled with an inert material and fully welded (no elastomers).

## BENEFITS & APPLICATIONS

- Applications include permanent monitoring, drill stem testing, hydraulic fracturing, chemical treatments, reservoir characterization
- 100% welded gauge design with testable metal-to-metal seal cable head (Choice of single or dual redundant M2M seals available)
- Testable Metal-to-Metal seal between Gauge and Gauge Mandrel
- Hybrid Electronics for long term reliability to 150°C
- RTD sensor - high accuracy and resolution temperature measurement
- Capable of either Annular or Tubing measurement
- Sample Rate: From 1 sample per sec up to 1 sample per 24 hrs
- Length: 20.4" (OAL), 19.5" (Make up Length)

<sup>1</sup> The long term operating temperature for this gauge is 150°C, however it can be exposed temporarily up to 170°C. e.g. during well treatment operations.

<sup>2</sup> The standard calibration temperature accuracy is +/- 0.5°C. Where required an enhanced calibration is available on a build to order basis; this increases the temperature accuracy to +/-0.1°C

<sup>3</sup> BlueFin's Standard Service Sapphire Gauge is manufactured from 17-4 PH DH1150 material. NACE rating restricted MR0175. This allows the use of 17-4 PH in some mild sour applications. For harsher environments our Sour Service Sapphire Gauge, manufactured from Inconel®-718, is recommended.

## GENERAL SPECIFICATIONS

Calibrated Pressure Range 10k, 15k psi

Diameter 0.75"

Material<sup>3</sup> 17-4 PH DH1150

TEC Configuration 1/8" or 1/4" TEC

## TEMPERATURE

**Operating Temp Range:** 25°C to 150°C  
(77°F to 302°F)

**Maximum Temp<sup>1</sup>:** 170°C (338 °F)

**Temp Accuracy<sup>2</sup>:**

+/-0.5°C (Standard), +/- 0.1°C (Enhanced)

**Temperature Resolution:** < 0.001°C

**Temperature Drift:** < 0.1°C

## PRESSURE

**Pressure Accuracy:** 0.030% Full Scale

**Pressure Resolution:** 0.0003% Full Scale

**Drift:** < 0.03% Full Scale/year



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