

# Single Gauge Quartz Pressure Tool (QPS)

The Single gauge Quartz Pressure Tool (QPS) is used to provide a continuous log of borehole fluid pressure and to record reservoir pressure draw-down and build-up data during flowing tests.

## Description

The Sondex Quartz Pressure Tool measures pressure and gauge temperature using an industry standard precision quartz crystal pressure transducer.

A Quartzdyne® pressure gauge, with removable bellows to isolate the quartz crystal from well fluids, is fitted to the lower tool body. An open pressure port with wire mesh filter allows well pressure into the gauge. A second (flushing) port is plugged whilst running in hole.

The crystal resonance frequency depends on pressure and temperature, hence the gauge incorporates a second "temperature" crystal, thermally coupled to the first which is not subjected to well pressure.

A 7.2MHz clock, used to down shift the pressure and temperature crystal frequencies is output as a time reference for frequency measurement. Drift of this clock is included in the calibration algorithm, resulting in accurate calculation of Temperature and Pressure. Gauge output pressure and temperature frequencies lie in the range 15-60kHz.

## Features

- Pressure gradient measurement.
- Draw-down and build-up pressure transient Analysis.
- Combinable with other Ultrawire™ production logging tools.
- Precision and accurate measurement.
- Fast response to small changes in fluid pressure.
- PTA build up and draw down.

## Specification

<b>Temperature rating</b>	350°F (177°C)
<b>Pressure rating</b>	15,000psi (103.4MPa)
<b>Tool diameter</b>	1 1/4in (43mm)
<b>Tool length</b>	19.01in (482mm)
<b>Tool weight</b>	8.8lb (4kg)
<b>Toolbus</b>	Ultrawire™
<b>Current consumption</b>	20mA
<b>Pressure:</b>	
<b>Max total/combined error</b>	0.02% FS
<b>Resolution</b>	0.008psi (55.16Pa)
<b>Response Time</b>	<1 sec for 99.5%
<b>Ageing</b>	< 3psi (20.68kPa)/year
<b>Temperature:</b>	
<b>Accuracy</b>	0.27°F (0.15°C) typical
<b>Resolution</b>	<0.009°F (0.005°C)
<b>Ageing</b>	<0.29°F (0.16°C)/year
<b>Reference Clock (Ageing):</b>	<2ppm/year
<b>Materials</b>	Corrosion resistant throughout

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