

Pioneer Petrotech Services Inc.



MEMORY

SRO

18K psi

350°C
(662°F)

RTD

FLOW

CCL

GAMMA
RAY

QUARTZ

PPS71 Quartz

Geothermal Tool

www.pioneerps.com

Overview of PPS71 Quartz Geothermal Tools

Quartz Pressure Sensor, Temperature, Flow, CCL & Gamma

The **PPS71 Quartz Geothermal Tools** are designed for extreme, high temperature downhole conditions. The robust electronics combined with vacuum flask technology allow these products to perform at 350 °C (662 °F) continuously, for four hours. The tool measures pressure, temperature, casing collar location, flow profile and gamma ray, and can be configured as either a memory tool or surface read out tool (SRO) tool.

The measurements are done with a superior quartz transducer, a fast response resistance temperature detector (RTD), either a continuous or fullbore spinner flowmeter, magnetic CCL and sensitive gamma ray crystal.

By combining the downhole measurements with PPS's DepthWatcher (PPS36), a depth versus time recorder, customers have the capability to create synchronized profile logs which have many applications for the end user such as monitoring radioactive tracers in injected fluids, interpreting lithology, estimating shale volume and correlating cores with logged depth.

In addition SmartLog, PPS's proprietary companion software for this tool can be used to create logging files for reports and export LAS files. These profile logs can be opened in any commercial logging software.

- * Operating temperatures up to 350 °C (662 °F)
- * Features a fast response RTD temperature sensor
- * Continuous or full-bore spinners are available
- * Operates in either memory or surface read out mode
- * Surface read out mode using e-line is compatible with the Warrior or PPS SRO acquisition system
- * Can be combined with PPS36 DepthWatcher if depth measurement is needed



SRO Surface Box



PPS36 DepthWatcher



PPS71 Quartz Tool with Flask

SRO Transmitter



Specifications

PPS71 Quartz Geothermal Tools

Quartz Pressure Sensor, Temperature, Flow, CCL & Gamma

Pressure Sensor	Quartz
Pressure Ranges—psi	5K 10K 18K
Temperature Sensor	RTD (Pt1000; 4-wire)
Temperature Rating—Standard Housing	177 °C (350 °F)
Temperature Rating—Flask Housing	300 °C (572 °F) OD 1.56" 350 °C (662 °F) OD 1.75"
Flow Sensor Type	Reed switch/magnetic
Flow Rate Range	5 – 7,000 RPM
Gamma Sensor Type	Crystal, NaI (scintillation type)
Gamma Sensitivity	Typically 1.7 CPS/API
Downhole Time (OD 1.75")	4 hours at 350 °C (662 °F)
Downhole Time (OD 1.56")	4 hours at 300 °C (572 °F)
Memory Capacity	6,000,000 data Sets
Sampling Rate	0.1 s – 1.8 hrs/per sample
SRO Data Transmission Distance	Up to 7,000 meters via standard electrical cable
SRO Interface Compatibility	Warrior 8 and up
Service	H ₂ S Services
Outside Diameter—inches	1.56 (39 mm) Memory Only 1.75 (44 mm) 1.83 (46 mm) Memory Only
Overall Length Memory Tool—inches	89.2 (2266 mm)
Overall Length SRO Tool—inches	112 (2845 mm)
Housing Material	Inconel 718

Choose a PPS71 Geothermal Tool

	Memory Mode	SRO Mode	Temperature Max.	Pressure Max.	Flow Profile	Casing Collar Locator	Gamma Ray	Memory Capacity
PPS71 PT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	350°C	10kpsi				6,000,000
PPS71 PTS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	350°C	10kpsi	<input checked="" type="checkbox"/>			6,000,000
PPS71 PTS-C	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	350°C	10kpsi	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		2,000,000
PPS71 Elite	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	350°C	15kpsi	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	2,000,000
PPS71 Quartz	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	350°C	18kpsi	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	2,000,000
PPS71 G-CCL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A	N/A	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	2,000,000

Smart Gauges and Simple Software



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