

PPS71 PT Geothermal Tools - Memory / SRO

The **PPS71 PT 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 and temperature, and can be configured as either a memory tool or surface read out (SRO) tool. The measurements are done with a highly sensitive silicon-sapphire (piezo) transducer and a resistance temperature detector (RTD). The RTD is exposed to the well fluids for faster response and higher accuracy.



Pressure Measurement

Sensor Type	Silicon-Sapphire
Pressure Range	5K psi 10K psi
Accuracy	± 0.03% FS
Resolution	0.0003% FS

Temperature Measurement

Sensor Type	RTD (Pt1000; 4-wire)
Temperature Range	300 °C (572 °F) 350 °C (662 °F)
Accuracy	± 0.5 °C
Resolution	0.01 °C

Environmental

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"
Downhole Time (OD 1.75")	4 hours at 350 °C (662 °F) 6 hours at 300 °C (572 °F) 8 hours at 250 °C (482 °F) 10 hours at 200 °C (392 °F)
Downhole Time (OD 1.56")	4 hours at 300 °C (572 °F) 5.5 hours at 250 °C (482 °F) 7.5 hours at 200 °C (392 °F)

Features:

- Operating temperatures up to 350 °C (662 °F)
- Fast response RTD temperature sensor
- 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



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Memory Tool Specifications

Sampling Rate	0.1 s – 1.8 hrs/per sample
Data Sets	Time / Pressure / Temperature
Memory Capacity	6,000,000 data Sets
Communication Interface	USB
Communication Rate	115,200 bits/s
Operation Voltage	2.7 – 3.9 VDC
Battery	180 °C (356 °F) C-size Li-battery (5 A hr/3.6 V)
Connector	Lemo 6 pin with locker

Surface SRO Interface

Transmitter Sampling Rate	0.1 s – 1.8 hrs/per sample
Data Transmission Rate	9,600 bits per second via standard electrical cable
Data Transmission Distance	Up to 7,000 meters via standard electrical cable
Compatibility	Warrior 8 and up
Communication Port	USB 2.0 to PC
Power Input	100 - 240 VAC
Surface Unit Power Output	+60 VDC
Working Temperature	-40 °C (-40 °F) to 85 °C (185 °F)
Humidity	90%
Condensation	No
Material	Aluminum
Connectors	1 AC Power, 1 DC Power, 1 USB Port and 1 Gauge Interface
Dimensions–inches	7.75 (196 mm) x 4 (101 mm) x 3.25 (82 mm)
Interface	USB 2.0

Mechanical and Materials

Service	Sour Services
Outside Diameter–inches	1.56 (39 mm) Memory Only 1.75 (44 mm)
Overall Length Memory Tool–inches	59.3 (1,506 mm) with bullnose
Overall Length SRO Tool–inches	104.5 (2,654 mm) with bullnose
Housing Material	Stainless Steel 17-4 Inconel 718

PPS71 PT Tool



SRO Surface Box



PPS36 DepthWatcher

