



PressureWhileDrilling(PWD)

Overview

The PWD monitors downhole drilling parameters with high accuracy and full scale for improved efficiency and overall drilling performance in mitigating BHA shock and vibration, the primary causes of downhole tool failure. Parameters acquired by PWD include: internal and external pressure; temperature; shock and vibration; and RPM. Measurements are simultaneously recorded and transmitted to surface in real time with MWD Telemetry for optimized drilling and improved. Has Options For battery configuration or MWD connection (DLA).

Key Features

- Real-time BHA diagnostics
- Real-time and recorded measurements
- Compact design, scalable architecture
- Powered by MWD, Turbine or Battery

Sour Service

The PWD uses 3 high-strength corrosion resistant alloys; INC718, P550, and Beryllium Copper(BeCu). INC718 is a Nickel-Chromium alloy which give is resistance to many media. Nickle contributes to its resistance to many inorganic/organic compounds through a wide range of pH. The chromium is known to add resistance to oxidizing and sulfur compounds and molybdenum adds resistance to pitting. P550 is a Manganese-chromium steel with high nitrogen content. High Nitrogen reduces pitting and protects against stress corrosion cracking and supports the benefits of chromium. BeCU is know for its ability resistance to stress corrosion cracking and maintaining Strength in H2S.

*H₂S Standard Elastomer is partially H₂S resistant but for higher H₂S content above 20ppm special elastomer material is available.

General Specifications

Borehole Size Range	8-3/8 in. to 9-7/8 in.
Nominal O.D.	6-3/4 in
Maximum O.D.	7-3/8 in
Nominal I.D.	2 in
Length PWD+Battery + DLA	146-1/4"
Weight PWD+Battery + DLA	1450 lbs
Thread Connections	See Diagram
Collar Material	P550 Non-Mag SST
Auxiliary materials	INC 718, BeCu
Elastomer material (standard)	FluoroCarbon 90D - Parker V0709
Elastomer for H ₂ S* ^{H₂S}	FluoroCarbon 95D - Parker V1238
Operating Temperature	32-347°F / 0-175°C
Max Operating Pressure	25,000 psi / 172mPa
Max Overpull(tension)	500,000 lbs / 2224kN
Max WOB	1,000,000 lbs / 4448kN
Max DLS	10 deg / 100 ft
Max Torque	30,000 ft-lbs / 40,675Nm

Electronics

Memory life	200 hrs
Voltage Input	20 - 36 volts
Power consumption	90 mA / < 5Watts
Downhole Memory	16 Gb
Interface to MWD	RS485/CAN
Power Supply	Turbine Power / MWD/ Battery

Mud Content

Max lost circulation	no limit
Max sand content %1	1%

Connections

