PrecisionCollector

Precision Mechanical Applications

Applications

- Removal and collection of a wide range of wellbore debris:
- Unconsolidated (e.g. proppants, sand)
- Consolidated (settled barites, hard scale)
- Vicious (asphaltenes, waxes)
- Wells where circulation for cleanout is not recommended or not possible

Features and Benefits

- Robust mechanical collection mechanism, not requiring fluid circulation
- Mechanical interaction and friction separates debris from fluid, rather than filtration
- Highest solids recovery content per collected volume of debris
- Customizable bottom hole assembly (BHA) with operational flexibility depending on debris in well
- Real-time monitoring of key milling parameters; weight on bit (WOB), bit speed, vibration
- Provides loosening, collection and recovery of debris to surface in one run
- Best technology option if debris composition and consistency is unknown or varying
- Operates in wet and dry environments
- Precise, cost effective and low risk wellbore cleanout service
- Light on logistics, footprint, personnel and time

The PrecisionCollector is a robust, full system cleanout technology that can remove a wide range of debris types in varying well conditions. It mills, agitates and dislodges the debris downhole, collecting and retaining it in reservoir chambers for transportation out of hole. It is run in combination with PowerTrac® for anchoring and providing weight on bit, coupled with a Direct Drive Rotation (DDR) device to generate the required rotational force.



Typical properties					
Service name	PrecisionCollector 250	PrecisionCollector 300	PrecisionCollector 350	PrecisionCollector 380	PrecisionCollector 450
Tool body outer diameter[1]	2.50 in. (63.5 mm)	3.00 in. (76.2 mm)	3.50 in. (88.9 mm)	3.8 in. (96.5 mm)	4.5 in. (114.3 mm)
Typical bit types used	PrecisionRock Bit	PrecisionRock Bit	PrecisionRock Bit	PrecisionRock Bit	PrecisionRock Bit
Recommended minimum bit size OD	≥ 2.625 in.	≥ 3.125 in.	≥ 3.625 in.	≥ 3.925 in.	≥ 4.625 in.
Capacity per reservoir chamber OD	0.62 US Gal (2.36 l)	0.87 US Gal (3.30 l)	1.36 US Gal (5.16 l)	1.53 US Gal (5.8 l)	2.48 US Gal (9.4 l)
Makeup length single reservoir chamber	3.6 ft (1.10 m)	3.6 ft (1.09 m)	3.9 ft (1.19 m)	3.9 ft (1.19 m)	3.9 ft (1.19 m)
"Standard" configuration capacity[2,4]	3.12 US Gal (11.8 l)	4.36 US Gal (16.5 l)	6.82 US Gal (25.8 l)	7.66 US Gal (29.0 l)	12.42 US Gal (47.0 l)
"Standard" configuration total makeup length[2,5]	19.4 ft (5.91 m)	19.4 ft (5.91 m)	21.8 ft (6.65 m)	21.8 ft (6.65 m)	21.8 ft (6.64 m)
System pressure rating	15,000 psi (1,034 bar)	15,000 psi (1,034 bar)	15,000 psi (1,034 bar)	15,000 psi (1,034 bar)	15,000 psi (1,034 bar)
System temperature rating	350°F (177°C)	350°F (177°C)	350°F (177°C)	350°F (177°C)	350°F (177°C)
Deviations	Vertical to horizontal	Vertical to horizontal	Vertical to horizontal	Vertical to horizontal	Vertical to horizontal
Operational torque[3]	≤ 110 Nm	≤ 110 Nm	≤ 110 Nm	≤ 110 Nm	≤ 110 Nm
Operational RPM[3]	≤ 180 rpm	≤ 180 rpm	≤ 180 rpm	≤ 180 rpm	≤ 180 rpm

[1] Tool OD only (not bit OD)
[2] Standard configuration for PrecisionCollector is 5 reservoir chambers but may be increased dependent on rig up height
[3] Standard output. Customizable down gearing possible with a 3:1 gear
[4] Excludes volume in bottom connector for all sizes and top section for 350,380 and 450
[5] Length includes reservoir chambers. Does not include length of RockBit, Direct Drive Rotation, PowerTrac® and accessories

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