

MAGNOGARD

Openhole magnet

APPLICATIONS

- Openhole operations including drilling, casing exits, milling, prescreen wiper trips, and openhole fishing
- Removal of ferrous debris in the open hole

BENEFITS

- Extends bit life and reduces BHA damage by capturing ferrous debris in the wellbore
- Captures debris from the flow path, minimizing effects on equivalent circulating densities
- Enables drillers to determine the source of debris by providing the recovered materials for inspection at the surface
- Assures the open hole is junk free prior to running lower completions
- Decreases survey interference by reducing magnetized metallic fines levels in the mud system

FEATURES

- Expedited magnet removal for ease of inspection
- Rated to 400 degF [204 degC]
- Single-piece, high-strength mandrel with no internal connections
- Nonupset (slick) OD design
- Large debris collection valleys
- Wear-resistant, smooth-ground tungsten carbide areas on body
- Circumferential magnet coverage



Designed for use in openhole drilling applications, MAGNOGARD* openhole magnet collects metallic debris and junk out of the flow path to maximize fluid bypass. Including the MAGNOGARD magnet in the drillstring increases the life of BHA components and drill bits by reducing exposure to metallic debris and junk present in the wellbore.

How it works

The MAGNOGARD magnet rotates and reciprocates in the open hole without damaging the tool or the formation. The powerful magnets feature protected debris collection valleys that maintain an open fluid bypass around the tool. The MAGNOGARD magnet brings debris to surface for improved removal and inspection.

Specifications	675
Nominal OD	6.75 in [17.1 cm]
Max. OD	6.85 in [17.4 cm]
Magnet section OD	6.5 in [16.5 cm]
Min. ID	2.18 in [5.54 cm]
Nominal length	11.5 ft [3.5 m]
Protected debris volume	480 in ³ [7,866 cm ³]
Nominal weight in air	939 lbm [426 kg]
Hole size	8 $\frac{3}{8}$ to 9 $\frac{1}{8}$ in [21.27 to 25.08 cm]
Top thread connection	NC50 box
Bottom thread connection	NC50 pin
Max. rotational speed	150 rpm
Max. reciprocation speed	150 ft/min [45.7 m/min]
Max compression at tool with rotation	15,000 lbm [6,804 kg]
Max compression at tool no rotation	87,500 lbm [39,689 kg]
Max. dogleg (rotating)	8°/100 ft [8°/30 m] (at up to 150 rpm)
Max. dogleg (sliding)	16°/100 ft [16°/30 m]
Max. operating temperature	400 degF [204 degC]
Max. O ₂	1 ppm
Drilling fluid pH range	9.5 to 12
Max. stick/slip	30 min at Level 3

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