



Switchblade® Drilling System Technical Description

Overview

The Switchblade® was designed to address the known shortcomings of the conventional spiral blade stabilizer and add more operational flexibility.

Unique innovative solution enhances drilling performance, prevents downhole failures and makes tripping easier. Surface adjustable gauge size and interchangeable blades bring additional benefits in specific applications.

Design features

- Dome-shaped, low friction interchangeable blades
- 6 or 8 points of contact
- Flow profile with optimized hydrodynamics
- Surface-adjustable gauge size

Benefits

- Reduced torque and drag
- Improved weight transfer and tool face control when slide drilling
- BHA vibration dampening
- Increased stability
- Resistance to balling up and packing off
- Reduced risk of swab and surge
- Minimized damage to mud cake while drilling and tripping
- Fine-tuning BHA performance with adjustable gauge size
- Interchangeable blades reduce tools turnover time and rig inventory

Taper System

The blades are independently configurable allowing the creation of a unique front or back tapered profile. This can be applied to the top string stabilizer to reduce the risk of hanging up when POOH through cutting bed accumulations and or interbedded formations.

Conversely, the tool can be installed above a motor to create a positive taper effect in wells with high dogleg angles to provide excellent weight transfer when sliding.





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Specifications

Tool Series	12"	16"	17"
Gauge Ranges*	11" - 12 1/8"	14 3/4" - 15 7/8"	16 1/4" - 17 3/8"
Overall Length (m)	2.52	2.67	2.75
ID (in ²)	2 13/16"	3"	3"
Weight (kg)	648	1,033	1,186
Fishing Neck Dia.	8 1/4"	9 1/2"	9 1/2"
Surface Area (in ²)	185	245	245
Number of Blades	6	8	8
Blade Dressing	Brick Pattern Tungsten Carbide or Thermally Stable Polycrystalline (TSP) Inserts		
Connections**	6 5/8" Reg	7 5/8" Reg	7 5/8" Reg
Minimum Make-Up Torque (ft/lbs)	53,000 <i>NM 47,000</i>	83,000 <i>NM 69,000</i>	83,000 <i>NM 69,000</i>



Note the measurements given above may change slightly due to the hardfacing thickness of the blades. It is always recommended to gauge the Switchblade prior to installing it in the BHA. We recommend all tools should be run a minimum of 1/8" to 1/4" undergauge to the drill bit size.

ED Projects do not recommend running in a full gauge configuration.