

## Fixed Cutter Drill Bits

# HyperSteer™ directional drill bits

Reduced makeup length for high build rates in curve and lateral applications

## DESIGN

HyperSteer directional drill bits are designed to minimize makeup length without eliminating the gauge pads. Historically, one of the primary means of reducing makeup length was by shortening, and in some cases, eliminating the gauge pads. However, while shortening the gauge length may increase build rate capabilities, it trades off stability and ultimately, durability.

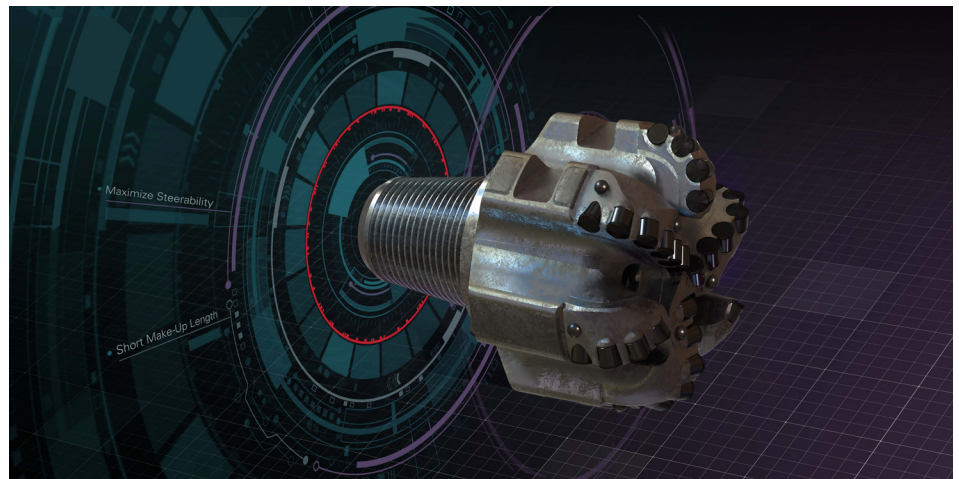
HyperSteer drill bits solve these issues by moving the breaker slot into the gauge pad and reducing length through elimination of the shank.

## FEATURES

- Reduced makeup length
- Breaker slots built into the gauge pad
- No shank

## BENEFITS

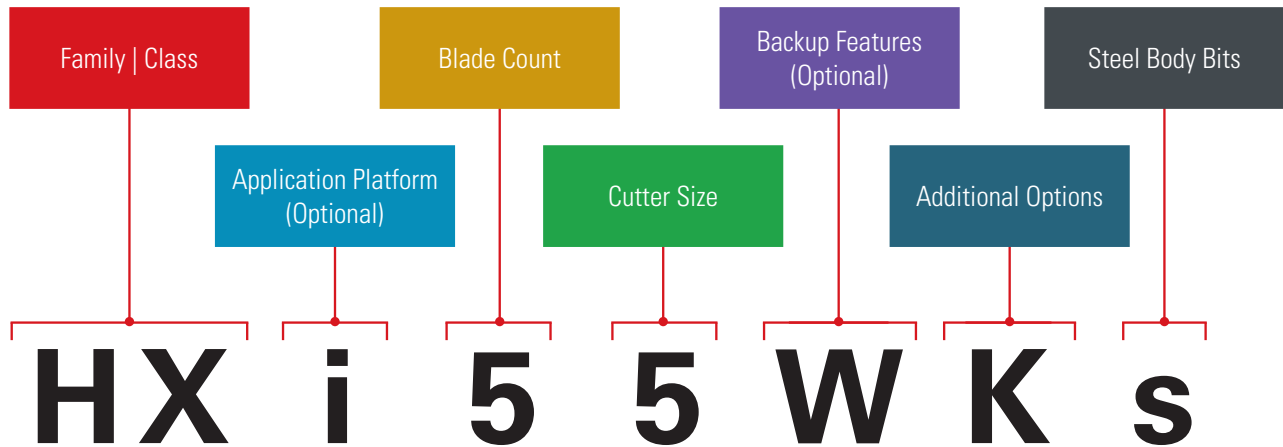
- Increased build rate capabilities on both RSS and conventional assemblies
- Make up and breakout on location
- Reduce shocks and vibrations
- Reduction in tool failures



## Overview

The Hedron® line of fixed cutter drill bits has added HyperSteer™ directional drill bits for applications that require minimum makeup length for maximum steerability. Through the design at the customer interface (DatCI™) process, application design evaluation (ADE™) specialists can customize makeup length for high build rate applications.

Drilling a curve and lateral on a rotary steerable system (RSS) tool requires a highly steerable bit to meet dogleg severity requirements. Simultaneously, the bit should be stable at higher rates of penetration (ROP) to minimize harmful shocks and vibrations when drilling the lateral. HyperSteer drill bits address both of these challenges by reducing makeup length to maintain sufficient gauge length. Reduced makeup length allows the RSS to transfer more force to the drill bit for increased side cutting and higher build rates, while the gauge length provides stability in the lateral especially when ROP is increased.



Family | Class

HX = Hedron® HyperSteer™  
 CX = Crush & Shear™ HyperSteer™

Application Platform (Optional)

D = Directional  
 E = GeoPilot™ Dirigo RSS System  
 G = Point-the-Bit RSS System  
 i = Push-the-Bit RSS Including iCruise™

Blade Count

Blade count indicates the number of blades on the bit.

- 3 = Three Blades
- 4 = Four Blades
- 5 = Five Blades
- 6 = Six Blades
- 7 = Seven Blades
- 8 = Eight Blades
- 9 = Nine Blades
- 0 = Ten Blades
- 1 = Eleven Blades
- 2 = Twelve or More Blades

Cutter Size

The cutter size digit describes the main cutter size on the bit in 1/8" increments.

- 2 = 1/4" (8mm)
- 3 = 3/8" (10.5mm)
- 4 = 1/2" (13mm)
- 5 = 5/8" (16mm)
- 6 = 3/4" (19mm)

Backup Features (Optional)

- D = Dual Row Backup PDC Cutters
- W = Stega™ Efficient Backup Cutter Layout
- I = Impregnated Diamond Backup Discs
- R = Shyfter™ Active Shaped Backup Elements
- M = Shyfter™ Passive Shaped Backup Elements
- U = Cruiser™ Depth of Cut Rolling Element

Additional Options

- K = Geometrix™ Shaped Cutters
- B = Saber™ Engineered Blade Relief
- O = Cerebro® In-bit Sensing Capable
- T = Tracker™ Articulating Gauge Pads

Steel Body Bits

- s = Steel Body Bits

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