



LONGYEAR™ DIAMOND BITS

Technical Overview

LONGYEAR™ DIAMOND BITS

How fast does it cut and how long does it last? Boart Longyear has successfully created a chemical bond between diamond and matrix, which acts stronger than the diamond itself. The increased diamond projection and improved face flushing create a bit with more versatility, higher penetration rates, and longer life.

To download a free copy of the Diamond Core Drilling Reference Guide, visit:

<https://www.boartlongyear.com/bits-rods-reference>

Or contact your local sales representative.





CUTS FASTER, LASTS LONGER

“The new Longyear bits cut faster and last longer. These two qualities in a bit are hard to come by. Usually, a bit that cuts faster gets used up faster – which means more tripping to change the bit. The new Longyear bits seem to have the right balance. It’s important to select the right bit for the type of rock encountered. Longyear bits make that easier to do. I highly recommend the new Longyear bits – they have improved penetration rates, productivity and outlast any other bit I’ve used.”

- Robert Jex, Division Manager US North Coring

“Boart Longyear Color series bits not only penetrate rock faster, they last well beyond the other diamond bits I’ve used throughout my 32-year career.”

- Mike Reedy, Division Manager, DS - Southwest Coring

LONGYEAR™ BITS

Increased Productivity

The Longyear Bits are similar to large diamond bits, but with the easy, smooth drilling characteristics drillers prefer. This means increased productivity throughout the entire operation, and ultimately more core.

Higher Penetration Rate

To support higher penetration rates, the new Longyear™ formulas are combined with a new, more open, express geometry. Tapered intermediate waterways improve flushing and prevent accumulation of debris. Designed for fast cutting in competent ground, the new express geometry is available in our 16mm crown heights to maintain bit life at higher cutting speeds.



1 RAZORCUT™

The unique Razorcut™ protrusions on the face of the bit contain diamonds that enable the bit to begin cutting right out of the box – even in the softest ground. The arrangement of these protrusions also improves the tracking and balance in the hole when drilling begins.

2 LONGYEAR™ MATRIX*

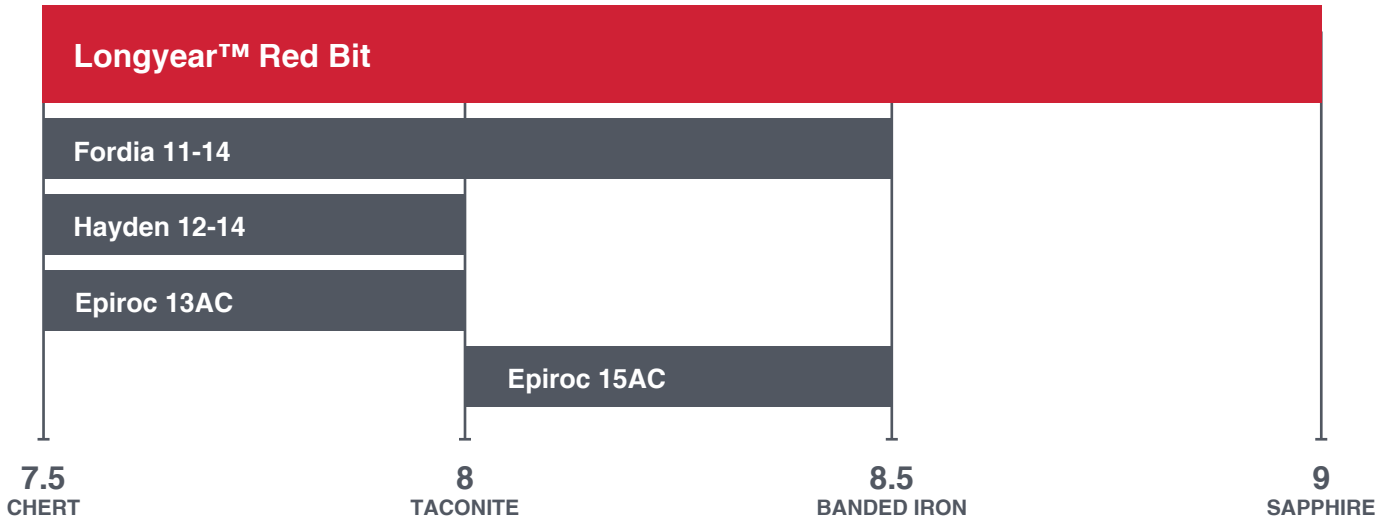
After significant research, using novel metallurgy, Boart Longyear has successfully created a chemical bond between diamond and matrix, which acts stronger than the diamond itself. The increased diamond projection and improved face flushing create a bit with more versatility, higher penetration rates and longer life, similar to large diamond bits, but with the easy, smooth drilling characteristics drillers prefer. This means increased productivity throughout the entire operation, and ultimately more core.

3 EXPRESS GEOMETRY

To support higher penetration rates, we have combined the new Longyear™ formulas with a new, more open express geometry. Tapered intermediate waterways improving flushing and prevent accumulation of debris. Designed for fast cutting in competent ground, the new express geometry is available in our 16mm crown heights to maintain bit life at higher cutting speeds.

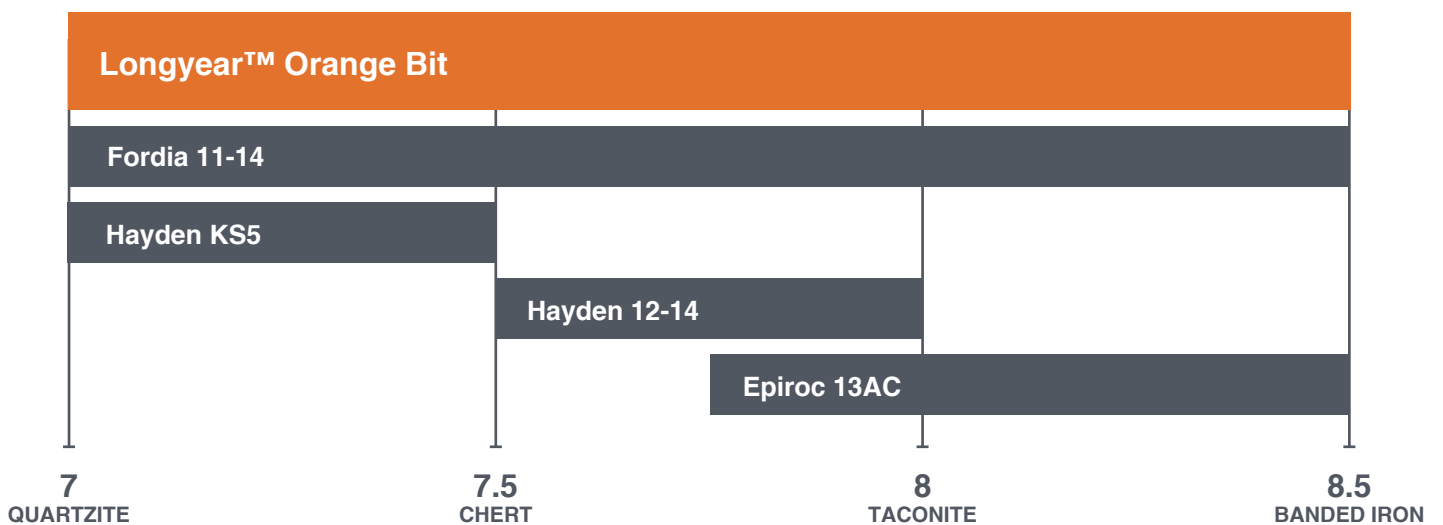
THE LONGYEAR™ RED BIT COMPARED TO OTHER BITS IN ITS PREFERRED RANGE

Longyear™ Red Bit 7.5-9 Hardness Rating



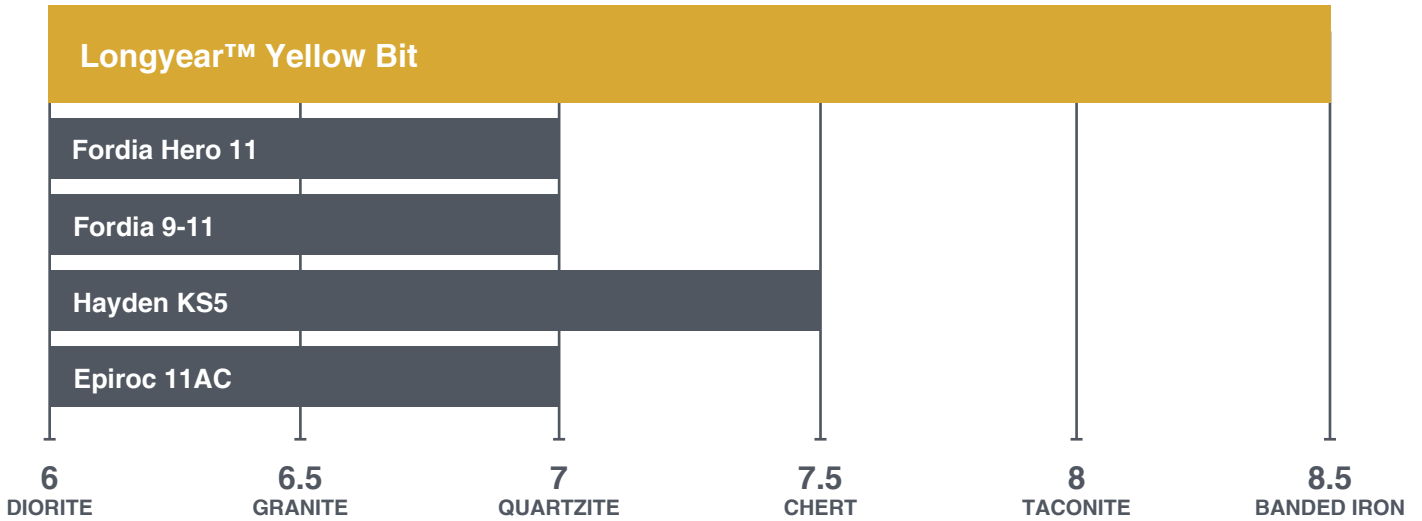
THE LONGYEAR™ ORANGE BIT COMPARED TO OTHER BITS IN ITS PREFERRED RANGE

Longyear™ Orange Bit 7–8.5 Hardness Rating



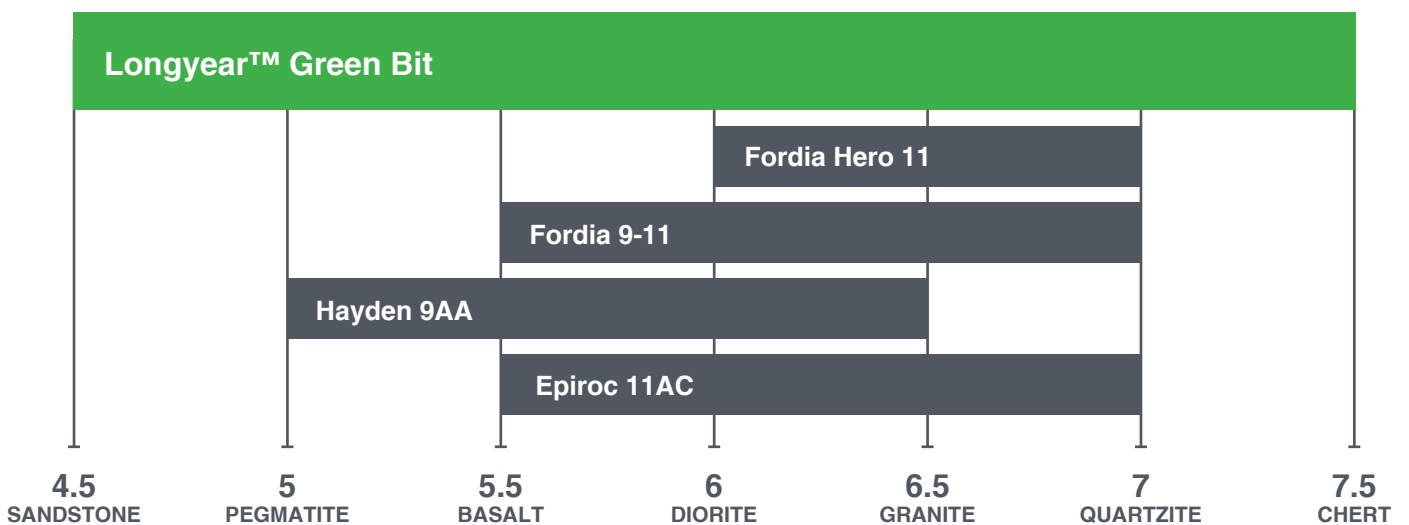
THE LONGYEAR™ YELLOW BIT COMPARED TO OTHER BITS IN ITS PREFERRED RANGE

Longyear™ Yellow Bit 6–8.5 Hardness Rating



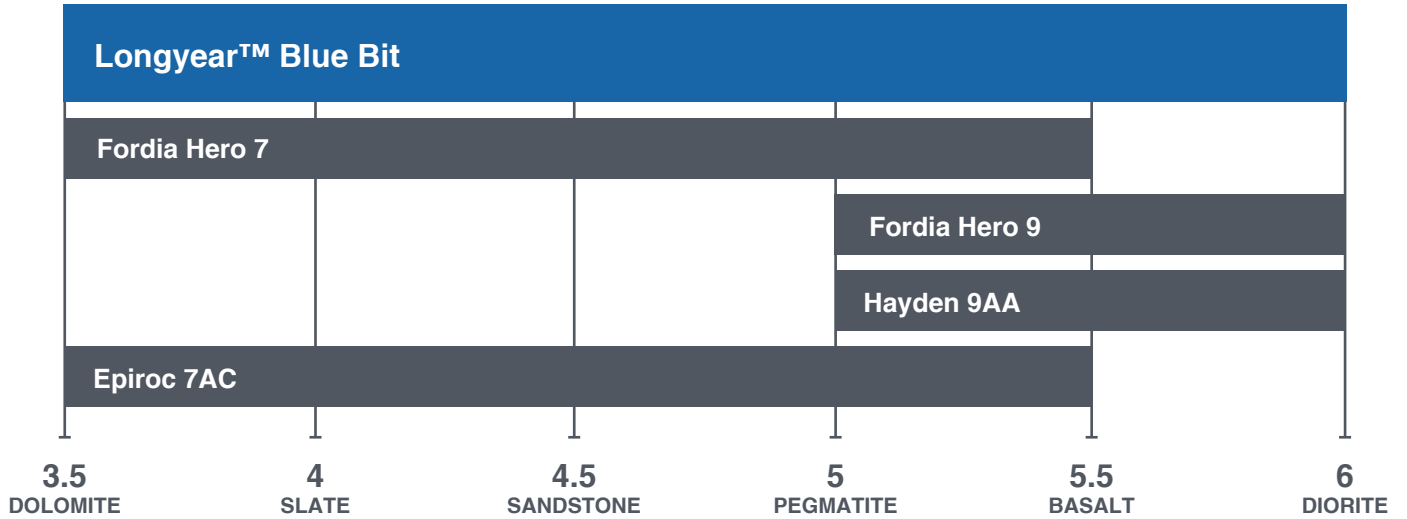
THE LONGYEAR™ GREEN BIT COMPARED TO OTHER BITS IN ITS PREFERRED RANGE

Longyear™ Green Bit 4.5–7.5 Hardness Rating



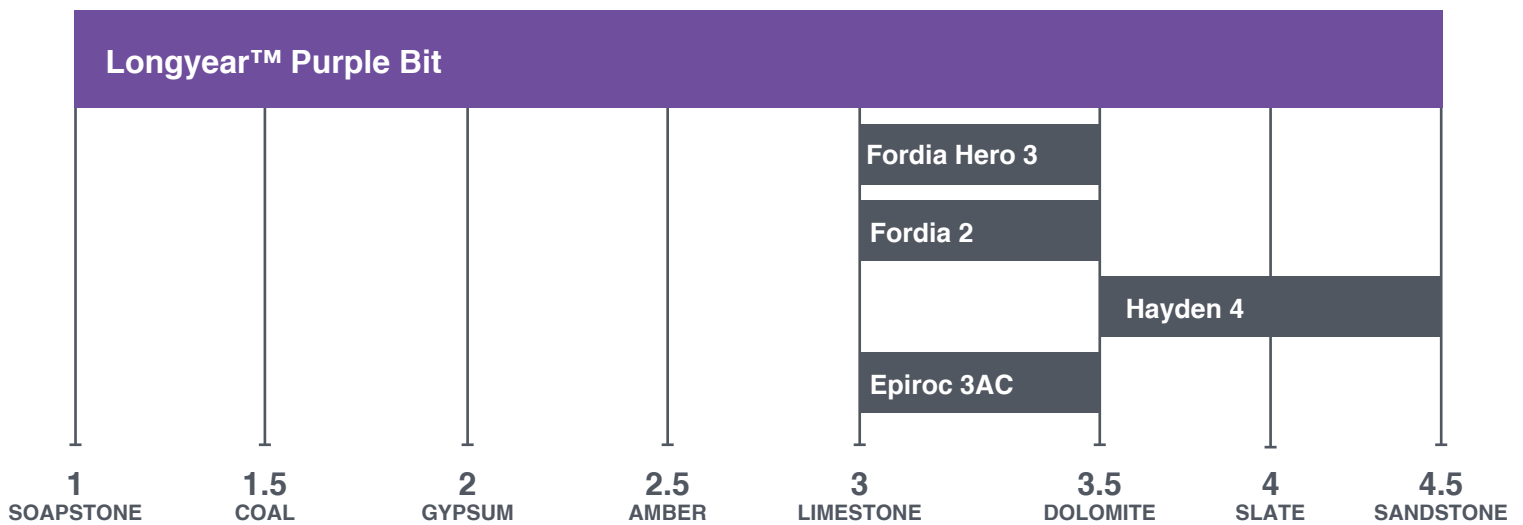
THE LONGYEAR™ BLUE BIT COMPARED TO OTHER BITS IN ITS PREFERRED RANGE

Longyear™ Blue Bit 3.5–6 Hardness Rating



THE LONGYEAR™ PURPLE BIT COMPARED TO OTHER BITS IN ITS PREFERRED RANGE

Longyear™ Purple Bit 1–4.5 Hardness Rating





HARDNESS RATING & COMPARISON CHART

The Longyear™ Diamond Bit Color Series are an innovative and versatile new line of diamond coring bits using patent-pending technology.

Longyear Diamond Bits are engineered to drill faster, last longer, and out-perform existing bit technology in a wide range of drilling conditions and ground formations.



Red Bit
 Hardness: 7.5–9
 COMPARE TO BLY BITS:
 BLY ALPHA/10ABR, 10, 10COM: 8–9



Green Bit
 Hardness: 4.5–7.5
 COMPARE TO BLY BITS:
 BLY ALPHA/07ABR, 07, 07COM: 5–7
 BLY ALPHA/08ABR, 08, 08COM: 6–7.5



Orange Bit
 Hardness: 7–9
 COMPARE TO BLY BITS:
 BLY ALPHA/09ABR, 09, 09COM: 7–8
 BLY ALPHA/10ABR, 10, 10COM: 8–9



Blue Bit
 Hardness: 2.5–6
 COMPARE TO BLY BITS:
 BLY ALPHA/06 ABR, 06, 06COM: 4–6



Yellow Bit
 Hardness: 6–8.5
 COMPARE TO BLY BITS:
 BLY ALPHA/08ABR, 08, 08COM: 6–7.5
 BLY ALPHA/09ABR, 09, 09COM: 7–8



Purple Bit
 Hardness: 1–4.5
 COMPARE TO BLY BITS:
 BLY ALPHA/02 SERIES: 2.5–4.5

LONGYEAR™ DIAMOND BITS HARDNESS RATING

SOFTER

HARDER

SOAPSTONE	COAL	GYPSUM	AMBER	LIMESTONE	DOLOMITE	SLATE	SANDSTONE	PEGMATITE	BASALT	DIORITE	GRANITE	QUARTZITE	CHERT	TACONITE	BANDED IRON	SAPPHIRE
1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9



PURPLE BIT

COMPARE TO:
 EPIROC 3AC
 FORDIA HERO 3
 HAYDEN 2



BLUE BIT

COMPARE TO:
 EPIROC 7AC
 FORDIA HERO 7, FORDIA HERO 9
 HAYDEN 4



GREEN BIT

COMPARE TO:
 EPIROC 11AC
 FORDIA HERO 11, FORDIA 9-11
 HAYDEN KS5, HAYDEN 9AA



YELLOW BIT

COMPARE TO:
 EPIROC 13AC, 15AC
 FORDIA 11-14
 HAYDEN 12-14



ORANGE BIT

COMPARE TO:
 EPIROC 13AC, 15AC
 FORDIA 11-14
 HAYDEN KS5, 12-14



RED BIT

COMPARE TO:
 EPIROC 15AC
 FORDIA 11-14
 HAYDEN 12-14