



The surface set diamond core bit is produced from a single layer of natural diamond set on the surface of the bit crown with a hard matrix and are mainly recommended for drilling soft to hard formations.

To choose a right surface set for the formations drilled diamond size, diamond grade and profile design will need to be considered.

Diamond Size	Formation Drilled
10/20 SPC*	Soft formation
20/30 SPC	Soft to medium formation
30/40 SPC	Medium formation
40/60 SPC	Medium to hard formation
60/80 SPC	Very hard formation

* Stone per Carat

The principle of choosing the right diamond size is the harder the rock, the smaller the diamond size should be used.

Diamond Grade	Formation Drilled
A Grade	Soft formation
AA Grade	Soft to medium formation
AAA Grade	Hard to very hard formation

The general rule for selecting the diamond grade is the harder the rock, the better the grade of diamond.

Profiles

Semi Round – Crown width <11mm

Very strong, hard fractured formations

- Good drilling stability
- Fast penetration rate
- Long bit life

Stepped profile – Crown width >11mm

Soft to medium hard formations

- Suitable for alternating bands of hard and soft geology
- Good drilling stability
- Fast penetration

Applications

- Geotechnical investigation
- Environmental investigation
- Mineral exploration

Features

- Fast penetration
- Good core recovery
- Suitable for water, polymer or air flush
- Mohs hardness scale 1 to 8 depending on matrix

Dimensions		
Size T2 Metric Gauge	Outside diameter (mm)	Inside diameter (mm)
T2-66	66.12/65.87	51.81/51.565
T2-76	76.12/75.87	61.82/61.57
T2-76 Coreliner	76.12/75.87	58.12/57.87
T2-86	86.13/85.58	71.83/71.58
T2-86 Coreliner	86.13/85.58	68.1/83.57
T2-101	101.12/100.8	83.82/83.57
T2-101 Coreliner	101.12/100.8	80.13/79.88
Size T6 Metric Gauge		
T6-76	76.12/75.87	57.12/56.87
T6-86	86.13/85.58	67.13/66.88
T6-86 Coreliner	86.18/85.88	63.98/63.77
T6-101	101.12/100.8	79.12/78.87
T6-101 Coreliner	101.12/100.8	76.09/75.86
T6-116	116.20/115.8	93.14/92.89
T6-116 Coreliner	116.20/115.8	90.12/89.88
T6-131	131.19/130.8	108.13/107.87
T6-131 Coreliner	131.19/130.8	103.6/103.37
T6-146	146.18/145.8	123.11/122.86
T6-146 Coreliner	146.18/145.8	118.11/117.85
H Gauge		
HWF	98.98/98.6	76.33/76.08
HWF Coreliner	99.36/98.98	77.089/76.885
412F	107.19/106.88	75.38/74.98
412F Coreliner	107.19/106.88	72.99/72.69
P Gauge		
PWF	120.78/120.4	92.33/91.95
PWF Coreliner	120.78/120.4	87.12/86.86
PQ	122.30/121.8	85.09/84.84
S Gauge		
SWF	145.67/145.16	112.95/112.5
SWF Coreliner	146.18/145.8	107.18/106.78
Geobore S	146.27/145.99	102.18/101.98