

Casing Shoes

JKS Boyles supplies casing shoes for use with all standard DCDMA and metric casing tubes. As is the case with drill bits, the casing shoes are produced with cutting media types of impregnated diamond, surface-set diamond or tungsten carbide to accommodate various ground conditions and drilling equipment.



Reaming Shells

JKS Boyles also offers diamond set reaming shells for use in most standardised conventional and wireline corebarrel assemblies. All the reaming shells are manufactured with a full matrix body gauge ring that is cast onto the steel tool body for maximum bond strength and tool integrity. Each diamond set gauge ring features spiral waterway canals that both effectively clear the bit cuttings and provide 360 degree hole contact with the gauge ring.



CASING SHOES/BIT

Type	O.D. Shoe	I.D. Shoe	I.D. Bit
AQ	47.6	34.9	32.6
BQ	59.2	46.0	45.4
NQ	72.4	60.3	56.4
HQ	91.9	77.5	73.6
PQ	120.3	103.1	99.4
SQ	143.0	125.3	121.6
AW	59.6	48.2	45.2
BW	75.3	60.2	56.3
NW	91.8	76.0	72.1
HW	117.5	99.7	95.9
PW	143.5	123.8	117.7
SW	172.5	150.9	143.1
66mm	66.0	57.0	55.0
76mm	76.0	67.0	65.0
86mm	86.0	77.0	75.0
101mm	101.0	88.0	86.5
116mm	116.0	103.0	101.5
131mm	131.0	118.0	116.5
146mm	146.0	133.0	131.5

Surface-Set Bits

Surface-set diamond bits are primarily used when drilling relatively soft, abrasive unconsolidated formations that are not effectively drilled by impregnated diamond bits. They are also recommended for use in drilling harder formations where the available rotational speeds and bit loads are insufficient to use impregnated diamond bits due to equipment limitations.

Diamond Grades for Surface-Set bits

All surface-set diamond bits supplied by JKS Boyles are available with one of eight standard grades of natural drill diamond set onto the cutting surfaces of the bit face. These grades are spread over three categories:

- Whole Stone Grades
- Processed Grades
- Carbonados



SURFACE-SET CROWN PROFILES

Profile	Letter	Description
	A	Fully round: (Standardised by DCDMA). Strong setting at gauges.
	W	Partly round: (Standardised by DCDMA). Strong setting at gauges.
	B	Semi-round: (Standardised by DCDMA). The most commonly used of non-step core bits. Exceptional strength in very hard broken ground. Requires high bit loads.
	S	Multi-Step: (Standardised by DCDMA). Very popular bit for wireline drilling – good penetration and stability in all but very broken formations.
	X	Narrow, Modified and Wide Pilot: Particularly good core recovery in soft, friable formations, especially when used with face discharge waterways. Good stabilisation. Low vibration.
	V	O.D./I.D. Steps: Used in special applications requiring stable, straight hole drilling.
	M	Tapered Pilot: Good in most formations. Stable with strong I.D. and O.D.

SURFACE-SET BIT – SELECTION GUIDE

Diamond Size		Rock Type	Rock Condition
Face Stones	Step Stones		
Not recommended – Use Impregnated bit		Ultra Hard Jasperite, Ironstone, Quartz, Chert	All Types
Not recommended – Use Impregnated bit		Very Hard Quartzite, Gneiss, Granite, Rhyolite, Diorite, Porphyry	All Types
Not recommended – Use Impregnated bit		Hard Andesite, Basalt, Gabbro, Diorite	All Types
45/55 SPC 35/45 SPC	34/45 SPC 23/35 SPC	Medium Hard Dolomite, Siltstone, Schist, Sandstone, Pegmatite	Competent Broken
25/35 SPC 15/25 SPC	15/25 SPC 10/15 SPC	Soft Shale, Limestone, Tuff, Pegmatite	Competent Broken
10/15 SPC	6/10 SPC	Very Soft Clay, Gypsum, Talc, Potash	Competent Broken

