

BORING TOOLS

Diamond Bit

It is used by connecting with single core tube and double core tube.

There are two types of diamond bit, and use them properly by the stratum, hard rock or super-hard rock.

Surface-bit

Pouring diamonds at the surface

Impregnated-bit

Sintering metal powder with diamond powder

Name	46	56	66	76	86	101	116	131	146
outside diameter mm	46	56	66	76	86	101	116	131	146
inside diameter mm	30	40	48	58	68	77	92	105	120

Please consult us to choose an appropriate bit by rock type.

And you will make your "Bit-Life" longer.

We will do for production excluding the size list above.



Diamond Reamer

It is used by connecting with diamond bit.

It does side-digging at the same time, and maintain the hole-diameter constancy.

There are diamond-bits around side of reamer.

At the both ends, there are screw for connecting diamond-bit and core-tube.

Name	46	56	66	76	86	101	116	131	146
outside diameter mm	46.5	56.5	66.5	76.5	86.5	101.7	116.7	131.7	146.7

We will do for production excluding the size list above.



Metal Crown

Connecting with top of single core-tube, and it is mainly be used for the boring.

Japanese Industrial Standards

Name	outside diameter mm	inside diameter mm	total length mm	size of tip-Amount
45JIS	46	30	65	5X5X7-6
55JIS	56	40	65	5X5X7-6
65JIS	66	50	65	5X5X7-6
75JIS	76	60	65	5X5X7-8
85JIS	86	70	65	5X5X7-8
100JIS	101	84	100	5X5X7-10
115JIS	116	99	100	6X6X7-10
130JIS	131	114	100	6X6X7-12
145JIS	146	129	100	6X6X7-14



Though the standard metal chip is "G2", other materials or shapes can be produced. We can also produce "Hi-metal-crown" of octagon chip (Super-chip).

Toho Mechanical Standards

Name	outside diameter mm	inside diameter mm	total length mm	size of tip-Amount
165	167	148	125	6X6X7-14
178	180	158	110	6X6X7-14
190	192	171	160	6X6X7-16
216	218	194	160	6X6X7-16
241	244	218	180	6X6X7-16
267	269	246	180	6X6X7-16
318	320	296	180	6X6X7-18
355	357	331	200	7X7X8-18
406	408	379	250	7X7X8-20

Standard metal chip is "G2".

Rod Metal Crown

Name	outside diameter mm	inside diameter mm	total length mm	size of tip-Amount
40.5	40.5	22	70	7X7X10-4
40.5	40.5	26	60	5X5X7-6
50	50	32	95	5X5X7-6



Casing Crown

Name		outside diameter mm	inside diameter mm	total length mm
3	S40	89.1	78.1	100
	S60	89.1	75.9	100
	S80	89.1	73.9	100
3 1/2	S40	101.6	90.2	100
	S60	101.6	87.6	100
	S80	101.6	85.4	100
4	S40	114.3	102.3	100
	S60	114.3	100.1	100
	S80	114.3	97.1	100
5	S40	139.8	126.6	100
	S60	139.8	123.6	100
	S80	139.8	120.8	100



Casing Crown (Strong Type)

Name	outside diameter mm	inside diameter mm	thickness mm
83	83	72	5.5
3"	89.1	78.1	5.5
3 1/2"	101.6	90.2	5.7
4"	114.3	102.3	6.0



Wing Metal Crown (Crown for muddy-water)

Setting the "Wing" outside-circumference of metal-crown.

Outside diameter of core-tube has more than drilling-hole, and make good flow of the slurry.

So, it can be used for clay and collapse stratum.

Japanese Industrial Standards

Name	outside diameter mm	inside diameter mm	screw	total length mm
65	66	40	55CT	65
75	76	50	65CT	65
85	86	60	75CT	75
100	101	70	85CT	75
115	116	84	100CT	75
130	131	99	115CT	75



Shield-Hi-Crown

It is used by connecting in the point of shield-casing.

Name	outside diameter mm	inside diameter mm	total length mm
3"	92	74	150
4"	116	98.3	160
5"	142	123.5	170
85	87	69	180
105	110	90	180
110	115	95	180
130	135	115	180
135	140	120	180
140	145	121	180
165	170	145	180



3" ~ 5"



85 ~ 165

Non-Core-Bit

It is used for weak stratum of silty and clay or for soft-rock stratum of mudstone and tuff, which is not needed of one.

Cross-Bit



It is suitable for clay stratum with gravel or weathering soil stratum.

Y-Type-Bit



It is suitable for soft-rock stratum of mudstone and tuff. One piece of the blades expand to the center of water supply-hole, so there is no clogging of core.

S-Type-Bit



It doesn't collapse bore-hole easily. So, especially, it is effective for mudstone.

Flat-Type-Bit



Generally, it is used for weak stratum.

Stabilizer



It is not only prevent from bending of bore-hole, but also reaming of it.

Drain

For rotary-percussion

Name
96
118
133



For boring machine

Name	inch
77	3"
90	3 1/2"
110	4"
128	5"
160	6"



Tricon Bit

It is non-core bit for drilling soft-rock, semi-softrock, and gravel stratum.

You can choose cutting tooth form properly by the stratum, softrock, semi-hardrock, hardrock and so on.

Name (inch)	size mm	screw	weight kg
3	76.2	50JIS	2.1
3 ³ / ₈	85.7	50REG	2.4
3 ³ / ₄	95.3	2 ³ / ₈ REG	4
3 ⁷ / ₈	98.4		4.2
4	101.6		4.3
4 ³ / ₄	120.6	2 ⁷ / ₈ REG	6.5
5 ¹ / ₈	130.2		9.4
5 ⁵ / ₈	142.9	3 ¹ / ₂ REG	14.3
6 ¹ / ₄	158.7		17.5
7 ⁵ / ₈	193.7	4 ¹ / ₂ REG	31.6
8 ¹ / ₂	215.9		40.5
8 ⁵ / ₈	219.0		41
9 ⁵ / ₈	244.5	6 ⁵ / ₈ REG	56
10 ⁵ / ₈	269.9		70
12 ¹ / ₄	311.2		88
14 ³ / ₄	374.7		123
17 ¹ / ₂	444.5	7 ⁵ / ₈ REG	205
20	508.0	7 ⁵ / ₈ REG 8 ⁵ / ₈ REG	350
22	558.8		430
24	609.6		500
26	660.4		700



Metal Chip

Type of Tip	chip size mm	material	usage
Quad range (Normal Chip)	5 X 5 X 7	G 2 G 1 H 1 0 H 0 5	General purpose type
	6 X 6 X 7		
	7 X 7 X 10		
	8 X 8 X 10		
	10 X 10 X 20		
Octagon (Super-Chip)	5 X 7	G 2、G 1 H 0 5、H 1 0	Impact-resistance type
	6 X 7		