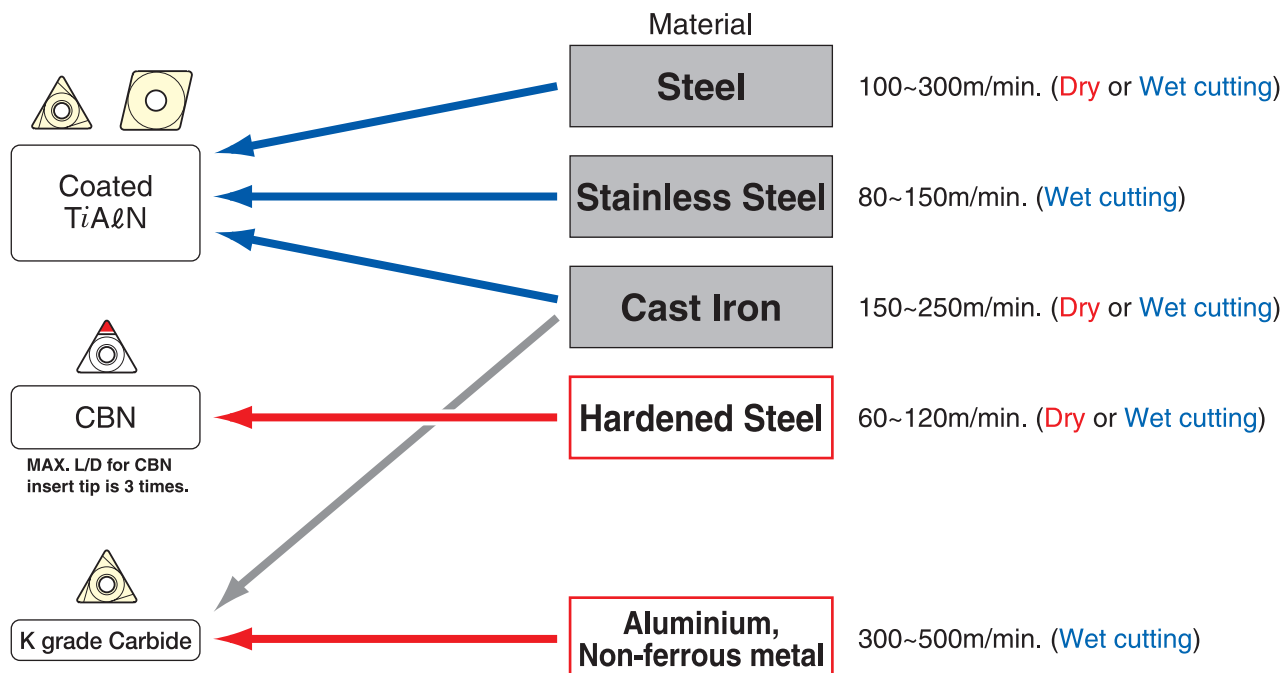


DJ BORING ARBOR CUTTING DATA

NIKKEN

Selection of Insert Tip for each material.



Recommended cutting Speed

●...Best ○...Good —...Unsuitable

Insert			SS41	S55C	SCM	SKD	SC	FC,FCD	SUS	AL,ALC	Hardened Steel			Inter- rupted Cutting
	Code No.	Grade									SCM	SKD	SUJ	
	C	Coated	100~300	100~300	100~300	80~150	80~150	150~250	80~150	-	-	-	-	●
	E	P10	60~100	60~100	80~120	40~100	60~100	-	40~80	-	-	-	-	●
	F	K10	-	-	-	-	-	60~130	-	300~500	-	-	-	●
	T	Cermet	100~300	100~300	100~300	80~150	80~150	-	80~150	-	-	-	-	○
	B	CBN	-	-	-	-	-	200~500	-	-	60~120	60~100	60~120	○
	C	Coated	100~300	100~300	100~300	80~150	80~150	150~250	80~150	-	-	-	-	●

★ Existing Inserts (Cermet, P grade Carbide & K grade Carbide) are available.

★ The cutting speed is recommended to be reduced to 50% for the interrupted cutting.

Recommended Cutting Condition (removal, feed)

Boring Range	Type		Best Condition		MAX. Condition	
	DJ3	DJ8	mm/φ	mm/rev.	mm/φ	mm/rev.
φ 3~ 8	J10- 3		~0.1	0.03~0.07		
φ 5~ 15	J10- 5		0.1~0.2	0.05~0.07		
φ 8~ 18	J10- 8	J16- 8	0.1~0.2	0.05~0.08		
φ18~ 28	J10-18	J16-18	0.2~0.4	0.05~0.08	1.0	0.1
φ28~ 39		J16-28	0.2~0.4	0.05~0.08	1.5	0.15
φ38~ 50		J16-38	0.2~0.5	0.05~0.08	2.0	0.15

In case of CBN insert, reduce L/D as small as possible : MAX. 3 times.

Stock removal on diameter.

D<32mm : less than 0.25mm

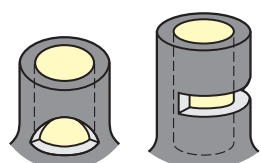
D>32mm : less than 0.3mm

Feed per rev. depends on
Nose/R and accuracy required.

Logical Surface Finish : $\frac{(\text{Feed per rev.})^2}{8 \times \text{Nose/R}}$

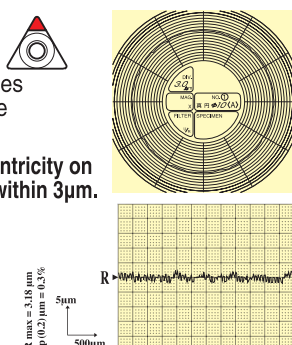
Example of hardened steel boring with CBN Insert

Reduce L/D as small as possible: MAX. 3times
For bits of L/D shorter than standard one are also available. Please contact with us.



Example of intermittent boring of hardened steel (HRC60) φ10mm

Results of concentricity on 24 pcs. were all within 3μm.

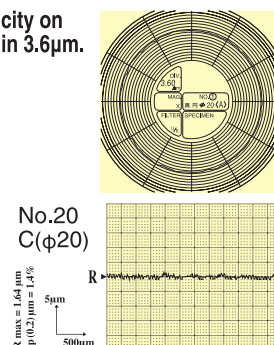


Results of surface finish on 24 pcs. were all within 3.3 microns. (R MAX.)

Results of concentricity on 24 pcs. were all within 3.6μm.



Example of intermittent boring of hardened steel (HRC60) φ20mm



Results of surface finish on 24 pcs. were all within 2.8 microns. (R MAX.)