

NIKKEN DJ HEAD INSTRUCTION MANUAL

NIKKEN
VER.4.1

DJ3 or DJ8 Head includes 4 of Boring Bits with Insert Tip, Tip Clamp Handle (T6 and T8) and Dial Adjusting Handle (M2.5) as standard. DJ Head without Boring Bits is also available. e.g. Code No. **Q26-DJ3-36-BD, Q26-DJ8-44-BD.**

Setting of DJ Boring Bar
Select a boring bar that is suitable for the required diameter and depth from the DJ Boring Bit list. Set the Boring Bit into the head so that the insert faces the location line on the head (opposite side to the dial ring). Always ensure that this procedure is carried out otherwise the desired finish will not be obtainable and the set-up will be DANGEROUS.

Following this operation, tighten the set screws for Boring Bit on the opposite side of the dial ring.

Adjusting The Boring Diameter

Min. Dial Readout (in dia.) Main scale : 0.01mm, Sub scale : 0.005mm, One revolution in dia. : 0.8mm

Operation Of the Dial Ring

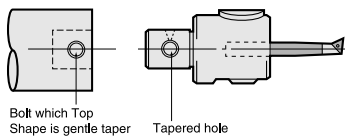
The direction of the dial ring adjustment has been modified for ease to use.
CW direction : + direction increases the boring diameter.

- 1) Before adjusting the diameter, always ensure that the locking screw for adjustment has been loosened.
- 2) To ensure accuracy when adjusting the boring diameter, always rotate the dial ring in the same direction(+direction). If the desired diameter has been passed, wind off the dial by approximately 0.2mm and re-adjust.
- 3) Always tighten the locking screw after the adjustment has been completed.

Modular Connection

Connection system is the Face Contact System by drawing into with the bolt, which top shape is gentle taper.

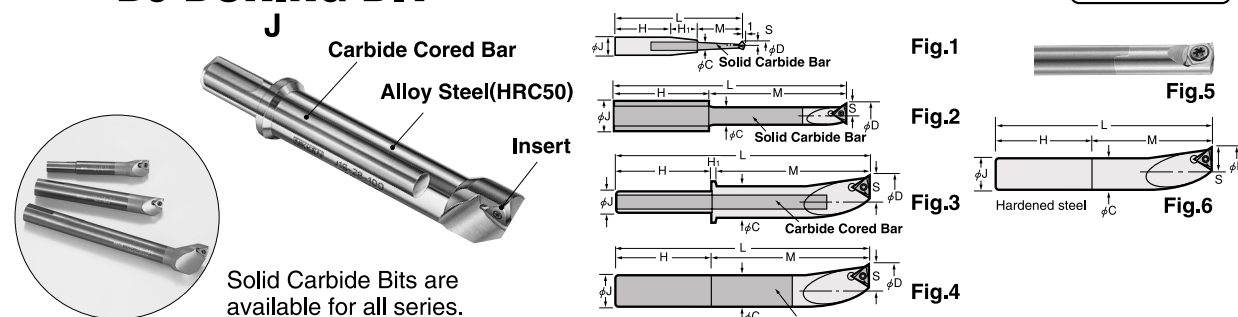
- 1) Insert a Head by adjusting the position of a hole.
- 2) Tighten the bolt temporary, then loosen slightly.
- 3) Tighten the bolt again by moving a head clockwise and counterclockwise. This operation is to centralize the each other.
- 4) Then, tighten the bolt completely until face contact.



Please confirm that the insert chip and the other parts are clamped properly. And please never use other than the proper insert chip and parts, otherwise the danger that it is injured by the dropping and/or flying parts will occur during cutting.
In case that the usage is mistaken, or the operating condition is unsuitable, it will be injured by causing breakage and scattering of a tool. Please use it within the range of the recommended conditions with a safety cover, an eye shield, etc.
In case that it is used by high-speed spindle, If dynamic balance is not maintained, there is a danger that it is injured by damaging tool by deflection or vibration. Please be sure to make a test run and confirm of no deflection, vibration and unusual sound.
Quotation fee of the repair is always necessary whether repair or not.

This manual is for basic instruction and information for safety use of our product. please contact with us for the further details.
Please note that we could not take a responsibility of the accidental damage on our product which is modified the specifications by the customer without our approval.

DJ BORING BIT



Style	Code No.	Boring Range D	Boring Depth M	J	L	H	H ₁	C	S	Insert No.	Insert Clamping Bolt No.	Insert Clamping Handle No.	Fig.
DJ3	J10- 3- 14	3~ 8	14	10	62	30	18	2.2	1.5	—	—	—	1
	- 5- 35	5~15	35		70	35	—	4.3	2.5	CC03-C	M611	10S	5
	- 8- 40	8~18	40		75	35	—	7.2	4.0	3MP-C	M2040	T6	2
	- 8- 55*	8~18	55		90	35	—	11.2	6.0	3MP-C	M2040	T6	4
	-12- 55*	12~22	55		85	26	—	12	9.0	6MP-C	M2577	T8	4
	-18- 65	18~28	65		91	26	—	12	9.0	6MP-C	M2577	T8	4
	-18- 80*	18~28	80		106	5	—	12	9.0	6MP-C	M2577	T8	3
	J16- 5- 35*	5~15	35		78	43	—	4.3	2.5	CC03-C	M611	10S	5
	- 8- 40	8~18	40		83	43	—	7.2	4.0	3MP-C	M2040	T6	2
	- 8- 55*	8~18	55		98	43	—	7.2	4.0	3MP-C	M2040	T6	2
DJ8	-12- 60*	12~22	60	16	103	33	—	11.2	6.0	3MP-C	M2045	T6	6
	-18- 60	18~28	60		93	33	—	11.2	6.0	3MP-C	M2045	T6	6
	-18- 80	18~28	80		113	33	—	16	9.0	6MP-C	M2577	T8	4
	-18-100*	18~28	100		133	33	—	16	9.0	6MP-C	M2577	T8	4
	-18-120*	18~28	120		153	33	—	16	9.0	6MP-C	M2577	T8	4
	-28- 65	28~39	65		98	33	—	16	14.0	6MP-C	M2577	T8	6
	-28- 85	28~39	85		118	33	—	16	14.0	6MP-C	M2577	T8	6
	-28-100*	28~39	100		133	33	—	16	14.0	6MP-C	M2577	T8	4
	-28-130*	28~39	130		163	33	—	16	14.0	6MP-C	M2577	T8	4
	-38- 65	38~50	65		98	33	—	16	19.0	6MP-C	M2577	T8	6
	-38- 85	38~50	85		118	33	—	16	19.0	6MP-C	M2577	T8	4
	-38-100*	38~50	100		133	33	—	16	19.0	6MP-C	M2577	T8	3
	-38-130*	38~50	130		163	33	—	16	19.0	6MP-C	M2577	T8	4
	-38-130*	38~50	130		163	33	—	16	19.0	6MP-C	M2577	T8	4

★The Bits marked * are optional accessories.

★“C” grade(coated) Insert Tips are supplied as standard.

However for long size solid carbide type as J16-18-120, J16-28-130 and J16-38-130, “T” grade (cermet without coating) Insert Tip are supplied.

★The Insert Tips for J10-8, -12 and J16-8, -12 were changed from 3MS to 3MP.

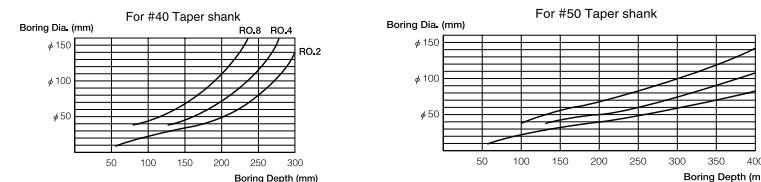
★Bits for Centre Through Coolant type are also available. Please contact with us.

NIKKEN INSERT TIP (EXCLUSIVE FOR BORING ARBOR) NIKKEN

Relation between Boring Depth and Nose radius

For the boring of large diameter and short depth, the use of insert with large nose radius is recommended.

The smaller nose radius inserts are ideal for small diameter boring or finishing operation.



Insert Tip Code No.			Dimension	Grade	Material	Applicable Bit
R0.2	R0.4	R0.8				
3MS-T2				Cermet	Alloy Steel, Stainless Steel	OLD J10-8, J10-12 J16-8, J16-12
-E2				P10	Alloy Steel	
-F2				K10	Cast Iron, Aluminum	
-B2				CBN	Hardened steel	
3MP-C2	3MP-C4			Coated	Alloy Steel, Stainless, Cast Iron	NEW J10-8, J10-12 J16-8, J16-12
-E2				P10	Alloy Steel	
-F2				K10	Cast Iron, Aluminum	
-B2				CBN	Hardened steel	
	-B4			Diamond	High Speed Aluminum	J10-18 J16-18, J16-28, J16-38
6MP-C2	6MP-C4	6MP-C8		Coated	Alloy Steel, Stainless, Cast Iron	
-T2	-T4	-T8		Cermet	Alloy Steel, Stainless Steel	
-E2	-E4	-E8		P10	Alloy Steel	
	-F4	-F8		K10	Cast Iron, Aluminum	J10-5 J16-5
	-B4	-B8		CBN	Hardened steel	
-D2*	-D4*	-D8*		Diamond	High Speed Aluminum	
				Coated	Alloy Steel, Stainless, Cast Iron	

★Min. order quantity of CBN or Diamond: 1pcs. All other inserts: 10 pcs.

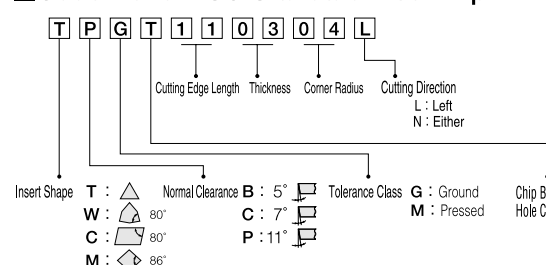
★T (cermet) insert is TiN-coated as standard, please specify uncoated insert for deep-hole boring applications, if required.

★For NIKKEN special-nose geometries inserts for deep-hole boring applications, please specify code No. adding letter “-SR”.

★The centre hole of 6MP-D (Diamond) insert marked ※ is different from standard hole, so the different clamp screw (M2562D) must be used.

★※1 The hole dia for 6MP insert is φ2.8mm.

Code No. of ISO Standard Insert Tip



The majority of ISO inserts available are designed for turning where the workpiece rotates and are not recommended for use in boring as it's the tool which is rotating, however these inserts can be fitted on to the boring bit if the size is the same.

Diameters of centre holes on ISO standard insert can vary and you may, therefore have to change the clamp screw to suit the insert.

RECOMMENDABLE CUTTING CONDITIONS

Material of Work	Hardness	Applicable Tip	V (m/min.)	RECOMMENDABLE CUTTING CONDITIONS (mm/rev.)		Stock Removal (mm)	
				finish	rough	finish	rough
Aluminum	ADC12	F	200~500	0.05~0.15		0.2~6.0	
Mild Steel	SS41(HB160)	C,T,E	100~300	0.05~0.15		0.2~2.0	
Steel	S45C(HB250)	C,T	80~300	0.05~0.15		0.2~2.0	
Die. Steel	SKD11(HRC25)	C,T	40~200	0.05~0.15		0.2~2.0	
Stainless Steel	SUS304	C,T,E	40~80	0.05~0.15		0.2~2.0	
Cast Iron	FC25(HB250)	C,F	60~150	0.05~0.15		0.2~4.0	
Harden Steel	(HRC58~63)	B	60~120	0.05~0.1	—	0.05~0.3	—

★In case of interrupted boring, the cutting speed should be reduced to 50%.

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

Stock removal on diameter,
D < φ 28mm: less than 0.25mm
D > φ 28mm: less than 0.3mm

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