

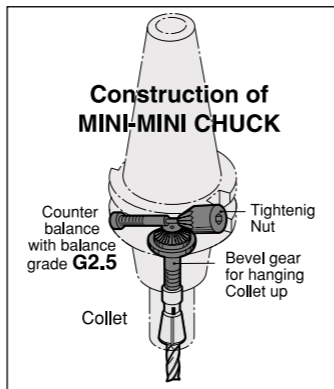
MINI-MINI CHUCK INSTRUCTION MANUAL

NIKKEN
VER.8

Thank you for your purchase of NIKKEN products. We can recommend our products with our confidence, however, please read this manual for long terms. And, please keep it where the operator can refer to it whenever necessary.



- Wipe all dust from internal bore of chuck, inside and outside of collet and shank of cutter. Clean minute dust inside slot grooves of collet by air blow.
- Please paste the small amount of the pure oil into the screw portion of the back end of the collet inside and the external of the collet. Do not paste the oil into the internal of the collet (gripping portion).
- Set PMK / VMK Collet onto MINI-MINI CHUCK and screw PMK / VMK Collet clockwise.
- Insert cutter shank into PMK / VMK Collet and hold cutter by fingers, tighten by L wrench clockwise to clamp.
(Tightening torque MMC8 type: 20~25Nm/MMC12 type: 40~45Nm)



- Protection must be used to grip cutter teeth.
- Gripping range of VMK Collet is H7.

For high speed application, the cutter shank tolerance is recommended to be H6.



- Clamp as much of the shank of cutter as possible. If the clamping length of shank is too short, it might cause breakage of the cutter or Collet, even damage to the Chuck itself.
- Do not clamp without a cutter.
- There is an interchangeability between PMK8 / VMK8 type Collets and MMK8 type Collets.
- There is not an interchangeability between PMK12 / VMK12 type Collets and MMK12 type Collets.

- When removing Collet and cutter, follow the above procedures in reverse.



- When you try to remove a cutter, hold a cutter by fingers so that it will not jump up.

- When using Centre Through Tool Coolant type MINI-MINI CHUCK for centre through coolant application;

- Use standard VMK Collet (without "J") for a cutter with coolant hole.
- Use VMK-J collet for a cutter without coolant hole.

- Use MINI-MINI CHUCK on the machine with safety door inter lock for high speed operation.

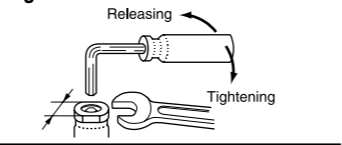


- Quotation fee of the repair is always necessary whether repair or not.

BT/IT/CAT type MINI-MINI CHUCK



Straight Shank MINI-MINI CHUCK



Style	Code No.	Width of Spanner	Standard Accessory
16	K16-MMP 4	13	Special Spanner
20	K20-MMC 8	19	—
32	K32-MMC 8	30	—
	K32-MMC12		—

*Spanner is not provided for K20 and K32 style MINI-MINI CHUCK.

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.



- Please be careful not to inflict personal injury at your handling of cutting tools.
- Please do not disassemble or modify the chucks by yourselves.
- Please check if the cutting tool is chucked with the slim chuck properly before the machining.
- Please pay attention not to inflict personal injury with the broken tools or swarfs.
- Please do not touch the tool at its rotating.
- If a cutting tool breaks in machining, please check the run-out accuracy of the chuck and inspection of the crack.
- For rust prevention, please use MINI-MINI CHUCK with RPT treatment. Please specify "-RP" when ordering, if RPT treatment is necessary.
- Please use NIKKEN pullstud, do not use any pullstud which has damage marks on its draw head area or is deformed.
- The pullstud is considered to consumption item and should be replaced periodically.
- Without hole: 3 years or 150,000 times of ATC. With coolant hole: 2 years or 100,000 times of ATC.



RPT Treatment

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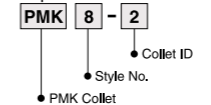
COLLET FOR MINI-MINI CHUCK

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PMK Collet ··· Standard collet for Mini-Mini Chuck.



Explanation of Code No.



PMK Collet Code No.
MPK 4-1, 1.5, 2, 2.5, 3, 3.5, 4
PMK 8-2, 2.2, 2.4, ····3, ····4, ····5, ····6, ····7, ····8 (0.2mmとび)
PMK12-4, 5, 6, 8, 10, 12

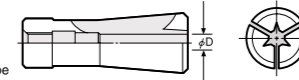
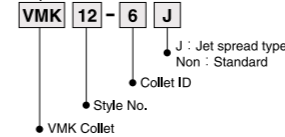
*The gripping range of MPK collet is H6.
*For high precision machining, please use a cutter with shank dia. tolerance of H6, even the gripping range of PMK collet is 0.2mm. (e.g. PMK8-2: 1.8~2.0mm)

VMK, VMK-J Collet ··· Centre through tool coolant type collet.

- Use standard VMK Collet (without "J") for a cutter with coolant hole.
- Use VMK-J Collet for a cutter without coolant hole.



Explanation of Code No.



VMK Collet Code No.
VMK 8-2J, 3J, 4J, 5J, 6J, 8J
VMK12-4J, 5J, 6J, 8J, 10J, 12J

*Please use a cutter with shank dia. tolerance of H6~H7.
*VMK8-2J is jet coolant hole type.

VMK SHANK PRESS FIT TOOL

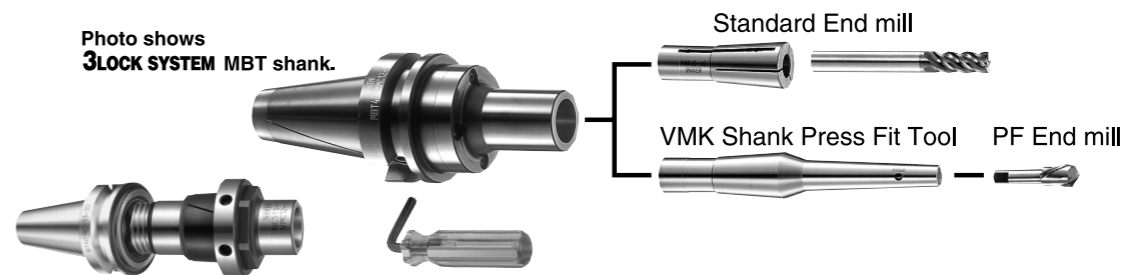
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MMC12 MINI-MINI CHUCK

φ6,8,10,12,16mm

Photo shows 3LOCK SYSTEM MBT shank.



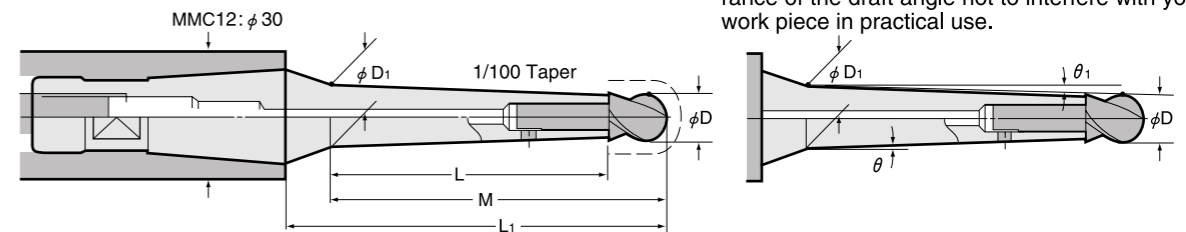
DREAM-CUT+VMC12 VEGA CHUCK

Midium Deep Profiling

VMK12 Shank Press Fit Tool φ6,8,10,12,16mm

Draft Angle

The draft angle is the line angle from φD1 to φD of the Press Fit End Mill. Please be careful to have an enough tolerance of the draft angle not to interfere with your work piece in practical use.



Shank	Endmill		Shank Code No.	L	M	L1	φD1	Tool angle θ	Draft Angle θ1	Press Fit Endmill	Push Out Bar
	Nose R	φD									
VMK12	3	6	VMK12-PF 6- 40	40	49	59	10.1	3°	2°40'	EPFB 2060	PFO 6- 40
			- 60	60	69	79	12.2		2°50'		- 60
			-100	100	109	119	16.4		2°50'		-100
	4	8	VMK12-PF 8- 40	40	52	62	10.7	2°	1°40'	EPFB 2080	PFO12- 40
			- 60	60	72	82	12.1		1°50'		- 60
			-100	100	112	122	14.9		1°50'		-100
	5	10	VMK12-PF12- 40	40	55	65	12.6	2°	1°30'	EPFB 2100	PFO12- 40
			- 60	60	75	85	14.0		1°40'		- 60
			-100	100	115	125	16.7		1°50'		-100
	6	12	VMK12-PF12- 40	40	58	68	12.6	2°	0°20'	EPFB 2120	PFO12- 40
			- 60	60	78	88	14.0		0°50'		- 60
			-100	100	118	128	16.7		1°20'		-100
8	16	VMK12-PF20- 40	40	64	74	17.8	2°	1°	EPFB 2160	PFO20- 40A	
		- 60	60	84	94	19.2		1°20'		- 60A	
		-100	100	134	134	21.0		1°30'		-100A	

For Press Fit End Mill, please refer Press Fit Tool Catalogue.

*The Code No. of the Push Out Bars with bold character is changed.