

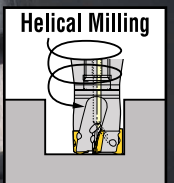
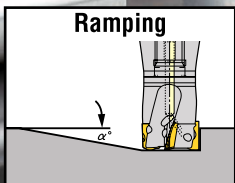
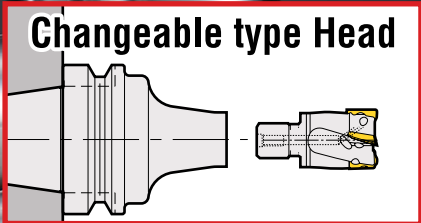
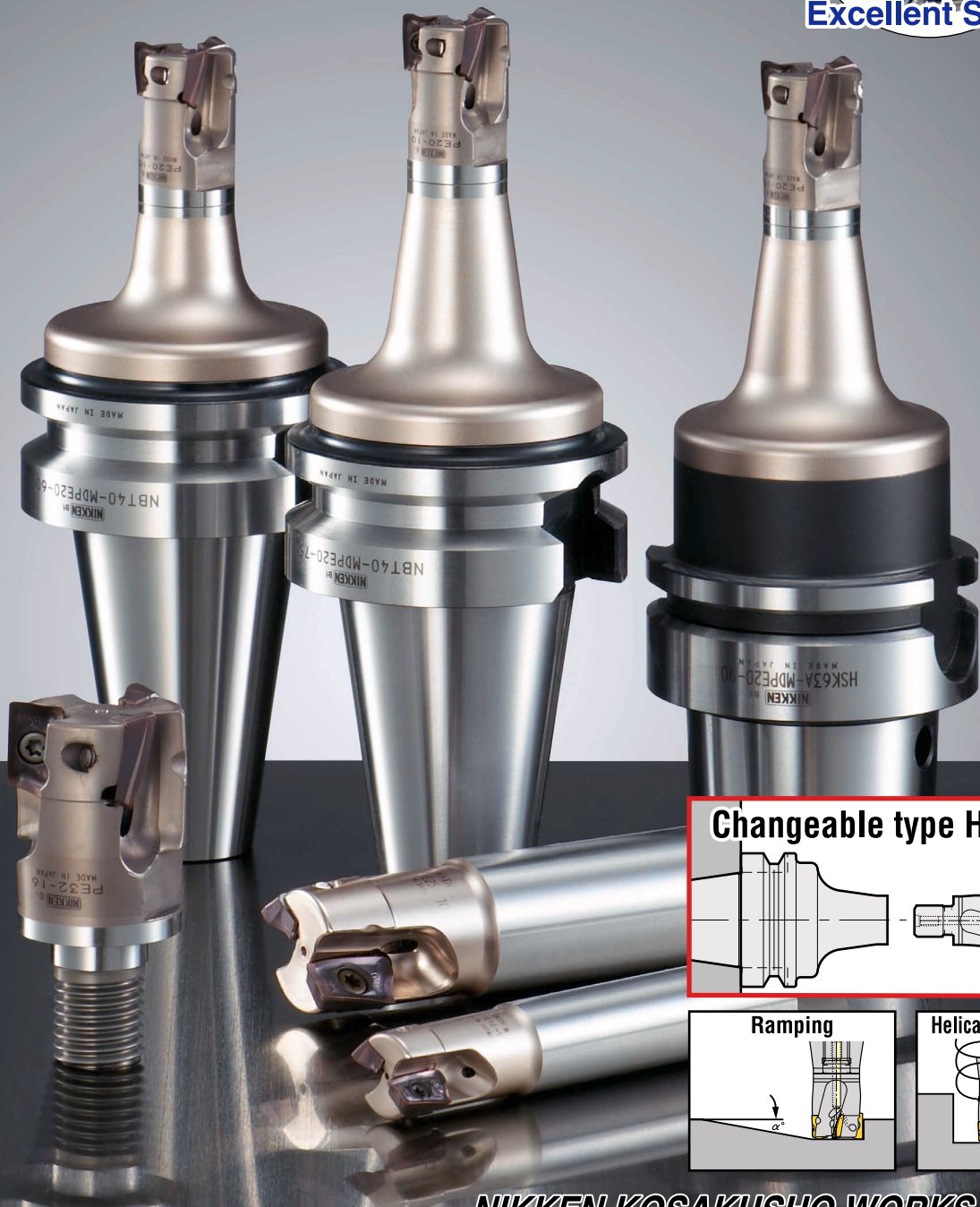
NIKKEN

NEW Changeable type Head
**MAJOR DREAM
PRO-ENDMILL**

Machine performs
100% of its capability.
Cutting tool performs
100% of its capability.

2Lock, HSK ⊕ Dampening Effect

NBT30 NIT40N
40 NIT50
50

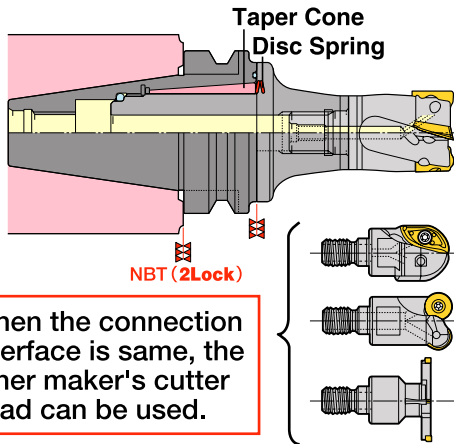


NIKKEN KOSAKUSHO WORKS, LTD.
CAT.NO.2803E

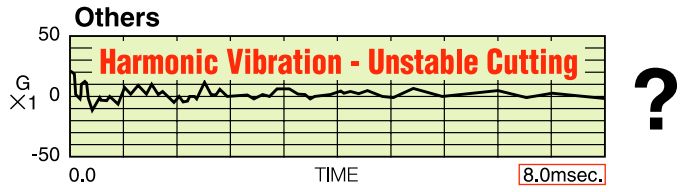
MAJOR DREAM PRO-ENDMILL

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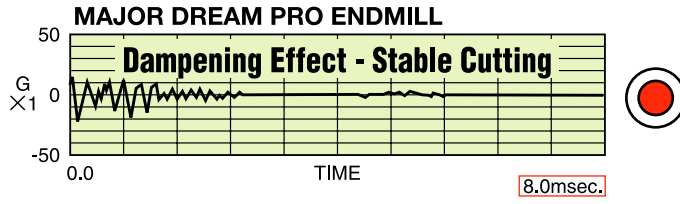
Dampening Effect ⊕ Changeable type PRO-ENDMILL Head



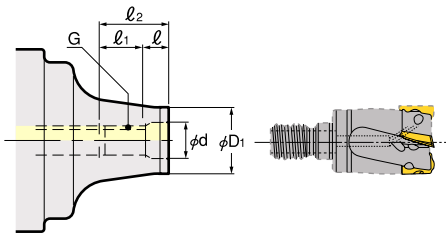
When the connection interface is same, the other maker's cutter head can be used.



Difference due to Dampening Technique and Effect

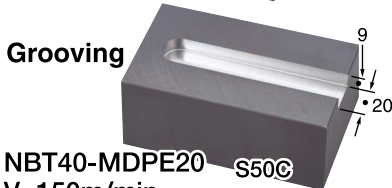
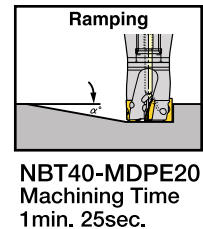
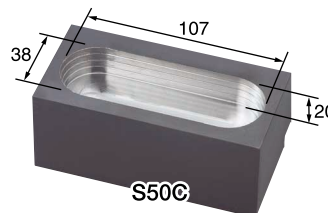
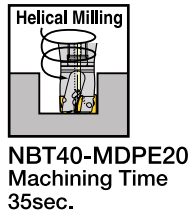
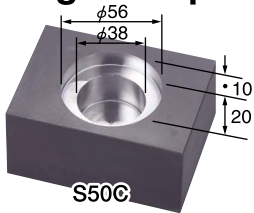


Connection Interface

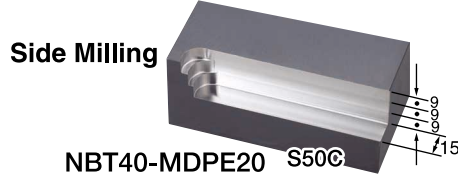


Code No.	Screw G	Bore Dia. phi d	Nose Dia. phi D1	Bore Depth l	Screw depth l1	l2 (l+l1)
MDPE-M 8	M 8	8.5	14.7	9	11	20
-M10	M10	10.5	18.7		12	21
-M12	M12	12.5	23		15	24
-M16	M16	17.0	30		16	25

Cutting Examples



NBT40-MDPE20 S50C
V=150m/min.
S=2,400min⁻¹
f=0.1mm/tooth
F=720mm/min.



NBT40-MDPE20 S50C
V=150m/min.
S=2,400min⁻¹
f=0.12mm/tooth
F=860mm/min.

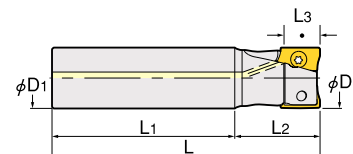
No Vibration on Aluminum Thin Wall



NBT40-MDPE32
V=950m/min.
S=9,500min⁻¹
f=0.14mm/tooth
F=4,000mm/min.

Straight Shank PRO-ENDMILL

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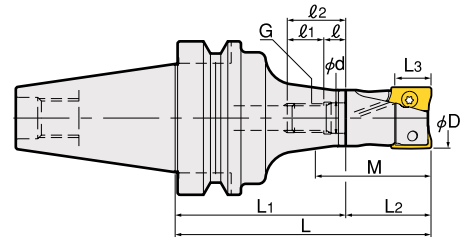


S-MDPE

Code No.	phi D	D1	L	L1	L2	MAX. Depth L3	No. of Tooth	Insert Tip	Tip Clamp Bolt	Tip Clamp Wrench
S16-MDPE16- 90	16	16	90	60	30	10	2	AOMT123608PEER-M	TPS-25	TIP07F
S20-MDPE20-100	20	20	100	70			3			
S25-MDPE25-110	25	25	110	75	40	15	2	AOMT184808PEER-M	TPS-4	TIP15W
S32-MDPE32-120	32	32	120	80			3			

★Tip clamp bolts including one spare bolt and the tip clamp wrench are standard accessories.
★Insert tip is not included. Please order separately. P.2
★All types are centre through tool coolant type.

2LOCK MAJOR DREAM PRO-ENDMILL

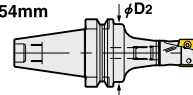


NBT-MDPE (Arbor + Head), NIT-MDPE

TAPER	Code No.	φD	L	L1	L2	MAX. Depth L3	M	Arbor Code No.	Head Code No.
No.30	NBT30-MDPE16- 75	16	75	45	30	10	37.5	NBT30-MDPE-M 8- 45	M 8-MDPE16-30
	-MDPE20- 75	20						-MDPE-M10- 45	M10-MDPE20-30
	-MDPE25- 80	25	80	35	15	43.4	-MDPE-M12- 45	M12-MDPE25-35	
	-MDPE32- 95	32	95	55	40	52.5	-MDPE-M16- 55	M16-MDPE32-40	
No.40	NBT40-MDPE16- 85,105,120	16	85,105,120	55, 75, 90	30	10	37.4	NBT40-MDPE-M 8- 55, 75, 90	M 8-MDPE16-30
	(NIT40N)-MDPE20- 90,105,120	20	90,105,120	60, 75, 90				40.0	-MDPE-M10- 60, 75, 90
	-MDPE25- 90,105,120	25	90,105,120	55, 70, 85	35	45.3,47.5,47.5	-MDPE-M12- 55, 70, 85	M12-MDPE25-35	
	-MDPE32-105,120,135	32	105,120,135	65, 80, 95	40	52.5	-MDPE-M16- 65, 80, 95	M16-MDPE32-40	
No.50	NBT50-MDPE16-100,120,135	16	100,120,135	70, 90,105	30	10	37.4	NBT50-MDPE-M 8- 70, 90,105	M 8-MDPE16-30
	(NIT50)-MDPE20-105,120,135	20	105,120,135	75, 90,105				30	40.0
	-MDPE25-105,120,135	25	105,120,135	70, 85,100	35	45.3,47.5,47.5	-MDPE-M12- 70, 85,100	M12-MDPE25-35	
	-MDPE32-120,135,150	32	120,135,150	80, 95,110	40	52.5	-MDPE-M16- 80, 95,110	M16-MDPE32-40	

★Tip clamp bolts including one spare bolt and the tip clamp wrench are standard accessories.
★Insert tip is not included. Please order separately. P.2
★All types are centre through tool coolant type.

★NIT40N φD2=54mm

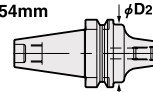


NBT-MDPE-M (Arbor), NIT-MDPE-M

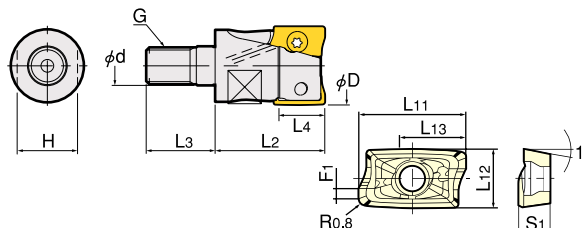
TAPER	Code No.	φD	L1	φd	ℓ	ℓ1	ℓ2	G
No.30	NBT30-MDPE-M 8- 45	16	45	8.5	9	11	20	M 8
	-MDPE-M10- 45	20		10.5		12	21	M10
	-MDPE-M12- 45	25		12.5		15	24	M12
	-MDPE-M16- 55	32		17.0		16	25	M16
No.40	NBT40-MDPE-M 8- 55, 75, 90	16	55, 75, 90	8.5	9	11	20	M 8
	(NIT40N)-MDPE-M10- 60, 75, 90	20	60, 75, 90	10.5		12	21	M10
	-MDPE-M12- 55, 70, 85	25	55, 70, 85	12.5		15	24	M12
	-MDPE-M16- 65, 80, 95	32	65, 80, 95	17.0		16	25	M16
No.50	NBT50-MDPE-M 8- 70, 90,105	16	70, 90,105	8.5	9	11	20	M 8
	(NIT50)-MDPE-M10- 75, 90,105	20	75, 90,105	10.5		12	21	M10
	-MDPE-M12- 70, 85,100	25	70, 85,100	12.5		15	24	M12
	-MDPE-M16- 80, 95,110	32	80, 95,110	17.0		16	25	M16

★PRO-ENDMILL head is not included. Please order separately. P.2
★All types are centre through tool coolant type.

★NIT40N φD2=54mm



PRO-ENDMILL HEAD & INSERT TIP



AOMT (Insert Tip)

Tip Code No.	L11	L12	L13	S1	F1
AOMT123608PEER-M	12	6.6	10	3.6	1.2
AOMT184808PEER-M	18	9	15	4.8	1.4

★Nose R = 0.8 is only available. Please select MITSUBISHI insert tips for other Nose R.
★Grade is only VP15TF (Steel, Cast Iron, Harden Steel). Please select MITSUBISHI insert tips for VP20RT (Stainless) or TF15 (Aluminium).
★Minimum order quantity is 10pcs.

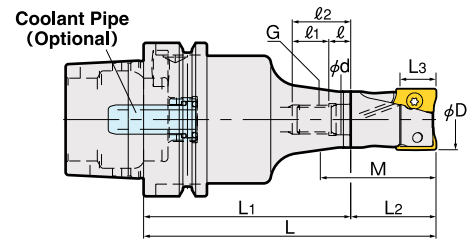
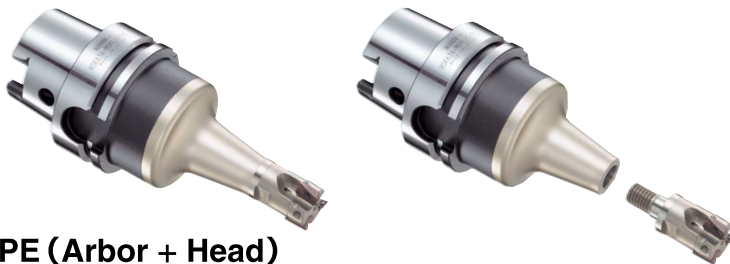
M-MDPE (Head)

φD	Code No.	L2	L3	MAX. Depth L4	φd	G	No. of Tooth	Insert Tip	Tip Clamp Bolt	Tip Clamp Wrench	Spanner Width H
16	M 8-MDPE16-30	30	18	10	8.5	M 8	2	AOMT123608PEER-M	TPS-25	TIP07F	10
20	M10-MDPE20-30		19		10.5	M10	3				14
25	M12-MDPE25-35	35	22	15	12.5	M12	2	AOMT184808PEER-M	TPS-4	TIP15W	19
32	M16-MDPE32-40	40	23		17.0	M16	3				24

★Tip clamp bolts including one spare bolt and the tip clamp wrench are standard accessories.
★Insert tip is not included. Please order separately.
★All types are centre through tool coolant type.

HSK MAJOR DREAM PRO-ENDMILL

NIKKEN



HSK-MDPE (Arbor + Head)

TAPER	Code No.	φD	L	L ₁	L ₂	MAX. Depth L ₃	M	Arbor Code No.	Head Code No.
HSK 63A	HSK 63A-MDPE16-100,120,135	16	100,120,135	70, 90,105	30	10	37.4	HSK 63A-MDPE-M 8- 70, 90,105	M 8-MDPE16-30
	-MDPE20-105,120,135	20	105,120,135	75, 90,105	30	10	40.0	-MDPE-M10- 75, 90,105	M10-MDPE20-30
	-MDPE25-105,120,135	25	105,120,135	70, 85,100	35	15	45.3,47.5,47.5	-MDPE-M12- 70, 85,100	M12-MDPE25-35
	-MDPE32-120,135,150	32	120,135,150	80, 95,110	40	15	52.5	-MDPE-M16- 80, 95,110	M16-MDPE32-40
HSK 100A	HSK100A-MDPE16-120,140,155	16	120,140,155	90,110,125	30	10	37.4	HSK100A-MDPE-M 8- 90,110,125	M 8-MDPE16-30
	-MDPE20-125,140,155	20	125,140,155	95,110,125	30	10	40.0	-MDPE-M10- 95,110,125	M10-MDPE20-30
	-MDPE25-125,140,155	25	125,140,155	90,105,120	35	15	45.3,47.5,47.5	-MDPE-M12- 90,105,120	M12-MDPE25-35
	-MDPE32-140,155,170	32	140,155,170	100,115,130	40	15	52.5	-MDPE-M16-100,115,130	M16-MDPE32-40

★Tip clamp bolts including one spare bolt and the tip clamp wrench are standard accessories.
★All types are centre through tool coolant type.

★Insert tip is not included. Please order separately. P.2

HSK-MDPE-M (Arbor)

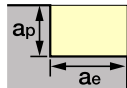
TAPER	Code No.	φD	L ₁	φd	ℓ	ℓ ₁	ℓ ₂	G
HSK 63A	HSK 63A-MDPE-M 8- 70, 90,105	16	70, 90,105	8.5	9	11	20	M 8
	-MDPE-M10- 75, 90,105	20	75, 90,105	10.5		12	21	M10
	-MDPE-M12- 70, 85,100	25	70, 85,100	12.5		15	24	M12
	-MDPE-M16- 80, 95,110	32	80, 95,110	17.0		16	25	M16
HSK 100A	HSK100A-MDPE-M 8- 90,110,125	16	90,110,125	8.5		11	20	M 8
	-MDPE-M10- 95,110,125	20	95,110,125	10.5		12	21	M10
	-MDPE-M12- 90,105,120	25	90,105,120	12.5		15	24	M12
	-MDPE-M16-100,115,130	32	100,115,130	17.0		16	25	M16

★PRO-ENDMILL head is not included. Please order separately. P.2

★All types are centre through tool coolant type.

Cutting Condition

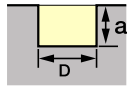
Side Milling



- Bold Characters of cutting speed **V** shows when $a_e=0.5 \times D$.
- Cutting speed **V** should be decreased to 80% when $a_e=0.75 \times D$.
- When a_p is increased, decrease feed per one tooth **f** (mm/tooth).
- Bold Characters of feed per one tooth **f** shows when $a_e = 0.5 \times D$ & $a_p = \text{MAX}$.

Material	Mild Steel (SS400, S10C)	Carbon Steel, Alloy Steel (S45C, SCM440)	Cast Iron (FC300)	Ductile Iron (FCD450)	harden steel (SCD)
V (m/min.)	220 (140~270)	170 (110~210)	170 (110~210)	120 (80~150)	85 (50~100)
f	MDPE16	0.1 (0.1~0.15)		0.07 (0.07~0.1)	
	MDPE20	0.1 (0.1~0.25)		0.07 (0.07~0.2)	0.07 (0.07~0.15)
	MDPE25				
	MDPE32	0.1 (0.1~0.3)		0.07 (0.07~0.25)	0.07 (0.07~0.15)

Grooving



- When a_p is increased, decrease feed per one tooth **f** (mm/tooth).
- Bold Characters of feed per one tooth **f** shows when $a_p=\text{MAX}$.
- MAX. ramping angle **MDPE16: 15°, MDP20: 9°, MDPE25: 11°, MDPE32: 7°**

Material	Mild Steel (SS400, S10C)	Carbon Steel, Alloy Steel (S45C, SCM440)	Cast Iron (FC300)	Ductile Iron (FCD450)	harden steel (SCD)
V (m/min.)	180 (140~210)	140 (110~160)	100 (80~120)	100 (80~120)	70 (50~80)
f	MDPE16	0.1		0.07	
	MDPE20		0.07 (0.07~0.1)		0.07
	MDPE25				
	MDPE32		0.07 (0.07~0.15)		0.07



• Proper torque to tighten the insert tip is recommended.

AOMT123608 : 1.0Nm , AOMT184808 : 4.0Nm

• Insert tip is recommended to use under the condition which the flank wear of the insert tip is within 0.3mm in normal use.

NIKKEN KOSAKUSHO WORKS, LTD. OSAKA, JAPAN.

5-1, 1-chome, Minamishinden, Daito-shi, Osaka-fu, Japan. Telephone:+0081 (0) 72-869-5820 Telefax:+0081 (0) 72-869-6220

<http://www.nikken-world.com>
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