Expansion1.0

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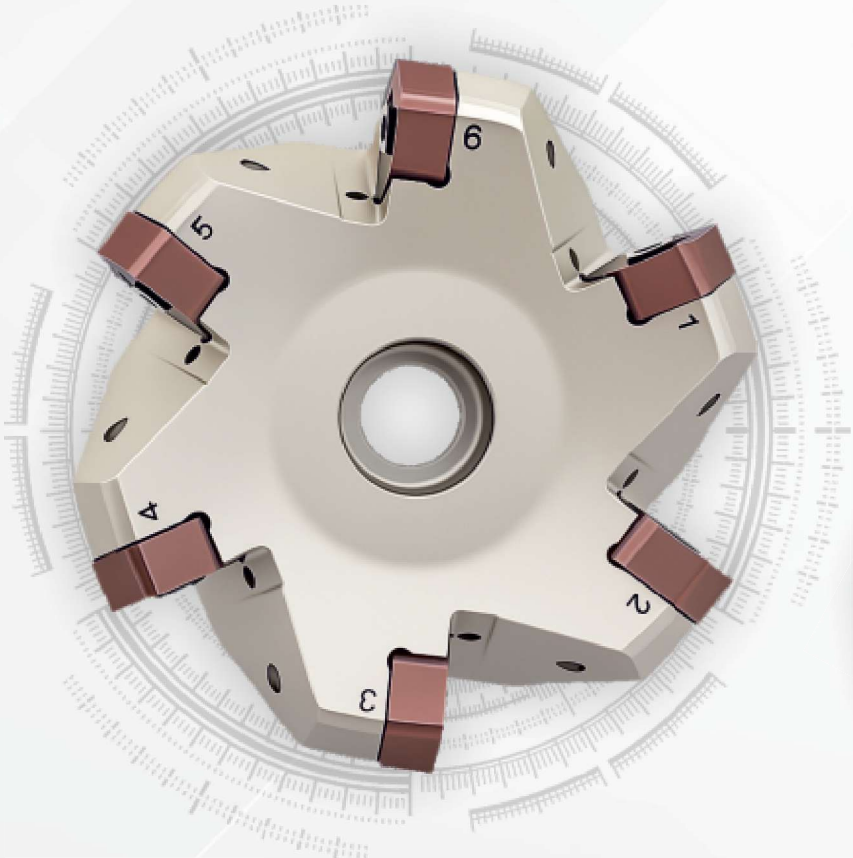
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DOUBLE HEXA

A Cost-Effective Breakthrough in Rough Milling

for Steels & Cast Iron

New





DOC upto 4.5mm

Brochure/MDC/2025/002/26E1

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Cutter & Insert Advantages

Introducing the **Double Hexa 09 Cutter Range.**
A new series of rough face milling cutter featuring True 12 cutting-edges hexagonal inserts that can handle machining of irregular castings upto 4.5mm with single cut.



Heavy Duty Cutter for Roughing with **45°** approach angle.

Both normal and close pitch cutters in range to suit the machine.

7mm thick insert for normal and close pitch cutter (Low Force Design).

Grade advantage

For Depth of Cut as **Ap ~ 4.5 mm** with high load resistance and stability at medium to high cutting speeds.

New Steel

DMC2020P
for high speed > 200 - 300 m/min.

DMP2030P
for general speed < 200 m/min.

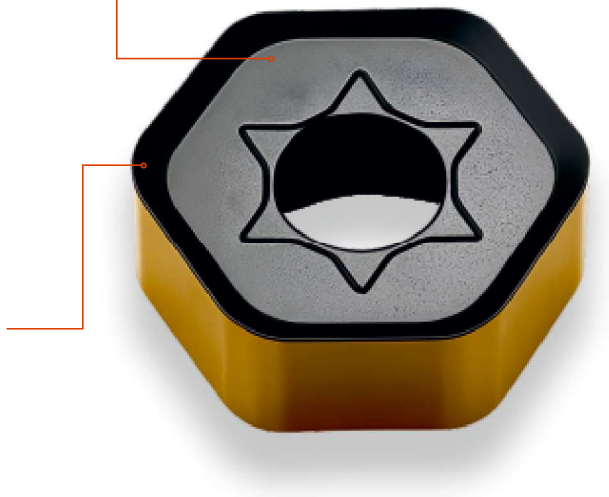
Cast Iron

DMC3020K
for high speed > 250 - 400 m/min.

DMP3030K
for general speed < 250 m/min.

Capability of two insert types - **Nose radius-only** (RE=1.2mm) for less frittering for maximum strength in pure roughing.

Wiper flat + Nose radius for improved finish in roughing.



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Application Target

- Steels, SG and Grey cast iron machining that need higher material removal rate.
- High speed machining - Vc max. ~ 400m/min and Ap max. ~4.5mm.

Grade Selection For First Time Right

New
What is your primary STEEL machining goal?

Consistent performance in high speed & general machining of Steels.
➤ Choose **DMC2020P**
- ✓ Higher wear resistance at high speed
- ✓ Superior edge security
- ✓ **CVD** coating for excellent wear and crater resistance.

Chatter free machining in general purpose and roughing of Steels.
➤ Choose **DMP2030P**
- ✓ For high strength steels
- ✓ Stable tool life
- ✓ **PVD**-coating for abrasion and corrosion

What is your primary CAST IRON machining goal?

High speed and heavy duty roughing with excellent wear resistance.
➤ Choose **DMC3020K**
- ✓ Maximum wear resistance at high speed
- ✓ Optimized for nodular & grey cast irons
- ✓ **CVD** coating for durability
- ✓ Thicker (TiCN / Al_2O_3 MT-CVD)

Versatile, balanced performance across a wide range of cutting conditions.
➤ Choose **DMP3030K**
- ✓ Balanced wear resistance & toughness
- ✓ Ideal for general-purpose cast irons
- ✓ **PVD**-coated for sharp cutting edges
- ✓ Multilayer (TiAlN / CrN)

RECOMMENDED Cutting conditions

New
For STEEL machining

Material	Parameters	for DMC2020P			for DMP2030P		
Steel	Speed (m/min)	125	**200** Ideal condition	275	110	**180** Ideal condition	225
	Feed (mm/tooth)	0.10	**0.20**	0.30	0.15	**0.25**	0.40

For CAST IRON machining

Material	Parameters	for DMC3020K			for DMP3030K		
Grey Cast Iron	Speed (m/min)	175	**250** Ideal condition	400	150	**200** Ideal condition	250
	Feed (mm/tooth)	0.15	**0.25**	0.40	0.15	**0.25**	0.40
Ductile Cast Iron	Speed (m/min)	140	**200** Ideal condition	300	125	**180** Ideal condition	225
	Feed (mm/tooth)	0.15	**0.25**	0.36	0.15	**0.25**	0.36

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Machining example

New

Steel (MFHN09160RS16) + (HNMX090612ANEN-UM DMC2020P)

Component: Railway Bogie Frame
Material: MS+ Welded (ISO P)
Machine: VMC
Application: Face Milling







	Existing	Motherson
Vc (m/min)	302	251
↑ Fz (mm/tooth)	0.28	0.33
↑ Ap (mm)	1.00	1.2
Cutting edges	12	12
↑ **Tool life**	50% part	100% part
↓ **Cut time**	30 min.	20 min.

Feed 1.1X
Productivity 33%
Tool Life 100%

Cast Iron (MFHN0980RS09) + (HNMX090612ANEN-UM DMC3020K)

Component: Housing
Material: SG Iron (ISO K)
Machine: HMC
Application: Face Milling







	Existing	Motherson
Vc (m/min)	500	352
↑ Fz (mm/tooth)	0.12	0.18
↑ No. of Pockets	6	9
↓ Cutting edges	14	12
↑ **Tool life**	20 parts	30 parts
↓ **Cut time**	137 sec	83 sec

Feed 1.5X
Productivity 39%
Tool Life 50%

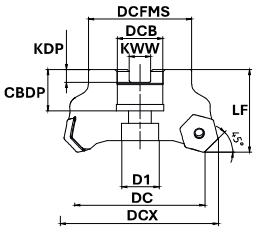


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Cutter Body (MFHN Series)







Catalogue No.	Stock	Dia. DC	Max. Dia. DCX	Boss DCSFMS	Hight LF	Bore Dia. DCB	Key Way Width KWW	Keyway Depth KDP	Mounting Depth CBDP	Bolt D1	Number Of Teeth (Z)	Weight (kg)
MFHN09040RS04	●	40	53	40	40	**16**	8.4	5.6	18.0	M8	4	0.35
MFHN09050RS04	●	50	63	40	40	**22**	10.4	6.3	20.0	18	4	0.45
MFHN09050RS06	●	50	63	40	40	**22**	10.4	6.3	20.0	18	6	0.43
MFHN09063RS05	●	63	76	50	40	**22**	10.4	6.3	20.0	18	5	0.66
MFHN09063RS07	●	63	76	50	40	**22**	10.4	6.3	20.0	18	7	0.65
MFHN09080RS06	●	80	93	60	50	**27**	12.4	7.0	25.0	20	6	1.2
MFHN09080RS09	●	80	93	60	50	**27**	12.4	7.0	25.0	20	9	1.1
MFHN09100RS07	●	100	113	70	50	**32**	14.4	8.5	32.0	46	7	1.6
MFHN09100RS11	●	100	113	70	50	**32**	14.4	8.5	32.0	46	11	1.4
MFHN09125RS08	●	125	138	90	63	**40**	16.4	9.5	35.5	55	8	3.2
MFHN09125RS13	●	125	138	90	63	**40**	16.4	9.5	35.5	55	13	3.5
MFHN09160RS16	●	160	173	125	63	**40**	16.4	9.5	32.0	90	16	5.2

Spare items

Common for all

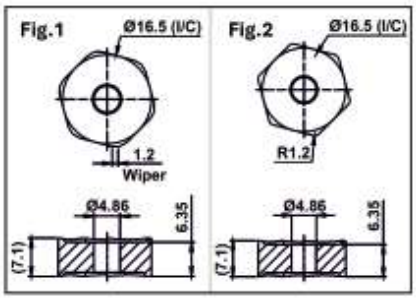
INSERT SCREW	WRENCH
S-M4512IP	TRDR15IP

***Additional for MFHN09040RS04**

CLAMPING SCREW	WRENCH
WB8-30	LH040

Inserts (HNMX09 Series)

Grade		CVD	PVD	CVD	PVD	
Application	High-Speed	P		K		
General Shoulder Milling	General Purpose	P	P		K	
	Roughing		P		K	
	Cat. No.	DMC2020P	DMP2030P	DMC3020K	DMP3030K	Fig.
	HNMX0906ANEN-UM	●	●	●	●	1
	HNMX090612ANEN-UM	●	●	●	●	2



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