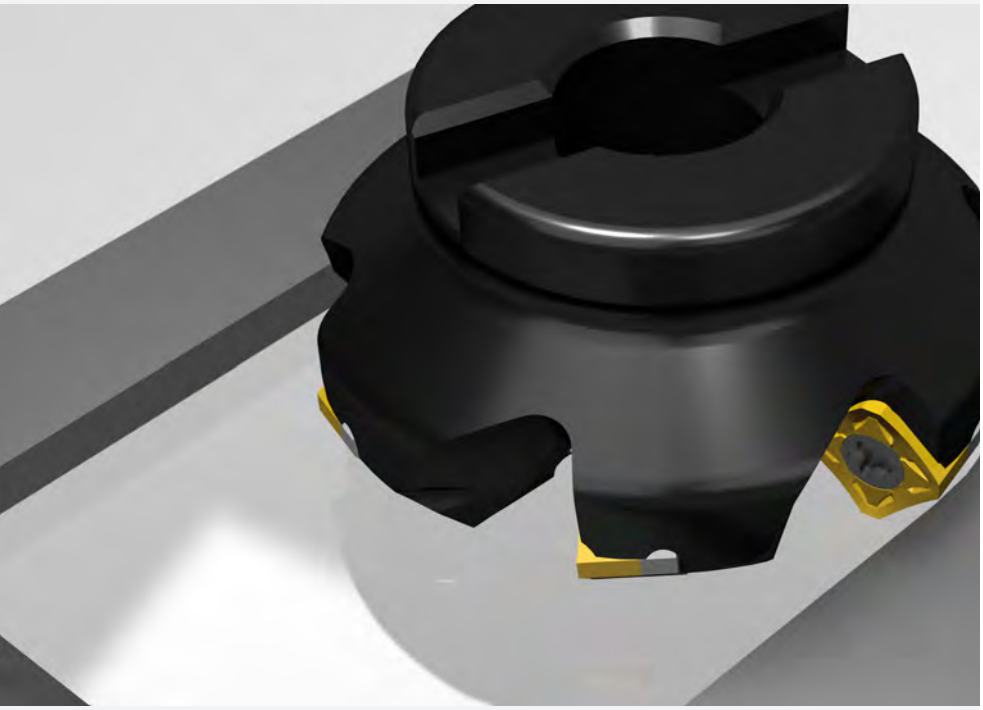

MILLING

Grade table .D3
Grade details .D4
Grade cross reference .D6
Application overview .D8
Shouldering .D11
Facing .D45
High feed .D75
Profiling .D85
Chamfering .D99
Advanced .D105

nikkoTOOLS

ISO 513		CARBIDE			CERMET	PCBN	DIAMOND	CERAMIC	
		CVD COATED	PVD COATED	UNCOATED	UNCOATED	UNCOATED	PCD	Si_3N_4	Al_2O_3 mixed
P Steel	P01								
	P10	JC8520			JU4525				
	P20		JP5530, JP8625, JP8725						
	P30	JC8530	JP5540						
	P40								
M Stainless steel	M01								
	M10								
	M20	JC9540	JP5530, JP9535-JP9635						
	M30		JP5540						
	M40		JP9545						
K Cast iron	K01	JC7515				NBH450U		NSN350	NAC200
	K10	JC8520	JP7615			NBH550U		NSN400	
	K20	JC7530	JP7525			NBH900U			
	K30					NBH950U			
N Non-ferrous material	N01								
	N10		JP6525	JU6520			ND150		
	N20						ND120		
	N30								
S Heat resistance alloy	S01								
	S10		JP9535-JP9635						
	S20	JC9540	JP5540						
	S30		JP9545						
H Hardened steel	H01					NBH450U			
	H10					NBH900U			
	H20					NBH950U			
	H30								

nikkoTOOLS

GRADE	SUBSTRATE	HARDNESS HV	COATING		APPLICATION		FEATURES
			TECHNOLOGY	COMPOSITION			
JC7515	carbide	1.950	CVD	$TiCN+Al_2O_3$	K	K05 K20	MTCVD special coating with extreme wear resistance. Recommended for grey cast iron machining at high cutting speed.
JC8520	carbide	1.640	CVD	$TiCN+Al_2O_3$	P K	P10 P20 K15 K25	High wear resistance on steel machining at high cutting speed, very good performance also in cast iron machining as a complementary solution.
JC9540	carbide	1.560	CVD	$TiCN+Al_2O_3$	M S	M25 M40 S20 S30	Tough substrate with high stability at high temperature. High wear resistance on stainless steel and HRSA machining.
JP5530	micrograin carbide	1.840	PVD	TiAlN	P M K	P20 P40 M25 M30 K25 K30	Universal grade mainly for steel application but also available for ISO M and ISO K machining.
JP5540	carbide	1.560	PVD	TiAlSiN	P M S	P35 P45 M30 M40 S20 S30	All-around solution with high reliability thanks to a special tough substrate with high stability at high temperature.
JP6525	micrograin carbide	1700	PVD	TiBCN	N	N05 N25	High performance coated grade for non-ferrous materials. Very low friction coefficient reduces adhesions and improves surface finishing.
JP7525	carbide	1.840	PVD	TiAlN	K	K15 K35	First choice for ISO K machining with a predictable long tool life. Perfect performance both on gray and nodular cast iron.
JP7615	carbide	1.840	PVD	TiAlN	K	K10 K20	A hard multilayered PVD coating for succesful milling of cast iron under stable conditions. Available only for RekPlus series, until stock exhaustion.
JP8625	micrograin carbide	1.600	PVD	TiAlN	P	P15 P25	Micrograin PVD grade for general machining of steel under various cutting conditions. Available only for RekPlus series, until stock exhaustion.
JP8725	micrograin carbide	1.840	PVD	AlCrN	P	P15 P30	First choiche for steel application. The new substrate contributes to a great performance increase compared to conventional products.
JP9535	micrograin carbide	1.640	PVD	TiAlN	M S	M20 M35 S15 S25	First choice for stainless steel machining under general cutting conditions. Also applicable on titanium thanks to a great stability at high temperature.
JP9635	micrograin carbide	1.640	PVD	TiAlN	M S	M20 M35 S15 S25	Micrograin PVD grade for general machining of stainless steel under various cutting conditions. Available only for RekPlus series, until stock exhaustion.
JP9545	carbide	1.560	PVD	TiAlSiN	M S	M35 M45 S25 S35	Ultra tough substrate with high stability at high temperature. Perfect choice for difficult to cut materials under sever cutting conditions.
JU4525	cermet	1.560	-	-	P	P05 P15	Uncoated cermet for high speed machining of steel. Optimum solution for finishing application under stable conditions.
JU6520	micrograin carbide	1.560	-	-	N	N10 N30	Uncoated grade for non-ferrous materials. The micrograin substrate toughness allows the production of very sharp ground cutting edges.
NAC200	Al_2O_3+TiCN	2.300	-	-	K H	K01 K20 H01 H20	Applicable for finishing application of cast iron and hardened steel in case of very stable cutting conditions.

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GRADE	SUBSTRATE	HARDNESS HV	COATING		APPLICATION		FEATURES
			TECHNOLOGY	COMPOSITION			
NBH450U	High volume CBN 95%	4.400	-	-	K	K01 K20	First choice for gray cast iron finishing at very high cutting condition and with great wear resistance.
NBH550U	High volume CBN 80%	3.500	-	-	K	K20 K30	First choice for gray cast iron roughing at very high cutting condition (until 2000 m/min). Productivity unattainable with conventional products.
NBH900U	High volume CBN 80%	3.500	-	-	H K	H25 H35 K25 K35	Universal grade for severe applications both on ISO K and ISO H materials. High reliability on roughing operations.
NBH950U	High volume CBN 90%	4.000	-	-	H K	H30 H35 K30 K35	Extreme toughness mainly for cast iron machining but appliable, as alternative grade, even on hardened steel.
ND120	diamond 95%	6.000	-	-	N	N10 N30	First choice for all-around application on non-ferrous materials.
ND150 new name: **NDP302**	diamond 95%	7.000	-	-	N	N05 N25	Multi-modal grade for a perfect balance between toughness and wear resistance. Good solution for high silicon aluminium and bi-metal applications.
NSA6000	SiAlON	1.800	-	-	S	S10 S30	First choice for heat resistant super alloys (HRSA) machining with variable cutting conditions. Perfect balance between toughness and wear resistance.
NSN350	Si_3N_4	1.700	-	-	K	K05 K20	High wear resistance for stable applications.
NSN400	Si_3N_4	1.700	-	-	K	K05 K30	First choice for roughing machining of gray cast iron even with interrupted cut.

MILLING Grade cross reference

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ISO 513		nikkoTOOLS		ISCAR		KENNAMETAL		KYOCERA		MITSUBISHI	
		carbide	cermet	carbide	cermet	carbide	cermet	carbide	cermet	carbide	cermet
P	P01 - P10	JC8520	JU4525	IC5400	IC30N		KTPK20		TN100M		
	P10 - P20	JC8520 JP5530 JP8725	JU4525	IC5400 IC5500 IC808	IC30N		KTPK20	PR1225 PR1525	TN100M PV60M	MC7020 MP6120 VP15TF	NX2525
	P20 - P30	JP5530 JP8725		IC5500 IC808 IC830		KCPK30 KC522M KC725M KCPM40		PR1225 PR1525		MP6130 VP20RT	NX4545
	P30 - P40	JP5540		IC330 IC830 IC845		KC725M KCPK30 KCPM40		PR1230 PR1535		MP6130 VP30RT	
M	M01 - M10				IC30N		KTPK20		TN100M PV60M		NX2525
	M10 - M20	JP9535		IC808	IC30N	KC522M		PR1525		VP15TF	NX4545
	M20 - M30	JC9540 JP9535		IC5820 IC380 IC830		KC522M KCPM40		CA6535 PR1525 PR1535		MC7020 MP7130 VP20RT	
	M30 - M40	JC9540 JP5540 JP9535 JP9545		IC5820 IC830 IC840 IC882		KC725M KCPM40 KCSM40		CA6535 PR1535		MP7140 VP30RT	
K	K01 - K10	JC7515 JC8520		IC5100	IC30N	KCK15	KTPK20	PR1210 PR1510	TN100M PV60M	MC5020	NX2525
	K10 - K20	JC7515 JC8520 JP7525 JP7615		IC5100 IC810		KCK15 KCK20		CA420M PR1210 PR1510		MC5020 MP8010	
	K20 - K30	JP7525		IC810		KCK20 KCPK30		CA420M PR1210 PR1510		VP15TF	
N	N01 - N10	JP6525	-		-	KC410M	-	KW10	-		-
	N10 - N20	JP6525 JU6525	-	IC28	-	KC410M K313	-	KW10 GW25	-	HTI10 LC15TF	-
	N20 - N30	JU6525	-	IC28	-	KC422M	-	GW25	-	TF15	-
S HRSA	S01 - S10	JC9540 JP5540	-	IC808	-		-		-		-
	S10 - S20	JP9535 JP9635	-	IC830	-	KC522M KCSM30	-	CA6535 PR1535	-	MP9120	-
	S20 - S30	JC9540 JP5540	-	IC380 IC840	-	KC725M KCSM40	-	CA6535 PR1535	-	MP9130 VP15TF	-
S TITANIUM	S01 - S10		-		-		-		-		-
	S10 - S20	JP6525 JP9535 JU6520	-	IC28 IC808	-	KCSM30	-	GW25 PR1535	-	MP9120	-
	S20 - S30	JP9535	-	IC28 IC808	-	KCSM30 KCSM40	-	PR1535	-	MP9130 VP15TF	-

BLACK: CVD, UNDERLINED: PVD, RED: uncoated

MILLING Grade cross reference

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SANDVIK		SECO		SUMITOMO		TAEGUTEC		TUNGALOY		WALTER	
carbide	cermet	carbide	cermet	carbide	cermet	carbide	cermet	carbide	cermet	carbide	cermet
GC1010	CT530	MP1501	MP1020	ACP100	T2500A	TT2510	CT7000	AH110 AH710	NS740		
GC1130 GC4220	CT530	MP1501	MP1020	ACP100 ACP200	T2500A	TT7080	CT7000	AH725 T3225	NS740	WKP25S	
GC1130 GC4330		MP2501 MP3000 F40M		ACP200 ACP300 ACU2500		TT7080 TT8080		AH130 AH725 T3130 T3225		WKP25S WKP35G	
GC4340		F40M MM4500 T350M		ACP300		TT8080 TT8020 TT8525B		AH140 AH3135 T3130		WKP35G WSP45S	
	CT530		MP1020		T2500A		CT7000		NS740		
		MS2050		ACM200 ACU2500		TT9030 TT9080		AH725			
GC2030		F40M MP2050 MS2050		ACM200 ACP300		TT9080 TT8080		AH130 AH725 T3130 T3225		WSM35S	
GC1040 GC2040		F40M MP2050 MM4500 T350M		ACM300 ACP300		TT8080 TT8020		AH140 AH3135		WSM45X WSM35S WSP45S	
GC3220	CT530	MK1500	MP1020	ACK200	T2500A	TT2510	CT7000	T1115 T1215	NS740	WAK15	
GC1020 GC3220 GC3330		MK1500 MK2050 MP1501		ACK2000 ACK3000		TT6080 TT7515		AH120 T1115 T1215		WKP25S WKK25S	
GC1020 GC3040		MK2050		ACK3000		TT6080		AH120		WKP35S WKK25S	
H10	-	H15	-		-	K10	-	KS05F TH10	-	WK10	-
H10	-	H15	-	H20	-	K10	-	KS05F TH10	-	WK10 WXN15	-
	-	H25	-	H20	-		-		-		-
	-		-		-		-	AH120	-		-
GC1130 S30T	-	MS2500	-	ACM200	-	TT9540	-	AH725	-	WSM35S	-
S40T	-	MS2050 F40M	-	ACM300	-	TT9540	-		-	WSM45X	-
	-		-		-		-	AH120	-	WK10	-
GC1130 S30T	-	MS2500	-	ACM200	-	K10	-	AH725	-	WK10 WSM35S	-
S40T	-	MS2050 F40M	-	ACM300	-	TT3540	-		-	WSM45X	-

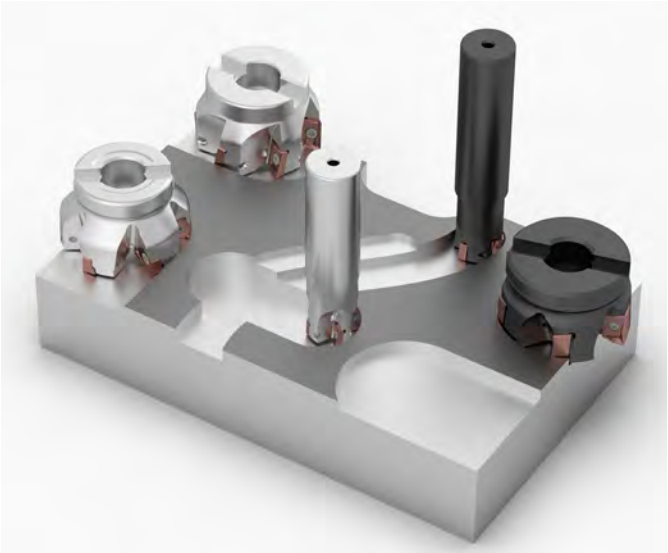
This table is our own estimation based on information available to the public and is not authorized by the company mentioned on it.

A - TURNING
B - THREADING
C - GROOVING
D - MILLING
E - DRILLING
F - ACCESSORIES
G - SPARE PARTS

SHOULDERING

quick guide D12

REKPLUS	P M K N S	D14
DOUBLEREK	P M K	D23
DOUBLE3GON	P M K N S	D29
ISO APKT	P M N	D42
ALUREK	N	D37



FACING

quick guide D46

4FACEPLUS	P M K N S	D48
OKTOPLUS	P M K N S	D55
DOUBLE4FACE	P M K N S	D62
ISO SEHX	P K N	D72
DOUBLEHEX	K	D67

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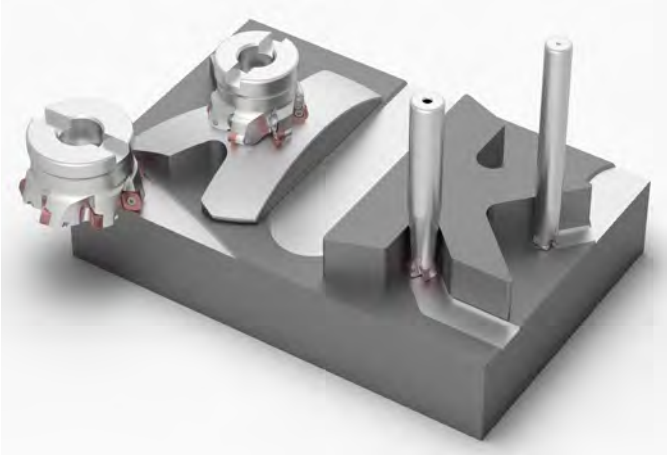
HIGH FEED PROFILING

quick guide D76

quick guide D86

HF4PLUS	P M K S	D77
ROUNDPLUS	P M K S	D87



CHAMFERING

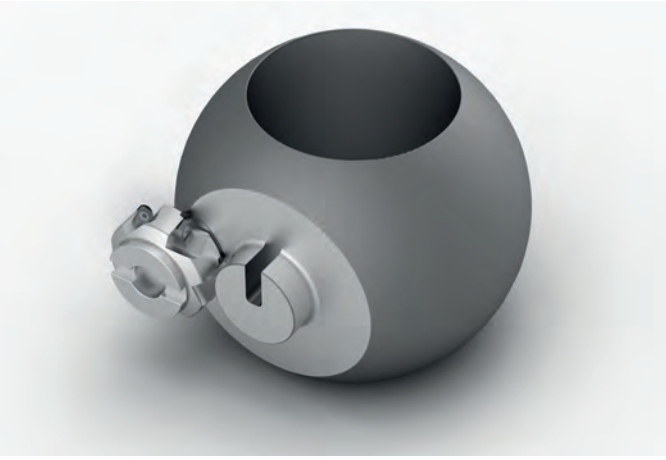
quick guide D100

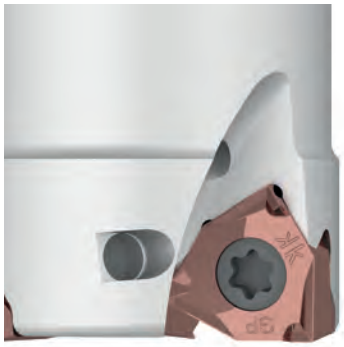
CHAMFERSQUARE	P M K N	D101

ADVANCED

quick guide D106

TANGENTIAL	K	D110
SQUARE SERIES	K	D114
XP SERIES	K N	D112
ROUND SERIES	S H	D108





MILLING Shouldering

Quick guide .D12

REKPLUS .D14
DOUBLEREK .D23
DOUBLE3GON .D29
ALUREK .D37
ISO APKT .D42

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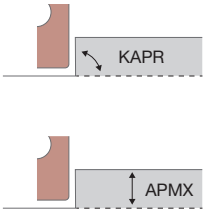

	REKPLUS	DOUBLEREK	DOUBLE3CON
	D14	D23	D29
	SCREW-IN	SCREW-IN	SCREW-IN
	CYLINDRICAL	CYLINDRICAL	CYLINDRICAL
	ARBOR	ARBOR	ARBOR
KAPR	90°	90°	90°
Insert sizes	11 / 16	10 / 17	04 / 08
APMX	8 / 15	7 / 15	3 / 7
Tool diameter	Ø16 - Ø100	Ø16 - Ø125	Ø20 - Ø160
Coolant holes	✓	✓	✓
Workpiece material	P M K N S	P M K	P M K N S
No. of cutting edges	2	4	6
No. of geometries	5	2	4
Special features	cylindrical 10xD cutters		
Side Milling	✓	✓	✓
Slotting	✓	✓	✓
Face Milling	✓	✓	✓
Ramping	✓	✗	✗
Helical Interpolation	✓	✗	✗
Machine load	■■■□□	■■■□□	■■■□□
Strength	■■■■□	■■■■■	■■■□□
Precision	■■■■□	■■■■□	■■■■■
Finishing	■■■□□	■■■■■	■■■■□
Range	■■■■□	■■■□□	■■■□□

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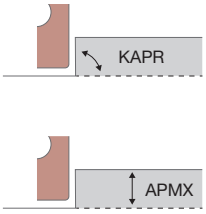
	ALUREK	ISO APKT
	D37	D42
	SCREW-IN CYLINDRICAL ARBOR	Only insert is available.
KAPR	90°	90°
Insert sizes	19	10 / 16
APMX	19	9 / 15
Tool diameter	Ø25 - Ø50	-
Coolant holes	✓	-
Workpiece material	N	P M N
No. of cutting edges	2	2
No. of geometries	1	2
Special features	PVD coated grade for non-ferrous materials	-
Side Milling	✓	✓
Slotting	✓	✓
Face Milling	✓	✓
Ramping	✓	✓
Helical Interpolation	✓	✗
Machine load	■□□□□	■■■■□
Strenght	■■■□□	■■■□□
Precision	■■■■□	■■■□□
Finishing	■■■■□	■■■□□
Range	■■□□□	■□□□□

REKPLUS

Versatile shoulder milling cutters capable of ramping for diverse application

APPLICATION

- Shoulder milling
- Long overhang milling
- Profiling and Pocketing
- Linear and helical ramping

ISO APPLICATION FIELDS

P M K N S

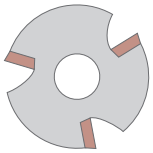
ADVANTAGES AND CHARACTERISTICS

- Inserts of helical geometry type can produce high precision 90°.
- The straight geometries are suitable for roughing without special finishing needs and ensure excellent competitiveness.
- Extremely complete range of cutter bodies with cylindrical shank (Weldon also available), both with standard and 10xD lengths, with threaded connection plus 10xD extensive sleeves, all with internal cooling.

Cutter bodies

- Arbor type
- Cylindrical type (up to 10xD)
- Screw-in type
- Extension sleeves (steel/carbide 10xD)
- From D16 to D100

Extension arbors



Coarse pitch

Fine pitch

Inserts

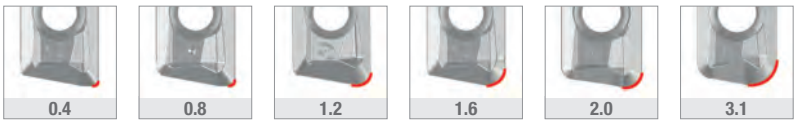
- 2 cutting edges
- Edge length 11 and 16
- Cemented carbide grades with CVD and PVD coatings
- Geometries: HSC, HGP, GP, TE, AL.

HSC P M S

SIZE
11 16

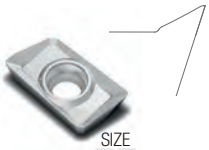
HGP P M K

SIZE
11 16



Helical geometries are available with a wide range of radii.

GP P M K



SIZE
11 16

TE P K

SIZE
11 16

AL N

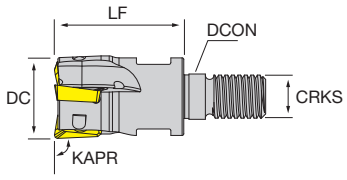
SIZE
11 16

NT-RKP

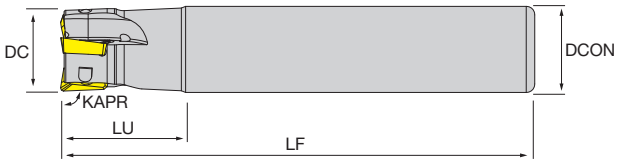
RekPlus

- Positive type precision shoulder milling system, with coolant through
- Tolerance of tool diameter (with Nikko inserts installed) 0/-0.2
- 10xD cylindrical body and screw-in type for applications that need long-overhang
- High-Quality Swiss screws available to guarantee your machining process

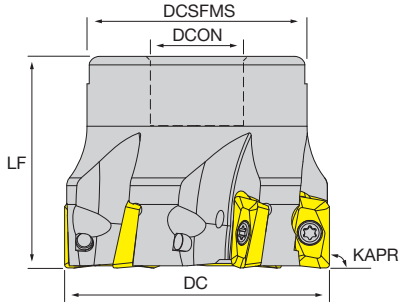
Screw-in



Cylindrical



Arbor



Designation	Stock	DC	CICT	DCON	LF	LU	DCSFMS	CRKS	KAPR	WT	MIID
SCREW-IN											
NT-RKP11 D016-M08-Z02	●	16	2	8.5	25	-	-	M8	90°	0.03 Kg	NT-RKP11
NT-RKP11 D020-M10-Z03	●	20	3	10.5	38	-	-	M10	90°	0.07 Kg	NT-RKP11
NT-RKP11 D025-M12-Z03	●	25	3	12.5	38	-	-	M12	90°	0.12 Kg	NT-RKP11
NT-RKP11 D025-M12-Z04	●	25	4	12.5	38	-	-	M12	90°	0.11 Kg	NT-RKP11
NT-RKP11 D032-M16-Z04	●	32	4	17	43	-	-	M16	90°	0.23 Kg	NT-RKP11
NT-RKP11 D032-M16-Z05	●	32	5	17	43	-	-	M16	90°	0.22 Kg	NT-RKP11
NT-RKP16 D025-M12-Z02	●	25	2	12.5	38	-	-	M12	90°	0.11 Kg	NT-RKP16
NT-RKP16 D032-M16-Z03	●	32	3	17	43	-	-	M16	90°	0.19 Kg	NT-RKP16
NT-RKP16 D040-M16-Z04	●	40	4	17	43	-	-	M16	90°	0.24 Kg	NT-RKP16
CYLINDRICAL											
NT-RKP11 D016-S16-Z02	●	16	2	16	100	25	-	-	90°	0.13 Kg	NT-RKP11
NT-RKP11 D020-S20-Z03	●	20	3	20	110	30	-	-	90°	0.23 Kg	NT-RKP11
NT-RKP11 D025-S25-Z03	●	25	3	25	120	35	-	-	90°	0.41 Kg	NT-RKP11
NT-RKP11 D025-S25-Z04	●	25	4	25	120	35	-	-	90°	0.40 Kg	NT-RKP11
NT-RKP11 D032-S32-Z04	●	32	4	32	130	35	-	-	90°	0.74 Kg	NT-RKP11
NT-RKP11 D032-S32-Z05	●	32	5	32	130	35	-	-	90°	0.73 Kg	NT-RKP11
NT-RKP16 D025-S25-Z02	●	25	2	25	120	35	-	-	90°	0.40 Kg	NT-RKP16
NT-RKP16 D032-S32-Z03	●	32	3	32	130	45	-	-	90°	0.71 Kg	NT-RKP16
CYLINDRICAL - LONG TYPE (10XD)											
NT-RKP11 D016-S15-Z02-L	●	16	2	15	160	25	-	-	90°	0.19 Kg	NT-RKP11
NT-RKP11 D016-S16-Z02-L	●	16	2	16	160	25	-	-	90°	0.21 Kg	NT-RKP11
NT-RKP11 D017-S16-Z02-L	●	17	2	16	170	25	-	-	90°	0.23 Kg	NT-RKP11
NT-RKP11 D020-S19-Z03-L	●	20	3	19	200	30	-	-	90°	0.39 Kg	NT-RKP11
NT-RKP11 D020-S20-Z03-L	●	20	3	20	200	30	-	-	90°	0.43 Kg	NT-RKP11
NT-RKP11 D021-S20-Z03-L	●	21	3	20	210	30	-	-	90°	0.46 Kg	NT-RKP11

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Designation	Stock	DC	CICT	DCON	LF	LU	DCSFMS	CRKS	KAPR	WT	MIID
NT-RKP11 D025-S24-Z03-L	●	25	3	25	250	35	-	-	90°	0.82 Kg	NT-RKP11
NT-RKP11 D025-S25-Z03-L	●	25	3	25	250	35	-	-	90°	0.89 Kg	NT-RKP11
NT-RKP11 D026-S25-Z03-L	●	26	3	25	260	35	-	-	90°	0.94 Kg	NT-RKP11
CYLINDRICAL - REDUCED SHANK											
NT-RKP11 D020-S16-Z03	●	20	3	16	110	30	-	-	90°	0.15 Kg	NT-RKP11
NT-RKP11 D025-S20-Z03	●	25	3	20	120	35	-	-	90°	0.28 Kg	NT-RKP11
NT-RKP11 D028-S25-Z04	○	28	4	25	120	35	-	-	90°	-	NT-RKP11
NT-RKP11 D030-S25-Z04	○	30	4	25	130	35	-	-	90°	-	NT-RKP11
NT-RKP11 D032-S25-Z04	●	32	4	25	130	35	-	-	90°	0.49 Kg	NT-RKP11
NT-RKP16 D040-S32-Z04	●	40	4	32	150	45	-	-	90°	0.89 Kg	NT-RKP16
CYLINDRICAL - WELDON CONNECTION											
NT-RKP11 D016-W16-Z02	●	16	2	16	80	25	-	-	90°	0.10 Kg	NT-RKP11
NT-RKP11 D020-W20-Z03	●	20	3	20	90	30	-	-	90°	0.18 Kg	NT-RKP11
NT-RKP11 D025-W25-Z04	●	25	4	25	100	35	-	-	90°	0.32 Kg	NT-RKP11
ARBOR											
NT-RKP11 D032-F16-Z04	●	32	4	16	40	-	28	-	90°	0.11 Kg	NT-RKP11
NT-RKP11 D040-F16-Z05	●	40	5	16	40	-	35	-	90°	0.22 Kg	NT-RKP11
NT-RKP11 D040-F16-Z06	●	40	6	16	40	-	35	-	90°	0.20 Kg	NT-RKP11
NT-RKP11 D050-F22-Z05	●	50	5	22	40	-	40	-	90°	0.33 Kg	NT-RKP11
NT-RKP11 D050-F22-Z07	●	50	7	22	40	-	46	-	90°	0.37 Kg	NT-RKP11
NT-RKP11 D063-F22-Z06	●	63	6	22	40	-	50	-	90°	0.59 Kg	NT-RKP11
NT-RKP11 D063-F22-Z08	●	63	8	22	40	-	50	-	90°	0.57 Kg	NT-RKP11
NT-RKP11 D080-F27-Z07	●	80	7	27	50	-	60	-	90°	1.21 Kg	NT-RKP11
NT-RKP11 D080-F27-Z10	●	80	10	27	50	-	60	-	90°	1.07 Kg	NT-RKP11
NT-RKP16 D040-F16-Z04	●	40	4	16	40	-	35	-	90°	0.19 Kg	NT-RKP16
NT-RKP16 D040-F16-Z05	●	40	5	16	40	-	35	-	90°	0.18 Kg	NT-RKP16
NT-RKP16 D050-F22-Z04	●	50	4	22	40	-	40	-	90°	0.29 Kg	NT-RKP16
NT-RKP16 D050-F22-Z05	●	50	5	22	40	-	40	-	90°	0.27 Kg	NT-RKP16
NT-RKP16 D063-F22-Z05	●	63	5	22	40	-	50	-	90°	0.53 Kg	NT-RKP16
NT-RKP16 D063-F22-Z06	●	63	6	22	40	-	50	-	90°	0.51 Kg	NT-RKP16
NT-RKP16 D080-F27-Z06	●	80	6	27	50	-	60	-	90°	1.09 Kg	NT-RKP16
NT-RKP16 D080-F27-Z08	●	80	8	27	50	-	60	-	90°	1.06 Kg	NT-RKP16
NT-RKP16 D100-F32-Z07	●	100	7	32	50	-	80	-	90°	1.90 Kg	NT-RKP16
NT-RKP16 D100-F32-Z09	●	100	9	32	50	-	80	-	90°	1.85 Kg	NT-RKP16

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Spare parts	Insert screws	Flag wrenches
NT-RKP11 Dooo-ooo-Zoo	NT-ST25056T08HQ	NT-FTB08
NT-RKP16 Dooo-ooo-Zoo	NT-ST40095T15HQ	NT-FTB15

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NT-RKP

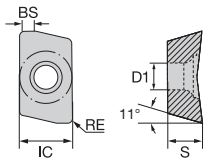
RekPlus

- HGP and HSC are high precision helical type geometries, better guarantee your shouldering precision
- GP, TE and SC are economical straight type geometries
- Available in different radii besides R0.8, such as R0.4, 1.2, 1.6, 2.0, 3.1
- Available with cermet and diverse carbide grades covering PMKNS applications
- Aluminum type available with different radius. For more possibilities for non ferrous materials, please go to AluRek series
- For H materials please go to advanced milling chapter

HC: Coated carbide
HF: Micrograin carbide
HT: Cermet
CVD: Chemical vapour deposition
PVD: Physical vapour deposition

		HC CVD	HF PVD	HF PVD	HF PVD	HF PVD	HF PVD	HF PVD	HF PVD	HF PVD	HF PVD	HT	HF
		JC7515	JP5520	JP5530	JP5540	JP7525	JP7615	JP8625	JP8725	JP9535	JP9635	JU4525	JU6520
Stable machining, light cut	● 1st choice ○ suitable	●	○				○	○	○			●	●
General machining, medium cut	● 1st choice ○ suitable	●	●	●	○	●	●	●	●	●	●		●
Unstable machining, heavy cut	● 1st choice ○ suitable			○	●	●				●	●		

Dimensions

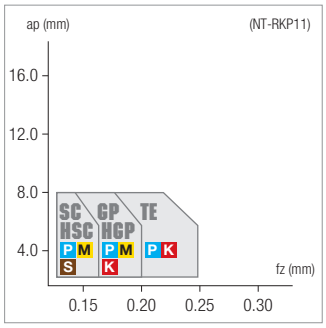


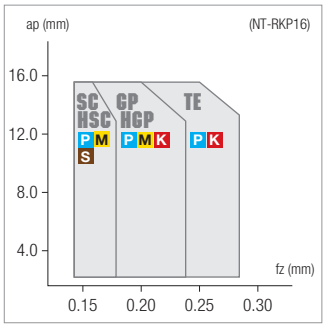
2 edges

ISO	JC7515	JP5520	JP5530	JP5540	JP7525	JP7615	JP8625	JP8725	JP9535	JP9635	JU4525	JU6520
	Vc(m/min) - suggested cutting speed range (bold: 1st choice)											
P		100 260	100 260	80 220			100 260	100 280			130 300	
M		60 180	60 180	60 180					80 200	80 180		
K	180 360				140 300	140 300						
N												300 1100
S				20 50					20 60	20 50		
H												

	Designation		RE	IC	S	D1	BS	JC7515	JP5520	JP5530	JP5540	JP7525	JP7615	JP8625	JP8725	JP9535	JP9635	JU4525	JU6520
GENERAL	HGP P M K helical type all-around application	NT-RKP11R04M-HGP	0.4	6.35	3.5	2.8	1.2							●			●		
		NT-RKP11R08M-HGP	0.8	6.35	3.5	2.8	0.7				●		●	●	●				
		NT-RKP11R12M-HGP	1.2	6.35	3.5	2.8	0.5							●			●		
		NT-RKP11R16M-HGP	1.6	6.35	3.5	2.8	-							●			●		
		NT-RKP16R08M-HGP	0.8	9.525	4.76	4.5	0.7				▲		●	●	▲		●		
		NT-RKP16R12M-HGP	1.2	9.525	4.76	4.5	0.5							●			●		
		NT-RKP16R16M-HGP	1.6	9.525	4.76	4.5	-							●			●		
		NT-RKP16R20M-HGP	2	9.525	4.76	4.5	-							●			●		
		NT-RKP16R31M-HGP	3.1	9.525	4.76	4.5	-							●			●		
GENERAL	GP P M K	NT-RKP11R08M-GP	0.8	6.35	3.5	2.8	1.9	▽		●		○			●	●		●	
		NT-RKP16R08M-GP	0.8	9.525	4.76	4.5	2	▽		●		○			●	●		●	
LOW FORCE	HSC P M S helical type low cutting force	NT-RKP11R04M-HSC	0.4	6.35	3.5	2.8	1.2							●			●		
		NT-RKP11R08M-HSC	0.8	6.35	3.5	2.8	0.7				●				●		●		
		NT-RKP11R12M-HSC	1.2	6.35	3.5	2.8	0.5							●			●		
		NT-RKP16R08M-HSC	0.8	9.525	4.76	4.5	0.7				▲			●	▲		●		
		NT-RKP16R12M-HSC	1.2	9.525	4.76	4.5	0.5							●			●		
LOW FORCE	SC P M S	NT-RKP11R08M-SC	0.8	6.35	3.5	2.8	1.9		▽	▽									
		NT-RKP16R08M-SC	0.8	9.525	4.76	4.5	2		▽							▽			

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion



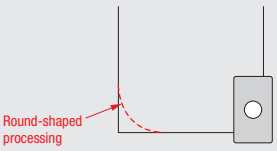


UPCOMING GRADES UPDATE (only for helical type)

OLD		NEW
JP8625	▶	JP8725
JP9635	▶	JP9535 JP5540
JP7615	▶	JP7525

MODIFICATION OF THE CUTTER BODY

When using inserts with corner radius larger than 1.6 mm the cutter body must be modified



NT-RKP

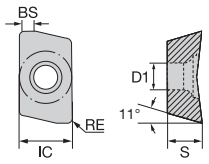
RekPlus

- HGP and HSC are high precision helical type geometries, better guarantee your shouldering precision
- GP, TE and SC are economical straight type geometries
- Available in different radii besides R0.8, such as R0.4, 1.2, 1.6, 2.0, 3.1
- Available with cermet and diverse carbide grades covering PMKNS applications
- Aluminum type available with different radius. For more possibilities for non ferrous materials, please go to AluRek series
- For H materials please go to advanced milling chapter

HC: Coated carbide
HF: Micrograin carbide
HT: Cermet
CVD: Chemical vapour deposition
PVD: Physical vapour deposition

	HC CVD	HF PVD	HF PVD	HF PVD	HF PVD	HF PVD	HF PVD	HF PVD	HF PVD	HF PVD	HT	HF
	JC7515	**JP5520**	**JP5530**	**JP5540**	**JP7525**	**JP7615**	**JP8625**	**JP8725**	**JP9535**	**JP9635**	**JU4525**	**JU6520**
Stable machining, light cut (● 1st choice, ○ suitable)	●	○				○	○	○			●	●
General machining, medium cut (● 1st choice, ○ suitable)	●	●	●	○	●	●	●	●	●	●		●
Unstable machining, heavy cut (● 1st choice, ○ suitable)			○	●	●				●	●		

Dimensions



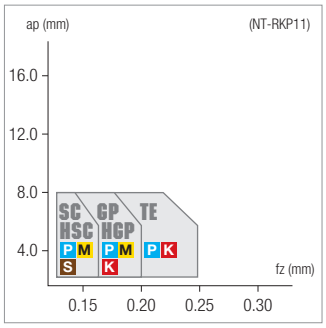
2 edges

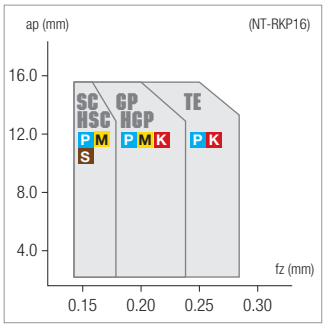
Vc(m/min) - suggested cutting speed range (bold: 1st choice)

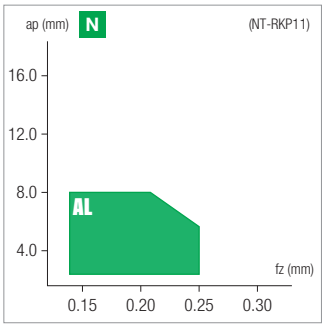
ISO	JC7515	JP5520	JP5530	JP5540	JP7525	JP7615	JP8625	JP8725	JP9535	JP9635	JU4525	JU6520
P		100 260	100 260	80 220			100 260	100 280			130 300	
M		60 180	60 180	60 180					80 200	80 180		
K	180 360				140 300	140 300						
N												300 1100
S				20 50					20 60	20 50		
H												

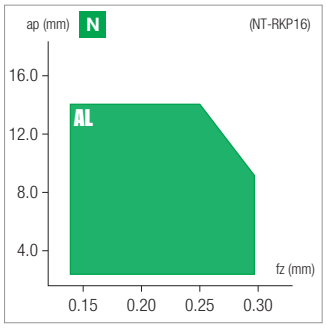
	Designation	RE	IC	S	D1	BS	JC7515	JP5520	JP5530	JP5540	JP7525	JP7615	JP8625	JP8725	JP9535	JP9635	JU4525	JU6520
REINFORCED TE P K	NT-RKP11R08M-TE	0.8	6.35	3.5	2.8	1.9			●		○			●				
	NT-RKP16R08M-TE	0.8	9.525	4.76	4.5	2.2			○		○			●				
ALUMINIUM AL N	NT-RKP11R04G-AL	0.4	6.35	3.5	2.8	1.9												●
	NT-RKP11R08G-AL	0.8	6.35	3.5	2.8	1.9												●
polished surface, periphery ground	NT-RKP16R08G-AL	0.8	9.525	4.76	4.5	2.2												●

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion









MILLING Parameters - cutting speed · REKPLUS

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ISO 513	MATERIAL	HARDNESS HB	ae/DC	JP5530 min	JP5530 start	JP5530 max	JP5540 min	JP5540 start	JP5540 max	JP8625 min	JP8625 start	JP8625 max
P1 - P2	Free cutting steel and low carbon (ex. 1.0715/9 smn 28/avp, 1.0503/c45)	≤ 200	100%	100	**140**	180	80	**120**	160	100	**140**	180
			30%	160	**200**	240	120	**160**	200	160	**200**	240
			10%	220	**240**	260	180	**200**	220	220	**240**	260
P3 - P4	Medium and high alloy steel (ex. 1.7225/42 CrMo 4, 1.3505/100 Cr 6)	200 ÷ 300	100%	80	**120**	160	60	**100**	140	80	**120**	160
			30%	120	**160**	200	100	**140**	180	120	**160**	200
			10%	180	**200**	220	160	**180**	200	180	**200**	220
P5 - P6	High tensile strength and tool steel (ex. 1.2344/X 40 CrMoV 5 1/ORVAR, Hardox400®)	300 ÷ 400	100%	60	**90**	120				60	**90**	120
			30%	100	**130**	160				100	**130**	160
			10%	140	**170**	200				140	**170**	200
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JP5530 min	JP5530 start	JP5530 max	JP5540 min	JP5540 start	JP5540 max	JP9535 min	JP9535 start	JP9535 max
P7	Ferritic and martensitic stainless steel (ex. 1.4021/X 20 Cr 13/AISI420)	≤ 200	100%	60	**100**	140	60	**100**	140	80	**120**	160
			30%	80	**130**	180	80	**130**	180	100	**150**	200
			10%	100	**160**	220	100	**160**	220	120	**180**	240
P8	Precipitation hardening stainless steel (ex. 1.4548/X 5 CrNiCuNb 17 4/17-4-PH)	≤ 450	100%				50	**80**	110	60	**90**	120
			30%				60	**90**	120	70	**100**	130
			10%				70	**100**	130	80	**110**	140
M1	Austenitic stainless steel (ex. 1.4305/X 10 CrNiS 18 9/AISI303)	> 200	100%	60	**90**	120	60	**90**	120	80	**110**	140
			30%	80	**120**	160	80	**120**	160	100	**140**	180
			10%	100	**140**	180	100	**140**	180	120	**160**	200
M2 - M3	Austenitic and Duplex stainless steel (ex. 1.4401/X 5 CrNiMo 17 12 2/AISI316)		100%				60	**90**	120	70	**100**	130
			30%				70	**100**	130	80	**110**	140
							80	**110**	140	90	**120**	150
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JP7525 min	JP7525 start	JP7525 max	JP7615 min	JP7615 start	JP7615 max			
K1	Grey cast iron (ex. 0.6025/GG 25/EN-GJL-250)	150 ÷ 250	100%	140	**180**	220	140	**180**	220			
			30%	160	**210**	260	160	**210**	260			
			10%	180	**240**	300	180	**240**	300			
K2	Nodular cast iron (ex. 0.7050/GGG 50/EN-GJS-500-7)	150 ÷ 350	100%	100	**140**	180	100	**140**	180			
			30%	120	**170**	220	120	**170**	220			
			10%	140	**200**	260	140	**200**	260			
K3 - K4	Austenitic and ADI cast iron (ex. 0.6660/GGL-NiCr 20 2/Ni-Resist 2, GJS-1000-5/ ADI1000)	250 ÷ 500	100%	90	**120**	150	90	**120**	150			
			30%	120	**150**	180	120	**150**	180			
			10%	150	**180**	210	150	**180**	210			
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JU6520 min	JU6520 start	JU6520 max						
N1	Aluminium alloys ≤ Si 12% (ex. 3.4365/AlZn5.5MgCu/ERGAL)		100%	300	**400**	500						
			30%	400	**600**	800						
			10%	500	**800**	1100						
N2	Aluminium alloys Si > 12% (ex. 3.2382/G-AlSi12)		100%	200	**250**	300						
			30%	300	**350**	400						
			10%	400	**450**	500						
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JP5540 min	JP5540 start	JP5540 max	JP9535 min	JP9535 start	JP9535 max	JP9635 min	JP9635 start	JP9635 max
S1 - S2 - S3	Fe/Ni/Co based heat resistant alloys (ex. Hastelloy, Inconel 625, Inconel 718)		100%	20	**25**	30	20	**30**	40	20	**25**	30
			30%	30	**35**	40	30	**40**	50	30	**35**	40
			10%	40	**45**	50	40	**50**	60	40	**45**	50
S4 - S5	Titanium alloys (ex. TiAl2Sn4Zr2MoSi)		100%	30	**40**	50	40	**50**	60	30	**40**	50
			30%	40	**50**	60	50	**60**	70	40	**50**	60
			10%	50	**60**	70	60	**70**	80	50	**60**	70

ae: radial depth of cut; DC: milling cutter diameter

Complete workpiece materials p. **H**1.

JP8725			JU4525						
min	start	max	min	start	max				
100	**150**	200	130	**180**	230				
160	**210**	260	200	**240**	280				
220	**250**	280	260	**280**	300				
90	**130**	170	120	**150**	180				
130	**170**	210	180	**210**	240				
190	**210**	230	230	**250**	270				
80	**110**	140	90	**120**	150				
120	**150**	180	150	**180**	210				
160	**190**	220	190	**220**	250				
JP9635									
min	start	max							
80	**110**	140							
100	**140**	180							
120	**170**	220							
60	**80**	100							
70	**90**	110							
80	**100**	120							
80	**100**	120							
100	**130**	160							
120	**150**	180							
70	**90**	110							
80	**100**	120							
90	**110**	130							

Complete workpiece materials p. **H**1.

MILLING Parameters - depth of cut and feed rate · REKPLUS

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DESIGNATION	ae/DC	DEPTH OF CUT			FEED RATE		
		ap (mm)			fz (mm)		
		min	start	max	min	start	max
NT-RKP11RooM-HGP	100%	1.00	**2.50**	4.00	0.06	**0.09**	0.12
	30%	1.00	**4.50**	8.00	0.08	**0.11**	0.14
	10%	1.00	**4.50**	8.00	0.10	**0.15**	0.20
NT-RKP16RooM-HGP	100%	1.00	**4.00**	7.00	0.10	**0.13**	0.16
	30%	1.00	**8.00**	15.00	0.12	**0.16**	0.20
	10%	1.00	**8.00**	15.00	0.16	**0.20**	0.24
NT-RKP11RooM-HSC	100%	1.00	**2.50**	4.00	0.04	**0.07**	0.10
	30%	1.00	**4.50**	8.00	0.06	**0.09**	0.12
	10%	1.00	**4.50**	8.00	0.08	**0.12**	0.16
NT-RKP16RooM-HSC	100%	1.00	**4.00**	7.00	0.06	**0.10**	0.14
	30%	1.00	**8.00**	15.00	0.10	**0.13**	0.16
	10%	1.00	**8.00**	15.00	0.12	**0.15**	0.18

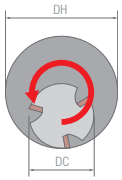
DESIGNATION	ae/DC	DEPTH OF CUT			FEED RATE		
		ap (mm)			fz (mm)		
		min	start	max	min	start	max
NT-RKP11R08M-GP	100%	1.00	**2.50**	4.00	0.06	**0.09**	0.12
	30%	1.00	**4.50**	8.00	0.08	**0.11**	0.14
	10%	1.00	**4.50**	8.00	0.10	**0.15**	0.20
NT-RKP16R08M-GP	100%	1.00	**4.00**	7.00	0.10	**0.13**	0.16
	30%	1.00	**8.00**	15.00	0.12	**0.16**	0.20
	10%	1.00	**8.00**	15.00	0.16	**0.20**	0.24
NT-RKP11R08M-SC	100%	1.00	**2.50**	4.00	0.04	**0.07**	0.10
	30%	1.00	**4.50**	8.00	0.06	**0.09**	0.12
	10%	1.00	**4.50**	8.00	0.08	**0.12**	0.16
NT-RKP16R08M-SC	100%	1.00	**4.00**	7.00	0.06	**0.10**	0.14
	30%	1.00	**8.00**	15.00	0.10	**0.13**	0.16
	10%	1.00	**8.00**	15.00	0.12	**0.15**	0.18
NT-RKP11R08M-TE	100%	1.00	**2.50**	4.00	0.08	**0.11**	0.14
	30%	1.00	**4.50**	8.00	0.10	**0.14**	0.18
	10%	1.00	**4.50**	8.00	0.12	**0.17**	0.22
NT-RKP16R08M-TE	100%	1.00	**4.00**	7.00	0.12	**0.15**	0.18
	30%	1.00	**8.00**	15.00	0.14	**0.18**	0.22
	10%	1.00	**8.00**	15.00	0.18	**0.23**	0.28
NT-RKP11RooG-AL	100%	1.00	**2.50**	4.00	0.08	**0.14**	0.20
	30%	1.00	**4.50**	8.00	0.10	**0.17**	0.24
	10%	1.00	**4.50**	8.00	0.12	**0.20**	0.28
NT-RKP16RooG-AL	100%	1.00	**4.00**	7.00	0.11	**0.18**	0.25
	30%	1.00	**8.00**	15.00	0.14	**0.22**	0.30
	10%	1.00	**8.00**	15.00	0.16	**0.25**	0.34

Parameters for ramping

NT-RKP11			NT-RKP16		
DC	RMPX	L	DC	RMPX	L
16	4.2°	10.8	25	5.0°	9.0
17	3.9°	11.5	32	1.7°	24.3
20	2.9°	15.4	40	1.1°	36.5
21	2.7°	16.6			
25	2.0°	21.5			
26	1.9°	22.4			
32	1.4°	29.5			
40	1.0°	39.3			

RMPX: max. ramping angle; L: max. ramping path

Parameters for helical milling



NT-RKP11 R0.4			NT-RKP11 R0.8/1.2/1.6					
DC	DH min.	DH max.	DC	DH min.	DH max.			
16	20	32	16	21	31			
17	22	34	17	23	33			
20	28	40	20	29	39			
21	30	42	21	31	41			
25	38	50	25	39	49			
26	40	52	26	41	51			
32	52	64	32	53	63			
40	68	80	40	69	79			
NT-RKP16 R0.8			NT-RKP16 R1.2/1.6/2.0			NT-RKP16 R3.1		
DC	DH min.	DH max.	DC	DH min.	DH max.	DC	DH min.	DH max.
25	32	49	25	33	49	25	35	47
32	46	63	32	47	63	32	49	61
40	62	79	40	63	79	40	65	77

DH min.: min. cutting dia.; DH max.: max. cutting dia.

nikkoTOOLS

DOUBLEREK

High productivity high precision double sided shoulder milling system

APPLICATION

· Shoulder milling
· Shoulders with repeated passes
· Long overhang shoulder milling

ISO APPLICATION FIELDS

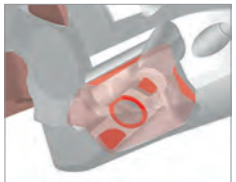
P M K

ADVANTAGES AND CHARACTERISTICS

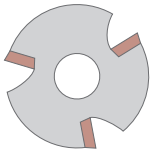
· Available in big and small dimensions allow axial removals up to 15 mm.
· Super positive rake with helical geometry, extremely smooth cutting action.
· Fully ground inserts for precision machining and excellent finishes.
· Thickness greater than conventional inserts of the same size ensures better heat dissipation and excellent mechanical strength
· Secure and reliable installation guarantees better precision especially at tough conditions

Cutter bodies

· Arbor type
· Cylindrical type
· Screw-in type
· Extension sleeves (steel/carbide 10xD)
· From D16 to D125



Precise and stable positioning



Coarse pitch

Fine pitch

Inserts

· 4 cutting edges
· Edge length 10 and 17
· Cemented carbide grades with CVD and PVD coatings
· Geometries: GP, TE

GP P M K

SIZE
10 17

TE P K

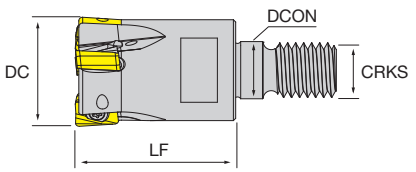
SIZE
17

NT-DRK

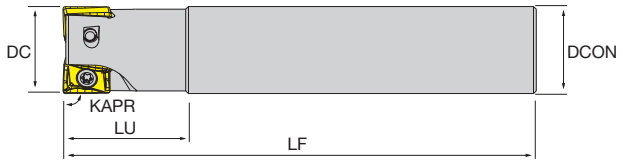
DoubleRek

- Double-sided precision shoulder milling system, with coolant through
- Low resistance robust helical shoulder milling system, provides precision, good surface and reliability
- Tolerance of tool diameter (with Nikko inserts installed) 0/-0.2
- Steel and carbide arbors available for screw-in type holders

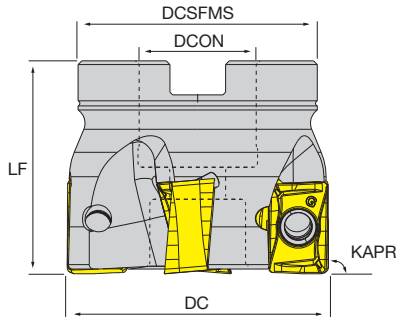
Screw-in



Cylindrical



Arbor



Designation	Stock	DC	CICT	DCON	LF	LU	DCSFMS	CRKS	KAPR	WT	MIID
SCREW-IN											
NT-DRK10 D016-M08-Z02	●	16	2	8.5	25	-	-	M8	90°	0.03 Kg	NT-DRK10
NT-DRK10 D020-M12-Z03	●	20	3	10.5	30	-	-	M10	90°	0.05 Kg	NT-DRK10
NT-DRK10 D025-M16-Z03	●	25	3	12.5	35	-	-	M12	90°	0.10 Kg	NT-DRK10
NT-DRK10 D032-M16-Z04	●	32	4	17	43	-	-	M16	90°	0.22 Kg	NT-DRK10
CYLINDRICAL											
NT-DRK10 D016-S16-Z02	●	16	2	16	100	25	-	-	90°	0.13 Kg	NT-DRK10
NT-DRK10 D020-S20-Z03	●	20	3	20	110	30	-	-	90°	0.23 Kg	NT-DRK10
NT-DRK10 D025-S25-Z03	●	25	3	25	120	35	-	-	90°	0.41 Kg	NT-DRK10
NT-DRK10 D032-S32-Z04	●	32	4	32	130	45	-	-	90°	0.74 Kg	NT-DRK10
NT-DRK17 D032-S32-Z02	●	32	2	32	130	45	-	-	90°	0.69 Kg	NT-DRK17
NT-DRK17 D040-S32-Z03	●	40	3	32	150	40	-	-	90°	0.89 Kg	NT-DRK17
ARBOR											
NT-DRK10 D032-F16-Z04	●	32	4	16	35	-	30	-	90°	0.10 Kg	NT-DRK10
NT-DRK10 D040-F16-Z05	●	40	5	16	40	-	30	-	90°	0.18 Kg	NT-DRK10
NT-DRK10 D050-F22-Z05	●	50	5	22	40	-	40	-	90°	0.31 Kg	NT-DRK10
NT-DRK10 D050-F22-Z07	●	50	7	22	40	-	40	-	90°	0.30 Kg	NT-DRK10
NT-DRK10 D063-F22-Z06	●	63	6	22	40	-	55	-	90°	0.62 Kg	NT-DRK10
NT-DRK10 D063-F22-Z08	●	63	8	22	40	-	55	-	90°	0.62 Kg	NT-DRK10
NT-DRK10 D080-F27-Z07	●	80	7	27	50	-	63	-	90°	1.26 Kg	NT-DRK10
NT-DRK10 D080-F27-Z10	●	80	10	27	50	-	63	-	90°	1.24 Kg	NT-DRK10
NT-DRK17 D050-F22-Z04	●	50	4	22	40	-	45	-	90°	0.29 Kg	NT-DRK17
NT-DRK17 D063-F22-Z05	●	63	5	22	40	-	56	-	90°	0.54 Kg	NT-DRK17
NT-DRK17 D063-F22-Z06	●	63	6	22	40	-	56	-	90°	0.51 Kg	NT-DRK17
NT-DRK17 D080-F27-Z06	●	80	6	27	50	-	63	-	90°	1.13 Kg	NT-DRK17
NT-DRK17 D080-F27-Z07	●	80	7	27	50	-	63	-	90°	1.10 Kg	NT-DRK17

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Designation	Stock	DC	CICT	DCON	LF	LU	DCSFMS	CRKS	KAPR	WT	MIID
NT-DRK17 D100-F32-Z07	●	100	7	32	50	-	78	-	90°	1.71 Kg	NT-DRK17
NT-DRK17 D100-F32-Z09	●	100	9	32	50	-	78	-	90°	1.71 Kg	NT-DRK17
NT-DRK17 D125-F40-Z08	●	125	8	40	63	-	80	-	90°	3.20 Kg	NT-DRK17
NT-DRK17 D125-F40-Z10	●	125	10	40	63	-	80	-	90°	3.15 Kg	NT-DRK17

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Spare parts	Insert screws	Flag wrenches
NT-DRK10 D○○○-○○○-Z○○	NT-ST25078P08	NT-FTP08
NT-DRK17 D○○○-○○○-Z○○	NT-ST45111T15	NT-FTB15

NT-DRK

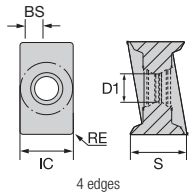
DoubleRek

- GP and TE are both helical geometries with reduced cutting resistance
- Precise and enhanced positioning guarantees more reliability in machining
- Available in diverse grades covering wide application range

HC: Coated carbide
HF: Micrograin carbide
CVD: Chemical vapour deposition
PVD: Physical vapour deposition

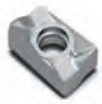
	JC7515	JC8520	JC9540	JP5530	JP7525	JP8725	JP9535	JP9545
	HC CVD	HC CVD	HC CVD	HF PVD	HF PVD	HF PVD	HF PVD	HF PVD
Stable machining, light cut (● 1st choice, ○ suitable)	●	●				○		
General machining, medium cut (● 1st choice, ○ suitable)	●	○	●	●	●	●	●	○
Unstable machining, heavy cut (● 1st choice, ○ suitable)			●	○	●		●	●

Dimensions

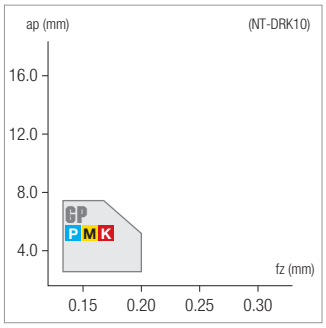


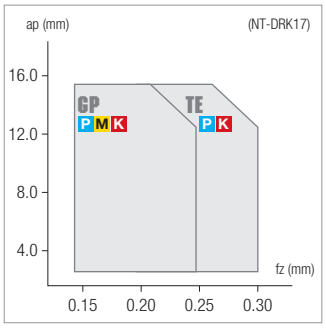
Vc(m/min) - suggested cutting speed range (bold: 1st choice)

ISO	JC7515	JC8520	JC9540	JP5530	JP7525	JP8725	JP9535	JP9545
P		130 300		100 260		100 280		
M			90 210	60 180			80 200	60 180
K	180 360	160 320			140 300			
N								
S			30 70				20 60	20 50
H								

	Designation		RE	IC	S	D1	BS	JC7515	JC8520	JC9540	JP5530	JP7525	JP8725	JP9535	JP9545
GENERAL	GP P M K 	NT-DRK10R08K-GP	0.8	5.82	5.45	2.9	0.9		●	●	●	●	●	●	●
	GP P M K	NT-DRK17R08K-GP	0.8	11.2	10.94	5.2	3.2	●	●	●	●	●	●	●	
REINFORCED	TE P K	NT-DRK17R12K-TE	1.2	11.2	10.94	5.2	3.2	●	●		●	●	●		

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion





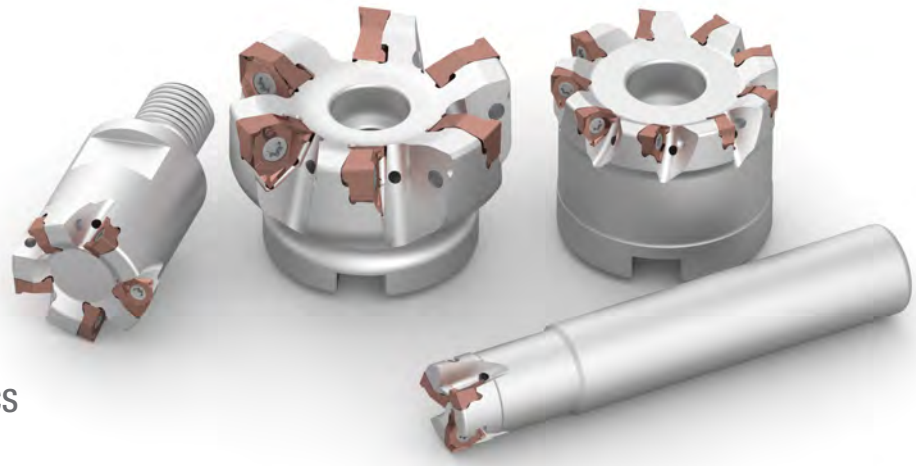
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC8520 min	JC8520 start	JC8520 max	JP5530 min	JP5530 start	JP5530 max	JP8725 min	JP8725 start	JP8725 max
P1 - P2	Free cutting steel and low carbon (ex. 1.0715/9 smn 28/avp, 1.0503/c45)	≤ 200	100%	130	**180**	230	100	**140**	180	100	**150**	200
			30%	200	**240**	280	160	**200**	240	160	**210**	260
			10%	260	**280**	300	220	**240**	260	220	**250**	280
P3 - P4	Medium and high alloy steel (ex. 1.7225/42 CrMo 4, 1.3505/100 Cr 6)	200 ÷ 300	100%	100	**140**	180	80	**120**	160	90	**130**	170
			30%	160	**200**	240	120	**160**	200	130	**170**	210
			10%	220	**240**	260	180	**200**	220	190	**210**	230
P5 - P6	High tensile strength and tool steel (ex. 1.2344/X 40 CrMoV 5 1/ORVAR, Hardox400®)	300 ÷ 400	100%	70	**100**	130	60	**90**	120	80	**110**	140
			30%	120	**160**	200	100	**130**	160	120	**150**	180
			10%	200	**220**	240	140	**170**	200	160	**190**	220
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC9540 min	JC9540 start	JC9540 max	JP9535 min	JP9535 start	JP9535 max	JP9545 min	JP9545 start	JP9545 max
P7	Ferritic and martensitic stainless steel (ex. 1.4021/X 20 Cr 13/AISI420)	≤ 200	100%	90	**130**	170	80	**120**	160	60	**100**	140
			30%	110	**160**	210	100	**150**	200	80	**130**	180
			10%	130	**190**	250	120	**180**	240	100	**160**	220
P8	Precipitation hardening stainless steel (ex. 1.4548/X 5 CrNiCuNb 17 4/17-4-PH)	≤ 450	100%	70	**100**	130	60	**90**	120	50	**80**	110
			30%	80	**110**	140	70	**100**	130	60	**90**	120
			10%	90	**120**	150	80	**110**	140	70	**100**	130
M1	Austenitic stainless steel (ex. 1.4305/X 10 CrNiS 18 9/AISI303)	> 200	100%	90	**120**	150	80	**110**	140	60	**90**	120
			30%	110	**150**	190	100	**140**	180	80	**120**	160
			10%	130	**170**	210	120	**160**	200	100	**140**	180
M2 - M3	Austenitic and Duplex stainless steel (ex. 1.4401/X 5 CrNiMo 17 12 2/AISI316)		100%	80	**110**	140	70	**100**	130	60	**90**	120
			30%	90	**120**	150	80	**110**	140	70	**100**	130
				100	**130**	160	90	**120**	150	80	**110**	140
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC7515 min	JC7515 start	JC7515 max	JC8520 min	JC8520 start	JC8520 max	JP7525 min	JP7525 start	JP7525 max
K1	Grey cast iron (ex. 0.6025/GG 25/EN-GJL-250)	150 ÷ 250	100%	180	**230**	280	160	**200**	240	140	**180**	220
			30%	200	**260**	320	180	**230**	280	160	**210**	260
			10%	220	**290**	360	200	**260**	320	180	**240**	300
K2	Nodular cast iron (ex. 0.7050/GGG 50/EN-GJS-500-7)	150 ÷ 350	100%	120	**180**	240	120	**160**	200	100	**140**	180
			30%	160	**220**	280	140	**190**	240	120	**170**	220
			10%	200	**260**	320	160	**220**	280	140	**200**	260
K3 - K4	Austenitic and ADI cast iron (ex. 0.6660/GGL-NiCr 20 2/Ni-Resist 2, GJS-1000-5/ ADI1000)	250 ÷ 500	100%	100	**140**	180	100	**130**	160	90	**120**	150
			30%	140	**180**	220	120	**160**	200	120	**150**	180
			10%	180	**220**	260	140	**190**	240	150	**180**	210
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC9540 min	JC9540 start	JC9540 max	JP9535 min	JP9535 start	JP9535 max	JP9545 min	JP9545 start	JP9545 max
S1 - S2 - S3	Fe/Ni/Co based heat resistant alloys (ex. Hastelloy, Inconel 625, Inconel 718)		100%	30	**40**	50	20	**30**	40	20	**25**	30
			30%	40	**50**	60	30	**40**	50	30	**35**	40
			10%	50	**60**	70	40	**50**	60	40	**45**	50
S4 - S5	Titanium alloys (ex. TiAl2Sn4Zr2MoSi)		100%				40	**50**	60	30	**40**	50
			30%				50	**60**	70	40	**50**	60
			10%				60	**70**	80	50	**60**	70

ae: radial depth of cut; DC: milling cutter diameter

Complete workpiece materials p. **H**1.

DESIGNATION	ae/Dc	DEPTH OF CUT			FEED RATE		
		ap (mm)			fz (mm)		
		min	start	max	min	start	max
NT-DRK10R08K-GP	100%	1.00	**2.50**	4.00	0.08	**0.10**	0.12
	30%	1.00	**4.00**	7.00	0.10	**0.13**	0.16
	10%	1.00	**4.00**	7.00	0.12	**0.16**	0.20
NT-DRK17R08K-GP	100%	1.00	**4.00**	7.00	0.11	**0.18**	0.21
	30%	1.00	**8.00**	15.00	0.14	**0.20**	0.26
	10%	1.00	**8.00**	15.00	0.16	**0.23**	0.30
NT-DRK17R12K-TE	100%	1.00	**4.00**	7.00	0.13	**0.19**	0.25
	30%	1.00	**8.00**	15.00	0.16	**0.23**	0.30
	10%	1.00	**8.00**	15.00	0.20	**0.27**	0.34

DOUBLE3GON High economical trigonal shoulder milling system for universal processes



APPLICATION

· Shoulder milling
· Shoulders with repeated passes
· Long overhang shoulder milling

ISO APPLICATION FIELDS

P M K N S

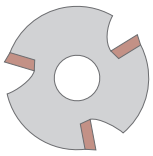
ADVANTAGES AND CHARACTERISTICS

· High precision in making 90° side milling
· Reduced cost per edge than conventional shoulder milling systems.
· Very robust system because of the negative trigonal and reliable installation.
· Full range of carbide geometries, radii and grades.
· «Ultra-precise» cutter bodies with special surface treatment to ensure longer life.

Cutter bodies

· Arbor type
· Cylindrical type
· Screw-in type
· Extension sleeves (steel/carbide 10xD)
· From D20 to D160

Extension arbors



Coarse pitch

Fine pitch

Inserts

· 6 cutting edges
· Edge length 04 and 08
· Cemented carbide grades with CVD and PVD coatings
· Geometries: SC, GP, TE, AL

SC P M S

SIZE
08

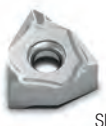
GP P M K

SIZE
04 08

TE P K

SIZE
08

AL N



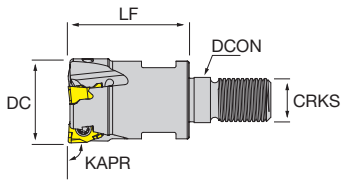
SIZE
08

NT-WX

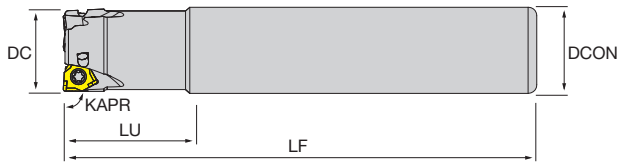
Double3Gon

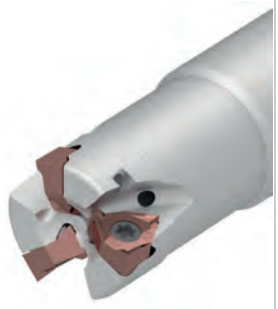
- Double sided trigonal type shoulder milling system, with coolant through
- Tolerance of tool diameter (with Nikko inserts installed) 0/-0.2
- Steel and carbide arbors available for screw-in type holders
- High-Quality Swiss screws guarantee more reliability in your machining

Screw-in

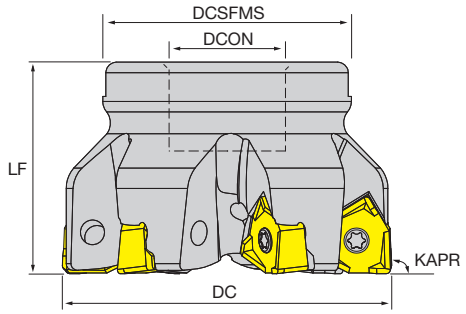


Cylindrical





Arbor



Designation	Stock	DC	CICT	DCON	LF	LU	DCSFMS	CRKS	KAPR	WT	MIID
SCREW-IN											
NT-WX04H D020-M10-Z03	●	20	3	10.5	28	-	-	M10	90°	0.05 Kg	WNEX0403
NT-WX04H D025-M12-Z03	○	25	3	12.5	30	-	-	M12	90°	-	WNEX0403
NT-WX04H D025-M12-Z04	●	25	4	12.5	30	-	-	M12	90°	0.09 Kg	WNEX0403
NT-WX04H D032-M16-Z04	○	32	4	17	40	-	-	M16	90°	-	WNEX0403
NT-WX04H D032-M16-Z05	●	32	5	17	40	-	-	M16	90°	0.20 Kg	WNEX0403
CYLINDRICAL											
NT-WX04H D020-S16-Z03	●	20	3	16	110	20	-	-	90°	0.16 Kg	WNEX0403
NT-WX04H D020-S20-Z03	●	20	3	20	110	28	-	-	90°	0.23 Kg	WNEX0403
NT-WX04H D025-S20-Z04	●	25	4	20	120	22	-	-	90°	0.27 Kg	WNEX0403
NT-WX04H D025-S25-Z04	●	25	4	25	120	30	-	-	90°	0.40 Kg	WNEX0403
NT-WX04H D032-S25-Z05	●	32	5	25	130	25	-	-	90°	0.47 Kg	WNEX0403
NT-WX04H D032-S32-Z05	●	32	5	32	130	40	-	-	90°	0.72 Kg	WNEX0403
ARBOR											
NT-WX04H D040-F16-Z05	○	40	5	16	40	-	35	-	90°	-	WNEX0403
NT-WX04H D040-F16-Z07	●	40	7	16	40	-	35	-	90°	0.22 Kg	WNEX0403
NT-WX04H D050-F22-Z06	○	50	6	22	40	-	47	-	90°	-	WNEX0403
NT-WX04H D050-F22-Z09	●	50	9	22	40	-	47	-	90°	0.38 Kg	WNEX0403
NT-WX04H D063-F22-Z08	○	63	8	22	40	-	47	-	90°	-	WNEX0403
NT-WX04H D063-F22-Z10	○	63	10	22	40	-	47	-	90°	-	WNEX0403
NT-WX08H D050-F22-Z04	●	50	4	22	40	-	47	-	90°	0.31 Kg	WNEX0806
NT-WX08H D050-F22-Z05	●	50	5	22	40	-	47	-	90°	0.33 Kg	WNEX0806
NT-WX08H D063-F22-Z06	●	63	6	22	40	-	47	-	90°	0.43 Kg	WNEX0806
NT-WX08H D063-F22-Z07	●	63	7	22	40	-	47	-	90°	0.42 Kg	WNEX0806
NT-WX08H D063-F27-Z06	●	63	6	27	40	-	47	-	90°	0.63 Kg	WNEX0806
NT-WX08H D080-F27-Z07	●	80	7	27	50	-	62.1	-	90°	0.99 Kg	WNEX0806

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Designation	Stock	DC	CICT	DCON	LF	LU	DCSFMS	CRKS	KAPR	WT	MIID
NT-WX08H D080-F27-Z09	●	80	9	27	50	-	62.1	-	90°	0.96 Kg	WNEX0806
NT-WX08H D100-F32-Z08	●	100	8	32	50	-	77.1	-	90°	-	WNEX0806
NT-WX08H D100-F32-Z11	●	100	11	32	50	-	77.1	-	90°	1.45 Kg	WNEX0806
NT-WX08H D125-F40-Z11	●	125	11	40	63	-	80	-	90°	2.38 Kg	WNEX0806
NT-WX08H D160-F40-Z12	●	160	12	40	63	-	85	-	90°	3.86 Kg	WNEX0806

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Spare parts	Insert screws	Flag wrenches
NT-WX04H D○○○-○○○-Z○○	NT-ST25056T08HQ	NT-FTB08
NT-WX08H D○○○-○○○-Z○○	NT-ST40110T15HQ	NT-FTB15

WNEX

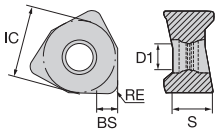
Double3Gon

- Double-sided trigonal inserts offering 6 edges!
- Stable sitting in the pocket guarantees more reliability in machining
- Available in diverse grades covering wide application range

HC: Coated carbide
HF: Micrograin carbide
CVD: Chemical vapour deposition
PVD: Physical vapour deposition

	JC7515	JC7530	JC8520	JC9540	JP5530	JP5540	JP7525	JP8525	JP8725	JP9525	JU6520
	HC CVD	HC CVD	HC CVD	HC CVD	HF PVD	HF PVD	HF PVD	HF PVD	HF PVD	HF PVD	HF
Stable machining, light cut (● 1st choice, ○ suitable)	●		●					○	○		●
General machining, medium cut (● 1st choice, ○ suitable)	●	●	○	●	●	○	●	●	●	●	●
Unstable machining, heavy cut (● 1st choice, ○ suitable)		●		●	○	●	●				

Dimensions



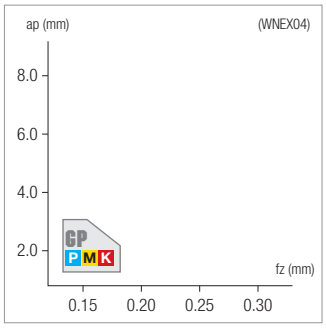
6 edges

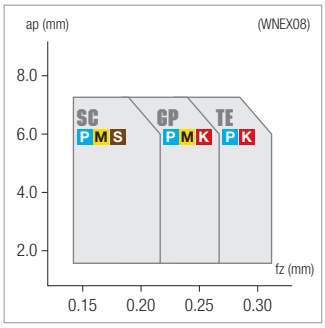
Vc(m/min) - suggested cutting speed range (bold: 1st choice)

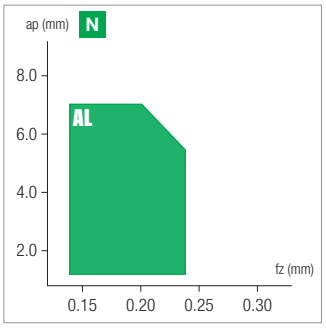
ISO	JC7515	JC7530	JC8520	JC9540	JP5530	JP5540	JP7525	JP8525	JP8725	JP9525	JU6520
P			130 300		100 260	80 220		100 260	100 280		
M				90 210	60 180	60 180				80 200	
K	180 360	160 320	160 320				140 300				
N											300 1100
S				30 70		20 50					
H											

	Designation		RE	IC	S	D1	BS	JC7515	JC7530	JC8520	JC9540	JP5530	JP5540	JP7525	JP8525	JP8725	JP9525	JU6520
GENERAL	GP P M K	WNEX040304R-GP	0.4	6.7	3.3	3.1	0.9						●	●	▽		▽	
		WNEX040308R-GP	0.8	6.7	3.3	3.1	0.9							●				
		WNEX080608R-GP	0.8	12.5	6.5	4.6	1.5	●		●	●	●	●	●		●		
LOW FORCE	SC P M S	WNEX080604R-SC	0.4	12.5	6.5	4.6	1.8						●		▽			
		WNEX080608R-SC	0.8	12.5	6.5	4.6	1.5						●					
REINFORCED	TE P K	WNEX080608R-TE	0.8	12.5	6.5	4.6	1.5	●	▽			●	●	●		●	▽	
		WNEX080612R-TE	1.2	12.5	6.5	4.6	1.1						●		▽			
ALUMINIUM	AL N polished surface periphery ground	WNEX080608R-AL	0.8	12.5	6.5	4.6	1.4											●

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion







MILLING Parameters - cutting speed · DOUBLE3GON

nikkoTOOLS

ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC8520 min	JC8520 start	JC8520 max	JP5530 min	JP5530 start	JP5530 max	JP5540 min	JP5540 start	JP5540 max
P1 - P2	Free cutting steel and low carbon (ex. 1.0715/9 smn 28/avp, 1.0503/c45)	≤ 200	100%	130	**180**	230	100	**140**	180	80	**120**	160
			30%	200	**240**	280	160	**200**	240	120	**160**	200
			10%	260	**280**	300	220	**240**	260	180	**200**	220
P3 - P4	Medium and high alloy steel (ex. 1.7225/42 CrMo 4, 1.3505/100 Cr 6)	200 ÷ 300	100%	100	**140**	180	80	**120**	160	60	**100**	140
			30%	160	**200**	240	120	**160**	200	100	**140**	180
			10%	220	**240**	260	180	**200**	220	160	**180**	200
P5 - P6	High tensile strength and tool steel (ex. 1.2344/X 40 CrMoV 5 1/ORVAR, Hardox400®)	300 ÷ 400	100%	70	**100**	130	60	**90**	120			
			30%	120	**160**	200	100	**130**	160			
			10%	200	**220**	240	140	**170**	200			
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC9540 min	JC9540 start	JC9540 max	JP5530 min	JP5530 start	JP5530 max	JP5540 min	JP5540 start	JP5540 max
P7	Ferritic and martensitic stainless steel (ex. 1.4021/X 20 Cr 13/AISI420)	≤ 200	100%	90	**130**	170	60	**100**	140	60	**100**	140
			30%	110	**160**	210	80	**130**	180	80	**130**	180
			10%	130	**190**	250	100	**160**	220	100	**160**	220
P8	Precipitation hardening stainless steel (ex. 1.4548/X 5 CrNiCuNb 17 4/17-4-PH)	≤ 450	100%	70	**100**	130				50	**80**	110
			30%	80	**110**	140				60	**90**	120
			10%	90	**120**	150				70	**100**	130
M1	Austenitic stainless steel (ex. 1.4305/X 10 CrNiS 18 9/AISI303)	> 200	100%	90	**120**	150	60	**90**	120	60	**90**	120
			30%	110	**150**	190	80	**120**	160	80	**120**	160
			10%	130	**170**	210	100	**140**	180	100	**140**	180
M2 - M3	Austenitic and Duplex stainless steel (ex. 1.4401/X 5 CrNiMo 17 12 2/AISI316)		100%	80	**110**	140				60	**90**	120
			30%	90	**120**	150				70	**100**	130
				100	**130**	160				80	**110**	140
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC7515 min	JC7515 start	JC7515 max	JC8520 min	JC8520 start	JC8520 max	JP7525 min	JP7525 start	JP7525 max
K1	Grey cast iron (ex. 0.6025/GG 25/EN-GJL-250)	150 ÷ 250	100%	180	**230**	280	160	**200**	240	140	**180**	220
			30%	200	**260**	320	180	**230**	280	160	**210**	260
			10%	220	**290**	360	200	**260**	320	180	**240**	300
K2	Nodular cast iron (ex. 0.7050/GGG 50/EN-GJS-500-7)	150 ÷ 350	100%	120	**180**	240	120	**160**	200	100	**140**	180
			30%	160	**220**	280	140	**190**	240	120	**170**	220
			10%	200	**260**	320	160	**220**	280	140	**200**	260
K3 - K4	Austenitic and ADI cast iron (ex. 0.6660/GGL-NiCr 20 2/Ni-Resist 2, GJS-1000-5/ ADI1000)	250 ÷ 500	100%	100	**140**	180	100	**130**	160	90	**120**	150
			30%	140	**180**	220	120	**160**	200	120	**150**	180
			10%	180	**220**	260	140	**190**	240	150	**180**	210
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JU6520 min	JU6520 start	JU6520 max						
N1	Aluminium alloys ≤ Si 12% (ex. 3.4365/AlZn5.5MgCu/ERGAL)		100%	300	**400**	500						
			30%	400	**600**	800						
			10%	500	**800**	1100						
N2	Aluminium alloys Si > 12% (ex. 3.2382/G-AlSi12)		100%	200	**250**	300						
			30%	300	**350**	400						
			10%	400	**450**	500						
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC9540 min	JC9540 start	JC9540 max	JP5540 min	JP5540 start	JP5540 max			
S1 - S2 - S3	Fe/Ni/Co based heat resistant alloys (ex. Hastelloy, Inconel 625, Inconel 718)		100%	30	**40**	50	20	**25**	30			
			30%	40	**50**	60	30	**35**	40			
			10%	50	**60**	70	40	**45**	50			
S4 - S5	Titanium alloys (ex. TiAl2Sn4Zr2MoSi)		100%				30	**40**	50			
			30%				40	**50**	60			
			10%				50	**60**	70			

ae: radial depth of cut; DC: milling cutter diameter

Complete workpiece materials p. **H**1.

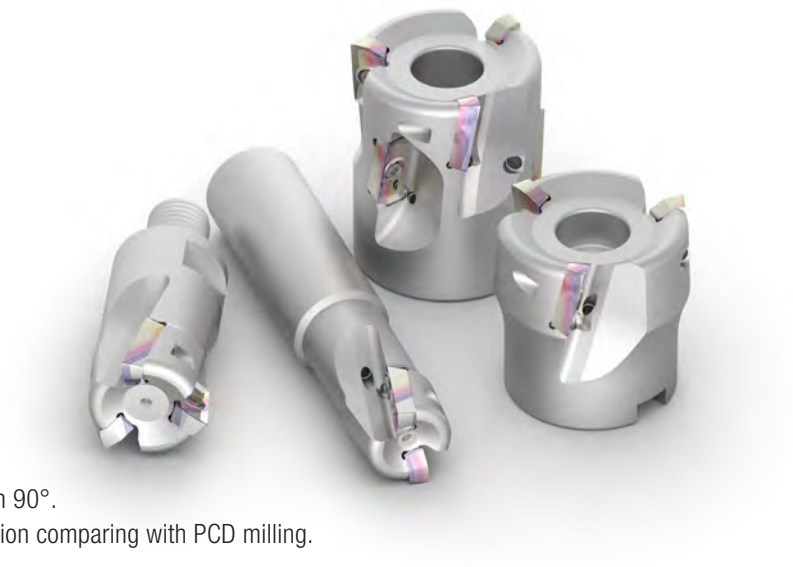
JP8725							
min	start	max					
100	**150**	200					
160	**210**	260					
220	**250**	280					
90	**130**	170					
130	**170**	210					
190	**210**	230					
80	**110**	140					
120	**150**	180					
160	**190**	220					

Complete workpiece materials p. **H**1.

DESIGNATION	ae/DC	DEPTH OF CUT			FEED RATE		
		ap (mm)			fz (mm)		
		min	start	max	min	start	max
WNEX0403ooR-GP	100%	0.60	**1.00**	1.40	0.05	**0.10**	0.15
	30%	0.60	**1.80**	3.00	0.06	**0.12**	0.18
	10%	0.60	**1.80**	3.00	0.07	**0.14**	0.20
WNEX0806ooR-GP	100%	1.00	**2.50**	4.00	0.11	**0.18**	0.21
	30%	1.00	**4.00**	7.00	0.14	**0.20**	0.26
	10%	1.00	**4.00**	7.00	0.16	**0.23**	0.30
WNEX0806ooR-SC	100%	1.00	**2.50**	4.00	0.08	**0.13**	0.18
	30%	1.00	**4.00**	7.00	0.10	**0.16**	0.22
	10%	1.00	**4.00**	7.00	0.12	**0.20**	0.26
WNEX0806ooR-TE	100%	1.00	**2.50**	4.00	0.13	**0.19**	0.25
	30%	1.00	**4.00**	7.00	0.16	**0.23**	0.30
	10%	1.00	**4.00**	7.00	0.20	**0.27**	0.34
WNEX080608R-AL	100%	1.00	**2.50**	4.00	0.08	**0.14**	0.20
	30%	1.00	**4.00**	7.00	0.10	**0.17**	0.24
	10%	1.00	**4.00**	7.00	0.12	**0.20**	0.28

ALUREK

Multi-functional shoulder milling cutters specially for non-ferrous materials



APPLICATION

- Shoulder milling
- Long overhang milling
- Profiling and Pocketing
- Linear and helical ramping

ISO APPLICATION FIELDS

N

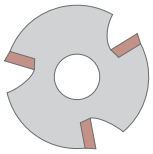
ADVANTAGES AND CHARACTERISTICS

- Inserts of helical geometry type can produce high precision 90°.
- PVD coated carbide inserts, an optimal cost-effective solution comparing with PCD milling.
- Different radii of inserts available.
- Smart-Lock at the back of the insert and on the cutter seats, guarantees a more reliable machining process and better surface finishing.
- Popular sizes of cutter bodies available with cylindrical shank, screw-in and arbor type connection, all with internal coolant.
- 10xD extensive sleeves available in both steel and carbide.

Cutter bodies

- Arbor type
- Cylindrical type (up to 10xD)
- Screw-in type
- Extension sleeves (steel/carbide 10xD)
- From D25 to D50

Smart-Lock



Coarse pitch

Fine pitch

Inserts

- 2 cutting edges
- Edge length 19
- PVD coated carbide grade specially for N materials
- Geometries: AL
- With Smart-Lock

AL N

SIZE 19

Smart-Lock on the back

0.2

0.8

2.0*

3.2

4.0*

5.0*

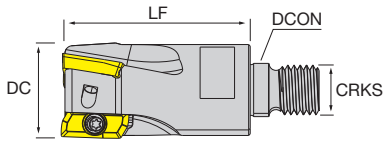
*Available upon request

NT-ALU90

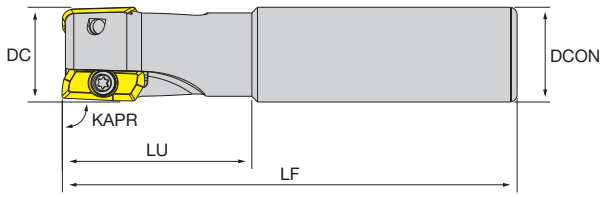
AluRek

- Highly positive and fine polished precision shoulder milling system tailored for aluminum and non-ferrous materials
- All with coolant through
- With Nikko smart-lock at the back of the insert and on the seat, offering better reliability and surface finishing
- Tolerance of tool diameter (with Nikko inserts installed) 0/-0.2

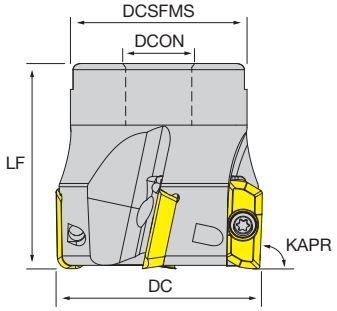
Screw-in

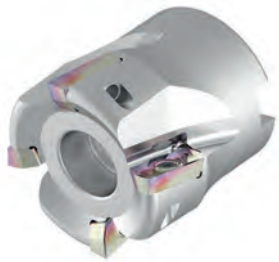


Cylindrical



Arbor





Designation	Stock	DC	CICT	DCON	LF	LU	DCSFMS	CRKS	KAPR		MIID
SCREW-IN											
NT-ALU9019 D025-M12-Z02	●	25	2	12.5	50	-	-	M12	90°		NT-ALU9019
NT-ALU9019 D032-M16-Z03	●	32	3	17	60	-	-	M16	90°		NT-ALU9019
CYLINDRICAL											
NT-ALU9019 D025-S25-Z02	●	25	2	25	120	50	-	-	90°		NT-ALU9019
NT-ALU9019 D032-S32-Z03	●	32	3	32	130	60	-	-	90°		NT-ALU9019
ARBOR											
NT-ALU9019 D040-F16-Z03	●	40	3	16	50	-	33	-	90°		NT-ALU9019
NT-ALU9019 D050-F22-Z03	●	50	3	22	50	-	43	-	90°		NT-ALU9019
NT-ALU9019 D050-F22-Z04	●	50	4	22	50	-	43	-	90°		NT-ALU9019

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Spare parts	Insert screws	Flag wrenches
NT-ALU9019 D○○○-○○○-Z○○	NT-ST40090T15	NT-FTB15

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NT-ALU90

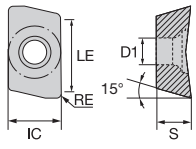
AluRek

- PVD coated micro-grain grade, optimal cost effective solution between uncoated carbide inserts and PCD
- With Nikko smart lock at the back, provides better surface finishing
- Sharp but reliable geometry, polished surface, precision periphery ground high performance solution
- Multiple radii available, R0.2 / 0.8 / 3.2

HF: Micrograin carbide
PVD: Physical vapour deposition

	HF PVD
	JP6525
Stable machining, light cut	● 1st choice ○ suitable
General machining, medium cut	● 1st choice ○ suitable
Unstable machining, heavy cut	● 1st choice ○ suitable

Dimensions

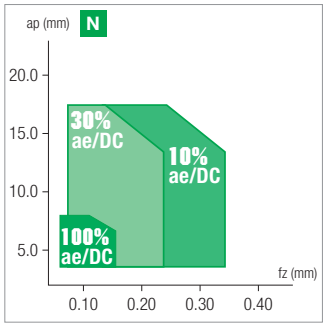


2 edges

ISO	Vc(m/min) - suggested cutting speed range (bold: 1st choice)
P	
M	
K	
N	400 1400
S	
H	

	Designation	RE	IC	S	D1	LE	Stock
ALUMINIUM AL N polished surface periphery ground	NT-ALU9019R02H-AL	0.2	9.5	4.76	4.6	19	●
	NT-ALU9019R08H-AL	0.8	9.5	4.76	4.6	19	●
	NT-ALU9019R32H-AL	3.2	9.5	4.76	4.6	19	●

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion



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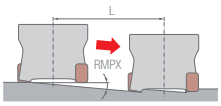
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JP6525 min	JP6525 start	JP6525 max		
N1	Aluminium alloys ≤ Si 12% (ex. 3.4365/AlZn5.5MgCu/ERGAL)		100%	400	**500**	600		
			30%	600	**800**	1000		
			10%	800	**1100**	1400		
N2	Aluminium alloys Si > 12% (ex. 3.2382/G-AlSi12)		100%	200	**350**	500		
			30%	300	**450**	600		
			10%	400	**550**	700		

ae: radial depth of cut; DC: milling cutter diameter
Complete workpiece materials p. **H**1.

DESIGNATION	ae/DC	DEPTH OF CUT			FEED RATE		
		ap (mm)			fn (mm/rev)		
		min	start	max	min	start	max
NT-ALU9019RooH-AL	100%	1.00	**4.00**	7.00	0.06	**0.10**	0.14
	30%	1.00	**9.00**	17.00	0.08	**0.15**	0.22
	10%	1.00	**9.00**	17.00	0.10	**0.20**	0.30

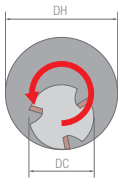
Parameters for ramping



ALU9019		
DC	RMPX	L
25	3.4°	3.0
32	2.5°	2.9
40	1.4°	2.1
50	0.7°	1.4

RMPX: max. ramping angle; L: max. ramping path

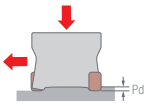
Parameters for helical milling



ALU9019 R0.2			ALU9019 R0.8			ALU9019 R3.2		
DC	DH min.	DH max.	DC	DH min.	DH max.	DC	DH min.	DH max.
25	32	49	25	33	48	25	37	47
32	46	63	32	47	62	32	51	61
40	62	79	40	63	78	40	67	77
50	82	99	50	83	98	50	87	97

DH min.: min. cutting dia.; DH max.: max. cutting dia.

Peck milling



Pd maximum pecking depth
Pd = 1 mm

APKT

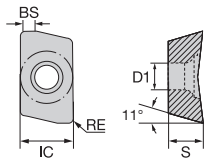
ISO

- Positive shoulder milling insert for general purpose use
- 3 geometries available, GP for universal use, TE for difficult conditions, AL for aluminum and non-ferrous materials
- AL geometry is highly sharp, periphery ground and fine polished

HC: Coated carbide
HF: Micrograin carbide
CVD: Chemical vapour deposition
PVD: Physical vapour deposition

	HC CVD	HF PVD	HF PVD	HF
	JC7530	JP5540	JP8725	JU6520
Stable machining, light cut (● 1st choice, ○ suitable)			○	●
General machining, medium cut (● 1st choice, ○ suitable)	●	○	●	●
Unstable machining, heavy cut (● 1st choice, ○ suitable)	●	●		

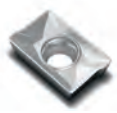
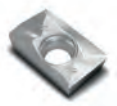
Dimensions



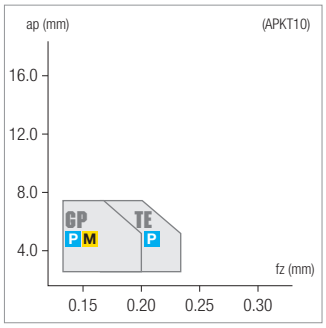
2 edges

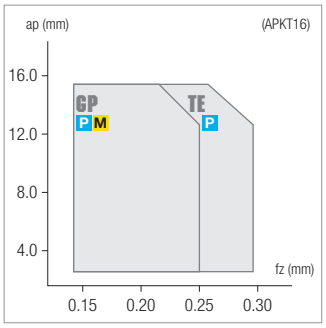
ISO	JC7530	JP5540	JP8725	JU6520
P		80 220	100 280	
M		60 180		
K	160 320			
N				300 1100
S		20 50		
H				

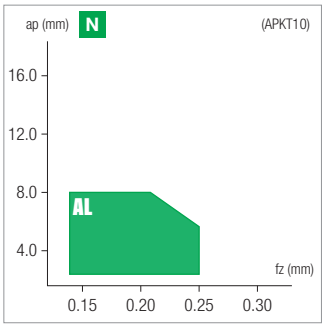
Vc(m/min) - suggested cutting speed range (bold: 1st choice)

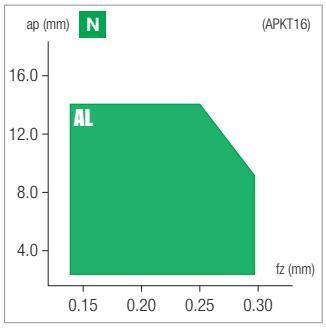
	Designation	RE	IC	S	D1	BS	JC7530	JP5540	JP8725	JU6520
GENERAL	GP P M APKT1003PDSR-GP	0.5	6.7	3.18	3.15	0.9		●	●	
	APKT1604PDSR-GP	1	9.525	4.76	4.4	1.9	▽	●	●	
REINFORCED	TE P  APKT1003PDSR-TE	0.5	6.7	3.18	3.15	0.9		●	●	
	APKT1604PDSR-TE	1	9.525	4.76	4.4	1.3	▽	●	●	
ALUMINIUM	AL N  polished surface periphery ground APKT1003PDFR-AL	0.5	6.7	3.18	3.15	1.6				●
	APKT1604PDFR-AL	1	9.525	4.76	4.4	1.9				●

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion









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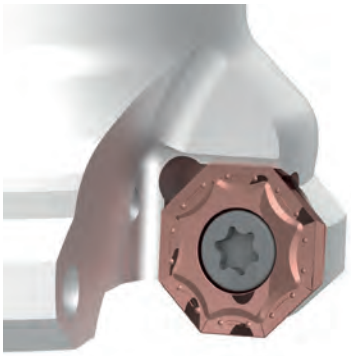
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JP5540 min	JP5540 start	JP5540 max	JP8725 min	JP8725 start	JP8725 max
P1 - P2	Free cutting steel and low carbon (ex. 1.0715/9 smn 28/avp, 1.0503/c45)	≤ 200	100%	80	**120**	160	100	**150**	200
			30%	120	**160**	200	160	**210**	260
			10%	180	**200**	220	220	**250**	280
P3 - P4	Medium and high alloy steel (ex. 1.7225/42 CrMo 4, 1.3505/100 Cr 6)	200 ÷ 300	100%	60	**100**	140	90	**130**	170
			30%	100	**140**	180	130	**170**	210
			10%	160	**180**	200	190	**210**	230
P5 - P6	High tensile strength and tool steel (ex. 1.2344/X 40 CrMoV 5 1/ORVAR, Hardox400®)	300 ÷ 400	100%				80	**110**	140
			30%				120	**150**	180
			10%				160	**190**	220
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JP5540 min	JP5540 start	JP5540 max			
P7	Ferritic and martensitic stainless steel (ex. 1.4021/X 20 Cr 13/AISI420)	≤ 200	100%	60	**100**	140			
			30%	80	**130**	180			
			10%	100	**160**	220			
P8	Precipitation hardening stainless steel (ex. 1.4548/X 5 CrNiCuNb 17 4/17-4-PH)	≤ 450	100%	50	**80**	110			
			30%	60	**90**	120			
			10%	70	**100**	130			
M1	Austenitic stainless steel (ex. 1.4305/X 10 CrNiS 18 9/AISI303)	> 200	100%	60	**90**	120			
			30%	80	**120**	160			
			10%	100	**140**	180			
M2 - M3	Austenitic and Duplex stainless steel (ex. 1.4401/X 5 CrNiMo 17 12 2/AISI316)		100%	60	**90**	120			
			30%	70	**100**	130			
				80	**110**	140			
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JU6520 min	JU6520 start	JU6520 max			
N1	Aluminium alloys ≤ Si 12% (ex. 3.4365/AlZn5.5MgCu/ERGAL)		100%	300	**400**	500			
			30%	400	**600**	800			
			10%	500	**800**	1100			
N2	Aluminium alloys Si > 12% (ex. 3.2382/G-AlSi12)		100%	200	**250**	300			
			30%	300	**350**	400			
			10%	400	**450**	500			

ae: radial depth of cut; DC: milling cutter diameter

Complete workpiece materials p. **H**1.

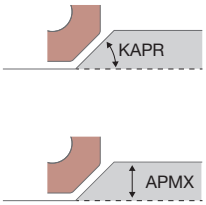
DESIGNATION	ae/DC	DEPTH OF CUT			FEED RATE		
		ap (mm)			fz (mm)		
		min	start	max	min	start	max
APKT1003PDSR-GP	100%	1.00	**2.50**	4.00	0.06	**0.11**	0.16
	30%	1.00	**4.00**	7.00	0.08	**0.14**	0.20
	10%	1.00	**4.00**	7.00	0.10	**0.16**	0.22
APKT1604PDSR-GP	100%	1.00	**4.00**	7.00	0.08	**0.14**	0.19
	30%	1.00	**7.00**	13.00	0.10	**0.17**	0.24
	10%	1.00	**7.00**	13.00	0.12	**0.20**	0.28
APKT1003PDSR-TE	100%	1.00	**2.50**	4.00	0.08	**0.13**	0.18
	30%	1.00	**4.00**	7.00	0.10	**0.16**	0.22
	10%	1.00	**4.00**	7.00	0.12	**0.19**	0.26
APKT1604PDSR-TE	100%	1.00	**4.00**	7.00	0.10	**0.16**	0.22
	30%	1.00	**7.00**	13.00	0.12	**0.20**	0.28
	10%	1.00	**7.00**	13.00	0.14	**0.24**	0.34
APKT1003PDFR-AL	100%	1.00	**2.50**	4.00	0.08	**0.14**	0.20
	30%	1.00	**4.00**	7.00	0.10	**0.17**	0.24
	10%	1.00	**4.00**	7.00	0.12	**0.20**	0.28
APKT1604PDFR-AL	100%	1.00	**4.00**	7.00	0.08	**0.16**	0.24
	30%	1.00	**7.00**	13.00	0.10	**0.20**	0.30
	10%	1.00	**7.00**	13.00	0.12	**0.24**	0.36



MILLING Facing

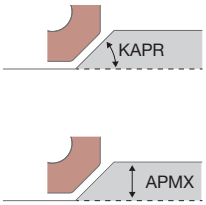
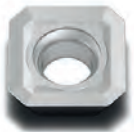
Quick guide .D46

4FACEPLUS .D48
OKTOPLUS .D55
DOUBLE4FACE .D62
DOUBLEHEX .D67
ISO SEHX .D72



	4FACEPLUS	OKTOPLUS	DOUBLE4FACE
	D48	D55	D62
	ARBOR	ARBOR	ARBOR
KAPR	45°	43°	45°
Insert sizes	13	05 / 06	12
APMX	6	3 / 4	3
Tool diameter	Ø40 - Ø200	Ø50 - Ø160	Ø50 - Ø160
Coolant holes	✗	✓	✓
Workpiece material	P M K N S	P M K N S	P M K N S
No. of cutting edges	4	8	8
No. of geometries	8	5	5
Special features	single edge Wiper type	double edge Wiper type	double edge Wiper type
Face Milling	✓	✓	✓
Intermittent Milling	✓	✓	✓
Machine load	■■■□□	■■■□□	■■■□□
Strenght	■■■□□	■■■□□	■■■■□
Precision	■■■■□	■■■□□	■■■■□
Finishing	■■■■□	■■■□□	■■■■□
Range	■■■■■	■■■□□	■■■■□

nikkoTOOLS

	DOUBLEHEX	ISO SEHX
	D67	D72
	ARBOR	 Only insert is available.
KAPR	60° (45° on request)	45°
Insert sizes	09	12
APMX	6	5
Tool diameter	Ø80 - Ø160	-
Coolant holes	✗	-
Workpiece material	K	P M K N
No. of cutting edges	12	4
No. of geometries	4	4
Special features	solid PCBN and ceramic available	-
Face Milling	✓	✓
Intermittent Milling	✓	✓
Machine load	■■■■□	■■□□□
Strenght	■■■■■	■■■□□
Precision	■■■□□	■■□□□
Finishing	■■■□□	■■■□□
Range	■■■■□	■□□□□

4FACEPLUS

Face milling system for multiple use general purpose operations

APPLICATION

· Finishing / semi-finishing / rough face milling
· Removal of the crusted surfaces
· General milling of interrupted surfaces
· Machining of linear and helical ramping

ISO APPLICATION FIELDS

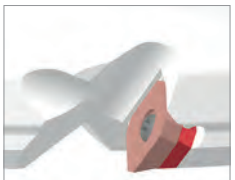
P M K N S

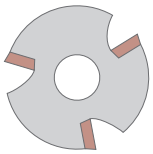
ADVANTAGES AND CHARACTERISTICS

· High productivity and easy to use
· Light cutting action with low power consumption
· Available in E tol. (ground type) and M tol. (pressed type)
· Available with wiper geometry for good surface finish

Cutter bodies

· Arbor type with shim
· From D50 to D200


With shim


Coarse pitch

Close pitch

Inserts

· 4 cutting edges
· Edge length 13 with APMX = 6mm
· Cemented carbide grades with CVD and PVD coatings
· Geometries: SC, GP, TE, AL, GG, GH, Flat, WU

SC P M S

SIZE 13

GP P M

SIZE 13

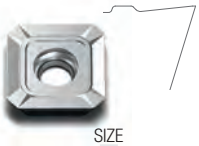
TE P

SIZE 13

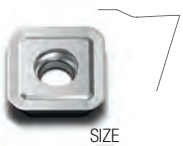
AL N

SIZE 13

GG K


SIZE 13

GH K


SIZE 13

FLAT K

SIZE 13

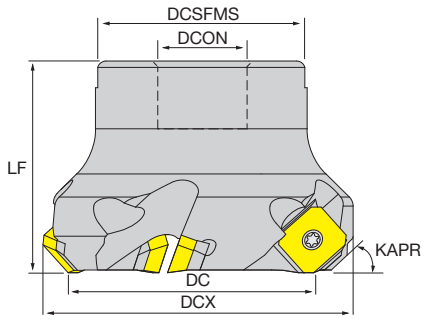
WU P K

SIZE 13

NT-SE

4FacePlus

- Positive general face milling cutters
- With shims to protect the insert seats
- Kapr 45°, without coolant through



Designation	Stock	DC	CICT	DCON	LF	LU	DCSFMS	CRKS	DCX	WT	MIID
NT-SE13 D040-F16-Z03	○	40	3	16	40	-	35	-	53	-	SEoo13T3
NT-SE13 D050-F22-Z04	●	50	4	22	40	-	40	-	63	0.41 Kg	SEoo13T3
NT-SE13 D050-F22-Z05	●	50	5	22	50	-	40	-	63	0.39 Kg	SEoo13T3
NT-SE13 D063-F22-Z05	●	63	5	22	50	-	50	-	76	0.71 Kg	SEoo13T3
NT-SE13 D063-F22-Z06	●	63	6	22	50	-	50	-	76	0.70 Kg	SEoo13T3
NT-SE13 D080-F27-Z06	●	80	6	27	50	-	60	-	93	1.06 Kg	SEoo13T3
NT-SE13 D080-F27-Z08	●	80	8	27	50	-	60	-	93	1.02 Kg	SEoo13T3
NT-SE13 D100-F32-Z07	●	100	7	32	50	-	80	-	113	1.56 Kg	SEoo13T3
NT-SE13 D100-F32-Z10	●	100	10	32	50	-	80	-	113	1.54 Kg	SEoo13T3
NT-SE13 D125-F40-Z08	●	125	8	40	63	-	100	-	138	2.92 Kg	SEoo13T3
NT-SE13 D125-F40-Z12	●	125	12	40	63	-	100	-	138	3.04 Kg	SEoo13T3
NT-SE13 D160-F40-Z10	●	160	10	40	63	-	100	-	173	4.06 Kg	SEoo13T3
NT-SE13 D200-F60-Z12	●	200	12	60	63	-	130	-	213	6.34 Kg	SEoo13T3

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Spare parts	Insert screws	Flag wrenches	Shim	Shim screws	L wrench
NT-SE13 Dooo-Foo-Zoo	NT-ST35120T15	NT-FTB15	NT-SH004	NT-SR002	NT-WR035

SE

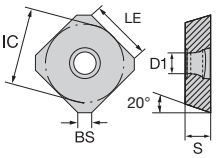
4FacePlus

- Positive general face milling inserts
- Diverse carbide grades with PVD and CVD coatings and also cermet grades available, covering a wide range of applications
- Sharp/universal/robust/cast iron featured/ wiper geometries available

HC: Coated carbide
HF: Micrograin carbide
HT: Cermet
CVD: Chemical vapour deposition
PVD: Physical vapour deposition

	JC7530	JC8520	JC9540	JP5530	JP7525	JP8725	JP9535	JU4525	JU6520
	HC CVD	HC CVD	HC CVD	HF PVD	HF PVD	HF PVD	HF PVD	HT	HF
Stable machining, light cut (● 1st choice, ○ suitable)		●				○		●	●
General machining, medium cut (● 1st choice, ○ suitable)	●	○	●	●	●	●	●		●
Unstable machining, heavy cut (● 1st choice, ○ suitable)	●		●	○	●		●		

Dimensions



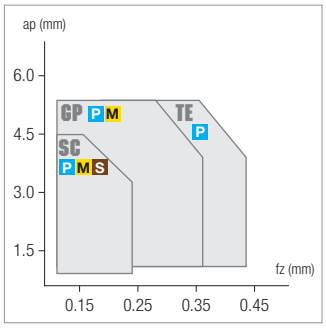
4 edges

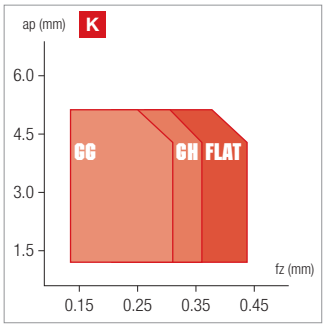
Vc(m/min) - suggested cutting speed range (bold: 1st choice)

ISO	JC7530	JC8520	JC9540	JP5530	JP7525	JP8725	JP9535	JU4525	JU6520
P		130 300		100 260		100 280		130 300	
M			90 210	60 180			80 200		
K	160 320	160 320			140 300				
N									300 1100
S			30 70				20 60		
H									

	Designation		BS	IC	S	D1	LE	JC7530	JC8520	JC9540	JP5530	JP7525	JP8725	JP9535	JU4525	JU6520
GENERAL	GP P M	SEET13T3AGEN-GP	1.2	13.4	3.97	4.4	8.8				●		●	●	●	
		SEMT13T3AGEN-GP	1.2	13.4	3.97	4.4	8.8		●	●	●		●	●		
GENERAL	GG K	SEET13T3AGSN-GG	1.3	13.4	3.97	4.4	8.8					●				
		SEMT13T3AGSN-GG	1.3	13.4	3.97	4.4	8.8					▲				
LOW FORCE	SC P M S	SEET13T3AGEN-SC	1.7	13.4	3.97	4.4	8.8			●	●		●	●		
REINFORCED	TE P	SEET13T3AGSN-TE	1.2	13.4	3.97	4.4	8.8				●					
		SEMT13T3AGSN-TE	1.2	13.4	3.97	4.4	8.8		●		●		●			
REINFORCED	GH K	SEET13T3AGSN-GH	1.3	13.4	3.97	4.4	8.8					●				
		SEMT13T3AGSN-GH	1.3	13.4	3.97	4.4	8.8					▲				

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion





nikkoTOOLS

SE

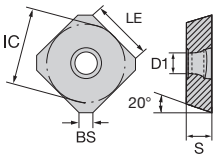
4FacePlus

- Positive general face milling inserts
- Diverse carbide grades with PVD and CVD coatings and also cermet grades available, covering a wide range of applications
- Sharp/universal/robust/cast iron featured/ wiper geometries available

HC: Coated carbide
HF: Micrograin carbide
HT: Cermet
CVD: Chemical vapour deposition
PVD: Physical vapour deposition

	JC7530	JC8520	JC9540	JP5530	JP7525	JP8725	JP9535	JU4525	JU6520
	HC CVD	HC CVD	HC CVD	HF PVD	HF PVD	HF PVD	HF PVD	HT	HF
Stable machining, light cut (● 1st choice, ○ suitable)		●				○		●	●
General machining, medium cut (● 1st choice, ○ suitable)	●	○	●	●	●	●	●		●
Unstable machining, heavy cut (● 1st choice, ○ suitable)	●		●	○	●		●		

Dimensions



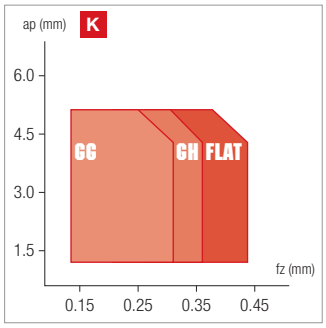
4 edges

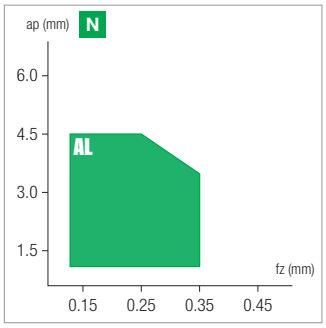
Vc(m/min) - suggested cutting speed range (bold: 1st choice)

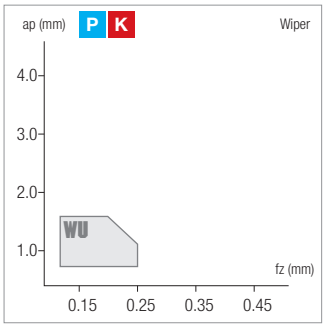
ISO	JC7530	JC8520	JC9540	JP5530	JP7525	JP8725	JP9535	JU4525	JU6520
P		130 300		100 260		100 280		130 300	
M			90 210	60 180			80 200		
K	160 320	160 320			140 300				
N									300 1100
S			30 70				20 60		
H									

	Designation		BS	IC	S	D1	LE	JC7530	JC8520	JC9540	JP5530	JP7525	JP8725	JP9535	JU4525	JU6520
REINFORCED	Flat K flat type	SEEW13T3AGSN	7.5	13.4	3.97	4.4	8.8	▽								
ALUMINIUM	AL N polished surface periphery ground	SEET13T3AGFN-AL	2.2	13.4	3.97	4.4	8.8									●
WIPER	WU P K 1 edge	SEET13T3-WU	7.5	13.4	3.97	4.4	8.8				●	●				

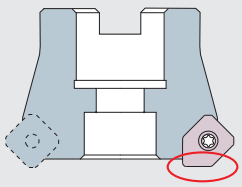
● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion







WIPER POSITION



The wiper insert must be mounted face towards the centre of the holder.
Only 1 wiper insert per setup.

MILLING Parameters - cutting speed · 4FACEPLUS

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ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC8520 min	JC8520 start	JC8520 max	JP5530 min	JP5530 start	JP5530 max	JP8725 min	JP8725 start	JP8725 max
P1 - P2	Free cutting steel and low carbon (ex. 1.0715/9 smn 28/avp, 1.0503/c45)	≤ 200	100%	130	**180**	230	100	**140**	180	100	**150**	200
			30%	200	**240**	280	160	**200**	240	160	**210**	260
			10%	260	**280**	300	220	**240**	260	220	**250**	280
P3 - P4	Medium and high alloy steel (ex. 1.7225/42 CrMo 4, 1.3505/100 Cr 6)	200 ÷ 300	100%	100	**140**	180	80	**120**	160	90	**130**	170
			30%	160	**200**	240	120	**160**	200	130	**170**	210
			10%	220	**240**	260	180	**200**	220	190	**210**	230
P5 - P6	High tensile strength and tool steel (ex. 1.2344/X 40 CrMoV 5 1/ORVAR, Hardox400®)	300 ÷ 400	100%	70	**100**	130	60	**90**	120	80	**110**	140
			30%	120	**160**	200	100	**130**	160	120	**150**	180
			10%	200	**220**	240	140	**170**	200	160	**190**	220
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC9540 min	JC9540 start	JC9540 max	JP5530 min	JP5530 start	JP5530 max	JP9535 min	JP9535 start	JP9535 max
P7	Ferritic and martensitic stainless steel (ex. 1.4021/X 20 Cr 13/AISI420)	≤ 200	100%	90	**130**	170	60	**100**	140	80	**120**	160
			30%	110	**160**	210	80	**130**	180	100	**150**	200
			10%	130	**190**	250	100	**160**	220	120	**180**	240
P8	Precipitation hardening stainless steel (ex. 1.4548/X 5 CrNiCuNb 17 4/17-4-PH)	≤ 450	100%	70	**100**	130				60	**90**	120
			30%	80	**110**	140				70	**100**	130
			10%	90	**120**	150				80	**110**	140
M1	Austenitic stainless steel (ex. 1.4305/X 10 CrNiS 18 9/AISI303)	> 200	100%	90	**120**	150	60	**90**	120	80	**110**	140
			30%	110	**150**	190	80	**120**	160	100	**140**	180
			10%	130	**170**	210	100	**140**	180	120	**160**	200
M2 - M3	Austenitic and Duplex stainless steel (ex. 1.4401/X 5 CrNiMo 17 12 2/AISI316)		100%	80	**110**	140				70	**100**	130
			30%	90	**120**	150				80	**110**	140
				100	**130**	160				90	**120**	150
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC8520 min	JC8520 start	JC8520 max	JP7525 min	JP7525 start	JP7525 max			
K1	Grey cast iron (ex. 0.6025/GG 25/EN-GJL-250)	150 ÷ 250	100%	160	**200**	240	140	**180**	220			
			30%	180	**230**	280	160	**210**	260			
			10%	200	**260**	320	180	**240**	300			
K2	Nodular cast iron (ex. 0.7050/GGG 50/EN-GJS-500-7)	150 ÷ 350	100%	120	**160**	200	100	**140**	180			
			30%	140	**190**	240	120	**170**	220			
			10%	160	**220**	280	140	**200**	260			
K3 - K4	Austenitic and ADI cast iron (ex. 0.6660/GGL-NiCr 20 2/Ni-Resist 2, GJS-1000-5/ADI1000)	250 ÷ 500	100%	100	**130**	160	90	**120**	150			
			30%	120	**160**	200	120	**150**	180			
			10%	140	**190**	240	150	**180**	210			
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JU6520 min	JU6520 start	JU6520 max						
N1	Aluminium alloys ≤ Si 12% (ex. 3.4365/AlZn5.5MgCu/ERGAL)		100%	300	**400**	500						
			30%	400	**600**	800						
			10%	500	**800**	1100						
N2	Aluminium alloys Si > 12% (ex. 3.2382/G-AlSi12)		100%	200	**250**	300						
			30%	300	**350**	400						
			10%	400	**450**	500						
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC9540 min	JC9540 start	JC9540 max	JP9535 min	JP9535 start	JP9535 max			
S1 - S2 - S3	Fe/Ni/Co based heat resistant alloys (ex. Hastelloy, Inconel 625, Inconel 718)		100%	30	**40**	50	20	**30**	40			
			30%	40	**50**	60	30	**40**	50			
			10%	50	**60**	70	40	**50**	60			
S4 - S5	Titanium alloys (ex. TiAl2Sn4Zr2MoSi)		100%				40	**50**	60			
			30%				50	**60**	70			
			10%				60	**70**	80			

ae: radial depth of cut; DC: milling cutter diameter

Complete workpiece materials p. **H**1.

JU4525							
min	start	max					
130	**180**	230					
200	**240**	280					
260	**280**	300					
120	**150**	180					
180	**210**	240					
230	**250**	270					
90	**120**	150					
150	**180**	210					
190	**220**	250					

Complete workpiece materials p. **H**1.

DESIGNATION	ae/DC	DEPTH OF CUT			FEED RATE		
		ap (mm)			fz (mm)		
		min	start	max	min	start	max
SEoT13T3AGEN-GP	100%	1.00	**3.00**	5.00	0.08	**0.15**	0.22
	30%	1.00	**3.00**	5.00	0.10	**0.19**	0.28
	10%	1.00	**3.00**	5.00	0.12	**0.22**	0.32
SEET13T3AGEN-SC	100%	0.50	**2.50**	4.50	0.06	**0.11**	0.16
	30%	0.50	**2.50**	4.50	0.08	**0.14**	0.20
	10%	0.50	**2.50**	4.50	0.09	**0.16**	0.23
SEoT13T3AGSN-TE	100%	1.00	**3.00**	5.00	0.11	**0.20**	0.29
	30%	1.00	**3.00**	5.00	0.14	**0.25**	0.36
	10%	1.00	**3.00**	5.00	0.16	**0.29**	0.42
SEoT13T3AGSN-GG	100%	0.50	**2.50**	4.50	0.10	**0.18**	0.26
	30%	0.50	**2.50**	4.50	0.12	**0.22**	0.32
	10%	0.50	**2.50**	4.50	0.14	**0.26**	0.38
SEoT13T3AGSN-GH	100%	1.00	**3.00**	5.00	0.13	**0.23**	0.33
	30%	1.00	**3.00**	5.00	0.16	**0.28**	0.40
	10%	1.00	**3.00**	5.00	0.19	**0.33**	0.47
SEEW13T3AGSN	100%	1.00	**3.00**	5.00	0.14	**0.24**	0.34
	30%	1.00	**3.00**	5.00	0.18	**0.30**	0.42
	10%	1.00	**3.00**	5.00	0.21	**0.35**	0.49
SEET13T3AGFN-AL	100%	0.50	**2.50**	4.50	0.06	**0.11**	0.16
	30%	0.50	**2.50**	4.50	0.08	**0.14**	0.20
	10%	0.50	**2.50**	4.50	0.09	**0.16**	0.23
SEET13T3-WU	100%	0.50	**1.00**	1.50	0.06	**0.13**	0.20
	30%	0.50	**1.00**	1.50	0.08	**0.16**	0.24
	10%	0.50	**1.00**	1.50	0.09	**0.18**	0.27

nikkoTOOLS

OKTOPLUS

Multi-edge face mill to optimize production economy

APPLICATION

· Finishing / semi-finishing / rough face milling
· Removal of the crusted surfaces
· General milling of interrupted surfaces

ISO APPLICATION FIELDS

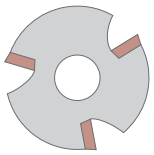
P M K N S

ADVANTAGES AND CHARACTERISTICS

· Super-positive cutter with a very gentle cutting action.
· Great performance even on circular interpolation milling.
· Excellent performance on difficult to machine materials (ISO M and ISO S).
· Extremely complete range of chipbreakers in both ground (E tolerance) and pressed (M tolerance) versions.

Cutter bodies

· Arbor type with coolant
· From D50 to D160



Coarse pitch

Fine pitch

Inserts

· 8 cutting edges
· Edge length 06 with APMX = 4 mm and 05 with APMX = 3
· Cemented carbide grades with CVD and PVD coatings
· Geometries: SC, GP, TE, AL, WU

OKTOPLUS OD

SC P M S

SIZE 06

GP P M K

SIZE 06

TE P K

SIZE 06

AL N

SIZE 06

WU P K

SIZE 06

OKTOPLUS OF

GP P M K

SIZE 05

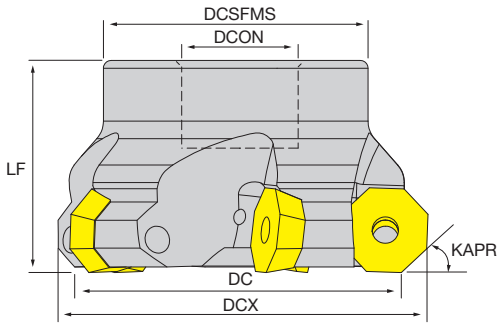
AL N

SIZE 05

NT-OD

OktoPlus OD

- Positive general face milling cutters
- For octagonal inserts with 8 cutting edges
- Kapr 43°
- With coolant through



Designation	Stock	DC	CICT	DCON	LF	LU	DCSFMS	CRKS	DCX	WT	MIID
NT-OD06H D050-F22-Z04	●	50	4	22	40	-	48	-	60	0.34 Kg	ODoo0605
NT-OD06H D063-F22-Z05	●	63	5	22	40	-	50	-	73	0.52 Kg	ODoo0605
NT-OD06H D080-F27-Z06	●	80	6	27	50	-	60	-	90	1.05 Kg	ODoo0605
NT-OD06H D100-F32-Z07	●	100	7	32	50	-	70	-	110	1.48 Kg	ODoo0605
NT-OD06H D125-F40-Z08	●	125	8	40	63	-	80	-	135	2.60 Kg	ODoo0605
NT-OD06H D160-F40-Z10	●	160	10	40	63	-	85	-	170	3.96 Kg	ODoo0605

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Spare parts	Insert screws	Flag wrenches
NT-OD06H Dooo-Foo-Zoo	NT-ST50110T20	NT-FTB20

nikkoTOOLS

OD

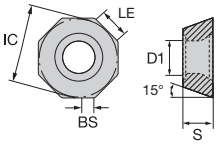
OktoPlus OD

- Positive general face milling inserts
- 8 cutting edges
- Kapr 43°
- Diverse carbide grades with PVD and CVD coating grades available, covering a wide range of applications
- Sharp/universal/robust/wiper geometries available

HC: Coated carbide
HF: Micrograin carbide
CVD: Chemical vapour deposition
PVD: Physical vapour deposition

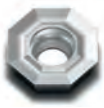
	HC CVD	HF PVD	HF PVD	HF PVD	HF PVD	HF
	JC7515	JP5520	JP5530	JP7525	JP9535	JU6520
Stable machining, light cut (● 1st choice, ○ suitable)	●	○				●
General machining, medium cut (● 1st choice, ○ suitable)	●	●	●	●	●	●
Unstable machining, heavy cut (● 1st choice, ○ suitable)			○	●	●	

Dimensions

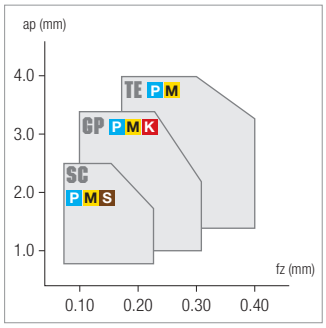


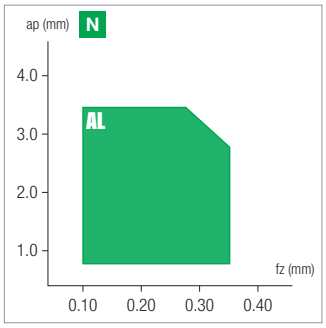
8 edges

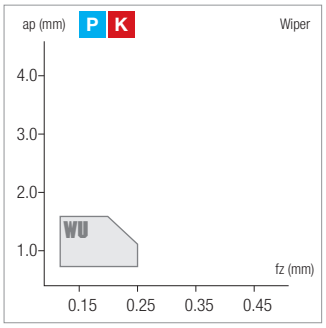
ISO	JC7515	JP5520	JP5530	JP7525	JP9535	JU6520
	Vc(m/min) - suggested cutting speed range (bold: 1st choice)					
P		100 260	100 260			
M		60 180	60 180		80 200	
K	180 360			140 300		
N						300 1100
S					20 60	
H						

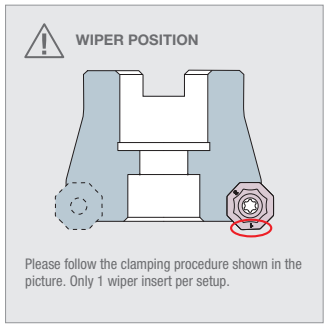
	Designation		BS	IC	S	D1	LE	JC7515	JP5520	JP5530	JP7525	JP9535	JU6520	Stock
GENERAL	GP P M K 	ODKT060508-GP	1.8	15.875	3.56	5.5	5				▽	●		
		ODMT060508-GP	1.8	15.875	3.56	5.5	5	●	▽	●	●	●		
LOW FORCE	SC P M S	ODKT060508-SC	1.8	15.875	3.56	5.5	5		▽	▽		●		
REINFORCED	TE P K	ODKT060508-TE	1.8	15.875	3.56	5.5	5		▽					
		ODMT060508-TE	1.8	15.875	3.56	5.5	5	○	▽	●	●			
ALUMINIUM	AL N polished surface periphery ground	ODKT060508-AL	1.8	15.875	3.56	5.5	5						●	
WIPER	WU P K 2 edges	ODKW060508-WU	6.4	15.875	3.56	5.5	5		▽	●	●			

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion





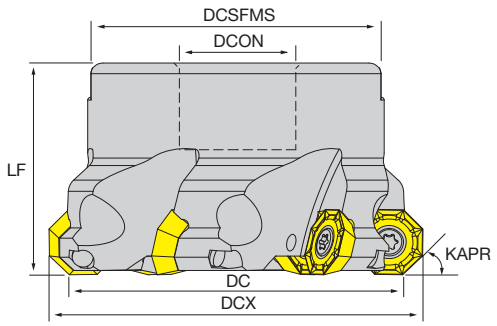


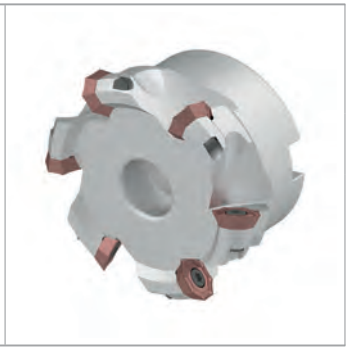


NT-OF

OktoPlus OF

- Positive general face milling cutters
- For octagonal inserts with 8 cutting edges
- Kapr 43°
- With coolant through





Designation	Stock	DC	CICT	DCON	LF	LU	DCSFMS	CRKS	DCX	WT	MIID
NT-OF05H D050-F22-Z05	●	50	5	22	40	-	46.8	-	58	0.34 Kg	OFoo05T3
NT-OF05H D063-F22-Z06	●	63	6	22	40	-	56	-	71	0.58 Kg	OFoo05T3
NT-OF05H D080-F27-Z07	●	80	7	27	50	-	60	-	88	0.91 Kg	OFoo05T3
NT-OF05H D100-F32-Z08	▲	100	8	32	50	-	70	-	108	1.40 Kg	OFoo05T3

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Spare parts	Insert screws	Flag wrenches
NT-OF05H Dooo-Foo-Zoo	NT-ST40110T15HQ	NT-FTB15

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OFKT

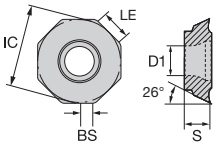
OktoPlus OF

- Positive general face milling inserts
- 8 cutting edges
- Kapr 43°
- Diverse carbide grades with PVD and CVD coating grades available, covering a wide range of applications
- Sharp/universal/robust/wiper geometries available

HC: Coated carbide
HF: Micrograin carbide
CVD: Chemical vapour deposition
PVD: Physical vapour deposition

	HC CVD	HF PVD	HF
	JC7530	JP5540	JU6520
Stable machining, light cut (● 1st choice, ○ suitable)			●
General machining, medium cut (● 1st choice, ○ suitable)	●	○	●
Unstable machining, heavy cut (● 1st choice, ○ suitable)	●	●	

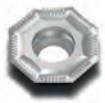
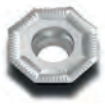
Dimensions



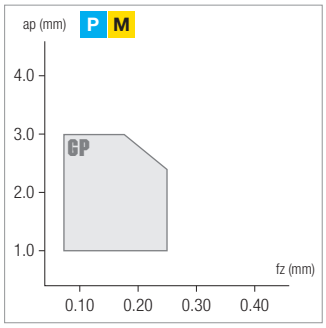
8 edges

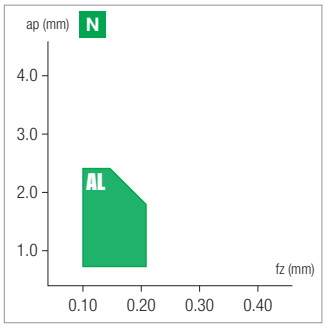
ISO	HC CVD	HF PVD	HF
P		80 220	
M		60 180	
K	160 320		
N			300 1100
S		20 50	
H			

Vc(m/min) - suggested cutting speed range (bold: 1st choice)

	Designation		BS	IC	S	D1	LE	HC CVD	HF PVD	HF	Stock
GENERAL	GP P M K 	OFKT05T305-GP	1.1	12.7	3.97	4.4	4	▽	●		
ALUMINIUM	AL N  polished surface periphery ground	OFKT05T305-AL	1.1	12.7	3.97	4.4	4			●	

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion





MILLING Parameters - cutting speed · OKTOPLUS

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ISO 513	MATERIAL	HARDNESS HB	ae/DC	JP5530 min	JP5530 start	JP5530 max	JP5540 min	JP5540 start	JP5540 max	JP9535 min	JP9535 start	JP9535 max
P1 - P2	Free cutting steel and low carbon (ex. 1.0715/9 smn 28/avp, 1.0503/c45)	≤ 200	100%	100	**140**	180	80	**120**	160			
			30%	160	**200**	240	120	**160**	200			
			10%	220	**240**	260	180	**200**	220			
P3 - P4	Medium and high alloy steel (ex. 1.7225/42 CrMo 4, 1.3505/100 Cr 6)	200 ÷ 300	100%	80	**120**	160	60	**100**	140			
			30%	120	**160**	200	100	**140**	180			
			10%	180	**200**	220	160	**180**	200			
P5 - P6	High tensile strength and tool steel (ex. 1.2344/X 40 CrMoV 5 1/ORVAR, Hardox400®)	300 ÷ 400	100%	60	**90**	120						
			30%	100	**130**	160						
			10%	140	**170**	200						
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JP5530 min	JP5530 start	JP5530 max	JP5540 min	JP5540 start	JP5540 max	JP9535 min	JP9535 start	JP9535 max
P7	Ferritic and martensitic stainless steel (ex. 1.4021/X 20 Cr 13/AISI420)	≤ 200	100%	60	**100**	140	60	**100**	140	80	**120**	160
			30%	80	**130**	180	80	**130**	180	100	**150**	200
			10%	100	**160**	220	100	**160**	220	120	**180**	240
P8	Precipitation hardening stainless steel (ex. 1.4548/X 5 CrNiCuNb 17 4/17-4-PH)	≤ 450	100%				50	**80**	110	60	**90**	120
			30%				60	**90**	120	70	**100**	130
			10%				70	**100**	130	80	**110**	140
M1	Austenitic stainless steel (ex. 1.4305/X 10 CrNiS 18 9/AISI303)	> 200	100%	60	**90**	120	60	**90**	120	80	**110**	140
			30%	80	**120**	160	80	**120**	160	100	**140**	180
			10%	100	**140**	180	100	**140**	180	120	**160**	200
M2 - M3	Austenitic and Duplex stainless steel (ex. 1.4401/X 5 CrNiMo 17 12 2/AISI316)		100%				60	**90**	120	70	**100**	130
			30%				70	**100**	130	80	**110**	140
							80	**110**	140	90	**120**	150
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC7515 min	JC7515 start	JC7515 max	JP7525 min	JP7525 start	JP7525 max			
K1	Grey cast iron (ex. 0.6025/GG 25/EN-GJL-250)	150 ÷ 250	100%	180	**230**	280	140	**180**	220			
			30%	200	**260**	320	160	**210**	260			
			10%	220	**290**	360	180	**240**	300			
K2	Nodular cast iron (ex. 0.7050/GGG 50/EN-GJS-500-7)	150 ÷ 350	100%	120	**180**	240	100	**140**	180			
			30%	160	**220**	280	120	**170**	220			
			10%	200	**260**	320	140	**200**	260			
K3 - K4	Austenitic and ADI cast iron (ex. 0.6660/GGL-NiCr 20 2/Ni-Resist 2, GJS-1000-5/ ADI1000)	250 ÷ 500	100%	100	**140**	180	90	**120**	150			
			30%	140	**180**	220	120	**150**	180			
			10%	180	**220**	260	150	**180**	210			
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JU6520 min	JU6520 start	JU6520 max						
N1	Aluminium alloys ≤ Si 12% (ex. 3.4365/AlZn5.5MgCu/ERGAL)		100%	300	**400**	500						
			30%	400	**600**	800						
			10%	500	**800**	1100						
N2	Aluminium alloys Si > 12% (ex. 3.2382/G-AlSi12)		100%	200	**250**	300						
			30%	300	**350**	400						
			10%	400	**450**	500						
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JP5540 min	JP5540 start	JP5540 max	JP9535 min	JP9535 start	JP9535 max			
S1 - S2 - S3	Fe/Ni/Co based heat resistant alloys (ex. Hastelloy, Inconel 625, Inconel 718)		100%	20	**25**	30	20	**30**	40			
			30%	30	**35**	40	30	**40**	50			
			10%	40	**45**	50	40	**50**	60			
S4 - S5	Titanium alloys (ex. TiAl2Sn4Zr2MoSi)		100%	30	**40**	50	40	**50**	60			
			30%	40	**50**	60	50	**60**	70			
			10%	50	**60**	70	60	**70**	80			

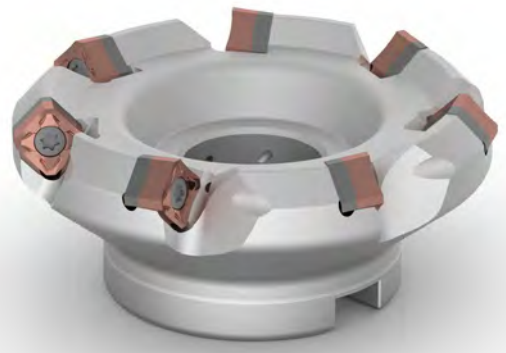
ae: radial depth of cut; DC: milling cutter diameter

Complete workpiece materials p. **H**1.

DESIGNATION	ae/DC	DEPTH OF CUT			FEED RATE		
		ap (mm)			fz (mm)		
		min	start	max	min	start	max
OFKT05T305-GP	100%	1.00	**2.00**	3.00	0.08	**0.12**	0.16
	30%	1.00	**2.00**	3.00	0.10	**0.15**	0.20
	10%	1.00	**2.00**	3.00	0.12	**0.18**	0.24
ODoT060508-GP	100%	1.00	**2.50**	4.00	0.10	**0.18**	0.26
	30%	1.00	**2.50**	4.00	0.12	**0.22**	0.32
	10%	1.00	**2.50**	4.00	0.14	**0.26**	0.38
ODKT060508-SC	100%	0.50	**2.00**	3.50	0.08	**0.14**	0.20
	30%	0.50	**2.00**	3.50	0.10	**0.17**	0.24
	10%	0.50	**2.00**	3.50	0.12	**0.20**	0.28
ODoT060508-TE	100%	1.00	**2.50**	4.00	0.12	**0.21**	0.30
	30%	1.00	**2.50**	4.00	0.14	**0.26**	0.38
	10%	1.00	**2.50**	4.00	0.16	**0.30**	0.44
OFKT05T305-AL	100%	0.50	**1.50**	2.50	0.08	**0.11**	0.14
	30%	0.50	**1.50**	2.50	0.10	**0.14**	0.18
	10%	0.50	**1.50**	2.50	0.12	**0.17**	0.22
ODKT060508-AL	100%	0.50	**2.00**	3.50	0.08	**0.14**	0.20
	30%	0.50	**2.00**	3.50	0.10	**0.17**	0.24
	10%	0.50	**2.00**	3.50	0.12	**0.20**	0.28
ODKW060508-WU	100%	0.50	**1.00**	1.50	0.06	**0.13**	0.20
	30%	0.50	**1.00**	1.50	0.08	**0.16**	0.24
	10%	0.50	**1.00**	1.50	0.09	**0.18**	0.27

DOUBLE4FACE

First choice for high productivity face milling



APPLICATION

· Finishing / semi-finishing / rough face milling
· Removal of the crusted surfaces
· General milling of interrupted surfaces

ISO APPLICATION FIELDS

P M K N S

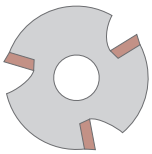
ADVANTAGES AND CHARACTERISTICS

· Curved geometry generates low cutting force and smooth cutting process.
· Shim style cutter in the entire range guarantees high stability and operational.
· Complete grades covering ISO P, M, K, N, S materials (with both PVD and CVD coating).
· Accurate inserts in tolerance E or pressed inserts in tolerance M - available both high precision and high economical solutions.

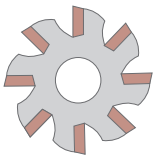
Cutter bodies

· Arbor type with shim
· From D50 to D160

With shim


Coarse pitch

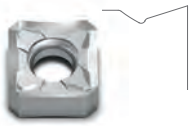
Fine pitch


Extra fine pitch

Inserts

· 8 cutting edges
· Edge length 12 with APMX = 3 mm
· Cemented carbide grades with CVD and PVD coatings
· Geometries: SC, GP, TE, AL, WU wiper

SC P M S


SIZE 12

GP P M K

SIZE 12

TE P K

SIZE 12

AL N

SIZE 12

WU P K

SIZE 12

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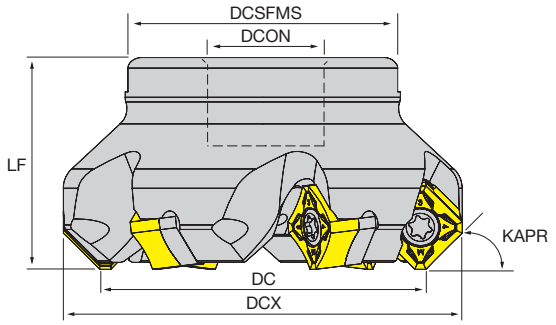
NT-SX

Double4Face

- Double-sided face milling cutters, Kapr 45°
- With shims to protect the insert seats
- For double-sided square inserts with 8 cutting edges
- With coolant through



Designation	Stock	DC	CICT	DCON	LF	LU	DCSFMS	CRKS	DCX	WT	MIID
NT-SX12H D050-F22-Z04	●	50	4	22	40	-	48	-	64	0.48 Kg	SNoX1205
NT-SX12H D050-F22-Z05	●	50	5	22	40	-	48	-	64	0.46 Kg	SNoX1205
NT-SX12H D063-F22-Z05	●	63	5	22	50	-	52	-	77	0.69 Kg	SNoX1205
NT-SX12H D063-F22-Z06	●	63	6	22	50	-	52	-	77	0.67 Kg	SNoX1205
NT-SX12H D080-F27-Z06	●	80	6	27	50	-	60	-	94	1.29 Kg	SNoX1205
NT-SX12H D080-F27-Z07	●	80	7	27	50	-	60	-	94	1.27 Kg	SNoX1205
NT-SX12H D080-F27-Z08	●	80	8	27	50	-	60	-	94	1.25 Kg	SNoX1205
NT-SX12H D100-F32-Z07	●	100	7	32	50	-	70	-	114	1.64 Kg	SNoX1205
NT-SX12H D100-F32-Z08	●	100	8	32	50	-	70	-	114	1.62 Kg	SNoX1205
NT-SX12H D100-F32-Z09	●	100	9	32	50	-	70	-	114	1.59 Kg	SNoX1205
NT-SX12H D125-F40-Z10	●	125	10	40	63	-	80	-	139	2.92 Kg	SNoX1205
NT-SX12H D160-F40-Z12	●	160	12	40	63	-	85	-	174	4.36 Kg	SNoX1205

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Spare parts	Insert screws	Flag wrenches	Shim	Shim screws	L wrench
NT-SX12H Dooo-Foo-Zoo	NT-ST40136T15	NT-FTB15	NT-SH009	NT-SR009	NT-WR040

SN

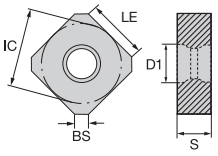
Double4Face

- Double-sided face milling inserts
- 8 cutting edges
- Curved design effectively reduces cutting force
- Kapr 45°
- Diverse carbide grades with PVD and CVD coating grades available, covering a wide range of applications
- 3D geometries, sharp/ universal/ reinforced/ wiper types available

HC: Coated carbide
HF: Micrograin carbide
CVD: Chemical vapour deposition
PVD: Physical vapour deposition

	HC CVD	HC CVD	HC CVD	HF PVD	HF PVD	HF PVD	HF PVD	HF PVD	HF
	JC7515	**JC8520**	**JC9540**	**JP5520**	**JP5530**	**JP7525**	**JP8725**	**JP9535**	**JU6520**
Stable machining, light cut (● 1st choice, ○ suitable)	●	●		○			○		●
General machining, medium cut (● 1st choice, ○ suitable)	●	○	●	●	●	●	●	●	●
Unstable machining, heavy cut (● 1st choice, ○ suitable)			●		○	●		●	

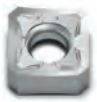
Dimensions



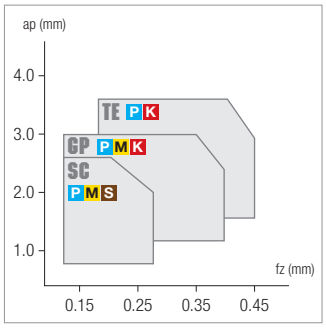
8 edges

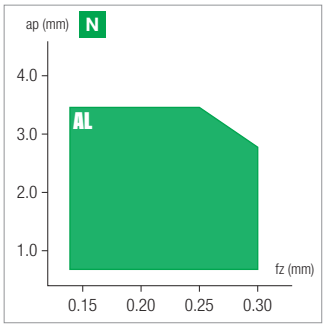
Vc(m/min) - suggested cutting speed range (bold: 1st choice)

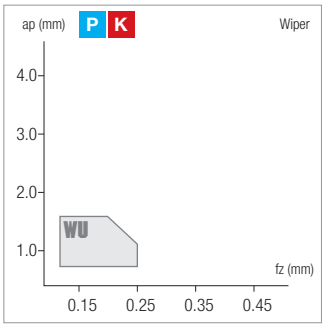
ISO	JC7515	JC8520	JC9540	JP5520	JP5530	JP7525	JP8725	JP9535	JU6520
P		130 300		100 260	100 260		100 280		
M			90 210	60 180	60 180			80 200	
K	180 360	160 320				140 300			
N									300 1100
S			30 70					20 60	
H									

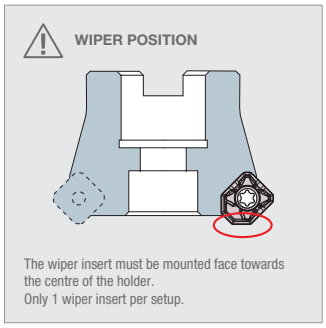
	Designation		BS	IC	S	D1	LE	JC7515	JC8520	JC9540	JP5520	JP5530	JP7525	JP8725	JP9535	JU6520
GENERAL	GP P M K 	SNEX1205ANEN-GP	1.6	12.7	6.35	5.9	9.1	●				●	●	●	●	
		SNMX1205ANEN-GP	1.6	12.7	6.35	5.9	9.1	●	●	●		●	▲	●	▲	
LOW FORCE	SC P M S	SNEX1205ANEN-SC	1.6	12.7	6.35	5.9	9.1	●		●		●	●	▲	●	
REINFORCED	TE P K	SNEX1205ANSN-TE	1.6	12.7	6.35	5.9	9.1	○			▽	●	●			
		SNMX1205ANSN-TE	1.6	12.7	6.35	5.9	9.1	▲	●		▽	●	●	▲		
ALUMINIUM	AL N polished surface periphery ground	SNEX1205ANFN-AL	1.6	12.7	6.35	5.9	9.1									●
WIPER	WU P K 2 edges	SNEX1205-WU	5.1	12.7	6.35	5.9	9.1	●			▽	●	●			

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion









ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC8520 min	JC8520 start	JC8520 max	JP5530 min	JP5530 start	JP5530 max	JP8725 min	JP8725 start	JP8725 max
P1 - P2	Free cutting steel and low carbon (ex. 1.0715/9 smn 28/avp, 1.0503/c45)	≤ 200	100%	130	**180**	230	100	**140**	180	100	**150**	200
			30%	200	**240**	280	160	**200**	240	160	**210**	260
			10%	260	**280**	300	220	**240**	260	220	**250**	280
P3 - P4	Medium and high alloy steel (ex. 1.7225/42 CrMo 4, 1.3505/100 Cr 6)	200 ÷ 300	100%	100	**140**	180	80	**120**	160	90	**130**	170
			30%	160	**200**	240	120	**160**	200	130	**170**	210
			10%	220	**240**	260	180	**200**	220	190	**210**	230
P5 - P6	High tensile strength and tool steel (ex. 1.2344/X 40 CrMoV 5 1/ORVAR, Hardox400®)	300 ÷ 400	100%	70	**100**	130	60	**90**	120	80	**110**	140
			30%	120	**160**	200	100	**130**	160	120	**150**	180
			10%	200	**220**	240	140	**170**	200	160	**190**	220
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC9540 min	JC9540 start	JC9540 max	JP5530 min	JP5530 start	JP5530 max	JP9535 min	JP9535 start	JP9535 max
P7	Ferritic and martensitic stainless steel (ex. 1.4021/X 20 Cr 13/AISI420)	≤ 200	100%	90	**130**	170	60	**100**	140	80	**120**	160
			30%	110	**160**	210	80	**130**	180	100	**150**	200
			10%	130	**190**	250	100	**160**	220	120	**180**	240
P8	Precipitation hardening stainless steel (ex. 1.4548/X 5 CrNiCuNb 17 4/17-4-PH)	≤ 450	100%	70	**100**	130				60	**90**	120
			30%	80	**110**	140				70	**100**	130
			10%	90	**120**	150				80	**110**	140
M1	Austenitic stainless steel (ex. 1.4305/X 10 CrNiS 18 9/AISI303)	> 200	100%	90	**120**	150	60	**90**	120	80	**110**	140
			30%	110	**150**	190	80	**120**	160	100	**140**	180
			10%	130	**170**	210	100	**140**	180	120	**160**	200
M2 - M3	Austenitic and Duplex stainless steel (ex. 1.4401/X 5 CrNiMo 17 12 2/AISI316)		100%	80	**110**	140				70	**100**	130
			30%	90	**120**	150				80	**110**	140
				100	**130**	160				90	**120**	150
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC7515 min	JC7515 start	JC7515 max	JC8520 min	JC8520 start	JC8520 max	JP7525 min	JP7525 start	JP7525 max
K1	Grey cast iron (ex. 0.6025/GG 25/EN-GJL-250)	150 ÷ 250	100%	180	**230**	280	160	**200**	240	140	**180**	220
			30%	200	**260**	320	180	**230**	280	160	**210**	260
			10%	220	**290**	360	200	**260**	320	180	**240**	300
K2	Nodular cast iron (ex. 0.7050/GGG 50/EN-GJS-500-7)	150 ÷ 350	100%	120	**180**	240	120	**160**	200	100	**140**	180
			30%	160	**220**	280	140	**190**	240	120	**170**	220
			10%	200	**260**	320	160	**220**	280	140	**200**	260
K3 - K4	Austenitic and ADI cast iron (ex. 0.6660/GGL-NiCr 20 2/Ni-Resist 2, GJS-1000-5/ ADI1000)	250 ÷ 500	100%	100	**140**	180	100	**130**	160	90	**120**	150
			30%	140	**180**	220	120	**160**	200	120	**150**	180
			10%	180	**220**	260	140	**190**	240	150	**180**	210
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JU6520 min	JU6520 start	JU6520 max						
N1	Aluminium alloys ≤ Si 12% (ex. 3.4365/AlZn5.5MgCu/ERGAL)		100%	300	**400**	500						
			30%	400	**600**	800						
			10%	500	**800**	1100						
N2	Aluminium alloys Si > 12% (ex. 3.2382/G-AlSi12)		100%	200	**250**	300						
			30%	300	**350**	400						
			10%	400	**450**	500						
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC9540 min	JC9540 start	JC9540 max	JP9535 min	JP9535 start	JP9535 max			
S1 - S2 - S3	Fe/Ni/Co based heat resistant alloys (ex. Hastelloy, Inconel 625, Inconel 718)		100%	30	**40**	50	20	**30**	40			
			30%	40	**50**	60	30	**40**	50			
			10%	50	**60**	70	40	**50**	60			
S4 - S5	Titanium alloys (ex. TiAl2Sn4Zr2MoSi)		100%				40	**50**	60			
			30%				50	**60**	70			
			10%				60	**70**	80			

ae: radial depth of cut; DC: milling cutter diameter

Complete workpiece materials p. **H**1.

DESIGNATION	ae/DC	DEPTH OF CUT			FEED RATE		
		ap (mm)			fz (mm)		
		min	start	max	min	start	max
SNoX1205ANEN-GP	100%	1.00	**2.00**	3.00	0.13	**0.21**	0.29
	30%	1.00	**2.00**	3.00	0.16	**0.26**	0.36
	10%	1.00	**2.00**	3.00	0.20	**0.31**	0.42
SNEX1205ANEN-SC	100%	0.50	**1.50**	2.50	0.06	**0.12**	0.18
	30%	0.50	**1.50**	2.50	0.08	**0.15**	0.22
	10%	0.50	**1.50**	2.50	0.10	**0.18**	0.26
SNoX1205ANSN-TE	100%	1.00	**2.00**	3.00	0.16	**0.25**	0.34
	30%	1.00	**2.00**	3.00	0.20	**0.32**	0.44
	10%	1.00	**2.00**	3.00	0.24	**0.38**	0.52
SNEX1205ANFN-AL	100%	0.50	**1.50**	2.50	0.10	**0.20**	0.30
	30%	0.50	**1.50**	2.50	0.12	**0.25**	0.38
	10%	0.50	**1.50**	2.50	0.14	**0.28**	0.42
SNEX1205-WU	100%	0.50	**1.00**	1.50	0.06	**0.13**	0.20
	30%	0.50	**1.00**	1.50	0.08	**0.16**	0.24
	10%	0.50	**1.00**	1.50	0.10	**0.19**	0.28

DOUBLEHEX

Safe and high economical milling system for cast iron

APPLICATION

· Roughing or semi-finishing face milling of cast iron
· Adapted for interrupted surfaces
· Adapted for remove the casted hard skins

ISO APPLICATION FIELDS

K

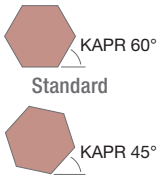
ADVANTAGES AND CHARACTERISTICS

· Fine pitch and extra-fine pitch type cutters available. Dense teeth in the cutter body allows higher table feeds with exceptional productivity.
· Precise inserts in tol.E or in tol.M, high precision or high economical solutions available.
· 3 different chipbreakers combined with both PVD and CVD grades.
· Inserts also available in solid PCBN and Silicon Nitride.
· Extremely competitive cost per cutting edge.

Cutter bodies

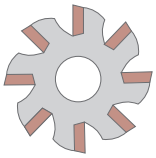
· Arbor type
· From D80 to D160

Wedge clampimg



On request

Fine pitch



Extra fine pitch

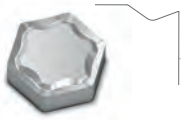
Inserts

· 12 edges
· Edge length 09 with APMX = 6 mm
· Carbide grades with PVD and CVD coatings,solid PCBN and ceramic
· Geometries: GL, GG, GH, Advanced

GL K

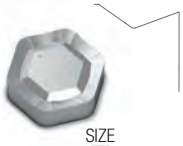
SIZE 09

GG K



SIZE 09

GH K



SIZE 09

UE K H PCBN

SIZE 09

UE K CERAMIC

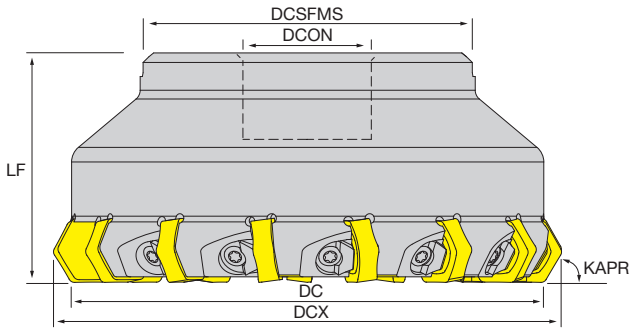
SIZE 09

A - TURNING
B - THREADING
C - GROOVING
D - MILLING
E - DRILLING
F - ACCESSORIES
G - SPARE PARTS

NT-HN

DoubleHex

- Double-sided face milling cutters specially for cast iron
- For hexagonal inserts with 12 cutting edges
- Kapr 60° and 45° upon request
- Extra fine pitch available



Designation	Stock	DC	CICT	DCON	LF	LU	DCSFMS	CRKS	DCX	WT	MIID
KAPR 60°											
NT-HN09 D080-F27-Z08	●	80	8	27	50	-	60	-	90	1.28 Kg	HNoX0905
NT-HN09 D080-F27-Z10	●	80	10	27	50	-	60	-	90	1.23 Kg	HNoX0905
NT-HN09 D100-F32-Z10	●	100	10	32	50	-	80	-	110	1.87 Kg	HNoX0905
NT-HN09 D100-F32-Z14	●	100	14	32	50	-	80	-	110	1.80 Kg	HNoX0905
NT-HN09 D125-F40-Z12	●	125	12	40	63	-	88	-	135	3.55 Kg	HNoX0905
NT-HN09 D125-F40-Z15	●	125	15	40	63	-	88	-	135	3.33 Kg	HNoX0905
NT-HN09 D160-F40-Z15	●	160	15	40	63	-	120	-	170	5.10 Kg	HNoX0905
NT-HN09 D160-F40-Z20	●	160	20	40	63	-	120	-	170	4.98 Kg	HNoX0905
KAPR 45°											
NT-HN0945 D080-F27-Z10	●	80	10	27	50	-	60	-	92.4	1.30 Kg	HNoX0905

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Spare parts	Wedge	Wedge screws	L wrench
NT-HN09 Dooo-Foo-Zoo	NT-WD090	NT-SC090	NT-WR030

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HN

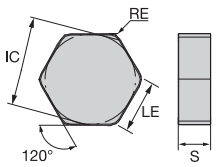
DoubleHex

- Double-sided face milling inserts specially for cast iron
- Hexagonal inserts with 12 cutting edges
- Coated carbide, CBN and ceramic grades available, covering a wide range of applications
- Geometries featuring different applications on cast iron, from light to heavy cutting

HC: Coated carbide
HF: Micrograin carbide
BH: High volume CBN
CN: Silicon nitride ceramic Si3N4
CVD: Chemical vapour deposition
PVD: Physical vapour deposition

	HC CVD	HF PVD	BH	CN
	JC7515	JP7525	NBH550U	NSN400
Stable machining, light cut (● 1st choice, ○ suitable)	●			●
General machining, medium cut (● 1st choice, ○ suitable)	●	●	●	●
Unstable machining, heavy cut (● 1st choice, ○ suitable)		●	●	

Dimensions



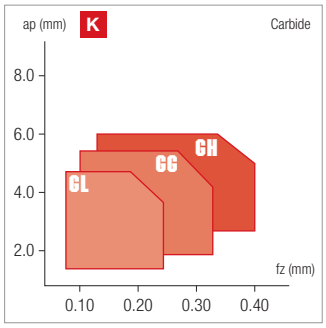
12 edges

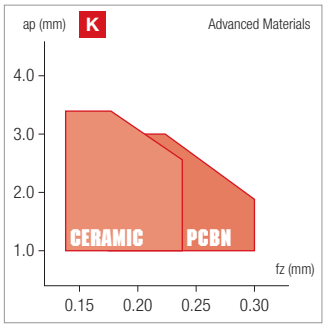
ISO	HC CVD JC7515	HF PVD JP7525	BH NBH550U	CN NSN400
P				
M				
K	180 360	140 300	800 2000	600 1200
N				
S				
H				

Vc(m/min) - suggested cutting speed range (bold: 1st choice)

	Designation		RE	IC	S	LE	AN	Stock				
GENERAL	GG K	HNEX090520-GG	2	16.2	5.56	9.35	0°	●	●			
		HNMX090520-GG	2	16.2	5.56	9.35	0°	●	●			
LOW FORCE	GL K	HNEX090510-GL	1	16.2	5.56	9.35	0°	●	●			
		HNEX090520-GL	2	16.2	5.56	9.35	0°	●	●			
REINFORCED	GH K	HNEX090516-GH	1.6	16.2	5.56	9.35	0°	●	●			
		HNEX090530-GH	3	16.2	5.56	9.35	0°	●	●			
		HNMX090516-GH	1.6	16.2	5.56	9.35	0°	●	●			
ADVANCED	UE K PCBN full solid	HNEN090520S-UE	2	16.2	5.56	9.35	0°			●		
ADVANCED	UE K CERAMIC silicon nitride	HNEN090520T-UE	2	16.2	5.56	9.35	0°				●	
		HNEN090530T-UE	3	16.2	5.56	9.35	0°				●	

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion





ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC7515			JP7525		
				min	start	max	min	start	max
K1	Grey cast iron (ex. 0.6025/GG 25/EN-GJL-250)	150 ÷ 250	100%	180	**230**	280	140	**180**	220
			30%	200	**260**	320	160	**210**	260
			10%	220	**290**	360	180	**240**	300
K2	Nodular cast iron (ex. 0.7050/GGG 50/EN-GJS-500-7)	150 ÷ 350	100%	120	**180**	240	100	**140**	180
			30%	160	**220**	280	120	**170**	220
			10%	200	**260**	320	140	**200**	260
K3 - K4	Austenitic and ADI cast iron (ex. 0.6660/GGL-NiCr 20 2/Ni-Resist 2, GJS-1000-5/ ADI1000)	250 ÷ 500	100%	100	**140**	180	90	**120**	150
			30%	140	**180**	220	120	**150**	180
			10%	180	**220**	260	150	**180**	210

ISO 513	MATERIAL	HARDNESS HB	ae/DC	NBH550U			NSN400		
				min	start	max	min	start	max
K1	Grey cast iron (ex. 0.6025/GG 25/EN-GJL-250)	150 ÷ 250	100%	800	**1000**	1200	400	**600**	800
			30%	1000	**1300**	1600	550	**750**	950
			10%	1200	**1600**	2000	800	**900**	1000

ae: radial depth of cut; DC: milling cutter diameter
Complete workpiece materials p. H1.

DESIGNATION	ae/DC	DEPTH OF CUT			FEED RATE		
		ap (mm)			fz (mm)		
		min	start	max	min	start	max
HNoX090520-GG	100%	1.00	**3.00**	5.00	0.10	**0.25**	0.40
	30%	1.00	**3.00**	5.00	0.13	**0.32**	0.51
	10%	1.00	**3.00**	5.00	0.16	**0.38**	0.60
HNEX0905oo-GL	100%	0.50	**2.50**	4.50	0.08	**0.22**	0.36
	30%	0.50	**2.50**	4.50	0.10	**0.27**	0.44
	10%	0.50	**2.50**	4.50	0.12	**0.32**	0.52
HNoX0905oo-GH	100%	1.00	**3.50**	6.00	0.13	**0.31**	0.50
	30%	1.00	**3.50**	6.00	0.16	**0.39**	0.62
	10%	1.00	**3.50**	6.00	0.19	**0.46**	0.73
HNEN0905ooo-UE	100%	1.00	**2.00**	3.00	0.13	**0.28**	0.43
	30%	1.00	**2.00**	3.00	0.16	**0.35**	0.54
	10%	1.00	**2.00**	3.00	0.20	**0.41**	0.62

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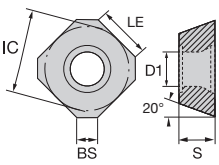
SEHX

ISO

- Positive type general face milling inserts
- 4 cutting edges
- Kapr 45°
- Diverse carbide grades with PVD and CVD coating grades available, covering a wide range of applications
- 3D geometries, general machining, low force, reinforced and aluminium types available

HC: Coated carbide
HF: Micrograin carbide
HT: Cermet
CVD: Chemical vapour deposition
PVD: Physical vapour deposition

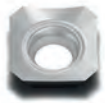
	HC CVD	HF PVD	HT	HF
	JC7530	JP8725	JU4525	JU6520
Stable machining, light cut (● 1st choice, ○ suitable)		○	●	●
General machining, medium cut (● 1st choice, ○ suitable)	●	●		●
Unstable machining, heavy cut (● 1st choice, ○ suitable)	●			



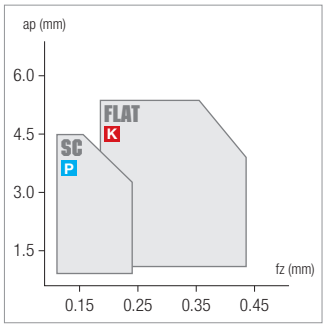
4 edges

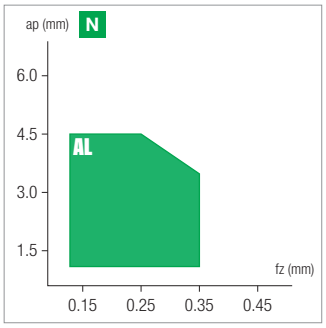
Dimensions	ISO	JC7530	JP8725	JU4525	JU6520
	P		100 280	130 300	
	M				
	K	160 320			
	N				300 1100
	S				
	H				

Vc(m/min) - suggested cutting speed range (bold: 1st choice)

	Designation		BS	IC	S	D1	LE	JC7530	JP8725	JU4525	JU6520	Stock
LOW FORCE	SC P	SEHX1204AFEN-SC	1.6	12.7	4.76	5.5	8.2		●	○		
REINFORCED	Flat K flat type	SEHX1204AFSN	1.6	12.7	4.76	5.5	8.2	▽				
ALUMINIUM	AL N  polished surface periphery ground	SEHX1204AFFN-AL	2.5	12.7	4.76	5.5	8.2				▽	

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion



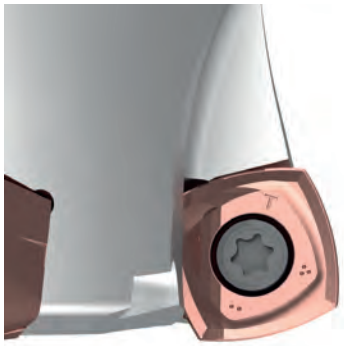


ISO 513	MATERIAL	HARDNESS HB	ae/DC	JP8725 min	JP8725 start	JP8725 max	JU4525 min	JU4525 start	JU4525 max
P1 - P2	Free cutting steel and low carbon (ex. 1.0715/9SMn28/AVP, 1.0503/C45)	≤ 200	100%	100	**150**	200	130	**180**	230
			30%	160	**210**	260	200	**240**	280
			10%	220	**250**	280	260	**280**	300
P3 - P4	Medium and high alloy steel (ex. 1.7225/42CrMo4, 1.3505/100Cr6)	200 ÷ 300	100%	90	**130**	170	120	**150**	180
			30%	130	**170**	210	180	**210**	240
			10%	190	**210**	230	230	**250**	270
P5 - P6	High tensile strength and tool steel (ex. 1.2344/X40CrMoV5-1/ORVAR, Hardox400®)	300 ÷ 400	100%	80	**110**	140	90	**120**	150
			30%	120	**150**	180	150	**180**	210
			10%	160	**190**	220	190	**220**	250
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC7530 min	JC7530 start	JC7530 max			
K1	Grey cast iron (ex. 0.6025/GG 25/EN-GJL-250)	150 ÷ 250	100%	160	**200**	240			
			30%	180	**230**	280			
			10%	200	**260**	320			
K2	Nodular cast iron (ex. 0.7050/GGG 50/EN-GJS-500-7)	150 ÷ 350	100%	120	**160**	200			
			30%	140	**190**	240			
			10%	160	**220**	280			
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JU6520 min	JU6520 start	JU6520 max			
N1	Aluminium alloys ≤ Si 12% (ex. 3.4365/AlZn5.5MgCu/ERGAL)		100%	300	**400**	500			
			30%	400	**600**	800			
			10%	500	**800**	1100			
N2	Aluminium alloys Si > 12% (ex. 3.2382/G-AlSi12)		100%	200	**250**	300			
			30%	300	**350**	400			
			10%	400	**450**	500			

ae: radial depth of cut; DC: milling cutter diameter

Complete workpiece materials p. **H**1.

DESIGNATION	ae/DC	DEPTH OF CUT			FEED RATE		
		ap (mm)			fz (mm)		
		min	start	max	min	start	max
SEHX1204AFEN-SC	100%	0.50	**2.00**	3.50	0.06	**0.11**	0.16
	30%	0.50	**2.00**	3.50	0.08	**0.14**	0.20
	10%	0.50	**2.00**	3.50	0.09	**0.16**	0.23
SEHX1204AFSN	100%	1.50	**3.00**	4.50	0.14	**0.24**	0.34
	30%	1.50	**3.00**	4.50	0.18	**0.30**	0.42
	10%	1.50	**3.00**	4.50	0.21	**0.35**	0.49
SEHX1204AFFN-AL	100%	0.50	**2.50**	4.50	0.08	**0.17**	0.28
	30%	0.50	**2.50**	4.50	0.10	**0.22**	0.34
	10%	0.50	**2.50**	4.50	0.12	**0.26**	0.40



MILLING High Feed

Quick guide .D76

HF4PLUS .D77

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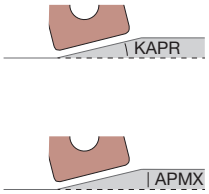


	HF4PLUS SD	HF4PLUS SP
	D78	D80
	SCREW-IN	SCREW-IN
		CYLINDRICAL
	ARBOR	ARBOR
KAPR	13°	13°
Insert sizes	10 / 12 / 15	07
APMX	1.5 / 2 / 3	1
Tool diameter	Ø35 - Ø125	Ø20 - Ø52
Coolant holes	✓	✓
Workpiece material	P M K S	P M K S
No. of cutting edges	4	4
No. of geometries	4	2
Special features	special geometry for ISO S	-
Face Milling	✓	✓
Long Overhang	✓	✓
Ramping	✓	✓
Pocketing	✓	✓
Helical Interpolation	✓	✓
Machine load	■■■□□	■■□□□
Strenght	■■■■■	■■■□□
Range	■■■■■	■■■■□

HF4PLUS

High productivity high feed milling system available from big to small diameters

APPLICATION

- Semi-finishing or roughing of surfaces
- Profiling and contouring
- Linear or trochoidal ramping
- Pocketing

ISO APPLICATION FIELDS

P M K S

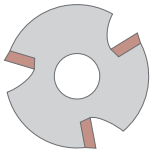
ADVANTAGES AND CHARACTERISTICS

- High feed machining that effectively reduces cycle time and improves efficiency
- Versatile in operations and simplify the process (can do face milling, ramping, helical pocketing, counterbore and countersink, combines roughing and semi finishing)
- Multiple-curve edge design improves robustness and reliability
- Available from mini size 07 to cost-effective 10, frequent 12 and large size 15

Cutter bodies

- Arbor type
- Cylindrical type
- Screw-in type
- Extension sleeves (steel/carbide 10xD)
- From D20 to D125

Extension arbors



Coarse pitch

Fine pitch

Inserts

- 4 edges
- Edge length 07, 10, 12 and 15
- Cemented carbide grades with PVD and CVD coatings
- Geometries: SC, GP, SS, TE

SC P M S

SIZE
07 10

GP P M K

SIZE
07 10 12 15

SS M S

SIZE
12

TE P K

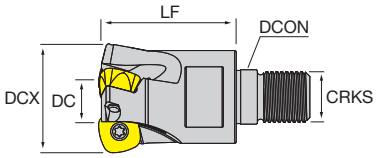
SIZE
10 12 15

NT-SD

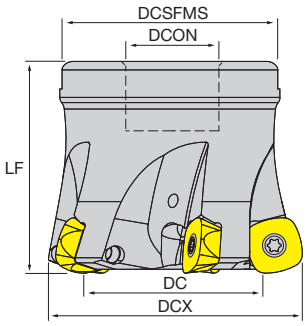
HF4Plus SD

- High feed milling system with positive square inserts, with coolant through
- Diverse combination of diameters and pitches, available with different insert sizes
- Tolerance of tool diameter (with Nikko inserts installed) 0/-0.2
- Steel and carbide arbors available for screw-in type holders

Screw-in



Arbor



Designation	Stock	DCX	CICT	DC	DCON	LF	LU	DCSFMS	CRKS	WT	MIID
SCREW-IN											
NT-SD10HF D035-M16-Z04	●	35	4	20	17	40	-	-	M16	0.18 Kg	SDMT1004
NT-SD10HF D042-M16-Z05	●	42	5	27	17	40	-	-	M16	0.23 Kg	SDMT1004
NT-SD12HF D032-M16-Z02	●	32	2	12.5	17	43	-	-	M16	0.18 Kg	SDMT1205
NT-SD12HF D035-M16-Z03	●	35	3	15.5	17	43	-	-	M16	0.19 Kg	SDMT1205
NT-SD12HF D040-M16-Z04	●	40	4	20.5	17	43	-	-	M16	0.20 Kg	SDMT1205
NT-SD12HF D042-M16-Z04	●	42	4	22.5	17	43	-	-	M16	0.22 Kg	SDMT1205
ARBOR											
NT-SD10HF D050-F22-Z06	●	50	6	35	22	50	-	47	-	0.38 Kg	SDMT1004
NT-SD10HF D052-F22-Z06	●	52	6	37	22	50	-	47	-	0.39 Kg	SDMT1004
NT-SD10HF D063-F27-Z07	●	63	7	48	27	50	-	58	-	0.65 Kg	SDMT1004
NT-SD10HF D066-F27-Z07	●	66	7	51	27	50	-	60	-	0.72 Kg	SDMT1004
NT-SD10HF D080-F27-Z08	●	80	8	65	27	50	-	65	-	1.00 Kg	SDMT1004
NT-SD12HF D042-F16-Z04	●	42	4	22.5	16	40	-	35	-	0.19 Kg	SDMT1205
NT-SD12HF D050-F22-Z04	●	50	4	30.5	22	50	-	47	-	0.37 Kg	SDMT1205
NT-SD12HF D050-F22-Z05	●	50	5	30.5	22	50	-	47	-	0.35 Kg	SDMT1205
NT-SD12HF D052-F22-Z04	●	52	4	32.5	22	50	-	47	-	0.39 Kg	SDMT1205
NT-SD12HF D052-F22-Z05	●	52	5	32.5	22	50	-	47	-	0.37 Kg	SDMT1205
NT-SD12HF D063-F22-Z04	●	63	4	43.5	22	50	-	52	-	0.56 Kg	SDMT1205
NT-SD12HF D063-F22-Z05	●	63	5	43.5	22	50	-	52	-	0.54 Kg	SDMT1205
NT-SD12HF D063-F27-Z04	●	63	4	43.5	27	50	-	52	-	0.58 Kg	SDMT1205
NT-SD12HF D063-F27-Z05	●	63	5	43.5	27	50	-	52	-	0.56 Kg	SDMT1205
NT-SD12HF D066-F27-Z06	●	66	6	46.5	27	50	-	60	-	0.68 Kg	SDMT1205
NT-SD12HF D080-F27-Z06	●	80	6	60.5	27	50	-	65	-	0.94 Kg	SDMT1205
NT-SD12HF D080-F27-Z07	●	80	7	60.5	27	50	-	65	-	0.99 Kg	SDMT1205
NT-SD12HF D100-F32-Z07	●	100	7	80.5	32	50	-	70	-	1.60 Kg	SDMT1205
NT-SD15HF D080-F27-Z05	●	80	5	61	27	50	-	58	-	0.80 Kg	SDMT1505
NT-SD15HF D080-F27-Z06	●	80	6	61	27	50	-	58	-	0.60 Kg	SDMT1505
NT-SD15HF D100-F32-Z06	●	100	6	81	32	50	-	70	-	1.20 Kg	SDMT1505
NT-SD15HF D125-F40-Z07	●	125	7	106	40	63	-	90	-	2.28 Kg	SDMT1505

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Spare parts	Insert screws	Flag wrenches
NT-SD10HF D○○○-○○○-Z○○	NT-ST35095T15HQ	NT-FTB15
NT-SD12HF D○○○-○○○-Z○○	NT-ST40110T15HQ	NT-FTB15
NT-SD15HF D○○○-○○○-Z○○	NT-ST50110T20	NT-FTB20

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SDMT

HF4Plus SD

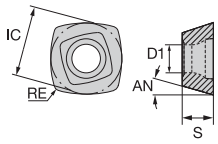
- GP geometry is for general purpose use
- SC and SS geometries are sharper, for M and S materials
- TE edge is reinforced and stronger
- Available with diverse carbide grades covering PMKS applications
- For the program radius and various other parameters for CNC program please go to the technical instruction page, it differs with sizes and geometries

HC: Coated carbide
HF: Micrograin carbide
CVD: Chemical vapour deposition
PVD: Physical vapour deposition

Stable machining, light cut: ● 1st choice ○ suitable
General machining, medium cut: ● 1st choice ○ suitable
Unstable machining, heavy cut: ● 1st choice ○ suitable

	JC8520	JC9540	JP5530	JP7525	JP8725	JP9535	JP9545
	HC CVD	HC CVD	HF PVD	HF PVD	HF PVD	HF PVD	HF PVD
Stable machining, light cut	●				○		
General machining, medium cut	○	●	●	●	●	●	○
Unstable machining, heavy cut		●	○	●		●	●

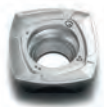
Dimensions



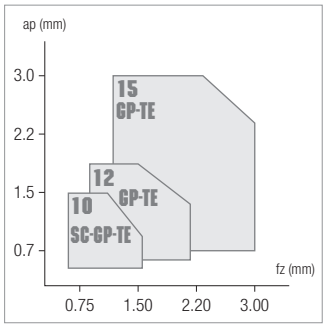
4 edges

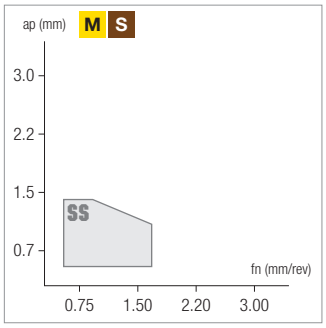
Vc(m/min) - suggested cutting speed range (bold: 1st choice)

ISO	JC8520	JC9540	JP5530	JP7525	JP8725	JP9535	JP9545
P	130 300		100 260		100 280		
M		90 210	60 180			80 200	60 180
K	160 320			140 300			
N							
S		30 70				20 60	20 50
H							

	Designation		RE	IC	S	D1	AN	JC8520	JC9540	JP5530	JP7525	JP8725	JP9535	JP9545	Stock
GENERAL	GP P M K 	SDMT100410R-GP	10	10	4.76	4	15°	●	●	●	●	●	●	●	
		SDMT120512R-GP	12	12.7	5.56	4.4	15°	●	●	●	●	●	●		
		SDMT150512R-GP	12	15.875	5.56	5.5	15°	●	●			●	●		
LOW FORCE	SC P M S	SDMT100410R-SC	10	10	4.76	4	15°			●			●		
SUPER SHARP	SS M S	SDMT120512R-SS	12	12.7	5.56	4.4	15°		●				●		
REINFORCED	TE P K	SDMT100410R-TE	10	10	4.76	4	15°			●		●	●		
		SDMT120512R-TE	12	12.7	5.56	4.4	15°	●		●		●			
		SDMT150512R-TE	12	15.875	5.56	5.5	15°	●				●			

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion





Rp SUGGESTED PROGRAMMING RADIUS

SDMT 10	2.5
SDMT 12	3.5
SDMT 15	5.0

more details at page D83

SDMT12-SS

SS geometry generates a bigger milling cutter diameter compared to GP and TE types.

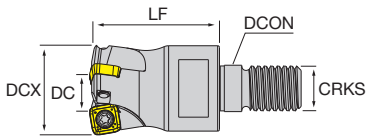
Please add **0.85 mm** to DCX values and **0.40 mm** to LF values, shown on page D78.

NT-SP

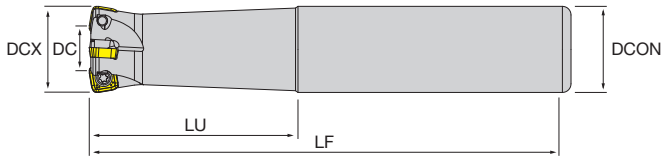
HF4Plus SP

- High feed milling system with positive square inserts, with coolant through
- Diverse combination of diameters and pitches available, focus on small diameters
- Tolerance of tool diameter (with Nikko inserts installed) 0/-0.2
- Steel and carbide arbors available for screw-in type holders

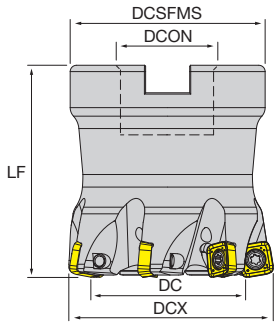
Screw-in



Cylindrical



Arbor



Designation	Stock	DCX	CICT	DC	DCON	LF	LU	DCSFMS	CRKS	WT	MIID
SCREW-IN											
NT-SP07HF D020-M10-Z02	●	20	2	7.3	10.5	30	-	-	M10	0.05 Kg	SPMT07T2
NT-SP07HF D020-M10-Z03	●	20	3	7.3	10.5	30	-	-	M10	0.04 Kg	SPMT07T2
NT-SP07HF D025-M12-Z03	●	25	3	12.3	12.5	35	-	-	M12	0.10 Kg	SPMT07T2
NT-SP07HF D025-M12-Z04	●	25	4	12.3	12.5	35	-	-	M12	0.10 Kg	SPMT07T2
NT-SP07HF D032-M16-Z04	●	32	4	19.3	17	40	-	-	M16	0.19 Kg	SPMT07T2
NT-SP07HF D032-M16-Z05	●	32	5	19.3	17	40	-	-	M16	0.17 Kg	SPMT07T2
NT-SP07HF D035-M16-Z05	●	35	5	22.3	17	40	-	-	M16	0.20 Kg	SPMT07T2
NT-SP07HF D042-M16-Z06	●	42	6	29.3	17	40	-	-	M16	0.24 Kg	SPMT07T2
CYLINDRICAL											
NT-SP07HF D020-S20-Z03	●	20	3	7.3	20	130	50	-	-	0.26 Kg	SPMT07T2
NT-SP07HF D025-S25-Z03	●	25	3	12.3	25	140	60	-	-	0.44 Kg	SPMT07T2
NT-SP07HF D025-S25-Z04	●	25	4	12.3	25	140	60	-	-	0.40 Kg	SPMT07T2
NT-SP07HF D032-S32-Z05	●	32	5	19.3	32	150	70	-	-	0.79 Kg	SPMT07T2
ARBOR											
NT-SP07HF D040-F16-Z05	●	40	5	27.3	16	40	-	35	-	0.21 Kg	SPMT07T2
NT-SP07HF D040-F16-Z06	●	40	6	27.3	16	40	-	35	-	0.20 Kg	SPMT07T2
NT-SP07HF D042-F16-Z05	●	42	5	29.3	16	40	-	35	-	0.22 Kg	SPMT07T2
NT-SP07HF D042-F16-Z06	●	42	6	29.3	16	40	-	35	-	0.21 Kg	SPMT07T2
NT-SP07HF D050-F22-Z07	●	50	7	37.3	22	50	-	46	-	0.41 Kg	SPMT07T2
NT-SP07HF D052-F22-Z07	●	52	7	39.3	22	50	-	46	-	0.44 Kg	SPMT07T2

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Spare parts	Insert screws	Flag wrenches
NT-SP07HF D○○○-○○○-Z○○	NT-ST30070T10HQ	NT-FTB10

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SPMT

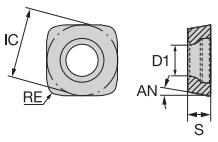
HF4Plus SP

- GP geometry is for general purpose use
- SC is sharper for M and S materials
- Available with diverse carbide grades covering PMKS applications
- For the program radius and various other parameters for CNC program please go to the technical instruction page

HC: Coated carbide
HF: Micrograin carbide
CVD: Chemical vapour deposition
PVD: Physical vapour deposition

	JC8520	JC9540	JP5530	JP7525	JP8725	JP9535	JP9545
	HC CVD	HC CVD	HF PVD	HF PVD	HF PVD	HF PVD	HF PVD
Stable machining, light cut (● 1st choice, ○ suitable)	●				○		
General machining, medium cut (● 1st choice, ○ suitable)	○	●	●	●	●	●	○
Unstable machining, heavy cut (● 1st choice, ○ suitable)		●	○	●		●	●

Dimensions



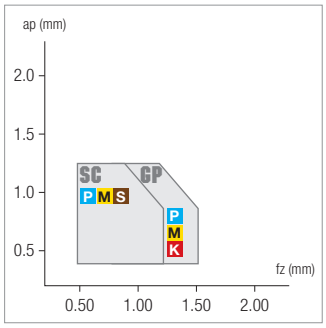
4 edges

Vc(m/min) - suggested cutting speed range (bold: 1st choice)

ISO	JC8520	JC9540	JP5530	JP7525	JP8725	JP9535	JP9545
P	130 300		100 260		100 280		
M		90 210	60 180			80 200	60 180
K	160 320			140 300			
N							
S		30 70				20 60	20 50
H							

	Designation		RE	IC	S	D1	AN	JC8520	JC9540	JP5530	JP7525	JP8725	JP9535	JP9545
GENERAL	GP P M K	SPMT07T210R-GP	1	7.8	2.8	3.5	11°	●	●	●	●	●	●	●
LOW FORCE	SC P M S	SPMT07T210R-SC	1	7.8	2.8	3.5	11°			●			●	

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion



Rp SUGGESTED PROGRAMMING RADIUS

SPMT 07	2.0

more details at page D83

ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC8520			JP5530			JP8725		
				min	start	max	min	start	max	min	start	max
P1 - P2	Free cutting steel and low carbon (ex. 1.0715/9 smn 28/avp, 1.0503/c45)	≤ 200	100%	130	**180**	230	100	**140**	180	100	**150**	200
			30%	200	**240**	280	160	**200**	240	160	**210**	260
			10%	260	**280**	300	220	**240**	260	220	**250**	280
P3 - P4	Medium and high alloy steel (ex. 1.7225/42 CrMo 4, 1.3505/100 Cr 6)	200 ÷ 300	100%	100	**140**	180	80	**120**	160	90	**130**	170
			30%	160	**200**	240	120	**160**	200	130	**170**	210
			10%	220	**240**	260	180	**200**	220	190	**210**	230
P5 - P6	High tensile strength and tool steel (ex. 1.2344/X 40 CrMoV 5 1/ORVAR, Hardox400®)	300 ÷ 400	100%	70	**100**	130	60	**90**	120	80	**110**	140
			30%	120	**160**	200	100	**130**	160	120	**150**	180
			10%	200	**220**	240	140	**170**	200	160	**190**	220
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC9540			JP9535			JP9545		
				min	start	max	min	start	max	min	start	max
P7	Ferritic and martensitic stainless steel (ex. 1.4021/X 20 Cr 13/AISI420)	≤ 200	100%	90	**130**	170	80	**120**	160	60	**100**	140
			30%	110	**160**	210	100	**150**	200	80	**130**	180
			10%	130	**190**	250	120	**180**	240	100	**160**	220
P8	Precipitation hardening stainless steel (ex. 1.4548/X 5 CrNiCuNb 17 4/17-4-PH)	≤ 450	100%	70	**100**	130	60	**90**	120	50	**80**	110
			30%	80	**110**	140	70	**100**	130	60	**90**	120
			10%	90	**120**	150	80	**110**	140	70	**100**	130
M1	Austenitic stainless steel (ex. 1.4305/X 10 CrNiS 18 9/AISI303)	> 200	100%	90	**120**	150	80	**110**	140	60	**90**	120
			30%	110	**150**	190	100	**140**	180	80	**120**	160
			10%	130	**170**	210	120	**160**	200	100	**140**	180
M2 - M3	Austenitic and Duplex stainless steel (ex. 1.4401/X 5 CrNiMo 17 12 2/AISI316)		100%	80	**110**	140	70	**100**	130	60	**90**	120
			30%	90	**120**	150	80	**110**	140	70	**100**	130
				100	**130**	160	90	**120**	150	80	**110**	140
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC8520			JP7525					
				min	start	max	min	start	max			
K1	Grey cast iron (ex. 0.6025/GG 25/EN-GJL-250)	150 ÷ 250	100%	160	**200**	240	140	**180**	220			
			30%	180	**230**	280	160	**210**	260			
			10%	200	**260**	320	180	**240**	300			
K2	Nodular cast iron (ex. 0.7050/GGG 50/EN-GJS-500-7)	150 ÷ 350	100%	120	**160**	200	100	**140**	180			
			30%	140	**190**	240	120	**170**	220			
			10%	160	**220**	280	140	**200**	260			
K3 - K4	Austenitic and ADI cast iron (ex. 0.6660/GGL-NiCr 20 2/Ni-Resist 2, GJS-1000-5/ ADI1000)	250 ÷ 500	100%	100	**130**	160	90	**120**	150			
			30%	120	**160**	200	120	**150**	180			
			10%	140	**190**	240	150	**180**	210			
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC9540			JP9535			JP9545		
				min	start	max	min	start	max	min	start	max
S1 - S2 - S3	Fe/Ni/Co based heat resistant alloys (ex. Hastelloy, Inconel 625, Inconel 718)		100%	30	**40**	50	20	**30**	40	20	**25**	30
			30%	40	**50**	60	30	**40**	50	30	**35**	40
			10%	50	**60**	70	40	**50**	60	40	**45**	50
S4 - S5	Titanium alloys (ex. TiAl2Sn4Zr2MoSi)		100%				40	**50**	60	30	**40**	50
			30%				50	**60**	70	40	**50**	60
			10%				60	**70**	80	50	**60**	70

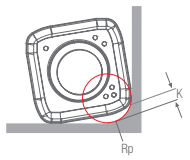
ae: radial depth of cut; DC: milling cutter diameter

Complete workpiece materials p. **H**1.

DESIGNATION	ae/DCX	DEPTH OF CUT			FEED RATE		
		ap (mm)			fz (mm)		
		min	start	max	min	start	max
SPMT07T210R-GP	100%	0.20	**0.60**	1.00	0.40	**0.70**	1.00
	30%	0.20	**0.60**	1.00	0.50	**0.90**	1.30
	10%	0.20	**0.60**	1.00	0.60	**1.10**	1.60
SDMT100410R-GP	100%	0.30	**0.90**	1.50	0.40	**0.75**	1.10
	30%	0.30	**0.90**	1.50	0.50	**1.00**	1.50
	10%	0.30	**0.90**	1.50	0.60	**1.20**	1.60
SDMT120512R-GP	100%	0.40	**1.20**	2.00	0.60	**0.90**	1.20
	30%	0.40	**1.20**	2.00	0.70	**1.10**	1.50
	10%	0.40	**1.20**	2.00	0.80	**1.30**	1.80
SDMT150512R-GP	100%	0.60	**1.80**	3.00	0.60	**1.00**	1.40
	30%	0.60	**1.80**	3.00	0.80	**1.30**	1.80
	10%	0.60	**1.80**	3.00	0.90	**1.50**	2.10
SPMT07T210R-SC	100%	0.20	**0.60**	1.00	0.30	**0.60**	0.90
	30%	0.20	**0.60**	1.00	0.40	**0.80**	1.20
	10%	0.20	**0.60**	1.00	0.50	**0.90**	1.40
SDMT100410R-SC	100%	0.30	**0.90**	1.50	0.30	**0.70**	1.10
	30%	0.30	**0.90**	1.50	0.40	**0.90**	1.40
	10%	0.30	**0.90**	1.50	0.50	**1.00**	1.50

DESIGNATION	ae/DCX	DEPTH OF CUT			FEED RATE		
		ap (mm)			fz (mm)		
		min	start	max	min	start	max
SDMT100410R-TE	100%	0.30	**0.90**	1.50	0.60	**0.90**	1.20
	30%	0.30	**0.90**	1.50	0.70	**1.20**	1.60
	10%	0.30	**0.90**	1.50	0.80	**1.40**	1.60
SDMT120512R-TE	100%	0.40	**1.20**	2.00	0.70	**1.00**	1.30
	30%	0.40	**1.20**	2.00	0.90	**1.30**	1.70
	10%	0.40	**1.20**	2.00	1.00	**1.50**	2.00
SDMT150512R-TE	100%	0.60	**1.80**	3.00	0.80	**1.20**	1.60
	30%	0.60	**1.80**	3.00	1.00	**1.50**	2.00
	10%	0.60	**1.80**	3.00	1.20	**1.80**	2.40
SDMT120512R-SS	100%	0.40	**0.70**	1.00	0.50	**0.80**	1.10
	30%	0.40	**0.70**	1.00	0.60	**1.00**	1.40
	10%	0.40	**0.70**	1.00	0.70	**1.20**	1.70

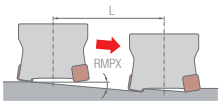
Approximate programming radius adjustment (Rp)



SPMT07			SDMT10			SDMT12 *			SDMT15		
Rp	undercut K	overcut r	Rp	undercut K	overcut r	Rp	undercut K	overcut r	Rp	undercut K	overcut r
1.5	0.69	0	2	1.18	0	3	1.28	0	4.5	1.15	0
2	**0.61**	**0**	**2.5**	**1.02**	**0**	**3.5**	**1.11**	**0**	**5**	**0.99**	**0**
2.5	0.54	0.08	3	0.86	0.02	4	0.95	0.02	5.5	0.82	0.14
3	0.46	0.24	3.5	0.70	0.13	4.5	0.79	0.14	6	0.67	0.03

*for SDMT12-SS programming radius adjustment please see next page. Green background are suggested values.

Parameters for ramping

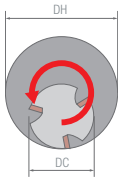


SPMT07			SDMT10			SDMT12 *			SDMT15		
DCX	RMPX	L	DCX	RMPX	L	DCX	RMPX	L	DCX	RMPX	L
20	3.5°	2.5	35	1.6°	2	32	4.0°	4.5	80		
25	3.0°	1.6	42	1.5°	1.7	40	2.4°	3.4	100		
32	1.2°	1.4	50	0.8°	1.5	42	2.1°	3.2	125		
35	1.2°	1.5	52	1.0°	2	50	1.5°	2.9			
40	1.0°	1.3	63	0.6°	1.8	52	1.0°	2			
42	0.9°	1.3	66	0.6°	1.8	63	1.0°	2.5			
52	0.6°	1.2	80	0.4°	1.6	66	0.9°	2.5			
						80	0.7°	2.2			
						100					

*for SDMT12-SS guide for ramping please see next page.

RMPX: max. ramping angle; L: max. ramping path

Parameters for helical milling

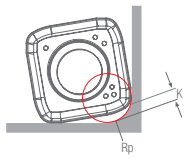


SPMT07			SDMT10			SDMT12 *			SDMT15		
DCX	DH min.	DH max.	DCX	DH min.	DH max.	DCX	DH min.	DH max.	DCX	DH min.	DH max.
20	28	40	35	54	70	32	46	64	80		
25	38	50	42	68	84	40	62	80	100		
32	52	64	50	84	100	42	66	84	125		
35	58	70	52	88	104	50	82	100			
40	68	80	63	110	126	52	86	104			
42	72	84	66	116	132	63	108	126			
52	92	104	80	144	160	66	114	132			
						80	142	160			
						100					

*for SDMT12-SS guide for helical milling please see next page.

DH min.: min. cutting dia.; DH max.: max. cutting dia.

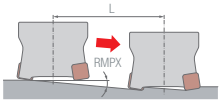
Approximate programming radius adjustment (Rp)



SDMT12-SS		
Rp	undercut K	overcut r
3	1.52	0
3.5	**1.45**	**0**
4	1.28	0.07

Green background are suggested values.

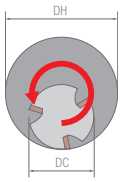
Parameters for ramping



SDMT12-SS		
DCX	RMPX	L
32	5.5°	6
40	3.7°	5.2
42	3.3°	5
50	2.4°	4.4
52	2.2°	4.2
63	1.5°	3.7
66	1.4°	3.5
80	1.0°	3.3

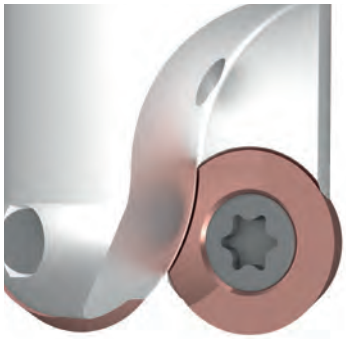
RMPX: max. ramping angle; L: max. ramping path

Parameters for helical milling



SDMT12-SS		
DCX	DH min.	DH max.
32	42	64
40	58	80
42	62	84
50	78	100
52	82	104
63	104	126
66	110	132
80	138	160

DH min.: min. cutting dia.; DH max.: max. cutting dia.



MILLING Profiling

Quick guide .D84

ROUNDPLUS .D85

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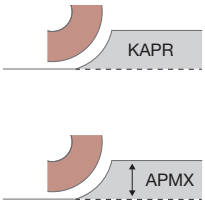
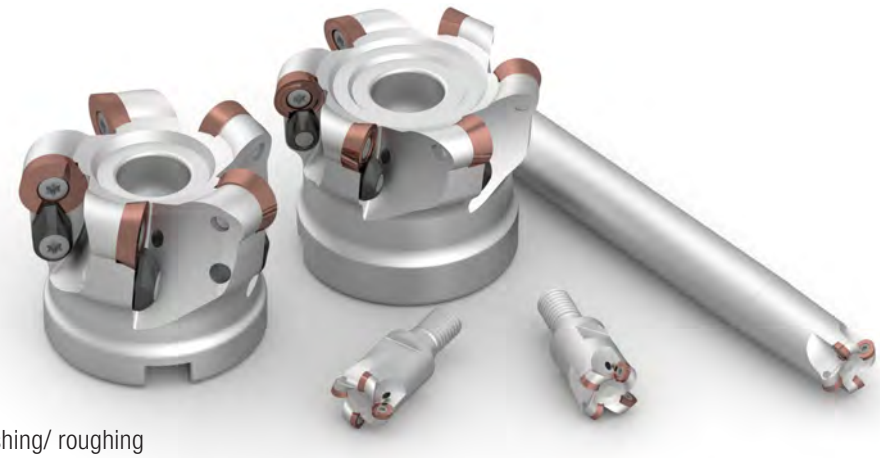


	ROUNDPLUS RC	ROUNDPLUS RD	ROUNDPLUS RP
	D86	D88	D92
	ARBOR	SCREW-IN CYLINDRICAL ARBOR	ARBOR
KAPR	variable	variable	variable
Insert sizes	12 / 16 / 20	05 / 07 / 10 / 12 / 16	12
APMX	3 / 4 / 5	1.25 / 1.75 / 2.5 / 3 / 4	3
Tool diameter	Ø063 - Ø160	Ø9 - Ø125	Ø42 - Ø80
Coolant holes	✓	✓	✓
Workpiece material	P M S	P M K S	P M S
No. of cutting edges	variable	variable	variable
No. of geometries	1	3	3
Special features	indexing faces	-	-
Face Milling	✓	✓	✓
Profiling	✓	✓	✓
Long Overhang	✓	✓	✓
Ramping	✓	✓	✓
Pocketing	✓	✓	✓
Helical Interpolation	✓	✓	✓
Machine load	■■■■□	■■■□□	■■■□□
Strenght	■■■■■	■■■■□	■■■□□
Range	■■■□□	■■■■■	■■□□□

ROUNDPLUS

Facing and Profiling milling cutters for multi-functional application



APPLICATION

· Profiling of finishing/ semi-finishing/ roughing
· Face milling of finishing/ semi-finishing/ roughing
· Possible to do ramping and pocket interpolation

ISO APPLICATION FIELDS

P M K S

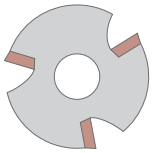
ADVANTAGES AND CHARACTERISTICS

· Insert geometries available for finishing/ semi-finishing/ roughing
· Cutters range from D9 all the way to D160
· Low cutting force with good robustness, allows long overhang working (up to 10xD)
· Multi-functional tool with good flexibility in machining

Cutter bodies

· Arbor type
· Cylindrical type (up to 10xD)
· Screw-in type
· Extension sleeves (steel/carbide 10xD)
· From D9 to D160

Extension arbors



Coarse pitch

Fine pitch

Inserts

· Multi-edges
· IC 05 / 07 / 10 / 12 / 16 / 20
· Cemented carbide grades with PVD and CVD coatings
· Geometries: SC, GP, Flat

SC P M

SIZE RD 10 12 16 | SIZE RP 12

GP P M S

SIZE RD 10 12 16 | SIZE RP 12

FLAT P K

SIZE RD 07 10 12 16 | SIZE RP 12

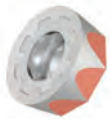
FLAT-D6 P

SIZE RD 12

FLAT-D8 P

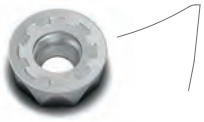
SIZE RD 12

RCEX inserts



with 8 indexes for easy positioning

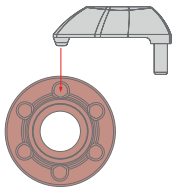
GP P M S



SIZE 16 20

RDEW12 with dots

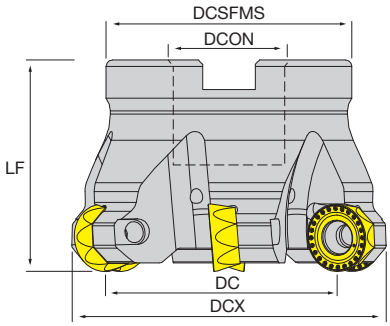
The clamp NT-CS014 has been designed to facilitate the inserts repositioning.
· The rounded front part perfectly fits in the dots on the insert top face.
· The same clamp fits on flat type inserts and positive inserts with geometries GP and SC.



NT-RC

RoundPlus RC

- Positive general face milling cutters for RC inserts
- All with coolant through
- Very robust milling solution for massive chip removal application



Designation	Stock	DCX	CICT	DC	DCON	LF	LU	DCSFMS	CRKS	WT	MIID
NT-RC16H D063-F22-Z05	●	63	5		22	50	-	45	-	0.46 Kg	RCEX1606
NT-RC16H D080-F27-Z06	●	80	6		27	50	-	58	-	0.78 Kg	RCEX1606
NT-RC16H D100-F32-Z06	●	100	6		32	50	-	70	-	1.26 Kg	RCEX1606
NT-RC20H D100-F32-Z06	●	100	6		32	50	-	70	-	1.19 Kg	RCEX2006
NT-RC20H D125-F40-Z07	●	125	7		40	63	-	90	-	2.71 Kg	RCEX2006
NT-RC20H D160-F40-Z08	●	160	8		40	63	-	100	-	3.98 Kg	RCEX2006

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Spare parts	Insert screws	Flag wrenches
NT-RC16H D○○○-○○○-Z○○	NT-ST50110T20	NT-FTB20
NT-RC16H D100-F32-Z06	NT-ST50110T20	NT-TT20
NT-RC20H D○○○-○○○-Z○○	NT-ST60160T25	NT-TT25

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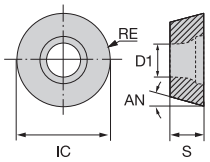
RC

RoundPlus RC

- GP geometry is for general purpose use
- 8 index facets for seating
- Both PVD and CVD coated carbide grades available
- Very reliable and cost effective solution for massive metal removal operations

HC: Coated carbide
HF: Micrograin carbide
CVD: Chemical vapour deposition
PVD: Physical vapour deposition

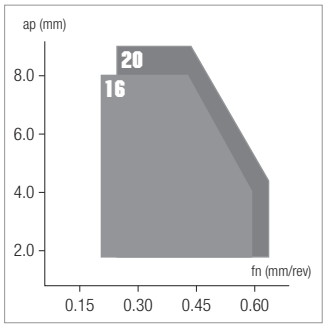
	HC CVD	HC CVD	HF PVD	HF PVD
	JC8520	JC9540	JP8725	JP9535
Stable machining, light cut (● 1st choice, ○ suitable)	●		○	
General machining, medium cut (● 1st choice, ○ suitable)	○	●	●	●
Unstable machining, heavy cut (● 1st choice, ○ suitable)		●		●



Dimensions	ISO	JC8520	JC9540	JP8725	JP9535
		Vc(m/min) - suggested cutting speed range (bold: 1st choice)			
	P	130 300		100 280	
	M		90 210		80 200
	K	160 320			
	N				
	S		30 70		20 60
	H				

	Designation	RE	IC	S	D1	AN	JC8520	JC9540	JP8725	JP9535	Stock
GENERAL	GP P M S with 8 indexes										
	RCEX1606M0E-GP-8X	8	16	6.35	5.5	7°	●	●	●	●	
	RCEX2006M0E-GP-8X	10	20	6.35	6.5	7°	●	●	●	●	

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

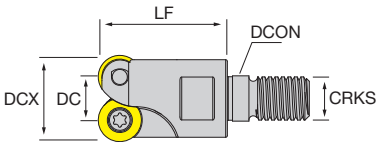


NT-RD

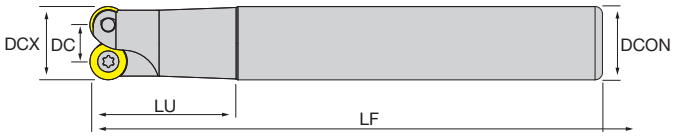
RoundPlus RD

- Positive general face milling cutters for RD inserts, with or without coolant through, various options available
- Very convenient multipurpose tool, at small depth of cut could be used as highfeed, at bigger depth of cut is robust with big radii, can also do profiling and copy milling
- Tolerance of tool diameter (with Nikko inserts installed) 0/-0.2
- Steel and carbide arbors available for screw-in type holders

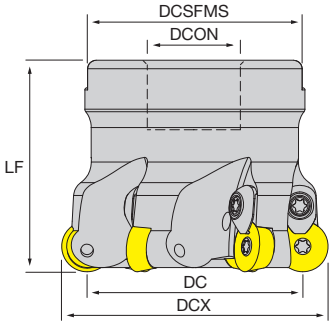
Screw-in



Cylindrical



Arbor



Designation	Stock	DCX	CICT	DC	DCON	LF	LU	DCSFMS	CRKS	WT	MIID
SCREW-IN - WITHOUT COOLANT HOLES											
NT-RD05 D012-M06-Z02	▽	12	2		6.5	18	-	-	M6	0.01 Kg	RDoo0501
NT-RD05 D012-M06-Z03	▽	12	3		6.5	18	-	-	M6	0.01 Kg	RDoo0501
NT-RD05 D013-M06-Z02	▽	13	2		6.5	18	-	-	M6	0.01 Kg	RDoo0501
NT-RD05 D013-M06-Z03	▽	13	3		6.5	18	-	-	M6	0.01 Kg	RDoo0501
NT-RD05 D016-M08-Z04	▽	16	4		8.5	23	-	-	M8	0.03 Kg	RDoo0501
NT-RD05 D017-M08-Z04	▽	17	4		8.5	23	-	-	M8	0.03 Kg	RDoo0501
NT-RD07 D016-M08-Z02	▽	16	2		8.5	23	-	-	M8	0.03 Kg	RDoo0702
NT-RD07 D017-M08-Z02	▽	17	2		8.5	23	-	-	M8	0.03 Kg	RDoo0702
NT-RD07 D017-M08-Z03	▽	17	3		8.5	23	-	-	M8	0.03 Kg	RDoo0702
NT-RD07 D021-M10-Z02	▽	21	2		10.5	30	-	-	M10	0.06 Kg	RDoo0702
NT-RD07 D021-M10-Z03	▽	21	3		10.5	30	-	-	M10	0.05 Kg	RDoo0702
NT-RD07 D025-M12-Z05	▽	25	5		12.5	35	-	-	M12	0.10 Kg	RDoo0702
NT-RD07 D026-M12-Z04	▽	26	4		12.5	35	-	-	M12	0.11 Kg	RDoo0702
NT-RD07 D026-M12-Z05	▽	26	5		12.5	35	-	-	M12	0.10 Kg	RDoo0702
NT-RD07 D035-M16-Z05	▽	35	5		17	43	-	-	M16	0.24 Kg	RDoo0702
NT-RD10 D021-M10-Z02	▽	21	2		10.5	30	-	-	M10	0.05 Kg	RDoo1003
SCREW-IN - WITH COOLANT HOLES											
NT-RD07H D016-M08-Z03	●	16	3		8.5	23	-	-	M8	0.02 Kg	RDoo0702
NT-RD07H D020-M10-Z03	●	20	3		10.5	30	-	-	M10	0.06 Kg	RDoo0702
NT-RD07H D025-M12-Z04	●	25	4		12.5	35	-	-	M12	0.09 Kg	RDoo0702
NT-RD07H D035-M16-Z06	●	35	6		17	43	-	-	M16	0.22 Kg	RDoo0702
NT-RD10H D020-M10-Z02	●	20	2		10.5	30	-	-	M10	0.05 Kg	RDoo1003
NT-RD10H D025-M12-Z03	●	25	3		12.5	35	-	-	M12	0.09 Kg	RDoo1003
NT-RD10H D026-M12-Z03	●	26	3		12.5	35	-	-	M12	0.09 Kg	RDoo1003
NT-RD10H D030-M12-Z03	●	30	3		12.5	35	-	-	M12	0.11 Kg	RDoo1003

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Designation	Stock	DCX	CICT	DC	DCON	LF	LU	DCSFMS	CRKS	WT	MIID
NT-RD10H D032-M16-Z03	●	32	3		17	43	-	-	M16	0.20 Kg	RDoo1003
NT-RD10H D032-M16-Z04	●	32	4		17	43	-	-	M16	0.18 Kg	RDoo1003
NT-RD10H D035-M16-Z03	●	35	3		17	43	-	-	M16	0.22 Kg	RDoo1003
NT-RD10H D035-M16-Z04	●	35	4		17	43	-	-	M16	0.20 Kg	RDoo1003
NT-RD10H D040-M16-Z04	●	40	4		17	43	-	-	M16	0.24 Kg	RDoo1003
NT-RD10H D042-M16-Z05	●	42	5		17	43	-	-	M16	0.21 Kg	RDoo1003
CYLINDRICAL - WITHOUT COOLANT HOLES											
NT-RD05 D009-S08-Z02	▽	9	2		8	100	12	-	-	0.04 Kg	RDoo0501
NT-RD05 D011-S10-Z02	▽	11	2		10	100	15	-	-	0.06 Kg	RDoo0501
NT-RD05 D013-S12-Z03	▽	13	3		12	100	18	-	-	0.08 Kg	RDoo0501
NT-RD05 D017-S16-Z04	▽	17	4		16	150	20	-	-	0.23 Kg	RDoo0501
NT-RD07 D021-S20-Z03	▽	21	3		20	150	25	-	-	0.35 Kg	RDoo0702
NT-RD07 D026-S25-Z05	▽	26	5		25	150	25	-	-	0.55 Kg	RDoo0702
NT-RD07 D035-S32-Z06	▽	35	6		32	150	30	-	-	0.92 Kg	RDoo0702
CYLINDRICAL - WITH COOLANT HOLES											
NT-RD05H D010-S10-Z02	●	10	2		10	100	18	-	-	0.05 Kg	RDoo0501
NT-RD05H D012-S12-Z03	●	12	3		12	100	22	-	-	0.07 Kg	RDoo0501
NT-RD05H D016-S16-Z04	●	16	4		16	150	30	-	-	0.21 Kg	RDoo0501
NT-RD07H D016-S16-Z02	●	16	2		16	150	25	-	-	0.21 Kg	RDoo0702
NT-RD07H D017-S16-Z02	●	17	2		16	150	20	-	-	0.20 Kg	RDoo0702
NT-RD07H D020-S20-Z03	●	20	3		20	150	35	-	-	0.33 Kg	RDoo0702
NT-RD07H D025-S25-Z05	●	25	5		25	150	40	-	-	0.51 Kg	RDoo0702
NT-RD10H D020-S20-Z02	●	20	2		20	150	40	-	-	0.32 Kg	RDoo1003
NT-RD10H D021-S20-Z02	●	21	2		20	150	25	-	-	0.34 Kg	RDoo1003
NT-RD10H D025-S25-Z03	●	25	3		25	150	40	-	-	0.50 Kg	RDoo1003
NT-RD10H D026-S25-Z03	●	26	3		25	150	25	-	-	0.52 Kg	RDoo1003
NT-RD10H D030-S25-Z03	●	30	3		25	150	25	-	-	0.53 Kg	RDoo1003
NT-RD10H D032-S32-Z03	●	32	3		32	150	40	-	-	0.82 Kg	RDoo1003
NT-RD10H D035-S32-Z04	●	35	4		32	150	35	-	-	0.85 Kg	RDoo1003
ARBOR - WITHOUT COOLANT HOLES											
NT-RD16 D066-F22-Z05	▽	66	5		22	50	-	56	-	0.62 Kg	RDoo1604
ARBOR - WITH COOLANT HOLES											
NT-RD10H D042-F16-Z05	●	42	5		16	40	-	35	-	0.20 Kg	RDoo1003
NT-RD10H D052-F22-Z06	●	52	6		22	40	-	46	-	0.33 Kg	RDoo1003
NT-RD12H D040-F16-Z04	○	40	4		16	50	-		-	-	RDoo1204
NT-RD12H D042-F16-Z04	●	42	4		16	50	-	38	-	0.25 Kg	RDoo1204
NT-RD12H D050-F22-Z04	●	50	4		22	50	-	46	-	0.35 Kg	RDoo1204
NT-RD12H D050-F22-Z05	●	50	5		22	50	-	46	-	0.37 Kg	RDoo1204
NT-RD12H D052-F22-Z04	●	52	4		22	50	-	46	-	0.40 Kg	RDoo1204
NT-RD12H D052-F22-Z05	●	52	5		22	50	-	46	-	0.42 Kg	RDoo1204
NT-RD12H D063-F22-Z05	●	63	5		22	50	-	52	-	0.56 Kg	RDoo1204
NT-RD12H D063-F22-Z06	●	63	6		22	50	-	52	-	0.58 Kg	RDoo1204
NT-RD12H D066-F22-Z06	●	66	6		22	50	-	56	-	0.71 Kg	RDoo1204
NT-RD12H D080-F27-Z07	●	80	7		27	50	-	60	-	0.93 Kg	RDoo1204
NT-RD16H D063-F22-Z05	●	63	5		22	50	-	52	-	0.50 Kg	RDoo1604
NT-RD16H D066-F27-Z05	●	66	5		27	50	-	56	-	0.56 Kg	RDoo1604
NT-RD16H D080-F27-Z05	●	80	5		27	50	-	60	-	0.85 Kg	RDoo1604
NT-RD16H D080-F27-Z06	●	80	6		27	50	-	60	-	0.87 Kg	RDoo1604
NT-RD16H D100-F32-Z07	●	100	7		32	50	-	70	-	1.22 Kg	RDoo1604
NT-RD16H D125-F40-Z08	●	125	8		40	63	-	90	-	2.50 Kg	RDoo1604

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Spare parts	Insert screws	Flag wrenches	Clamping set
NT-RD05o DCX ≤ 10	NT-ST20033T06	NT-FTB06	-
NT-RD05o DCX ≥ 11	NT-ST20040T06	NT-FTB06	-
NT-RD07o Dooo-ooo-Zoo	NT-ST25056T08HQ	NT-FTB08	-
NT-RD10o DCX ≤ 26	NT-ST35070T15	NT-FTB15	-

Spare parts	Insert screws	Flag wrenches	Clamping set
NT-RD10o DCX = 30	NT-ST35095T15HQ	NT-FTB15	-
NT-RD10o DCX ≥ 32	NT-ST35095T15HQ	NT-FTB15	NT-CS013
NT-RD12H Dooo-ooo-Zoo	NT-ST40110T15HQ	NT-FTB15	NT-CS014
NT-RD16H Dooo-ooo-Zoo	NT-ST45110T20	NT-FTB20	NT-CS021

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RD

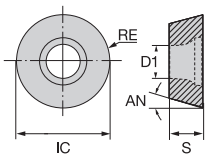
RoundPlus RD

- GP geometry is for general purpose use, SC geometry is sharper
- Reinforced with chamfer edge type available in multiple sizes
- Both PVD and CVD coated different carbide grades available
- Different dots fits with the same universal-clamp on our cutters
- Very reliable and cost efficient solution for multiple purpose and massive metal removal operations

HC: Coated carbide
HF: Micrograin carbide
HT: Cermet
CVD: Chemical vapour deposition
PVD: Physical vapour deposition

	HC CVD	HF PVD	HF PVD	HF PVD	HF PVD	HF PVD	HT
	JC9540	**JP5520**	**JP5530**	**JP7525**	**JP8725**	**JP9535**	**JU4525**
Stable machining, light cut (● 1st choice, ○ suitable)		○			○		●
General machining, medium cut (● 1st choice, ○ suitable)	●	●	●	●	●	●	
Unstable machining, heavy cut (● 1st choice, ○ suitable)	●		○	●		●	

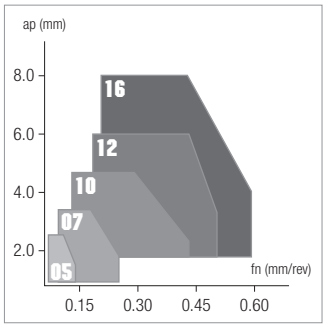
Dimensions



ISO	HC CVD	HF PVD	HF PVD	HF PVD	HF PVD	HF PVD	HT
	Vc(m/min) - suggested cutting speed range (bold: 1st choice)						
P		100 260	100 260		100 280		130 300
M	90 210	60 180	60 180			80 200	
K				140 300			
N							
S	30 70					20 60	
H							

	Designation		RE	IC	S	D1	AN	Stock						
GENERAL	GP P M S	RDET0803M0E-GP	4	8	3.18	2.9	15°			○				
		RDET1003M0E-GP	5	10	3.18	4.4	15°		▽	●		▲	●	
		RDET10T3M0E-GP	5	10	3.97	4.4	15°			○		○		
		RDET1204M0E-GP	6	12	4.76	4.4	15°	●		●		▲	●	
		RDMT1204M0E-GP	6	12	4.76	4.4	15°			●				
		RDET1604M0E-GP	8	16	4.76	5.5	15°			○		●	●	
LOW FORCE	SC P	RDET1204M0E-SC	6	12	4.76	4.4	15°			○				
		RDET1604M0E-SC	8	16	4.76	5.5	15°		▽	●		▲		
REINFORCED	M0E P M K flat type honed edge	RDEW0501M0E	2.5	5	1.51	2.2	15°			●	●	●	○	
		RDEW0702M0E	3.5	7	2.38	2.8	15°						●	▽
REINFORCED	MOT P K flat type chamfered edge	RDEW0702M0T	3.5	7	2.38	2.8	15°		▽	●	●	▲		
		RDEW1003M0T	5	10	3.18	4.4	15°			●	●	●		
		RDEW10T3M0T	5	10	3.97	4.4	15°		▽	●				
		RDEW1204M0T	6	12	4.76	4.4	15°			●	○	●		
		RDEW1604M0T	8	16	4.76	5.5	15°			●	●	●		
		RDMW1604M0T	8	16	4.76	5.5	15°			●		●		
REINFORCED	MOT P flat type - 6 dots chamfered edge	RDMW1204M0T-D6	6	12	4.76	4.4	15°					●		
		RDEW1605M0T-D6	8	16	5.66	5.5	15°		▽					

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion



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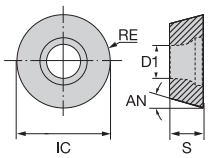
RD

RoundPlus RD

- GP geometry is for general purpose use, SC geometry is sharper
- Reinforced with chamfer edge type available in multiple sizes
- Both PVD and CVD coated different carbide grades available
- Different dots fits with the same universal-clamp on our cutters
- Very reliable and cost efficient solution for multiple purpose and massive metal removal operations

HC: Coated carbide
HF: Micrograin carbide
HT: Cermet
CVD: Chemical vapour deposition
PVD: Physical vapour deposition

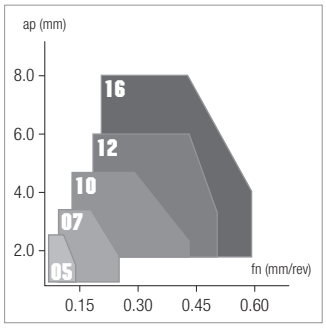
	HC CVD	HF PVD	HF PVD	HF PVD	HF PVD	HF PVD	HT
	JC9540	**JP5520**	**JP5530**	**JP7525**	**JP8725**	**JP9535**	**JU4525**
Stable machining, light cut (● 1st choice, ○ suitable)		○			○		●
General machining, medium cut (● 1st choice, ○ suitable)	●	●	●	●	●	●	
Unstable machining, heavy cut (● 1st choice, ○ suitable)	●		○	●		●	



Dimensions	ISO	JC9540	JP5520	JP5530	JP7525	JP8725	JP9535	JU4525
		Vc(m/min) - suggested cutting speed range (bold: 1st choice)						
	P		100 260	100 260		100 280		130 300
	M	90 210	60 180	60 180			80 200	
	K				140 300			
	N							
	S	30 70					20 60	
	H							

	Designation		RE	IC	S	D1	AN	Stock						
REINFORCED	MOT P	RDEW12T3M0T-D8	6	12	3.97	4.4	15°			○		●		
		RDEW1204M0T-D8	6	12	4.76	4.4	15°			○				
		RDMW1204M0T-D8	6	12	4.76	4.4	15°			○				
	flat type - 8 dots **chamfered edge**	RDMW1605M0T-D8	8	16	5.66	5.5	15°			●				

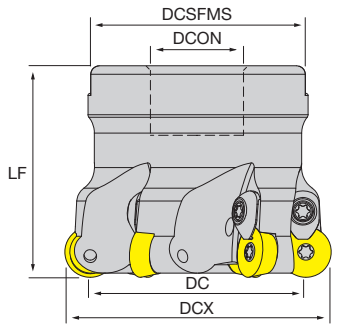
● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion



NT-RP

RoundPlus RP

- Positive general face milling cutters for RP inserts
- All with coolant through
- High clearance angle useful for M and S material roughing



Designation	Stock	DCX	CICT	DC	DCON	LF	LU	DCSFMS	CRKS	WT	MIID
NT-RP12H D042-F16-Z04	●	42	4		16	50	-	38	-	0.26 Kg	RPoo1204
NT-RP12H D050-F22-Z05	●	50	5		22	50	-	46	-	0.40 Kg	RPoo1204
NT-RP12H D052-F22-Z05	●	52	5		22	50	-	46	-	0.40 Kg	RPoo1204
NT-RP12H D063-F22-Z06	●	63	6		22	50	-	52	-	0.59 Kg	RPoo1204
NT-RP12H D066-F22-Z06	●	66	6		22	50	-	56	-	0.73 Kg	RPoo1204
NT-RP12H D080-F27-Z07	●	80	7		27	50	-	60	-	0.94 Kg	RPoo1204

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Spare parts	Insert screws	Flag wrenches	Clamping set
NT-RP12H Dooo-Foo-Zoo	NT-ST40110T15HQ	NT-FTB15	NT-CS013

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RP

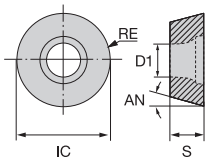
RoundPlus RP

- Sharp / general purpose /reinforced with chamfer edge types available
- Flat top surface or with geometries all fit with the same universal-clamp on our cutters
- Both PVD and CVD coated different carbide grades available
- Very reliable and cost efficient solution for roughing, especially on stainless steel or heat resistant super alloys

HC: Coated carbide
HF: Micrograin carbide
CVD: Chemical vapour deposition
PVD: Physical vapour deposition

	HC CVD	HF PVD	HF PVD	HF PVD
	JC9540	JP5530	JP8725	JP9535
Stable machining, light cut (● 1st choice, ○ suitable)			○	
General machining, medium cut (● 1st choice, ○ suitable)	●	●	●	●
Unstable machining, heavy cut (● 1st choice, ○ suitable)	●	○		●

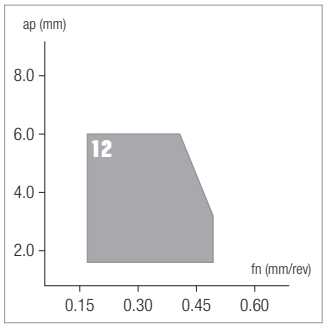
Dimensions



ISO	JC9540	JP5530	JP8725	JP9535
	Vc(m/min) - suggested cutting speed range (bold: 1st choice)			
P		100 260	100 280	
M	90 210	60 180		80 200
K				
N				
S	30 70			20 60
H				

	Designation		RE	IC	S	D1	AN	Stock				
GENERAL	GP P M S chipbreaker type **honed edge**	RPET1204M0E-GP	6	12	4.76	4.4	11°			●	●	
GENERAL	GP M S **with 4 indexes chamfered edge**	RPET1204M0T-GP-4X	6	12	4.76	4.4	11°	●				
LOW FORCE	SC P chipbreaker type **honed edge**	RPET1204M0E-SC	6	12	4.76	4.4	11°		○			
REINFORCED	M0T P flat type **chamfered edge**	RPEW1204M0T	6	12	4.76	4.4	11°		●			
		RPMW1204M0T	6	12	4.76	4.4	11°		●	●		

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion



ISO 513	MATERIAL	HARDNESS HB	ae/DC	JP5530			JP8725			JU4225		
				min	start	max	min	start	max	min	start	max
P1 - P2	Free cutting steel and low carbon (ex. 1.0715/9 smn 28/avp, 1.0503/c45)	≤ 200	100%	100	**140**	180	100	**150**	200	130	**180**	230
			30%	160	**200**	240	160	**210**	260	200	**240**	280
			10%	220	**240**	260	220	**250**	280	260	**280**	300
P3 - P4	Medium and high alloy steel (ex. 1.7225/42 CrMo 4, 1.3505/100 Cr 6)	200 ÷ 300	100%	80	**120**	160	90	**130**	170	120	**150**	180
			30%	120	**160**	200	130	**170**	210	180	**210**	240
			10%	180	**200**	220	190	**210**	230	230	**250**	270
P5 - P6	High tensile strength and tool steel (ex. 1.2344/X 40 CrMoV 5 1/ORVAR, Hardox400®)	300 ÷ 400	100%	60	**90**	120	80	**110**	140	90	**120**	150
			30%	100	**130**	160	120	**150**	180	150	**180**	210
			10%	140	**170**	200	160	**190**	220	190	**220**	250
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC9540			JP5530			JP9535		
				min	start	max	min	start	max	min	start	max
P7	Ferritic and martensitic stainless steel (ex. 1.4021/X 20 Cr 13/AISI420)	≤ 200	100%	90	**130**	170	60	**100**	140	80	**120**	160
			30%	110	**160**	210	80	**130**	180	100	**150**	200
			10%	130	**190**	250	100	**160**	220	120	**180**	240
P8	Precipitation hardening stainless steel (ex. 1.4548/X 5 CrNiCuNb 17 4/17-4-PH)	≤ 450	100%	70	**100**	130				60	**90**	120
			30%	80	**110**	140				70	**100**	130
			10%	90	**120**	150				80	**110**	140
M1	Austenitic stainless steel (ex. 1.4305/X 10 CrNiS 18 9/AISI303)	> 200	100%	90	**120**	150	60	**90**	120	80	**110**	140
			30%	110	**150**	190	80	**120**	160	100	**140**	180
			10%	130	**170**	210	100	**140**	180	120	**160**	200
M2 - M3	Austenitic and Duplex stainless steel (ex. 1.4401/X 5 CrNiMo 17 12 2/AISI316)		100%	80	**110**	140				70	**100**	130
			30%	90	**120**	150				80	**110**	140
				100	**130**	160				90	**120**	150
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JP7525								
				min	start	max						
K1	Grey cast iron (ex. 0.6025/GG 25/EN-GJL-250)	150 ÷ 250	100%	140	**180**	220						
			30%	160	**210**	260						
			10%	180	**240**	300						
K2	Nodular cast iron (ex. 0.7050/GGG 50/EN-GJS-500-7)	150 ÷ 350	100%	100	**140**	180						
			30%	120	**170**	220						
			10%	140	**200**	260						
K3 - K4	Austenitic and ADI cast iron (ex. 0.6660/GGL-NiCr 20 2/Ni-Resist 2, GJS-1000-5/ ADI1000)	250 ÷ 500	100%	90	**120**	150						
			30%	120	**150**	180						
			10%	150	**180**	210						
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC9540			JP9535					
				min	start	max	min	start	max			
S1 - S2 - S3	Fe/Ni/Co based heat resistant alloys (ex. Hastelloy, Inconel 625, Inconel 718)		100%	30	**40**	50	20	**30**	40			
			30%	40	**50**	60	30	**40**	50			
			10%	50	**60**	70	40	**50**	60			
S4 - S5	Titanium alloys (ex. TiAl2Sn4Zr2MoSi)		100%				40	**50**	60			
			30%				50	**60**	70			
			10%				60	**70**	80			

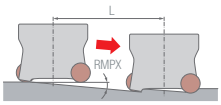
ae: radial depth of cut; DC: milling cutter diameter

Complete workpiece materials p. **H**1.

DESIGNATION	ae/DCX	DEPTH OF CUT			FEED RATE		
		ap (mm)			fz (mm)		
		min	start	max	min	start	max
IC=10 GP chipbreaker	100%	0.50	**1.50**	2.50	0.10	**0.18**	0.26
	30%	1.00	**3.00**	5.00	0.12	**0.21**	0.30
	10%	1.00	**3.00**	5.00	0.16	**0.28**	0.40
IC=12 GP chipbreaker	100%	1.00	**2.00**	3.00	0.12	**0.23**	0.34
	30%	1.00	**3.50**	6.00	0.16	**0.28**	0.40
	10%	1.00	**3.50**	6.00	0.20	**0.35**	0.50
IC=16 GP chipbreaker	100%	1.00	**2.50**	4.00	0.16	**0.28**	0.40
	30%	1.00	**4.50**	8.00	0.20	**0.33**	0.46
	10%	1.00	**4.50**	8.00	0.24	**0.42**	0.60
IC=20 GP chipbreaker	100%	1.00	**3.00**	5.00	0.18	**0.33**	0.48
	30%	1.00	**5.50**	10.00	0.22	**0.40**	0.58
	10%	1.00	**5.50**	10.00	0.30	**0.50**	0.70
IC=12 SC chipbreaker	100%	1.00	**2.00**	3.00	0.12	**0.20**	0.28
	30%	1.00	**3.50**	6.00	0.14	**0.24**	0.34
	10%	1.00	**3.50**	6.00	0.16	**0.28**	0.40
IC=16 SC chipbreaker	100%	1.00	**2.50**	4.00	0.14	**0.25**	0.36
	30%	1.00	**4.50**	8.00	0.18	**0.30**	0.42
	10%	1.00	**4.50**	8.00	0.22	**0.35**	0.48

DESIGNATION	ae/DCX	DEPTH OF CUT			FEED RATE		
		ap (mm)			fz (mm)		
		min	start	max	min	start	max
IC=05 Flat (MOE)	100%	0.25	**0.75**	1.25	0.04	**0.06**	0.08
	30%	0.50	**1.50**	2.50	0.06	**0.08**	0.10
	10%	0.50	**1.50**	2.50	0.08	**0.10**	0.12
IC=07 Flat (MOE, MOT)	100%	0.25	**1.00**	1.75	0.08	**0.12**	0.16
	30%	0.50	**2.00**	3.50	0.10	**0.15**	0.20
	10%	0.50	**2.00**	3.50	0.12	**0.18**	0.24
IC=10 Flat (MOT)	100%	0.50	**1.50**	2.50	0.12	**0.20**	0.28
	30%	1.00	**3.00**	5.00	0.15	**0.25**	0.35
	10%	1.00	**3.00**	5.00	0.18	**0.30**	0.42
IC=12 Flat (MOT)	100%	1.00	**2.00**	3.00	0.16	**0.27**	0.38
	30%	1.00	**3.50**	6.00	0.20	**0.34**	0.48
	10%	1.00	**3.50**	6.00	0.24	**0.40**	0.56
IC=16 Flat (MOT)	100%	1.00	**2.50**	4.00	0.19	**0.32**	0.45
	30%	1.00	**4.50**	8.00	0.24	**0.40**	0.56
	10%	1.00	**4.50**	8.00	0.28	**0.47**	0.66

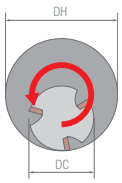
Parameters for ramping



NT-RD05H			NT-RD07H			NT-RD10H		
DCX	RMPX	L	DCX	RMPX	L	DCX	RMPX	L
10	6.2°	2.1	16	4.7°	2.6	20	9.4°	6.6
12	4.4°	1.8	17	4.1°	2.4	21	6.6°	4.8
13	3.6°	1.6	20	3.3°	2.2	25	4.4°	3.9
16	2.0°	1.0	25	2.3°	2.0	26	4.3°	3.9
17	2.0°	1.0	35	2.0°	1.0	30	3.2°	3.4
						32	1.2°	1.5
						35	1.0°	1.4
						40	0.9°	1.4
						42	0.8°	1.3
						52	0.6°	0.9

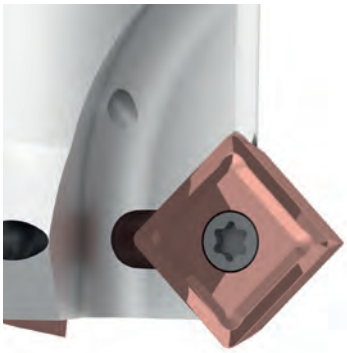
RMPX: max. ramping angle; L: max. ramping path

Parameters for helical milling



NT-RD05H			NT-RD07H			NT-RD10H		
DCX	DH min.	DH max.	DCX	DH min.	DH max.	DCX	DH min.	DH max.
10	12	18	16	24	30	20	22	38
12	16	22	17	26	32	21	24	40
13	18	24	20	32	38	25	32	48
16	24	30	25	42	48	26	34	50
17	26	32	35	62	68	30	42	58
						32	46	62
						35	52	68
						40	62	78
						42	66	82
						52	86	102

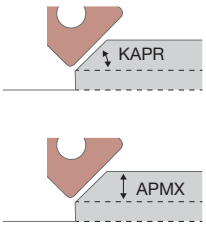
DH min.: min. cutting dia.; DH max.: max. cutting dia.



MILLING Chamfering

Quick guide .D100

CHAMFERSQUARE .D101



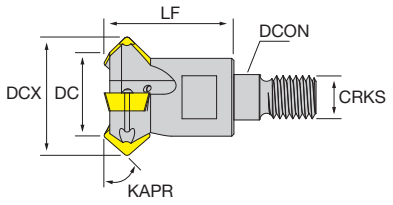
	CHAMFERSQUARE
	D101
	SCREW-IN CYLINDRICAL
KAPR	45°
Insert sizes	05 / 07 / 09
APMX	4.2 / 6.34 / 8.2
Tool diameter	Ø12 - Ø32
Coolant holes	✓
Workpiece material	P M K N
No. of cutting edges	4
No. of geometries	2
Special features	-
Chamfering	✓
Machine load	■ ■ □ □ □
Strenght	■ ■ ■ □ □
Precision	■ ■ ■ □ □
Finishing	■ ■ ■ □ □
Range	■ ■ ■ ■ □

NT-CHS45

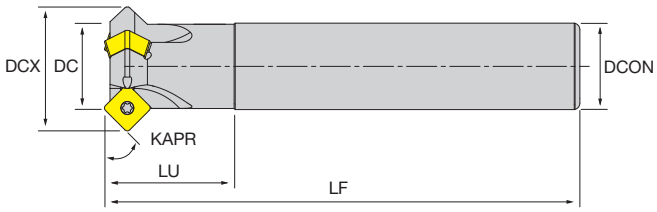
ChamferSquare

- Positive chamfering cutters for SP inserts
- All with coolant through
- Please select insert size according to your chamfer length
- Inserts could also be mounted on DRS drills

Screw-in



Cylindrical



Designation	Stock	DC	CICT	DCX	DCON	LF	LU	CRKS			MIID
SCREW-IN											
NT-CHS45 D12/19-M06-Z3-05	●	12	3	19	6.5	20	-	M6			SPoX05
NT-CHS45 D16/22-M08-Z4-05	●	16	4	22	8.5	25	-	M8			SPoX05
NT-CHS45 D20/30-M10-Z3-07	●	20	3	30	10.5	30	-	M10			SPoX07
NT-CHS45 D25/37-M12-Z3-09	●	25	3	37	12.5	35	-	M12			SPoX09
NT-CHS45 D32/44-M16-Z4-09	●	32	4	44	17	40	-	M16			SPoX09
CYLINDRICAL											
NT-CHS45 D12/19-S12-Z3-05	●	12	3	19	12	80	20	-			SPoX05
NT-CHS45 D16/22-S16-Z4-05	●	16	4	22	16	100	25	-			SPoX05
NT-CHS45 D20/30-S20-Z3-07	●	20	3	30	20	110	30	-			SPoX07
NT-CHS45 D25/37-S25-Z3-09	●	25	3	37	25	120	35	-			SPoX09
NT-CHS45 D32/44-S32-Z4-09	●	32	4	44	32	130	40	-			SPoX09

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Spare parts	Insert screws	Flag wrenches
NT-CHS45 D○○/○○-○○○-Z○-05	NT-ST20043T06	NT-FTB06
NT-CHS45 D○○/○○-○○○-Z○-07	NT-ST25065T07	NT-FTB07
NT-CHS45 D○○/○○-○○○-Z○-09	NT-ST35051T15	NT-FTB15

SPoX

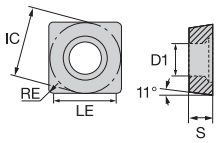
ChamferSquare

- General purpose type or fine polished sharp geometries for aluminum or non-ferrous materials available
- Diverse PVD coated carbide grades available
- Inserts could also be mounted on DRS drills

HF: Micrograin carbide
PVD: Physical vapour deposition

	JP5530	JP8725	JP9535	JP9635	JU6520
	HF PVD	HF PVD	HF PVD	HF PVD	HF
Stable machining, light cut (● 1st choice, ○ suitable)		○			●
General machining, medium cut (● 1st choice, ○ suitable)	●	●	●	●	●
Unstable machining, heavy cut (● 1st choice, ○ suitable)	○		●	●	

Dimensions



4 edges

ISO	JP5530	JP8725	JP9535	JP9635	JU6520
P	100 260	100 280			
M	60 180		80 200	80 180	
K					
N					300 1100
S			20 60	20 50	
H					

Vc(m/min) - suggested cutting speed range (bold: 1st choice)

	Designation		RE	IC	S	D1	LE	JP5530	JP8725	JP9535	JP9635	JU6520	Stock
GENERAL	GP P M	SPMX050204-GP	0.4	5	2.38	2.5	4.2	●	●	●			
		SPMX07T308-GP	0.8	7.94	3.97	2.8	6.34	●	●	●			
		SPMX090408-GP	0.8	9.8	4.3	4.2	8.2	●	●	▲	●		
ALUMINIUM	AL N polished surface periphery ground	SPGX050204-AL	0.4	5	2.38	2.5	4.2					●	
		SPGX07T308-AL	0.8	7.94	3.97	2.8	6.34					●	
		SPGX090408-AL	0.8	9.8	4.3	4.2	8.2					●	

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

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ISO 513	MATERIAL	HARDNESS HB	ae/DC	JP5530 min	JP5530 start	JP5530 max	JP8725 min	JP8725 start	JP8725 max
P1 - P2	Free cutting steel and low carbon (ex. 1.0715/9 smn 28/avp, 1.0503/c45)	≤ 200	100%	100	**140**	180	100	**150**	200
			30%	160	**200**	240	160	**210**	260
			10%	220	**240**	260	220	**250**	280
P3 - P4	Medium and high alloy steel (ex. 1.7225/42 CrMo 4, 1.3505/100 Cr 6)	200 ÷ 300	100%	80	**120**	160	90	**130**	170
			30%	120	**160**	200	130	**170**	210
			10%	180	**200**	220	190	**210**	230
P5 - P6	High tensile strength and tool steel (ex. 1.2344/X 40 CrMoV 5 1/ORVAR, Hardox400®)	300 ÷ 400	100%	60	**90**	120	80	**110**	140
			30%	100	**130**	160	120	**150**	180
			10%	140	**170**	200	160	**190**	220
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JP5530 min	JP5530 start	JP5530 max	JP9535 min	JP9535 start	JP9535 max
P7	Ferritic and martensitic stainless steel (ex. 1.4021/X 20 Cr 13/AISI420)	≤ 200	100%	60	**100**	140	80	**120**	160
			30%	80	**130**	180	100	**150**	200
			10%	100	**160**	220	120	**180**	240
P8	Precipitation hardening stainless steel (ex. 1.4548/X 5 CrNiCuNb 17 4/17-4-PH)	≤ 450	100%				60	**90**	120
			30%				70	**100**	130
			10%				80	**110**	140
M1	Austenitic stainless steel (ex. 1.4305/X 10 CrNiS 18 9/AISI303)	> 200	100%	60	**90**	120	80	**110**	140
			30%	80	**120**	160	100	**140**	180
			10%	100	**140**	180	120	**160**	200
M2 - M3	Austenitic and Duplex stainless steel (ex. 1.4401/X 5 CrNiMo 17 12 2/AISI316)		100%				70	**100**	130
			30%				80	**110**	140
							90	**120**	150
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JU6520 min	JU6520 start	JU6520 max			
N1	Aluminium alloys ≤ Si 12% (ex. 3.4365/AlZn5.5MgCu/ERGAL)		100%	300	**400**	500			
			30%	400	**600**	800			
			10%	500	**800**	1100			
N2	Aluminium alloys Si > 12% (ex. 3.2382/G-AlSi12)		100%	200	**250**	300			
			30%	300	**350**	400			
			10%	400	**450**	500			
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JP9535 min	JP9535 start	JP9535 max			
S1 - S2 - S3	Fe/Ni/Co based heat resistant alloys (ex. Hastelloy, Inconel 625, Inconel 718)		100%	20	**30**	40			
			30%	30	**40**	50			
			10%	40	**50**	60			
S4 - S5	Titanium alloys (ex. TiAl2Sn4Zr2MoSi)		100%	40	**50**	60			
			30%	50	**60**	70			
			10%	60	**70**	80			

ae: radial depth of cut; DC: milling cutter diameter

Complete workpiece materials p. H1.

DESIGNATION	ae/Dc	FEED RATE fz (mm)		
		min	start	max
SPMX050204-GP	100%	0.08	**0.13**	0.18
	30%	0.10	**0.16**	0.22
	10%	0.12	**0.19**	0.26
SPMX07T308-GP	100%	0.10	**0.16**	**0.22**
	30%	0.12	**0.20**	**0.28**
	10%	0.14	**0.24**	**0.34**
SPMX090408-GP	100%	0.11	**0.19**	**0.27**
	30%	0.14	**0.24**	**0.34**
	10%	0.16	**0.28**	**0.40**
SPGX050204-AL	100%	0.06	**0.10**	**0,14**
	30%	0.08	**0.13**	**0.18**
	10%	0.09	**0.15**	**0,21**
SPGX07T308-AL	100%	0.08	**0.13**	**0.18**
	30%	0.10	**0.16**	**0.22**
	10%	0.12	**0.19**	**0.26**
SPGX090408-AL	100%	0.10	**0.16**	**0,22**
	30%	0.12	**0.19**	**0.26**
	10%	0.14	**0.23**	**0.32**

MILLING Advanced

Quick guide .D106

ROUND SERIES .D108
TANGENTIAL .D110
XP SERIES .D112
SQUARE SERIES .D114

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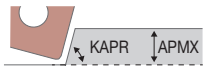
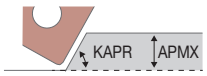
	ROUND	SQUARE	TANGENTIAL
	D108	D114	D110
NT-SN1288 			
NT-SN1275 			
NT-XP08 NT-SP12		ARBOR 75°	
NT-RN12	ARBOR	ARBOR 88°	ARBOR
KAPR	variable	75° / 88°	90°
Insert sizes	12	12	12
APMX	3		3 / 7
Tool diameter	Ø50 - Ø100	Ø50 - Ø125	Ø50 - Ø125
Coolant holes	✓	✓	✓
Workpiece material	S H	K	K
No. of cutting edges	variable	8	8
No. of geometries	3	4	1
Special features		chipbreaker type available	
Face Milling	✓	✓	✓
Side Milling	✓	✓	✓
Ramping	✓	✗	✗
Machine load	■■■■□	■■■□□	■■■□□
Strenght	■■■■■	■■■□□	■■■■□
Precision	■■■□□	■■■□□	■■■□□
Finishing	■■■□□	■■■□□	■■■□□
Range	■■■□□	■■■■□	■■■□□

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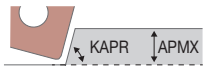
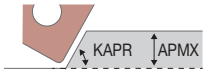
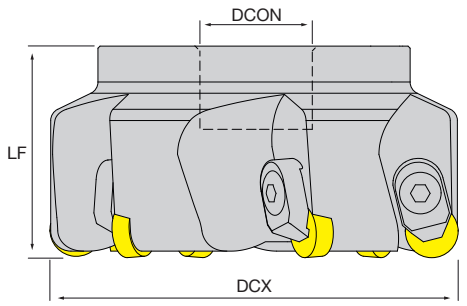
	XP SERIES
	D112
NT-SN1288  NT-SN1275  NT-XP08 NT-SP12 NT-RN12	ARBOR ALU ARBOR STEEL
KAPR	90°
Insert sizes	08
APMX	3 (PCD) / 1 (PCBN)
Tool diameter	Ø50 - Ø125
Coolant holes	-
Workpiece material	K N
No. of corners	1 (PCD) / 2 (PCBN)
No. of geometries	1
Special features	
Face Milling	✓
Side Milling	✓
Ramping	✗
Machine load	■ ■ □ □ □
Strenght	■ ■ ■ □ □
Precision	■ ■ ■ ■ □
Finishing	■ ■ ■ ■ □
Range	■ ■ ■ □ □

NT-RN

Round series

- Milling holder for doublesided solid round inserts without holes
- For dry cut milling
- Please select according to the thickness of the inserts



Designation	Stock	DCX	CICT	DCON	LF	LU	DCSFMS	CRKS		WT	MIID
FOR RNGN12**04**00											
NT-RN12 D050-F22-Z04	●	50	4	22	50	-	45	-			RNGN1204
NT-RN12 D063-F22-Z04	●	63	4	22	50	-	45	-			RNGN1204
NT-RN12 D080-F27-Z05	●	80	5	27	50	-	58	-			RNGN1204
NT-RN12 D100-F32-Z06	●	100	6	32	50	-	75	-			RNGN1204
FOR RNGN12**07**00											
NT-RN12X D050-F22-Z04	●	50	4	22	50	-	45	-			RNGN1207
NT-RN12X D063-F22-Z04	●	63	4	22	50	-	45	-			RNGN1207
NT-RN12X D080-F27-Z05	●	80	5	27	50	-	58	-			RNGN1207
NT-RN12X D100-F32-Z06	●	100	6	32	50	-	60	-			RNGN1207

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Spare parts	Clamp	Clamp screws	Springs	L wrench
NT-RN12○ D○○○-F○○-Z○○	NT-CS028	NT-SC035	NT-SG028	NT-WR030

nikkoTOOLS

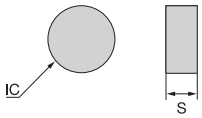
RN

Round series

- Solid CBN and solid ceramic inserts for advanced milling
- Different thickness and edge preparation available upon request
- Very reliable and cost efficient solution for multiple purpose use on S/H materials
- Wider range available on request

BH: High volume CBN
CN: Silicon nitride ceramic Si3N4
PVD: Physical vapour deposition

	NBH9000	NBH9500	NSA9000
	BH	BH	CN
Stable machining, light cut (1st choice / suitable)	○		○
General machining, medium cut (1st choice / suitable)	●	○	●
Unstable machining, heavy cut (1st choice / suitable)	●	●	○



ISO	NBH9000	NBH9500	NSA9000
P			
M			
K			
N			
S			800 1200
H	100 400	100 300	

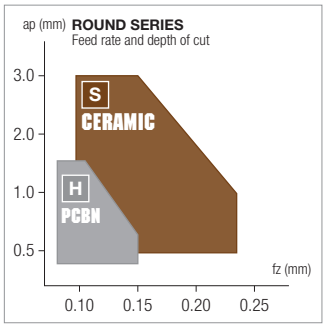
Vc(m/min) - suggested cutting speed range (bold: 1st choice)

	Designation		RE	IC	S	AN		Stock			
PCBN	UE H full solid	RNGN120400S-UE	6.35	12.7	4.76	0°		●	●		
CERAMIC	E S SiAlON	RNGN120700E	6.35	12.7	7.94	0°				○	
CERAMIC	CC S SiAlON	RNGN120400-CC	6.35	12.7	4.76	0°				●	
		RNGN120700-CC	6.35	12.7	7.94	0°				●	

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

ROUND SERIES cutting speed (m/min)

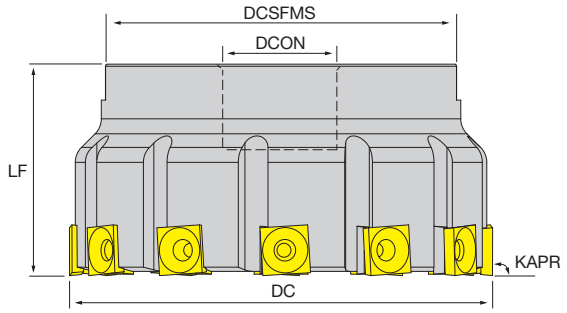
S1	HRSA good machinability <25 HRC	800÷1200
S2	HRSA medium machinability 25÷35 HRC	800÷1200
S3	HRSA low machinability 25÷45 HRC	600÷1200
H1	Case-hardened steel	100÷300
H2	Bearing steel	200÷400
H3	Hardened tool steel	150÷350



NT-SP

Tangential

- Milling holder for tangential solid square inserts
- For dry cut milling
- Kapr 90°
- More teeth density comparing to flat-mount type



Designation	Stock	DC	CICT	DCON	LF	LU	DCSFMS	CRKS		WT	MIID
NT-SP12-TAN D050-F22-Z05	●	50	5	22	50	-	45	-			SPHX1205
NT-SP12-TAN D063-F22-Z07	●	63	7	22	50	-	50	-			SPHX1205
NT-SP12-TAN D080-F27-Z08	●	80	8	27	50	-	60	-			SPHX1205
NT-SP12-TAN D100-F32-Z12	●	100	12	32	50	-	85	-			SPHX1205
NT-SP12-TAN D125-F40-Z15	●	125	15	40	50	-	85	-			SPHX1205

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Spare parts	Insert screws	Flag wrenches
NT-SP12-TAN D○○○-F○○-Z○○	NT-ST40101T15	NT-FTB15

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SPHX

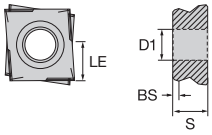
Tangential

- Tangentially mounted positive ceramic for advanced milling
- 8 cutting edges available
- Very robust and reliable solution for cast iron advanced milling
- Better surface quality with tangential solution when the clamping isn't ideal

CN: Silicon nitride ceramic Si3N4

		CN	CN
		NSN350	NSN400
Stable machining, light cut	● 1st choice ○ suitable	●	●
General machining, medium cut	● 1st choice ○ suitable	○	●
Unstable machining, heavy cut	● 1st choice ○ suitable		

Dimensions



8 edges

ISO	NSN350	NSN400	Vc(m/min) - suggested cutting speed range (bold: 1st choice)
P			
M			
K	600 1200	600 1200	
N			
S			
H			

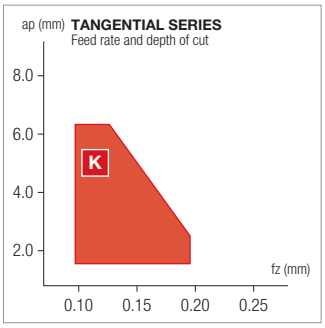
	Designation		BS	S	D1	LE	AN	NSN350	NSN400	Stock
CERAMIC	GP K silicon nitride	SPHX1205PCTR-GP	0.8	5.5	5.1	8	11°	●	●	

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

TANGENTIAL SERIES
cutting speed (m/min)

K1	Gray cast iron

CERAMIC NSN 600÷1200
roughing and finishing

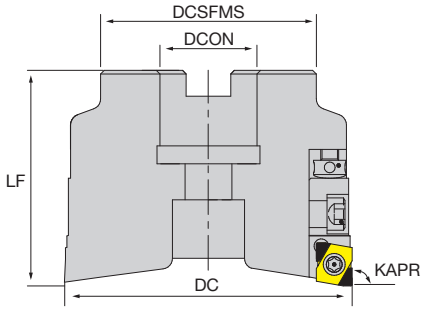


NT-XP

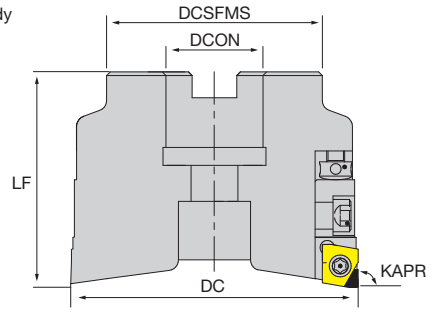
XP series

- Milling holder for brazed tip XP type inserts
- For dry cut milling
- Kapr 90°
- Both aluminum light body and robust steel body available

Steel body



Aluminium body



Designation	Stock	DC	CICT	DCON	LF	LU	DCSFMS	CRKS		WT	MIID
STEEL BODY											
NT-XP08-ST D050-F16-Z05	●	50	5	16	50	-	32	-			XPGo0802
NT-XP08-ST D063-F22-Z06	●	63	6	22	50	-	44	-			XPGo0802
NT-XP08-ST D080-F27-Z07	●	80	7	27	50	-	60	-			XPGo0802
NT-XP08-ST D100-F32-Z08	●	100	8	32	50	-	80	-			XPGo0802
ALUMINIUM BODY											
NT-XP08-AL D063-F22-Z05	●	63	5	22	50	-	44	-			XPGo0802
NT-XP08-AL D080-F27-Z07	●	80	7	27	50	-	60	-			XPGo0802
NT-XP08-AL D100-F32-Z08	●	100	8	32	50	-	80	-			XPGo0802
NT-XP08-AL D125-F40-Z10	●	125	10	40	63	-	105	-			XPGo0802

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Spare parts	Cartridge	Cartridge screw	L wrench	Adjusting screw	Chip cover	Insert screws	Insert screws
NT-XP08-AL Dooo-Foo-Zoo	NT-CRD-XP08	NT-CW040	NT-WR040	NT-AD040	NT-CH030	NT-ST40100T15	NT-ST30070T10HQ
NT-XP08-ST Dooo-Foo-Zoo	NT-CRD-XP08	NT-CW040	NT-WR040	NT-AD040	-	-	NT-ST30070T10HQ

XP

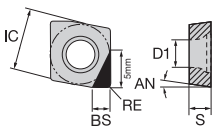
XP series

- Brazed-tip type insert available in both PCBN and PCD
- 2 cutting edges for PCBN, 1 cutting edge for PCD
- Edge length/RE/BS can be tailor made upon requests
- Different grades and edge preparation also available upon requests

BH: High volume CBN
DP: Polycristalline diamond

	BH	DP	DP
	NBH450U	ND120	ND150
Stable machining, light cut (● 1st choice, ○ suitable)	●	●	●
General machining, medium cut (● 1st choice, ○ suitable)	●	●	○
Unstable machining, heavy cut (● 1st choice, ○ suitable)	○		

Dimensions



DIAMOND 1 edge - PCBN 2 edges

ISO	BH	DP	DP
	Vc(m/min) - suggested cutting speed range (bold: 1st choice)		
P			
M			
K	500 2000		
N		500 2000	500 2500
S			
H			

	Designation		RE	IC	S	D1	BS				Stock
PCBN	UE K chamfer+hone	XPGW080204S-UE-2C	0.4	7.91	2.38	3.6	2.5	●			
		XPGW080208S-UE-2C	0.8	7.91	2.38	3.6	2.5	●			
DIAMOND	F N sharp edge	XPGT080204F-1C	0.4	7.91	2.38	3.6	2.5		●	●	
		XPGT080208F-1C	0.8	7.91	2.38	3.6	2.5		●	○	

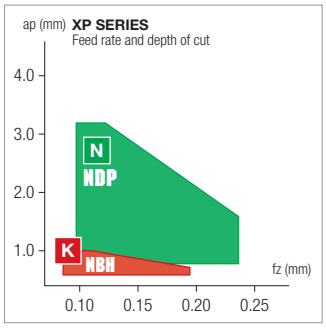
● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

XP SERIES cutting speed (m/min)

K1	Gray cast iron	500÷2000
N1	Aluminium alloy Si ≤ 12	1000÷3000
N2	Aluminium alloy Si > 12	300÷1000

K PCBN NBH only finishing

N DIAMOND NDP roughing and finishing

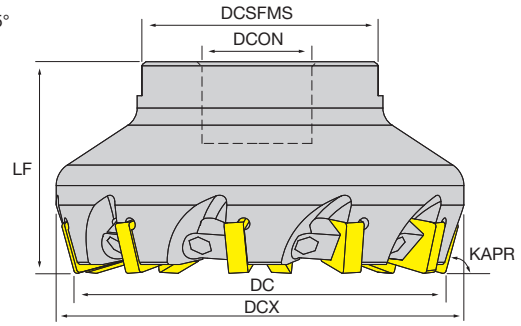


NT-SN

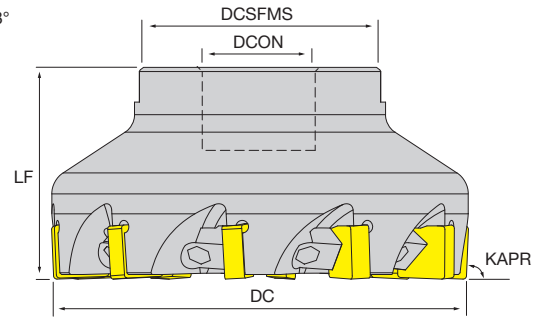
Square series

- Milling holder for doublesided solid square inserts without holes
- For dry cut milling
- Kapr 75° and 88° available
- Wider range available on request

KAPR 75°



KAPR 88°



Designation	Stock	DC	CICT	DCX	DCON	LF	LU	DCSFMS	CRKS	WT	MIID
KAPR 75°											
NT-SN1275 D050-F22-Z05	●	50	5		22	50	-	45	-		SNoN1204
NT-SN1275 D063-F22-Z06	●	63	6		22	50	-	45	-		SNoN1204
NT-SN1275 D080-F27-Z08	●	80	8		27	50	-	58	-		SNoN1204
NT-SN1275 D100-F32-Z10	●	100	10		32	50	-	60	-		SNoN1204
NT-SN1275 D125-F40-Z12	●	125	12		40	50	-	85	-		SNoN1204
KAPR 88°											
NT-SN1288 D063-F22-Z06	●	63	6	-	22	50	-	45	-		SNoN1204
NT-SN1288 D080-F27-Z08	●	80	8	-	27	50	-	58	-		SNoN1204
NT-SN1288 D100-F32-Z10	●	100	10	-	32	50	-	60	-		SNoN1204
NT-SN1288 D125-F40-Z12	●	125	12	-	40	50	-	85	-		SNoN1204

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Spare parts	Wedge	Wedge screws	L wrench
NT-SN12oo Dooo-Foo-Zoo	NT-WD070	NT-SC060	NT-WR030

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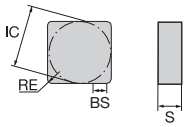
SN

Square series

- Solid square-shape CBN and solid ceramic inserts for advanced milling
- Different sizes and edge preparation available upon request
- Very reliable and cost efficient solution for multiple purpose use on K/H materials
- Wider range available on request

CM: Mixed ceramic Al2O3
BH: High volume CBN
CN: Silicon nitride ceramic Si3N4
PVD: Physical vapour deposition

	CM	BH	BH	CN
	NAC200	NBH550U	NBH900U	NSN400
Stable machining, light cut (● 1st choice, ○ suitable)	●		○	●
General machining, medium cut (● 1st choice, ○ suitable)	●	●	●	●
Unstable machining, heavy cut (● 1st choice, ○ suitable)		●	●	



8 edges

Dimensions	ISO	NAC200	NBH550U	NBH900U	NSN400
	P				
	M				
	K	400 800	800 2000	800 1500	600 1200
	N				
	S				
	H				

Vc(m/min) - suggested cutting speed range (bold: 1st choice)

	Designation		RE	IC	S	BS	AN					Stock
PCBN	UE K full solid	SNGN120412S-UE	1.2	12.7	4.76	-	0°			●		
PCBN	EN K full solid for 75° milling cutters	SNXN1204EN	-	12.7	4.76	1.4	0°		●			
PCBN	HN K full solid for 88° milling cutters	SNXN1204HN	-	12.7	4.76	1.8	0°		●			
PCBN	CB K full solid	SNXN120412-CB	1.2	12.7	4.76	-	0°		●			

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

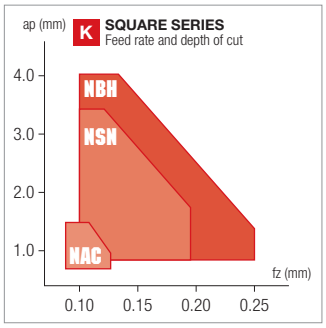
SQUARE SERIES cutting speed (m/min)

K1	Gray cast iron

PCBN NBH 800÷2000
roughing and finishing

CERAMIC NSN 600÷1200
roughing and finishing

CERAMIC NAC 400÷800
only finishing



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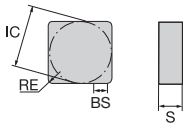
SN

Square series

- Solid square-shape CBN and solid ceramic inserts for advanced milling
- Different sizes and edge preparation available upon request
- Very reliable and cost efficient solution for multiple purpose use on K/H materials
- Wider range available on request

CM: Mixed ceramic Al2O3
BH: High volume CBN
CN: Silicon nitride ceramic Si3N4
PVD: Physical vapour deposition

	CM	BH	BH	CN
	NAC200	NBH550U	NBH900U	NSN400
Stable machining, light cut (● 1st choice, ○ suitable)	●		○	●
General machining, medium cut (● 1st choice, ○ suitable)	●	●	●	●
Unstable machining, heavy cut (● 1st choice, ○ suitable)		●	●	



8 edges

Dimensions	ISO	NAC200	NBH550U	NBH900U	NSN400
	P				
	M				
	K	400 800	800 2000	800 1500	600 1200
	N				
	S				
	H				

Vc(m/min) - suggested cutting speed range (bold: 1st choice)

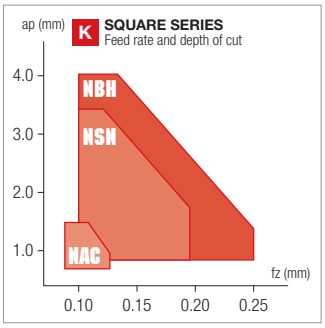
	Designation		RE	IC	S	BS	AN					Stock
CERAMIC	GP K Si3N4	SNGN120412-GP	1.2	12.7	4.76	-	0°				●	
CERAMIC	EN K Si3N4 or mixed Al2O3 for 75° milling cutters	SNXN1204EN	-	12.7	4.76	1.4	0°	●			●	
CERAMIC	HN K Si3N4 or mixed Al2O3 for 88° milling cutters	SNXN1204HN	-	12.7	4.76	1.8	0°	●			●	
CERAMIC	CB K Si3N4	SNXN120412-CB	1.2	12.7	4.76	-	0°				●	

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

SQUARE SERIES cutting speed (m/min)

K1	Gray cast iron

PCBN NBH 800÷2000
roughing and finishing

CERAMIC NSN 600÷1200
roughing and finishing

CERAMIC NAC 400÷800
only finishing