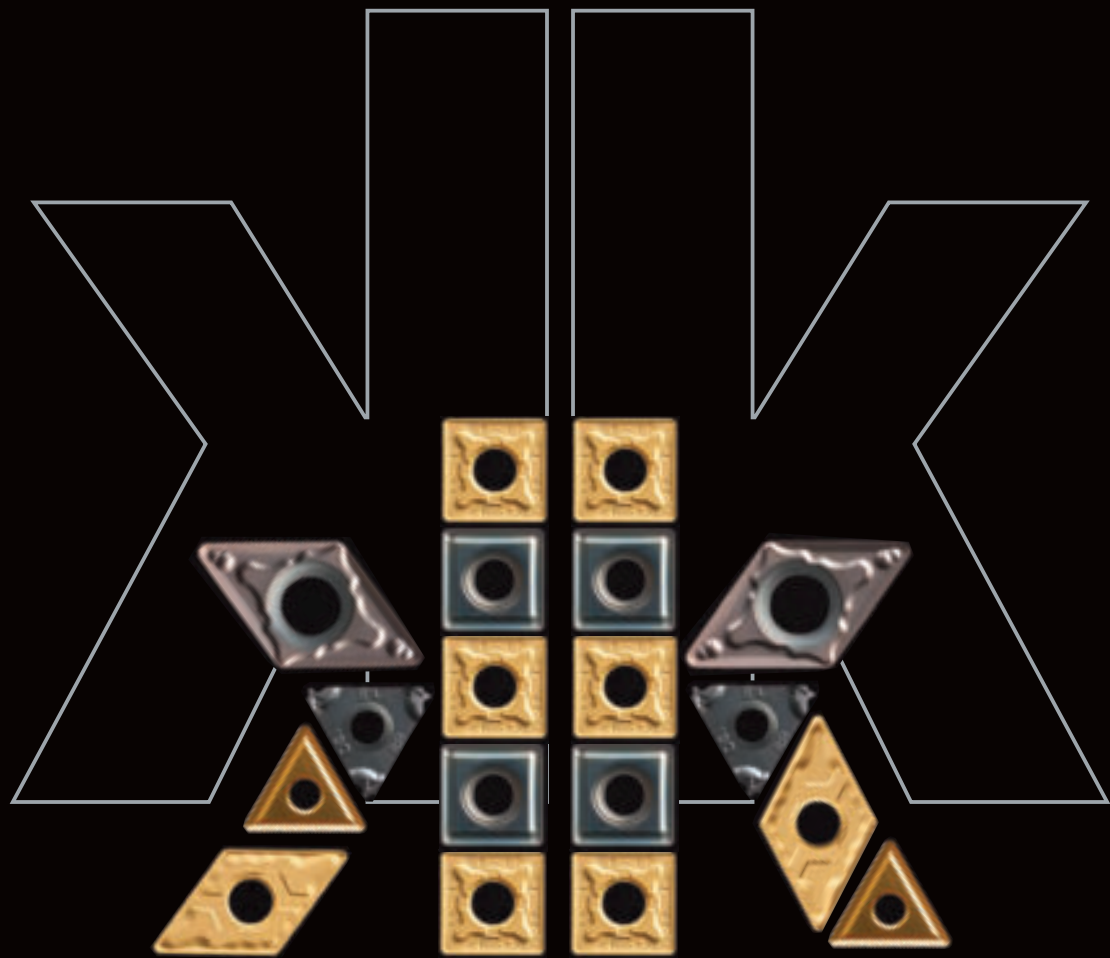


nixkoTOOLS



UPDATE **2019**

UPDATE 2019

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TURNING

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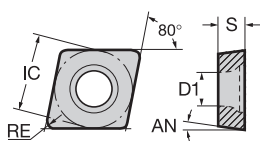
TURNING Carbide

CC

CARBIDE
Positive

ISO513

HC-CVD							HC-PVD			HW		HT				
JC7010	JC7020	JC8005	JC8015	JC8025	JC9010	JC9025	JP5015	JP5025	JP6010	JU6010	JU6020	JU4015	JP4020			
		200 380	180 360	140 300			80 220	60 180				200 380	200 400			
					150 280	120 240	80 160	60 120				160 280	160 300			
180 380	150 300						80 170					200 400	200 420			
								600 2200		600 2000	500 1500					
							40 80									
	</															



2 edges

GRADE APPLICATION AREA

Stable machining, continuous cut

main application

General machining, light interruption

applicable

Unstable machining, interrupted cut

GB P M N



MICROBORING, ground chipbreaker

MICRO CC.R01-GBL RE 0.1 a_p 0.05 0.20 0.35 f_n 0.02 0.04 0.06CC.R02-GBL RE 0.2 a_p 0.05 0.20 0.35 f_n 0.03 0.05 0.07CC.R04-GBL RE 0.4 a_p 0.05 0.20 0.35 f_n 0.04 0.06 0.08

PPF P M



ground chipbreaker, picture: right-hand

CCET 060202%/L-PPF RE 0.2 a_p 0.10 0.40 0.70 f_n 0.04 0.07 0.10060204%/L-PPF RE 0.4 a_p 0.10 0.40 0.70 f_n 0.04 0.08 0.12CCET 09T302%/L-PPF RE 0.2 a_p 0.10 0.50 0.90 f_n 0.04 0.08 0.1209T304%/L-PPF RE 0.4 a_p 0.10 0.50 0.90 f_n 0.04 0.09 0.14

PFU P M S



sharp edge

CCMT 060202-PFU RE 0.2 a_p 0.20 0.80 1.40 f_n 0.04 0.08 0.12060204-PFU RE 0.4 a_p 0.20 0.80 1.40 f_n 0.05 0.11 0.17CCMT 09T302-PFU RE 0.2 a_p 0.30 1.00 1.70 f_n 0.05 0.10 0.1509T304-PFU RE 0.4 a_p 0.30 1.00 1.70 f_n 0.06 0.14 0.2209T308-PFU RE 0.8 a_p 0.30 1.00 1.70 f_n 0.08 0.16 0.24

PPM P M



ground chipbreaker, picture: right-hand

CCET 09T304%/L-PPM RE 0.4 a_p 0.50 1.50 2.50 f_n 0.04 0.07 0.10

PMU P M K



general purpose

CCMT 060202-PMU RE 0.2 a_p 0.50 1.50 2.50 f_n 0.05 0.10 0.15060204-PMU RE 0.4 a_p 0.50 1.50 2.50 f_n 0.06 0.13 0.20060208-PMU RE 0.8 a_p 0.50 1.50 2.50 f_n 0.08 0.16 0.24CCMT 09T302-PMU RE 0.2 a_p 0.60 1.80 3.00 f_n 0.06 0.13 0.2009T304-PMU RE 0.4 a_p 0.60 1.80 3.00 f_n 0.07 0.16 0.2509T308-PMU RE 0.8 a_p 0.60 1.80 3.00 f_n 0.08 0.19 0.30CCMT 120404-PMU RE 0.4 a_p 0.80 2.20 3.60 f_n 0.08 0.17 0.26120408-PMU RE 0.8 a_p 0.80 2.20 3.60 f_n 0.10 0.22 0.32120412-PMU RE 1.2 a_p 0.80 2.20 3.60 f_n 0.12 0.24 0.36

● stock standard, ○ non-standard stock

HOLDERS EXTERNAL

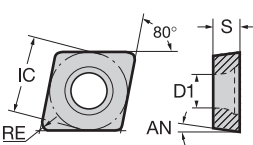


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HOLDERS INTERNAL



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CC		CARBIDE Positive					ISO513	HC-CVD						HC-PVD		HW		HT							
								JC7010	JC7020	JC8005	JC8015	JC8025	JC9010	JC9025	JP5015	JP5025	JP6010	JU6010	JU6020	JU4015	JP4020				
 2 edges		Size	IC	S	D1	AN	P			200 380	180 360	140 300			80 220	60 180				200 380	200 400				
		MICRO CC	3.50	1.40	1.90	7°	M							150 280	120 240	80 160	60 120				160 280	160 300			
		0602□□	6.35	2.38	2.80	7°	K	180 380	150 300							80 170					200 400	200 420			
		09T3□□	9.525	3.97	4.40	7°	N											600 2200	600 2000	500 1500					
		1204□□	12.70	4.76	5.50	7°	S									40 80									
						H																			
GRADE APPLICATION AREA		Stable machining, continuous cut					+ Hardness - Toughness																		
main application		General machining, light interruption																							
applicable		Unstable machining, interrupted cut																							

MEDIUM	PMN N	 polished surface	CCGX	060202-PMN	RE 0.2	a _p ▶	0.30	1.50	2.70									●						
						f _n ▶	0.05	0.10	0.15															
			060204-PMN	RE 0.4	a _p ▶	0.30	1.50	2.70									●	●	●					
					f _n ▶	0.06	0.13	0.20																
			060208-PMN	RE 0.8	a _p ▶	0.30	1.50	2.70									○	○	●					
					f _n ▶	0.08	0.16	0.24																
			CCGX	09T302-PMN	RE 0.2	a _p ▶	0.50	2.00	3.50									○	●					
						f _n ▶	0.06	0.11	0.16															
				09T304-PMN	RE 0.4	a _p ▶	0.50	2.00	3.50									●	●	●				
						f _n ▶	0.08	0.16	0.24															
CCGX	09T308-PMN	RE 0.8	a _p ▶	0.50	2.00	3.50									○	○	●							
			f _n ▶	0.10	0.20	0.30																		
	120402-PMN	RE 0.2	a _p ▶	0.50	3.00	5.50									○	●								
			f _n ▶	0.08	0.14	0.20																		
	120404-PMN	RE 0.4	a _p ▶	0.50	3.00	5.50									○	●	●							
			f _n ▶	0.10	0.20	0.30																		
	120408-PMN	RE 0.8	a _p ▶	0.50	3.00	5.50									○	●	●							
			f _n ▶	0.15	0.25	0.35																		

ROUGHING	PRU P K	 reinforced edge	CCMT	09T304-PRU	RE 0.4	a _p ▶	1.50	2.50	3.50	●				●								
						f _n ▶	0.10	0.19	0.28													
			09T308-PRU	RE 0.8	a _p ▶	1.50	2.50	3.50	●				●									
					f _n ▶	0.12	0.22	0.32														
			CCMT	120408-PRU	RE 0.8	a _p ▶	1.50	3.00	4.50	●				●								
f _n ▶	0.14	0.26				0.38																
	120412-PRU	RE 1.2	a _p ▶	1.50	3.00	4.50	●				●											
			f _n ▶	0.16	0.28	0.40																

● stock standard, ○ non-standard stock

HOLDERS EXTERNAL



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HOLDERS INTERNAL



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CN**CARBIDE**
Negative

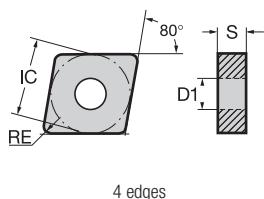
ISO513

HC-CVD

HC-PVD

HW

HT



Size	IC	S	D1
MICRO CN	7.50	3.18	3.60
0903 □	9.525	3.18	3.81
1204 □	12.70	4.76	5.16
1606 □	15.87	6.35	6.35
1906 □	19.05	6.35	7.94

ISO513	JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9010	JC9025	JP5015	JP5025	JP9015	JP9030	JW6020	JW4015
P			200 380	180 360	140 300	100 240			80 220	180 180				200 380
M							150 280	120 240	80 160	60 120	100 220	80 200		160 280
K	180 380	150 300								80 170				200 400
N													500 1500	
S									40 80					
H														

GRADE APPLICATION AREA

Stable machining, continuous cut

main application

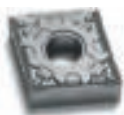
General machining, light interruption

applicable

Unstable machining, interrupted cut

**FINISHING**GB **P M**MICRO CN.R04-GB%/L RE 0.4 a_p 0.20 **0.50** 0.80
 f_n 0.05 **0.10** 0.15

MICRONEGA, picture: right-hand

NSP **P**CNMG 090304-NSP RE 0.4 a_p 0.30 **0.70** 1.10
 f_n 0.06 **0.12** 0.18
090308-NSP RE 0.8 a_p 0.30 **0.70** 1.10
 f_n 0.08 **0.16** 0.24
CNMG 120404-NSP RE 0.4 a_p 0.40 **1.20** 2.00
 f_n 0.08 **0.15** 0.22
120408-NSP RE 0.8 a_p 0.40 **1.20** 2.00
 f_n 0.10 **0.22** 0.34NFM **M**CNMG 120404-NFM RE 0.4 a_p 0.40 **1.20** 2.00
 f_n 0.08 **0.14** 0.20
120408-NFM RE 0.8 a_p 0.40 **1.20** 2.00
 f_n 0.10 **0.20** 0.30**MEDIUM**GM **P M**MICRO CN.R04-GM RE 0.4 a_p 0.80 **1.60** 2.40
 f_n 0.08 **0.15** 0.22

MICRONEGA

CN.R08-GM RE 0.8 a_p 0.80 **1.60** 2.40
 f_n 0.10 **0.17** 0.24SS **M**MICRO CN.R02-SS RE 0.2 a_p 0.40 **1.20** 2.00
 f_n 0.06 **0.11** 0.16

MICRONEGA, polished surface

CN.R04-SS RE 0.4 a_p 0.40 **1.20** 2.00
 f_n 0.08 **0.14** 0.20NMP **P**CNMG 120404-NMP RE 0.4 a_p 1.50 **2.50** 3.50
 f_n 0.12 **0.20** 0.28
120408-NMP RE 0.8 a_p 1.50 **2.50** 3.50
 f_n 0.16 **0.25** 0.34
120412-NMP RE 1.2 a_p 1.50 **2.50** 3.50
 f_n 0.20 **0.30** 0.40
120416-NMP RE 1.6 a_p 1.50 **2.50** 3.50
 f_n 0.25 **0.35** 0.45
CNMG 160608-NMP RE 0.8 a_p 3.00 **4.50** 6.00
 f_n 0.20 **0.30** 0.40
160612-NMP RE 1.2 a_p 3.00 **4.50** 6.00
 f_n 0.25 **0.35** 0.45
160616-NMP RE 1.6 a_p 3.00 **4.50** 6.00
 f_n 0.30 **0.40** 0.50

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

HOLDERS EXTERNAL

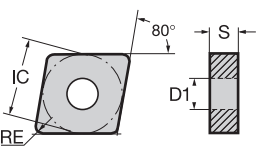


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HOLDERS INTERNAL



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CN	CARBIDE Negative					ISO513	HC-CVD							HC-PVD				HW	HT			
	Size	IC	S	D1			JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9010	JC9025	JP5015	JP5025	JP9015	JP9030	JW6020	JW4015		
	MICRO CN	7.50	3.18	3.60			200 380	180 360	140 300	100 240	150 280	120 240	80 160	60 120	100 220	80 200	200 380	160 280	200 400	500 1500		
 4 edges	0903□	9.525	3.18	3.81		K	180 380	150 300							80 170							
	1204□	12.70	4.76	5.16		N																
	1606□	15.87	6.35	6.35		S									40 80							
	1906□	19.05	6.35	7.94		H																
GRADE APPLICATION AREA	Stable machining, continuous cut																					
main application	General machining, light interruption																					
applicable	Unstable machining, interrupted cut																					

MEDIUM	NMP P		CNMG	190612-NMP	RE 1.2	a _p ▶ 4.00 f _n ▶ 0.30	6.00 0.40	8.00 0.50														
				190616-NMP	RE 1.6	a _p ▶ 4.00 f _n ▶ 0.32	6.00 0.45	8.00 0.58														
	NUP P M		CNMG	090304-NUP	RE 0.4	a _p ▶ 0.70 f _n ▶ 0.08	1.50 0.15	2.30 0.22														
				090308-NUP	RE 0.8	a _p ▶ 0.70 f _n ▶ 0.12	1.50 0.20	2.30 0.28														
			CNMG	120404-NUP	RE 0.4	a _p ▶ 1.00 f _n ▶ 0.10	2.50 0.20	4.00 0.30														
				120408-NUP	RE 0.8	a _p ▶ 1.00 f _n ▶ 0.15	2.50 0.25	4.00 0.35														
				120412-NUP	RE 1.2	a _p ▶ 1.00 f _n ▶ 0.18	2.50 0.30	4.00 0.42														
				120416-NUP	RE 1.6	a _p ▶ 1.00 f _n ▶ 0.20	2.50 0.35	4.00 0.50														
			CNMG	160608-NUP	RE 0.8	a _p ▶ 2.00 f _n ▶ 0.18	4.50 0.30	7.00 0.42														
				160612-NUP	RE 1.2	a _p ▶ 2.00 f _n ▶ 0.22	4.50 0.35	7.00 0.48														
			CNMG	190608-NUP	RE 0.8	a _p ▶ 3.00 f _n ▶ 0.22	6.00 0.35	9.00 0.48														
				190612-NUP	RE 1.2	a _p ▶ 3.00 f _n ▶ 0.25	6.00 0.40	9.00 0.55														
				190616-NUP	RE 1.6	a _p ▶ 3.00 f _n ▶ 0.30	6.00 0.45	9.00 0.60														
	NMU P		CNMG	120408/L-NMU	RE 0.8	a _p ▶ 1.00 f _n ▶ 0.20	2.50 0.30	4.00 0.40														
	NMM M		CNMG	090304-NMM	RE 0.4	a _p ▶ 0.70 f _n ▶ 0.13	1.50 0.20	2.30 0.27														
				090308-NMM	RE 0.8	a _p ▶ 0.70 f _n ▶ 0.18	1.50 0.25	2.30 0.32														
			CNMG	120404-NMM	RE 0.4	a _p ▶ 1.00 f _n ▶ 0.15	2.50 0.25	4.00 0.35														
				120408-NMM	RE 0.8	a _p ▶ 1.00 f _n ▶ 0.20	2.50 0.30	4.00 0.40														
				120412-NMM	RE 1.2	a _p ▶ 1.00 f _n ▶ 0.25	2.50 0.35	4.00 0.45														
				120416-NMM	RE 1.6	a _p ▶ 1.00 f _n ▶ 0.30	2.50 0.40	4.00 0.50														
			CNMG	160608-NMM	RE 0.8	a _p ▶ 2.00 f _n ▶ 0.25	4.50 0.35	7.00 0.45														
				160612-NMM	RE 1.2	a _p ▶ 2.00 f _n ▶ 0.30	4.50 0.40	7.00 0.50														
				160616-NMM	RE 1.6	a _p ▶ 2.00 f _n ▶ 0.35	4.50 0.45	7.00 0.55														

● stock standard, ○ non-standard stock, ▽ stock exhaustion



CN**CARBIDE**
Negative

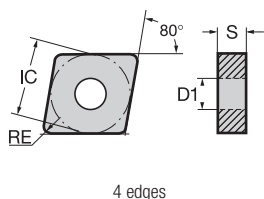
ISO513

HC-CVD

HC-PVD

HW

HT



Size	IC	S	D1
MICRO CN	7.50	3.18	3.60
0903 □	9.525	3.18	3.81
1204 □	12.70	4.76	5.16
1606 □	15.87	6.35	6.35
1906 □	19.05	6.35	7.94

ISO513	JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9010	JC9025	JP5015	JP5025	JP9015	JP9030	JW6020	JW4015
P			200 380	180 360	140 300	100 240			80 220	60 180				200 380
M							150 280	120 240	80 160	60 120	100 220	80 200		160 280
K	180 380	150 300								80 170				200 400
N													500 1500	
S									40 80					
H														

GRADE APPLICATION AREA

Stable machining, continuous cut

main application

General machining, light interruption

applicable

Unstable machining, interrupted cut

**NMM M**

CNMG	190612-NMM	RE 1.2	a_p 3.00 f_n 0.35	6.00 0.45	9.00 0.55
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	190616-NMM	RE 1.6	a_p 3.00 f_n 0.40	6.00 0.50	9.00 0.60
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NMK K

CNMG	120404-NMK	RE 0.4	a_p 0.50 f_n 0.10	2.00 0.20	3.50 0.30
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	120408-NMK	RE 0.8	a_p 0.50 f_n 0.15	2.00 0.25	3.50 0.35
--	-------------------	--------	--------------------------	----------------------------	--------------

	120412-NMK	RE 1.2	a_p 0.50 f_n 0.20	2.00 0.30	3.50 0.40
--	-------------------	--------	--------------------------	----------------------------	--------------

	120416-NMK	RE 1.6	a_p 0.50 f_n 0.25	2.00 0.35	3.50 0.45
--	-------------------	--------	--------------------------	----------------------------	--------------

CNMG	160608-NMK	RE 0.8	a_p 2.00 f_n 0.25	4.00 0.35	6.00 0.45
-------------	-------------------	--------	--------------------------	----------------------------	--------------

	160612-NMK	RE 1.2	a_p 2.00 f_n 0.30	4.00 0.40	6.00 0.50
--	-------------------	--------	--------------------------	----------------------------	--------------

	160616-NMK	RE 1.6	a_p 2.00 f_n 0.35	4.00 0.45	6.00 0.55
--	-------------------	--------	--------------------------	----------------------------	--------------

CNMG	190612-NMK	RE 1.2	a_p 3.00 f_n 0.35	5.00 0.45	7.00 0.55
-------------	-------------------	--------	--------------------------	----------------------------	--------------

	190616-NMK	RE 1.6	a_p 3.00 f_n 0.40	5.00 0.50	7.00 0.60
--	-------------------	--------	--------------------------	----------------------------	--------------

NWU P K

wiper edge

CNMG	120408-NWU	RE 0.8	a_p 0.80 f_n 0.20	2.00 0.40	3.20 0.60
-------------	-------------------	--------	--------------------------	----------------------------	--------------

	120412-NWU	RE 1.2	a_p 0.80 f_n 0.25	2.00 0.45	3.20 0.65
--	-------------------	--------	--------------------------	----------------------------	--------------

NMN N

polished surface

CNGG	120404-NMN	RE 0.4	a_p 0.50 f_n 0.10	2.00 0.20	3.50 0.30
-------------	-------------------	--------	--------------------------	----------------------------	--------------

	120408-NMN	RE 0.8	a_p 0.50 f_n 0.15	2.00 0.25	3.50 0.35
--	-------------------	--------	--------------------------	----------------------------	--------------

	120412-NMN	RE 1.2	a_p 0.50 f_n 0.20	2.00 0.30	3.50 0.40
--	-------------------	--------	--------------------------	----------------------------	--------------

NRP P

CNMG	120408-NRP	RE 0.8	a_p 2.00 f_n 0.25	4.00 0.35	6.00 0.45
-------------	-------------------	--------	--------------------------	----------------------------	--------------

	120412-NRP	RE 1.2	a_p 2.00 f_n 0.30	4.00 0.40	6.00 0.50
--	-------------------	--------	--------------------------	----------------------------	--------------

	120416-NRP	RE 1.6	a_p 2.00 f_n 0.35	4.00 0.45	6.00 0.55
--	-------------------	--------	--------------------------	----------------------------	--------------

CNMG	160612-NRP	RE 1.2	a_p 4.00 f_n 0.35	6.00 0.50	8.00 0.65
-------------	-------------------	--------	--------------------------	----------------------------	--------------

	160616-NRP	RE 1.6	a_p 4.00 f_n 0.40	6.00 0.55	8.00 0.70
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● stock standard, ○ non-standard stock

HOLDERS EXTERNAL

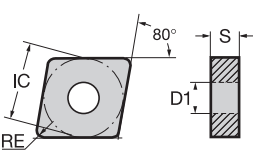


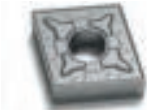
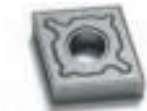
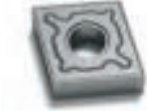
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HOLDERS INTERNAL



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CN		CARBIDE Negative				ISO513	HC-CVD								HC-PVD				HW	HT						
							JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9010	JC9025	JP5015	JP5025	JP9015	JP9030	JW6020	JW4015						
 4 edges	Size	IC	S	D1		P			200 380	180 360	140 300	100 240			80 220	60 180					200 380					
	MICRO CN	7.50	3.18	3.60		M								150 280	120 240	80 160	60 120	100 220	80 200			160 280				
	0903□	9.525	3.18	3.81		K	180 380	150 300									80 170					200 400				
	1204□	12.70	4.76	5.16		N																500 1500				
	1606□	15.87	6.35	6.35		S										40 80										
	1906□	19.05	6.35	7.94		H																				
GRADE APPLICATION AREA		Stable machining, continuous cut				Hardness Toughness ISO513																				
main application		General machining, light interruption																								
applicable		Unstable machining, interrupted cut																								

ROUGHING		NRP P	CNMG	190612-NRP	RE 1.2	a_p 6.00 f_n 0.40	8.00 0.55	10.0 0.70						●	●												
				190616-NRP	RE 1.6	a_p 6.00 f_n 0.45	8.00 0.60	10.0 0.75						●	●												
				190624-NRP	RE 2.4	a_p 6.00 f_n 0.50	8.00 0.65	10.0 0.80						●	●												
		NTP P	CNMG	160612-NTP	RE 1.2	a_p 5.00 f_n 0.40	7.00 0.55	9.00 0.70				▽															
				190612-NTP	RE 1.2	a_p 7.00 f_n 0.45	9.00 0.60	11.0 0.75				▽	▽														
				190616-NTP	RE 1.6	a_p 7.00 f_n 0.50	9.00 0.65	11.0 0.80				▽	▽														
		NRK K	CNMG	120408-NRK	RE 0.8	a_p 1.50 f_n 0.20	4.00 0.30	6.50 0.40	●	●																	
				120412-NRK	RE 1.2	a_p 1.50 f_n 0.25	4.00 0.35	6.50 0.45	●	●																	
				120416-NRK	RE 1.6	a_p 1.50 f_n 0.30	4.00 0.40	6.50 0.50	●	●																	
			CNMG	160612-NRK	RE 1.2	a_p 3.00 f_n 0.40	6.00 0.55	9.00 0.70	●	●																	
160616-NRK				RE 1.6	a_p 3.00 f_n 0.45	6.00 0.60	9.00 0.75	●	●																		
CNMG			190612-NRK	RE 1.2	a_p 5.00 f_n 0.45	8.00 0.60	11.0 0.75	○	○																		
			190616-NRK	RE 1.6	a_p 5.00 f_n 0.50	8.00 0.65	11.0 0.80	○	○																		
	Flat K	CNMA	120404	RE 0.4	a_p 2.00 f_n 0.15	4.00 0.25	6.00 0.35	○	○																		
			120408	RE 0.8	a_p 2.00 f_n 0.25	4.00 0.35	6.00 0.45	●	○																		
			120412	RE 1.2	a_p 2.00 f_n 0.35	4.00 0.45	6.00 0.55	●	○																		
			120416	RE 1.6	a_p 2.00 f_n 0.45	4.00 0.55	6.00 0.65	○	○																		
		CNMA	160612	RE 1.2	a_p 4.00 f_n 0.45	7.00 0.60	10.0 0.75	●	○																		
			160616	RE 1.6	a_p 4.00 f_n 0.50	7.00 0.65	10.0 0.80	●	○																		
		CNMA	190612	RE 1.2	a_p 6.00 f_n 0.50	9.00 0.65	12.0 0.80	○	○																		
			190616	RE 1.6	a_p 6.00 f_n 0.55	9.00 0.70	12.0 0.85	●	○																		
	MRP P	CNMM	190616-MRP	RE 1.6	a_p 6.00 f_n 0.60	9.00 0.75	12.0 0.90					○	○														
			190624-MRP	RE 2.4	a_p 6.00 f_n 0.65	9.00 0.80	12.0 0.95					●	●														
		CNMM	250924-MRP	RE 2.4	a_p 8.00 f_n 0.70	12.0 0.85	16.0 1.00					●	●														

2 edges, single side

● stock standard, ○ non-standard stock, ▽ stock exhaustion



TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

DC

CARBIDE
Positive

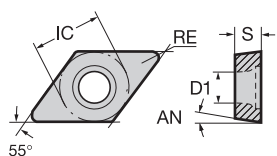
ISO513

HC-CVD

HC-PVD

HW

HT



2 edges

GRADE APPLICATION AREA

Stable machining, continuous cut

main application

General machining, light interruption

applicable

Unstable machining, interrupted cut

+

Hardness

-

Toughness

+

P

M

K

N

S

H

JC7010	JC7020	JC8005	JC8015	JC8025	JC9010	JC9025	JP5015	JP5025	JP6010	JU6010	JU6020	JU4015	JP4020			
		200 380	180 360	140 300			80 220	60 180				200 380	200 400			
					150 280	120 240	80 160	60 120				160 280	160 300			
180 380	150 300						80 170					200 400	200 420			
								600 2200	600 2000	500 1500						
							40 80									

FINISHING	PPF P M	DCET	070202*/L-PPF	RE 0.2	$a_p \rightarrow$ 0.10 $f_n \rightarrow$ 0.04	0.40 0.70 0.07 0.10										
			070204*/L-PPF	RE 0.4	$a_p \rightarrow$ 0.10 $f_n \rightarrow$ 0.04	0.40 0.70 0.08 0.12										
		DCET	11T302*/L-PPF	RE 0.2	$a_p \rightarrow$ 0.10 $f_n \rightarrow$ 0.04	0.50 0.90 0.08 0.12										
			11T304*/L-PPF	RE 0.4	$a_p \rightarrow$ 0.10 $f_n \rightarrow$ 0.04	0.50 0.90 0.09 0.14										
	PFU P M S	DCMT	070202-PFU	RE 0.2	$a_p \rightarrow$ 0.20 $f_n \rightarrow$ 0.04	0.80 1.40 0.08 0.12										
			070204-PFU	RE 0.4	$a_p \rightarrow$ 0.20 $f_n \rightarrow$ 0.05	0.80 1.40 0.11 0.17										
		DCMT	11T302-PFU	RE 0.2	$a_p \rightarrow$ 0.30 $f_n \rightarrow$ 0.05	1.00 1.70 0.10 0.15										
			11T304-PFU	RE 0.4	$a_p \rightarrow$ 0.30 $f_n \rightarrow$ 0.06	1.00 1.70 0.14 0.22										
			11T308-PFU	RE 0.8	$a_p \rightarrow$ 0.30 $f_n \rightarrow$ 0.08	1.00 1.70 0.16 0.24										
MEDIUM	PPM P M	DCET	070204*/L-PPM	RE 0.4	$a_p \rightarrow$ 0.40 $f_n \rightarrow$ 0.03	1.00 1.60 0.06 0.09										
			11T302*/L-PPM	RE 0.2	$a_p \rightarrow$ 0.50 $f_n \rightarrow$ 0.04	1.50 2.50 0.06 0.08										
			11T304*/L-PPM	RE 0.4	$a_p \rightarrow$ 0.50 $f_n \rightarrow$ 0.04	1.50 2.50 0.07 0.10										
	PMU P M K	DCMT	070202-PMU	RE 0.2	$a_p \rightarrow$ 0.50 $f_n \rightarrow$ 0.05	1.50 2.50 0.10 0.15										
			070204-PMU	RE 0.4	$a_p \rightarrow$ 0.50 $f_n \rightarrow$ 0.06	1.50 2.50 0.13 0.20										
			070208-PMU	RE 0.8	$a_p \rightarrow$ 0.50 $f_n \rightarrow$ 0.08	1.50 2.50 0.16 0.24										
		DCMT	11T302-PMU	RE 0.2	$a_p \rightarrow$ 0.60 $f_n \rightarrow$ 0.06	1.80 3.00 0.13 0.20										
			11T304-PMU	RE 0.4	$a_p \rightarrow$ 0.60 $f_n \rightarrow$ 0.07	1.80 3.00 0.16 0.25										
			11T308-PMU	RE 0.8	$a_p \rightarrow$ 0.60 $f_n \rightarrow$ 0.08	1.80 3.00 0.19 0.30										
		DCMT	150404-PMU	RE 0.4	$a_p \rightarrow$ 0.80 $f_n \rightarrow$ 0.08	2.20 3.60 0.17 0.26										
			150408-PMU	RE 0.8	$a_p \rightarrow$ 0.80 $f_n \rightarrow$ 0.10	2.20 3.60 0.22 0.32										
			150412-PMU	RE 1.2	$a_p \rightarrow$ 0.80 $f_n \rightarrow$ 0.12	2.20 3.60 0.24 0.36										
	PMN N	DCGX	070202-PMN	RE 0.2	$a_p \rightarrow$ 0.30 $f_n \rightarrow$ 0.05	1.50 2.70 0.10 0.15										
			070204-PMN	RE 0.4	$a_p \rightarrow$ 0.30 $f_n \rightarrow$ 0.06	1.50 2.70 0.13 0.20										
			070208-PMN	RE 0.8	$a_p \rightarrow$ 0.30 $f_n \rightarrow$ 0.08	1.50 2.70 0.16 0.24										
		DCGX	11T302-PMN	RE 0.2	$a_p \rightarrow$ 0.50 $f_n \rightarrow$ 0.06	2.00 3.50 0.11 0.16										
			11T304-PMN	RE 0.4	$a_p \rightarrow$ 0.50 $f_n \rightarrow$ 0.08	2.00 3.50 0.16 0.24										
			11T308-PMN	RE 0.8	$a_p \rightarrow$ 0.50 $f_n \rightarrow$ 0.10	2.00 3.50 0.20 0.30										

● stock standard, ○ non-standard stock

HOLDERS EXTERNAL



p. 107

HOLDERS INTERNAL



p. 111

DC		CARBIDE Positive					ISO513	HC-CVD					HC-PVD		HW		HT								
								JC7010	JC7020	JC8005	JC8015	JC8025	JC9010	JC9025	JP5015	JP5025	JP6010	JU6010	JU6020	JU4015	JP4020				
 2 edges		Size	IC	S	D1	AN	P			200 380	180 360	140 300			80 220	60 180					200 380	200 400			
		0702□□	6.35	2.38	2.80	7°	M						150 280	120 240	80 160	60 120					160 280	160 300			
		11T3□□	9.525	3.97	4.40	7°	K	180 380	150 300							80 170					200 400	200 420			
		1504□□	12.70	4.76	5.50	7°	N										600 2200	600 2000	500 1500						
								S								40 80									
GRADE APPLICATION AREA		Stable machining, continuous cut					+ Hardness - Toughness	+ Toughness - Hardness	+ Toughness - Hardness	+ Toughness - Hardness	+ Toughness - Hardness	+ Toughness - Hardness	+ Toughness - Hardness	+ Toughness - Hardness	+ Toughness - Hardness	+ Toughness - Hardness	+ Toughness - Hardness	+ Toughness - Hardness	+ Toughness - Hardness	+ Toughness - Hardness	+ Toughness - Hardness	+ Toughness - Hardness	+ Toughness - Hardness	+ Toughness - Hardness	
		General machining, light interruption																							
		Unstable machining, interrupted cut																							

ROUGHING	PRU P K reinforced edge	DCMT	11T304-PRU	RE 0.4	a_p 1.50 f_n 0.10	2.50 0.19	3.50 0.28	●					●												
			11T308-PRU	RE 0.8	a_p 1.50 f_n 0.12	2.50 0.22	3.50 0.32	●					●												

● stock standard

HOLDERS EXTERNAL



HOLDERS INTERNAL



TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

TURNING

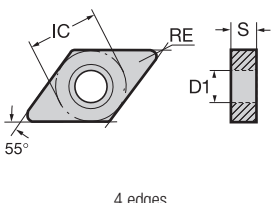
THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

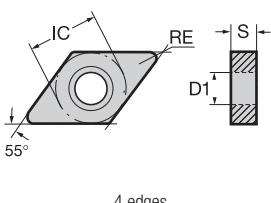
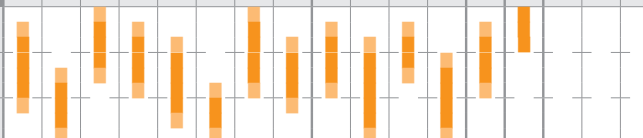
DN	CARBIDE Negative					ISO513	HC-CVD								HC-PVD				HW	HT				
	Size	IC	S	D1			JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9010	JC9025	JP5015	JP5025	JP9015	JP9030						
 4 edges	MICRO DN	7.00	3.18	3.60		P			200 380	180 360	140 300	100 240		80 220	60 180					200 380				
	1104□	9.525	4.76	3.81		M							150 280	120 240	80 160	60 120	100 220	80 200		160 280				
	1506□	12.70	6.35	5.16		K	180 380	150 300							80 170					200 400				
						N														500 1500				
						S									40 80									
						H																		
GRADE APPLICATION AREA	Stable machining, continuous cut					+ Hardness - Toughness																		
main application	General machining, light interruption																							
applicable	Unstable machining, interrupted cut																							

FINISHING	GB P M		MICRO DN.R04-GB [®] /L	RE 0.4	a _p ▶ 0.20 f _n ▶ 0.05	0.50 0.10	0.80 0.15																	
	MICRONEGA, picture: right-end																							
	NSP P		DNMG 110404-NSP	RE 0.4	a _p ▶ 0.30 f _n ▶ 0.06	0.70 0.12	1.10 0.18				●	●										●		
				RE 0.8	a _p ▶ 0.30 f _n ▶ 0.08	0.70 0.16	1.10 0.24				●	●									●			
			DNMG 150604-NSP	RE 0.4	a _p ▶ 0.40 f _n ▶ 0.08	1.20 0.15	2.00 0.22			●	●	●											●	
				RE 0.8	a _p ▶ 0.40 f _n ▶ 0.10	1.20 0.22	2.00 0.34			●	●	●											●	
	NFP P		DNMG 110408-NFP	RE 0.8	a _p ▶ 0.50 f _n ▶ 0.07	1.00 0.14	1.50 0.21				▽	▽												
	NFM M		DNMG 110404-NFM	RE 0.4	a _p ▶ 0.30 f _n ▶ 0.05	0.70 0.10	1.10 0.15											●						
				RE 0.8	a _p ▶ 0.30 f _n ▶ 0.07	0.70 0.15	1.10 0.23											●						
			DNMG 150604-NFM	RE 0.4	a _p ▶ 0.40 f _n ▶ 0.08	1.20 0.14	2.00 0.20												●					
RE 0.8				a _p ▶ 0.40 f _n ▶ 0.10	1.20 0.20	2.00 0.30												●						
MEDIUM	GM P M		MICRO DN.R04-GM	RE 0.4	a _p ▶ 0.80 f _n ▶ 0.08	1.60 0.15	2.40 0.22				○						●					▲		
	MICRONEGA			RE 0.8	a _p ▶ 0.80 f _n ▶ 0.10	1.60 0.17	2.40 0.24									▽								
	SS M		MICRO DN.R02-SS	RE 0.2	a _p ▶ 0.40 f _n ▶ 0.06	1.20 0.11	2.00 0.16												●					
				RE 0.4	a _p ▶ 0.40 f _n ▶ 0.08	1.20 0.14	2.00 0.20												●			▲		
	NMU P M		DNMG 150604 [®] /L-NMU	RE 0.4	a _p ▶ 1.00 f _n ▶ 0.15	2.50 0.25	4.00 0.35					●			●									
				RE 0.8	a _p ▶ 1.00 f _n ▶ 0.20	2.50 0.30	4.00 0.40					●			●									

picture: right-hand

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



DN		CARBIDE Negative				ISO513	HC-CVD								HC-PVD				HW	HT				
							JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9010	JC9025	JP5015	JP5025	JP9015	JP9030	JU6020	JU4015				
 4 edges	Size	IC	S	D1		P			200 380	180 360	140 300	100 240			80 220	60 180					200 380			
	MICRO DN	7.00	3.18	3.60		M							150 280	120 240	80 160	60 120	100 220	80 200			160 280			
	1104□	9.525	4.76	3.81		K	180 380	150 300								80 170					200 400			
	1506□	12.70	6.35	5.16		N															500 1500			
						S									40 80									
						H																		
GRADE APPLICATION AREA		Stable machining, continuous cut				+ Hardness - Toughness																		
 main application		General machining, light interruption																						
 applicable		Unstable machining, interrupted cut																						

MEDIUM	NMP P		DNMG	110404-NMP	RE 0.4	a _p ▶ 1.00 f _n ▶ 0.10	1.50 0.15	2.00 0.20					●	●										
				110408-NMP	RE 0.8	a _p ▶ 1.00 f _n ▶ 0.15	1.50 0.20	2.00 0.25	●				●	●										
			DNMG	150604-NMP	RE 0.4	a _p ▶ 1.50 f _n ▶ 0.12	2.50 0.20	3.50 0.28					●	●										
				150608-NMP	RE 0.8	a _p ▶ 1.50 f _n ▶ 0.16	2.50 0.25	3.50 0.34					●	●										
				150612-NMP	RE 1.2	a _p ▶ 1.50 f _n ▶ 0.20	2.50 0.30	3.50 0.40					●	●										
				150616-NMP	RE 1.6	a _p ▶ 1.50 f _n ▶ 0.25	2.50 0.35	3.50 0.45					●	●										
	NUP P M		DNMG	110404-NUP	RE 0.4	a _p ▶ 0.70 f _n ▶ 0.08	1.50 0.15	2.30 0.22					●	●								●		
				110408-NUP	RE 0.8	a _p ▶ 0.70 f _n ▶ 0.12	1.50 0.20	2.30 0.28					●	●								●		
				110412-NUP	RE 1.2	a _p ▶ 0.70 f _n ▶ 0.15	1.50 0.25	2.30 0.35					●	●										
			DNMG	150604-NUP	RE 0.4	a _p ▶ 1.00 f _n ▶ 0.10	2.50 0.20	4.00 0.30			●	●	●			●						●		
				150608-NUP	RE 0.8	a _p ▶ 1.00 f _n ▶ 0.15	2.50 0.25	4.00 0.35			●	●	●			●						●		
				150612-NUP	RE 1.2	a _p ▶ 1.00 f _n ▶ 0.18	2.50 0.30	4.00 0.42			●	●	●			●								
	NMM M		DNMG	110404-NMM	RE 0.4	a _p ▶ 0.70 f _n ▶ 0.13	1.50 0.20	2.30 0.27							●					○				
				110408-NMM	RE 0.8	a _p ▶ 0.70 f _n ▶ 0.18	1.50 0.25	2.30 0.32						●				●						
			DNMG	150604-NMM	RE 0.4	a _p ▶ 1.00 f _n ▶ 0.15	2.50 0.25	4.00 0.35							●				●					
				150608-NMM	RE 0.8	a _p ▶ 1.00 f _n ▶ 0.20	2.50 0.30	4.00 0.40					●	●					●					
				150612-NMM	RE 1.2	a _p ▶ 1.00 f _n ▶ 0.25	2.50 0.35	4.00 0.45						●					●					
	NMK K		DNMG	150604-NMK	RE 0.4	a _p ▶ 0.50 f _n ▶ 0.10	2.00 0.20	3.50 0.30	●	○														
150608-NMK				RE 0.8	a _p ▶ 0.50 f _n ▶ 0.15	2.00 0.25	3.50 0.35	●	○															
150612-NMK				RE 1.2	a _p ▶ 0.50 f _n ▶ 0.20	2.00 0.30	3.50 0.40	○	○															
NMN N		DNMG	150604-NMN	RE 0.4	a _p ▶ 0.50 f _n ▶ 0.10	2.00 0.20	3.50 0.30													●				
			150608-NMN	RE 0.8	a _p ▶ 0.50 f _n ▶ 0.15	2.00 0.25	3.50 0.35													●				

polished surface

● stock standard, ○ non-standard stock



DN

CARBIDE
Negative

ISO513

HC-CVD

HC-PVD

HW

HT

JC7010

JC7020

JC8005

JC8015

JC8025

JC8035

JC9010

JC9025

JP5015

JP5025

JP9015

JP9030

JW6020

JW4015

Size

IC

S

D1

P

M

K

N

S

H

MICRO DN

7.00

3.18

3.60

180

150

200

180

140

100

150

120

80

60

100

80

160

120

200

160

280

200

400

1104□

9.525

4.76

3.81

1506□

12.70

6.35

5.16

500

1500

40

80

4 edges

GRADE APPLICATION AREA

Stable machining, continuous cut

main application

General machining, light interruption

applicable

Unstable machining, interrupted cut

+

Hardness

-

Toughness

+

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NRP P



DNMG

150608-NRP

RE 0.8

 $a_p \triangleright$ 2.00

4.00

6.00

 $f_n \triangleright$ 0.25

0.35

0.45

150612-NRP

RE 1.2

 $a_p \triangleright$ 2.00

4.00

6.00

 $f_n \triangleright$ 0.30

0.40

0.50

150616-NRP

RE 1.6

 $a_p \triangleright$ 2.00

4.00

6.00

 $f_n \triangleright$ 0.35

0.45

0.55

NTP P



DNMG

150612-NTP

RE 1.2

 $a_p \triangleright$ 3.00

5.00

7.00

 $f_n \triangleright$ 0.35

0.45

0.55

NRK K



DNMG

150608-NRK

RE 0.8

 $a_p \triangleright$ 1.50

4.00

6.50

 $f_n \triangleright$ 0.20

0.30

0.40

150612-NRK

RE 1.2

 $a_p \triangleright$ 1.50

4.00

6.50

 $f_n \triangleright$ 0.25

0.35

0.45

Flat K



DNMA

150608

RE 0.8

 $a_p \triangleright$ 2.00

4.00

6.00

 $f_n \triangleright$ 0.25

0.35

0.45

150612

RE 1.2

 $a_p \triangleright$ 2.00

4.00

6.00

 $f_n \triangleright$ 0.35

0.45

0.55

● stock standard, ○ non-standard stock, ▽ stock exhaustion

HOLDERS EXTERNAL

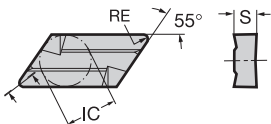


p. 120

HOLDERS INTERNAL



p. 125

KN		CARBIDE Negative				ISO513	HC-CVD								HC-PVD		HW	HT						
							JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9010	JC9025	JP9015	JP9030	JU6020	JU4015						
 2 edges		Size	IC	S		P			200 380	180 360	140 300	100 240						200 380						
		1604□□	9.525	4.76		M							150 280	120 240	100 220	80 200		160 280						
						K	180 380	150 300										200 400						
						N												500 1500						
						S																		
						H																		
GRADE APPLICATION AREA		Stable machining, continuous cut				+ Hardness - Toughness																		
 main application		General machining, light interruption																						
 applicable		Unstable machining, interrupted cut																						

MEDIUM	11 P	 picture: right-hand	KNUX	160405*/L-11	RE 0.5	a_p ▶ 1.00 f_n ▶ 0.15	2.50 0.25	4.00 0.35					●									
	160410*/L-11			RE 1.0	a_p ▶ 1.00 f_n ▶ 0.20	2.50 0.30	4.00 0.40					●										

● stock standard

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

SC

CARBIDE
Positive

ISO513

HC-CVD

HC-PVD

HW

HT

JC7010

JC7020

JC8005

JC8015

JC8025

JC9010

JC9025

JP5015

JP5025

JP6010

JU6010

JU6020

JU4015

JP4020

Size

IC

S

D1

AN

P

M

K

N

S

H

80

60

220

180

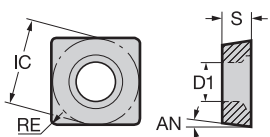
80

60

160

200

200



4 edges

GRADE APPLICATION AREA

Stable machining, continuous cut

main application

General machining, light interruption

applicable

Unstable machining, interrupted cut

+

Hardness

-

Toughness

+

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PMU P M K



general purpose

SCMT

09T304-PMU

RE 0.4

a_p ▶ 0.60f_n ▶ 0.07

1.80

3.00

○

●

●

○

●

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09T308-PMU

RE 0.8

a_p ▶ 0.60f_n ▶ 0.08

1.80

3.00

●

●

●

○

●

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120404-PMU

RE 0.4

a_p ▶ 0.80f_n ▶ 0.08

2.20

3.60

○

●

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120408-PMU

RE 0.8

a_p ▶ 0.80f_n ▶ 0.10

2.20

3.60

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PMN N



polished surface

SCGX

09T304-PMN

RE 0.4

a_p ▶ 0.50f_n ▶ 0.08

2.00

3.50

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09T308-PMN

RE 0.8

a_p ▶ 0.50f_n ▶ 0.10

2.00

3.50

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120404-PMN

RE 0.4

a_p ▶ 0.50f_n ▶ 0.10

3.00

5.50

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120408-PMN

RE 0.8

a_p ▶ 0.50f_n ▶ 0.15

3.00

5.50

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PRU P K



reinforced edge

SCMT

09T308-PRU

RE 0.8

a_p ▶ 1.50f_n ▶ 0.12

2.50

3.50

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120408-PRU

RE 0.8

a_p ▶ 1.50f_n ▶ 0.14

3.00

4.50

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● stock standard, ○ non-standard stock

HOLDERS EXTERNAL

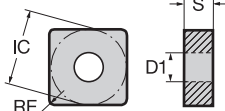
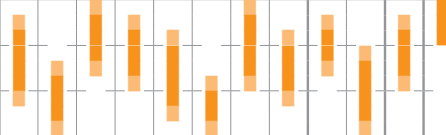


p. 127

HOLDERS INTERNAL



p. 128

SN		CARBIDE Negative				ISO513	HC-CVD								HC-PVD		HW	HT						
							JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9010	JC9025	JP9015	JP9030	JU6020	JU4015						
 8 edges		Size	IC	S	D1		P			200 380	180 360	140 300	100 240					200 380						
		0903□	9.525	3.18	3.81		M							150 280	120 240	100 220	80 200		160 280					
		1204□	12.70	4.76	5.16		K	180 380	150 300										200 400					
		1906□	19.05	6.35	7.94		N												500 1500					
		2509□	25.40	9.52	8.80		S																	
							H																	
GRADE APPLICATION AREA		Stable machining, continuous cut				+ Hardness - Toughness																		
■ main application		General machining, light interruption																						
■ applicable		Unstable machining, interrupted cut																						

FINISHING	NSP P		SNMG 120404-NSP	RE 0.4	a_p 0.40 f_n 0.08	1.20 0.15	2.00 0.22				●												
	120408-NSP		RE 0.8	a_p 0.40 f_n 0.10	1.20 0.22	2.00 0.34				●													
	NFP P		SNMG 120404-NFP	RE 0.4	a_p 0.50 f_n 0.06	1.50 0.12	2.50 0.18				▽	▽											
	120408-NFP		RE 0.8	a_p 0.50 f_n 0.08	1.50 0.17	2.50 0.26				▽													
	NFM M		SNMG 120404-NFM	RE 0.4	a_p 0.40 f_n 0.08	1.20 0.14	2.00 0.20									●							
	120408-NFM		RE 0.8	a_p 0.40 f_n 0.10	1.20 0.20	2.00 0.30									●								

MEDIUM	NMP P		SNMG 120404-NMP	RE 0.4	a_p 1.50 f_n 0.12	2.50 0.20	3.50 0.28				●	●											
	120408-NMP		RE 0.8	a_p 1.50 f_n 0.16	2.50 0.25	3.50 0.34				●	●												
	120412-NMP		RE 1.2	a_p 1.50 f_n 0.20	2.50 0.30	3.50 0.40				●	●												
	120416-NMP		RE 1.6	a_p 1.50 f_n 0.25	2.50 0.35	3.50 0.45				○	○												
	NUP P		SNMG 120404-NUP	RE 0.4	a_p 1.00 f_n 0.10	2.50 0.20	4.00 0.30				○	○											
	120408-NUP		RE 0.8	a_p 1.00 f_n 0.15	2.50 0.25	4.00 0.35				○	●												
	120412-NUP		RE 1.2	a_p 1.00 f_n 0.18	2.50 0.30	4.00 0.42				○	●												
	120416-NUP		RE 1.6	a_p 1.00 f_n 0.20	2.50 0.35	4.00 0.50				○	○												
	NMU P		SNMG 120408/L-NMU	RE 0.8	a_p 1.00 f_n 0.20	2.50 0.30	4.00 0.40					○											
	picture: right-hand																						
NMM M		SNMG 120404-NMM	RE 0.4	a_p 1.00 f_n 0.15	2.50 0.25	4.00 0.35								●	○								
120408-NMM		RE 0.8	a_p 1.00 f_n 0.20	2.50 0.30	4.00 0.40								●	○									
120412-NMM		RE 1.2	a_p 1.00 f_n 0.25	2.50 0.35	4.00 0.45							○	○										
120416-NMM		RE 1.6	a_p 1.00 f_n 0.30	2.50 0.40	4.00 0.50							○	○										

● stock standard, ○ non-standard stock, ▽ stock exhaustion



TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

TURNING

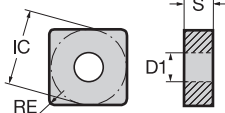
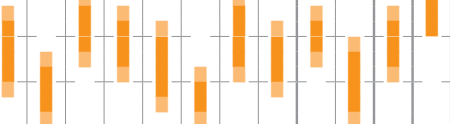
THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

SN		CARBIDE Negative				ISO513	HC-CVD								HC-PVD		HW	HT									
							JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9010	JC9025	JP9015	JP9030	JU6020	JU4015									
 8 edges		Size	IC	S	D1	P			200 380	180 360	140 300	100 240						200 380									
		0903□	9.525	3.18	3.81	M							150 280	120 240	100 220	80 200		160 280									
		1204□	12.70	4.76	5.16	K	180 380	150 300										200 400									
		1906□	19.05	6.35	7.94	N												500 1500									
		2509□	25.40	9.52	8.80	S																					
							H																				
GRADE APPLICATION AREA		Stable machining, continuous cut				+ Hardness - Toughness	  																				
main application		General machining, light interruption																									
applicable		Unstable machining, interrupted cut																									

MEDIUM	NMM M 	SNMG	190612-NMM	RE 1.2	$a_p \triangleright$ 3.00 $f_n \triangleright$ 0.35	6.00 0.45	9.00 0.55									○	○						
			190616-NMM	RE 1.6	$a_p \triangleright$ 3.00 $f_n \triangleright$ 0.40	6.00 0.50	9.00 0.60								○	○							
	NMK K 	SNMG	120408-NMK	RE 0.8	$a_p \triangleright$ 0.50 $f_n \triangleright$ 0.15	2.00 0.25	3.50 0.35	●	○														
			120412-NMK	RE 1.2	$a_p \triangleright$ 0.50 $f_n \triangleright$ 0.20	2.00 0.30	3.50 0.40	●	○														
	NMN N  polished surface	SNGG	120404-NMN	RE 0.4	$a_p \triangleright$ 0.50 $f_n \triangleright$ 0.10	2.00 0.20	3.50 0.30											●					
			120408-NMN	RE 0.8	$a_p \triangleright$ 0.50 $f_n \triangleright$ 0.15	2.00 0.25	3.50 0.35											●					
			120412-NMN	RE 1.2	$a_p \triangleright$ 0.50 $f_n \triangleright$ 0.20	2.00 0.30	3.50 0.40											●					
	ROUGHING	NRP P 	SNMG	120408-NRP	RE 0.8	$a_p \triangleright$ 2.00 $f_n \triangleright$ 0.25	4.00 0.35	6.00 0.45					●	●									
				120412-NRP	RE 1.2	$a_p \triangleright$ 2.00 $f_n \triangleright$ 0.30	4.00 0.40	6.00 0.50					●	●									
				120416-NRP	RE 1.6	$a_p \triangleright$ 2.00 $f_n \triangleright$ 0.35	4.00 0.45	6.00 0.55					●	●									
SNMG			190612-NRP	RE 1.2	$a_p \triangleright$ 6.00 $f_n \triangleright$ 0.40	8.00 0.55	10.0 0.70					○	○										
			190616-NRP	RE 1.6	$a_p \triangleright$ 6.00 $f_n \triangleright$ 0.45	8.00 0.60	10.0 0.75					●	●										
			190624-NRP	RE 2.4	$a_p \triangleright$ 6.00 $f_n \triangleright$ 0.50	8.00 0.65	10.0 0.80					●	●										
NTP P 		SNMG	120408-NTP	RE 0.8	$a_p \triangleright$ 3.00 $f_n \triangleright$ 0.30	5.00 0.40	7.00 0.50				▽	▽											
	120412-NTP		RE 1.2	$a_p \triangleright$ 3.00 $f_n \triangleright$ 0.35	5.00 0.45	7.00 0.55				▽	▽												
NRK K 	SNMG	120408-NRK	RE 0.8	$a_p \triangleright$ 1.50 $f_n \triangleright$ 0.20	4.00 0.30	6.50 0.40	●	○															
		120412-NRK	RE 1.2	$a_p \triangleright$ 1.50 $f_n \triangleright$ 0.25	4.00 0.35	6.50 0.45	●	○															
		120416-NRK	RE 1.6	$a_p \triangleright$ 1.50 $f_n \triangleright$ 0.30	4.00 0.40	6.50 0.50	●	●															
	SNMG	190612-NRK	RE 1.2	$a_p \triangleright$ 5.00 $f_n \triangleright$ 0.45	8.00 0.60	11.0 0.75	○	○															
		190616-NRK	RE 1.6	$a_p \triangleright$ 5.00 $f_n \triangleright$ 0.50	8.00 0.65	11.0 0.80	○	○															

● stock standard, ○ non-standard stock, ▽ stock exhaustion



SN		CARBIDE Negative				ISO513	HC-CVD								HC-PVD		HW	HT						
							JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9010	JC9025	JP9015	JP9030	JU6020	JU4015						
 8 edges		Size	IC	S	D1		P			200 380	180 360	140 300	100 240					200 380						
		0903□□	9.525	3.18	3.81		M							150 280	120 240	100 220	80 200		160 280					
		1204□□	12.70	4.76	5.16		K	180 380	150 300										200 400					
		1906□□	19.05	6.35	7.94		N												500 1500					
		2509□□	25.40	9.52	8.80		S																	
							H																	
GRADE APPLICATION AREA		Stable machining, continuous cut				+ Hardness - Toughness																		
main application		General machining, light interruption																						
applicable		Unstable machining, interrupted cut																						

ROUGHING	Flat K		SNMA 090308	RE 0.8	$a_p \triangleright$ 1.00 $f_n \triangleright$ 0.22	2.00 0.30	3.00 0.38	○																
			SNMA 120408	RE 0.8	$a_p \triangleright$ 2.00 $f_n \triangleright$ 0.25	4.00 0.35	6.00 0.45	●	○															
			120412	RE 1.2	$a_p \triangleright$ 2.00 $f_n \triangleright$ 0.35	4.00 0.45	6.00 0.55	●	○															
			120416	RE 1.6	$a_p \triangleright$ 2.00 $f_n \triangleright$ 0.45	4.00 0.55	6.00 0.65	●	○															
			SNMA 190616-MRP	RE 1.6	$a_p \triangleright$ 6.00 $f_n \triangleright$ 0.60	9.00 0.75	12.0 0.90				○	○												
HEAVY ROUGHING	MRP P		190624-MRP	RE 2.4	$a_p \triangleright$ 6.00 $f_n \triangleright$ 0.65	9.00 0.80	12.0 0.95					●	●											
			SNMM 250924-MRP	RE 2.4	$a_p \triangleright$ 8.00 $f_n \triangleright$ 0.70	12.0 0.85	16.0 1.00					●	●											

4 edges, single side

● stock standard, ○ non-standard stock

TURNING

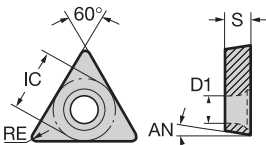
THREADING

GROOVING

MILLING

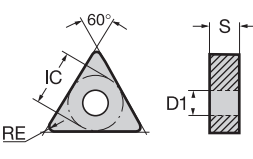
DRILLING

ACCESSORIES

TC		CARBIDE Positive					ISO513	HC-CVD						HC-PVD		HW		HT					
								JC7010	JC7020	JC8005	JC8015	JC8025	JC9010	JC9025	JP5015	JP5025	JP6010	JU6010	JU6020	JU4015	JP4020		
 3 edges	Size	IC	S	D1	AN	P			200 380	180 360	140 300			80 220	60 180				200 380	200 400			
	0902□□	5.56	2.38	2.50	7°	M						150 280	120 240	80 160	60 120				160 280	160 300			
	1102□□	6.35	2.38	2.80	7°	K	180 380	150 300						80 170					200 400	200 420			
	16T3□□	9.525	3.97	4.40	7°	N										600 2200	600 2000	500 1500					
	2204□□	12.70	4.76	5.50	7°	S								40 80									
							H																
GRADE APPLICATION AREA		Stable machining, continuous cut				+ Hardness - Toughness	  																
main application		General machining, light interruption																					
applicable		Unstable machining, interrupted cut																					

FINISHING	PFU P M S	TCMT 110202-PFU	RE 0.2	a_p 0.20 f_n 0.04	0.80 0.08	1.40 0.12																			
	 sharp edge	110204-PFU	RE 0.4	a_p 0.20 f_n 0.05	0.80 0.11	1.40 0.17																			
MEDIUM	PMU P M K	TCMT 090204-PMU	RE 0.4	a_p 0.50 f_n 0.05	1.00 0.09	1.50 0.13																			
		TCMT 110202-PMU	RE 0.2	a_p 0.50 f_n 0.05	1.50 0.10	2.50 0.15																			
		110204-PMU	RE 0.4	a_p 0.50 f_n 0.06	1.50 0.13	2.50 0.20																			
		110208-PMU	RE 0.8	a_p 0.50 f_n 0.08	1.50 0.16	2.50 0.24																			
		TCMT 16T304-PMU	RE 0.4	a_p 0.60 f_n 0.07	1.80 0.16	3.00 0.25																			
		16T308-PMU	RE 0.8	a_p 0.60 f_n 0.08	1.80 0.19	3.00 0.30																			
		16T312-PMU	RE 1.2	a_p 0.60 f_n 0.10	1.80 0.22	3.00 0.34																			
		TCMT 220408-PMU	RE 0.8	a_p 0.80 f_n 0.10	2.20 0.22	3.60 0.32																			
		polished surface	TCGX 090204-PMN	RE 0.4	a_p 0.30 f_n 0.05	1.00 0.11	1.70 0.17																		
			TCGX 110202-PMN	RE 0.2	a_p 0.30 f_n 0.05	1.50 0.10	2.70 0.15																		
110204-PMN	RE 0.4		a_p 0.30 f_n 0.06	1.50 0.13	2.70 0.20																				
110208-PMN	RE 0.8		a_p 0.30 f_n 0.08	1.50 0.16	2.70 0.24																				
TCGX 16T302-PMN	RE 0.2		a_p 0.50 f_n 0.06	2.00 0.11	3.50 0.16																				
16T304-PMN	RE 0.4		a_p 0.50 f_n 0.08	2.00 0.16	3.50 0.24																				
16T308-PMN	RE 0.8		a_p 0.50 f_n 0.10	2.00 0.20	3.50 0.30																				
reinforced edge	TCMT 16T304-PRU		RE 0.4	a_p 1.50 f_n 0.10	2.50 0.19	3.50 0.28																			
	16T308-PRU	RE 0.8	a_p 1.50 f_n 0.12	2.50 0.22	3.50 0.32																				

● stock standard, ○ non-standard stock, ▽ stock exhaustion

TN		CARBIDE Negative				ISO513	HC-CVD								HC-PVD		HW	HT				
							JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9010	JC9025	JP9015	JP9030	JU6020	JU4015				
 6 edges		Size	IC	S	D1	P			200 380	180 360	140 300	100 240					200 380					
		1604□	9.525	4.76	3.81	M							150 280	120 240	100 220	80 200		160 280				
		2204□	12.70	4.76	5.16	K	180 380	150 300										200 400				
						N												500 1500				
						S																
						H																
GRADE APPLICATION AREA		Stable machining, continuous cut				+ Hardness - Toughness																
main application		General machining, light interruption																				
applicable		Unstable machining, interrupted cut																				

FINISHING	NSP P		TNMG	160404-NSP	RE 0.4	a_p 0.40 f_n 0.08	1.20 0.15	2.00 0.22			●	●	●						●				
				160408-NSP	RE 0.8	a_p 0.40 f_n 0.10	1.20 0.22	2.00 0.34			●	●	●						●				
	NFP P		TNMG	160408-NFP	RE 0.8	a_p 0.50 f_n 0.08	1.50 0.17	2.50 0.26				▽											
NFM M		TNMG	160404-NFM	RE 0.4	a_p 0.40 f_n 0.08	1.20 0.14	2.00 0.20								●								
			160408-NFM	RE 0.8	a_p 0.40 f_n 0.10	1.20 0.20	2.00 0.30								●								

MEDIUM	NMP P		TNMG	160404-NMP	RE 0.4	a_p 1.50 f_n 0.12	2.50 0.20	3.50 0.28			●	●										
				160408-NMP	RE 0.8	a_p 1.50 f_n 0.16	2.50 0.25	3.50 0.34			●	●						▽				
				160412-NMP	RE 1.2	a_p 1.50 f_n 0.20	2.50 0.30	3.50 0.40			●	●										
			TNMG	220408-NMP	RE 0.8	a_p 3.00 f_n 0.20	4.50 0.30	6.00 0.40			○	●										
				220412-NMP	RE 1.2	a_p 3.00 f_n 0.25	4.50 0.35	6.00 0.45			●	●										
	NUP P M		TNMG	160404-NUP	RE 0.4	a_p 1.00 f_n 0.10	2.50 0.20	4.00 0.30			●	●	●		●				●			
				160408-NUP	RE 0.8	a_p 1.00 f_n 0.15	2.50 0.25	4.00 0.35			●	●	●		●				●			
				160412-NUP	RE 1.2	a_p 1.00 f_n 0.18	2.50 0.30	4.00 0.42			●	●	●		●							
			TNMG	220408-NUP	RE 0.8	a_p 2.00 f_n 0.18	4.50 0.30	7.00 0.42			○	○										
				220412-NUP	RE 1.2	a_p 2.00 f_n 0.22	4.50 0.35	7.00 0.48			○	○										
				220416-NUP	RE 1.6	a_p 2.00 f_n 0.24	4.50 0.40	7.00 0.56			○	○										
	NMU P M		TNMG	160404°/L-NMU	RE 0.4	a_p 1.00 f_n 0.15	2.50 0.25	4.00 0.35			○	●			●							
				160408°/L-NMU	RE 0.8	a_p 1.00 f_n 0.20	2.50 0.30	4.00 0.40			○	●			●							

picture: right-hand

● stock standard, ○ non-standard stock, ▽ stock exhaustion



TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

TN

CARBIDE
Negative

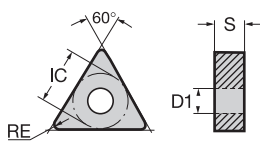
ISO513

HC-CVD

HC-PVD

HW

HT



6 edges

GRADE APPLICATION AREA

Size IC S D1

main application

applicable

Stable machining, continuous cut

General machining, light interruption

Unstable machining, interrupted cut

+

-

Hardness

+

-

Toughness



ISO513	JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9010	JC9025	JP9015	JP9030	JU6020	JU4015						
P			200 380	180 360	140 300	100 240						200 380						
M							150 280	120 240	100 220	80 200		160 280						
K	180 380	150 300										200 400						
N											500 1500							
S																		
H																		

NMM M



TNMG	160404-NMM	RE 0.4	a _p ▶ 1.00 f _n ▶ 0.15	2.50 0.25	4.00 0.35													
	160408-NMM	RE 0.8	a _p ▶ 1.00 f _n ▶ 0.20	2.50 0.30	4.00 0.40													
	160412-NMM	RE 1.2	a _p ▶ 1.00 f _n ▶ 0.25	2.50 0.35	4.00 0.45													
TNMG	220408-NMM	RE 0.8	a _p ▶ 2.00 f _n ▶ 0.25	4.50 0.35	7.00 0.45													
	220412-NMM	RE 1.2	a _p ▶ 2.00 f _n ▶ 0.30	4.50 0.40	7.00 0.50													
	220416-NMM	RE 1.6	a _p ▶ 2.00 f _n ▶ 0.35	4.50 0.45	7.00 0.55													

NMK K



TNMG	160404-NMK	RE 0.4	a _p ▶ 0.50 f _n ▶ 0.10	2.00 0.20	3.50 0.30	●	○											
	160408-NMK	RE 0.8	a _p ▶ 0.50 f _n ▶ 0.15	2.00 0.25	3.50 0.35	●	○											
	160412-NMK	RE 1.2	a _p ▶ 0.50 f _n ▶ 0.20	2.00 0.30	3.50 0.40	●	○											
	160416-NMK	RE 1.6	a _p ▶ 0.50 f _n ▶ 0.25	2.00 0.35	3.50 0.45	○	○											
TNMG	220408-NMK	RE 0.8	a _p ▶ 2.00 f _n ▶ 0.25	4.00 0.35	6.00 0.45	○	○											
	220412-NMK	RE 1.2	a _p ▶ 2.00 f _n ▶ 0.30	4.00 0.40	6.00 0.50	●	○											
	220416-NMK	RE 1.6	a _p ▶ 2.00 f _n ▶ 0.35	4.00 0.45	6.00 0.55	●	○											

NMN N



polished surface

TNGG	160404-NMN	RE 0.4	a _p ▶ 0.50 f _n ▶ 0.10	2.00 0.20	3.50 0.30													
	160408-NMN	RE 0.8	a _p ▶ 0.50 f _n ▶ 0.15	2.00 0.25	3.50 0.35													
	160412-NMN	RE 1.2	a _p ▶ 0.50 f _n ▶ 0.20	2.00 0.30	3.50 0.40													

NRP P



TNMG	160408-NRP	RE 0.8	a _p ▶ 2.00 f _n ▶ 0.25	4.00 0.35	6.00 0.45													
	160412-NRP	RE 1.2	a _p ▶ 2.00 f _n ▶ 0.30	4.00 0.40	6.00 0.50													
TNMG	220412-NRP	RE 1.2	a _p ▶ 4.00 f _n ▶ 0.35	6.00 0.50	8.00 0.65													
	220416-NRP	RE 1.6	a _p ▶ 4.00 f _n ▶ 0.40	6.00 0.55	8.00 0.70													

NRK K



TNMG	160408-NRK	RE 0.8	a _p ▶ 1.50 f _n ▶ 0.20	4.00 0.30	6.50 0.40	●	○											
	160412-NRK	RE 1.2	a _p ▶ 1.50 f _n ▶ 0.25	4.00 0.35	6.50 0.45	●	○											
TNMG	220408-NRK	RE 0.8	a _p ▶ 3.00 f _n ▶ 0.35	6.00 0.50	9.00 0.65	○	○											
	220412-NRK	RE 1.2	a _p ▶ 3.00 f _n ▶ 0.40	6.00 0.55	9.00 0.70	○	○											
	220416-NRK	RE 1.6	a _p ▶ 3.00 f _n ▶ 0.45	6.00 0.60	9.00 0.75	○	○											

● stock standard, ○ non-standard stock, ▽ stock exhaustion

HOLDERS EXTERNAL

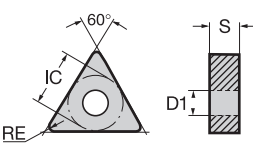


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HOLDERS INTERNAL



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TN		CARBIDE Negative				ISO513	HC-CVD								HC-PVD		HW	HT						
							JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9010	JC9025	JP9015	JP9030	JU6020	JU4015						
 6 edges		Size	IC	S	D1		P			200 380	180 360	140 300	100 240						200 380					
		1604□□	9.525	4.76	3.81		M							150 280	120 240	100 220	80 200		160 280					
		2204□□	12.70	4.76	5.16		K	180 380	150 300										200 400					
							N												500 1500					
							S																	
							H																	
GRADE APPLICATION AREA		Stable machining, continuous cut				+ Hardness - Toughness																		
■ main application		General machining, light interruption																						
■ applicable		Unstable machining, interrupted cut																						

ROUGHING	Flat K 	TNMA	160404	RE 0.4	a _p ▶	2.00	4.00	6.00	○	○														
					f _n ▶	0.15	0.25	0.35																
			160408	RE 0.8	a _p ▶	2.00	4.00	6.00	●	●														
					f _n ▶	0.25	0.35	0.45																
			160412	RE 1.2	a _p ▶	2.00	4.00	6.00	●	○														
					f _n ▶	0.35	0.45	0.55																
			160416	RE 1.6	a _p ▶	2.00	4.00	6.00	●	○														
					f _n ▶	0.45	0.55	0.65																
		TNMA	220408	RE 0.8	a _p ▶	4.00	7.00	10.0	●	○														
					f _n ▶	0.35	0.50	0.65																
220412	RE 1.2		a _p ▶	4.00	7.00	10.0	●	○																
			f _n ▶	0.45	0.60	0.75																		
220416	RE 1.6	a _p ▶	4.00	7.00	10.0	○	○																	
		f _n ▶	0.50	0.65	0.80																			

● stock standard, ○ non-standard stock

TURNING

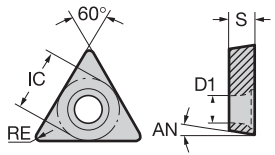
THREADING

GROOVING

MILLING

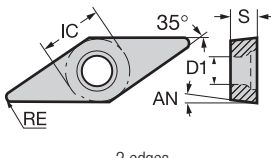
DRILLING

ACCESSORIES

TP	CARBIDE Positive					ISO513	HC-CVD						HC-PVD		HW		HT								
	Size	IC	S	D1	AN		P	JC7010	JC7020	JC8005	JC8015	JC8025	JC9010	JC9025	JP5015	JP5025	JP6010	JU6010	JU6020	JU4015	JP4020				
 3 edges	0902□□	5.56	2.38	3.00	11°	M			200 380	180 360	140 300			80 220	60 180				200 380	200 400					
	1103□□	6.35	3.18	3.40	11°	K	180 380	150 300						80 170	60 120				160 280	160 300					
						N											600 2200	600 2000	500 1500						
						S								40 80											
						H																			
GRADE APPLICATION AREA		Stable machining, continuous cut				+ Hardness - Toughness	  																		
main application		General machining, light interruption																							
applicable		Unstable machining, interrupted cut																							

FINISHING	PPF P M	 ground chipbreaker, picture: right-hand	TPEH	090202#/L-PPF	RE 0.2	a _p ▶ 0.10 f _n ▶ 0.03	0.30 0.06	0.50 0.09							●				●					
				090204#/L-PPF	RE 0.4	a _p ▶ 0.10 f _n ▶ 0.04	0.30 0.07	0.50 0.10						●				●						
			TPEH	110302#/L-PPF	RE 0.2	a _p ▶ 0.10 f _n ▶ 0.04	0.40 0.07	0.70 0.10							●				●					
				110304#/L-PPF	RE 0.4	a _p ▶ 0.10 f _n ▶ 0.04	0.40 0.08	0.70 0.12							●				●					
MEDIUM	PPM P M	 ground chipbreaker, picture: right-hand	TPEH	110304#/L-PPM	RE 0.4	a _p ▶ 0.40 f _n ▶ 0.03	1.00 0.06	1.60 0.09							●				●					

● stock standard

VB		CARBIDE Positive					ISO513	HC-CVD						HC-PVD		HW		HT								
								JC7010	JC7020	JC8005	JC8015	JC8025	JC9010	JC9025	JP5015	JP5025	JP6010	JU6010	JU6020	JU4015	JP4020					
 2 edges		Size	IC	S	D1	AN	P			200 380	180 360	140 300			80 220	60 180				200 380	200 400					
		1103□□	6.35	3.18	2.80	5°	M						150 280	120 240	80 160	60 120				160 280	160 300					
		1604□□	9.525	4.76	4.40	5°	K	180 380	150 300							80 170				200 400	200 420					
							N											600 2200	600 2000	500 1500						
							S									40 80										
							H																			
GRADE APPLICATION AREA		Stable machining, continuous cut					+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
main application		General machining, light interruption					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
applicable		Unstable machining, interrupted cut					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

FINISHING	PPF P M	VBET	110302*/L-PPF	RE 0.2	a_p 0.10 f_n 0.04	0.40 0.70 0.07 0.10										●				●					
	ground chipbreaker, picture: right-hand		110304*/L-PPF	RE 0.4	a_p 0.10 f_n 0.04	0.40 0.70 0.08 0.12										●				●					
	PFU P M S	VBMT	110304-PFU	RE 0.4	a_p 0.20 f_n 0.05	0.80 1.40 0.11 0.17								●	●					●	○				
	sharp edge	VBMT	160404-PFU	RE 0.4	a_p 0.30 f_n 0.06	1.00 1.70 0.14 0.22			●	●	●		●	●	●					●	●				
			160408-PFU	RE 0.8	a_p 0.30 f_n 0.08	1.00 1.70 0.16 0.24			●	●	●		●	●	●					●	○				

MEDIUM	PPM P M	VBET	110302*/L-PPM	RE 0.2	a_p 0.40 f_n 0.03	1.00 1.60 0.05 0.07										●				●					
	ground chipbreaker, picture: right-hand		110304*/L-PPM	RE 0.4	a_p 0.40 f_n 0.03	1.00 1.60 0.06 0.09										●				●					
	PMU P M K	VBMT	160404-PMU	RE 0.4	a_p 0.60 f_n 0.07	1.80 3.00 0.16 0.25	●			●	●		●	●	●					●					
	general purpose		160408-PMU	RE 0.8	a_p 0.60 f_n 0.08	1.80 3.00 0.19 0.30	●			●	●		●	●	●					●					

ROUGHING	PRU P K	VBMT	160408-PRU	RE 0.8	a_p 1.50 f_n 0.12	2.50 3.50 0.22 0.32	●					●													
	reinforced edge																								

● stock standard

HOLDERS EXTERNAL



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HOLDERS INTERNAL



p. 152

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

VC

CARBIDE
Positive

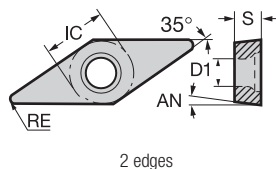
ISO513

HC-CVD

HC-PVD

HW

HT



Size	IC	S	D1	AN
1103□□	6.35	3.18	2.80	7°
1604□□	9.525	4.76	4.40	7°
2205□□	12.70	5.56	5.50	7°

ISO513	JC7010	JC7020	JC8005	JC8015	JC8025	JC9010	JC9025	JP5015	JP5025	JP6010	JU6010	JU6020	JU4015	JP4020
P			200 380	180 360	140 300			80 220	60 180				200 380	200 400
M						150 280	120 240	80 160	60 120				160 280	160 300
K	180 380	150 300							80 170				200 400	200 420
N										600 2200	600 2000	500 1500		
S								40 80						
H														

GRADE APPLICATION AREA

Stable machining, continuous cut

main application

General machining, light interruption

applicable

Unstable machining, interrupted cut



PMU P M K



general purpose

VCMT	110304-PMU	RE 0.4	a_p 0.50 f_n 0.06	1.50 0.13	2.50 0.20	●			●	●	●			●
VCMT	160404-PMU	RE 0.4	a_p 0.60 f_n 0.07	1.80 0.16	3.00 0.25	●			●	●	●			●
	160408-PMU	RE 0.8	a_p 0.60 f_n 0.08	1.80 0.19	3.00 0.30	●			●	●	●	▽		●
VCGX	110302-PMN	RE 0.2	a_p 0.30 f_n 0.05	1.50 0.10	2.70 0.15						●			
	110304-PMN	RE 0.4	a_p 0.30 f_n 0.06	1.50 0.13	2.70 0.20					○	○	●		
	110308-PMN	RE 0.8	a_p 0.30 f_n 0.08	1.50 0.16	2.70 0.24					○	●	●		
	160402-PMN	RE 0.2	a_p 0.50 f_n 0.06	2.00 0.11	3.50 0.16					○	●			
	160404-PMN	RE 0.4	a_p 0.50 f_n 0.08	2.00 0.16	3.50 0.24					○	●	●		
	160408-PMN	RE 0.8	a_p 0.50 f_n 0.10	2.00 0.20	3.50 0.30					○	○	●		
	160412-PMN	RE 1.2	a_p 0.50 f_n 0.12	2.00 0.24	3.50 0.36					○		●		
	220512-PMN	RE 1.6	a_p 1.00 f_n 0.14	3.00 0.27	5.00 0.40					○		○		
	220516-PMN	RE 1.6	a_p 1.00 f_n 0.14	3.00 0.30	5.00 0.46					○		●		
	220530-PMN	RE 3.0	a_p 1.00 f_n 0.20	3.00 0.40	5.00 0.60					●	●	●		

PMN N



polished surface

PRU P K



reinforced edge

VCMT	160404-PRU	RE 0.4	a_p 1.50 f_n 0.10	2.50 0.19	3.50 0.28	●			●					
	160408-PRU	RE 0.8	a_p 1.50 f_n 0.12	2.50 0.22	3.50 0.32	●			●					

● stock standard, ○ non-standard stock

HOLDERS EXTERNAL

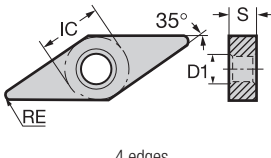


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HOLDERS INTERNAL



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VN		CARBIDE Negative				ISO513	HC-CVD								HC-PVD	HW	HT				
		Size	IC	S	D1		JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9010	JC9025	JP9015	JP9030	JU6020	JU4015			
						P			200 380	180 360	140 300	100 240						200 380			
		1604□	9.525	4.76	3.81	M							150 280	120 240	100 220	80 200		160 280			
						K	180 380	150 300										200 400			
						N											500 1500				
						S															
						H															
GRADE APPLICATION AREA		Stable machining, continuous cut																			
main application		General machining, light interruption																			
applicable		Unstable machining, interrupted cut																			
FINISHING	NSP P	VNMG 160404-NSP	RE 0.4	$a_p \triangleright$ 0.40 $f_n \triangleright$ 0.08	1.20 0.15	2.00 0.22			●	●	●							●			
		160408-NSP	RE 0.8	$a_p \triangleright$ 0.40 $f_n \triangleright$ 0.10	1.20 0.22	2.00 0.34			●	●	●							●			
	NFP P	VNMG 160408-NFP	RE 0.8	$a_p \triangleright$ 0.50 $f_n \triangleright$ 0.08	1.50 0.17	2.50 0.26				▽											
	NFM M	VNMG 160404-NFM	RE 0.4	$a_p \triangleright$ 0.40 $f_n \triangleright$ 0.08	1.20 0.14	2.00 0.20									●						
		160408-NFM	RE 0.8	$a_p \triangleright$ 0.40 $f_n \triangleright$ 0.10	1.20 0.20	2.00 0.30									●						
	NMP P	VNMG 160404-NMP	RE 0.4	$a_p \triangleright$ 1.50 $f_n \triangleright$ 0.12	2.50 0.20	3.50 0.28			●	●								▽			
MEDIUM		160408-NMP	RE 0.8	$a_p \triangleright$ 1.50 $f_n \triangleright$ 0.16	2.50 0.25	3.50 0.34			●	●								▽			
		160412-NMP	RE 1.2	$a_p \triangleright$ 1.50 $f_n \triangleright$ 0.20	2.50 0.30	3.50 0.40			●	●											
	NUP P	VNMG 160404-NUP	RE 0.4	$a_p \triangleright$ 1.00 $f_n \triangleright$ 0.10	2.50 0.20	4.00 0.30			○	○								●			
		160408-NUP	RE 0.8	$a_p \triangleright$ 1.00 $f_n \triangleright$ 0.15	2.50 0.25	4.00 0.35			●	●								●			
		160412-NUP	RE 1.2	$a_p \triangleright$ 1.00 $f_n \triangleright$ 0.18	2.50 0.30	4.00 0.42			○	○											
	NMM M	VNMG 160404-NMM	RE 0.4	$a_p \triangleright$ 1.00 $f_n \triangleright$ 0.15	2.50 0.25	4.00 0.35							●		○		▽				
		160408-NMM	RE 0.8	$a_p \triangleright$ 1.00 $f_n \triangleright$ 0.20	2.50 0.30	4.00 0.40							○		○		▽				
	NMK K	VNMG 160404-NMK	RE 0.4	$a_p \triangleright$ 0.50 $f_n \triangleright$ 0.10	2.00 0.20	3.50 0.30	●	○													
		160408-NMK	RE 0.8	$a_p \triangleright$ 0.50 $f_n \triangleright$ 0.15	2.00 0.25	3.50 0.35	●	○													
		160412-NMK	RE 1.2	$a_p \triangleright$ 0.50 $f_n \triangleright$ 0.20	2.00 0.30	3.50 0.40	●	○													

● stock standard, ○ non-standard stock, ▽ stock exhaustion



TURNING

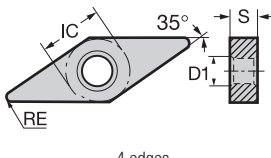
THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

VN		CARBIDE Negative				ISO513	HC-CVD								HC-PVD		HW	HT					
		Size	IC	S	D1			JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9010	JC9025	JP9015	JP9030	JU6020	JU4015				
 4 edges						P			200 380	180 360	140 300	100 240						200 380					
		1604□□	9.525	4.76	3.81	M							150 280	120 240	100 220	80 200		160 280					
						K	180 380	150 300										200 400					
						N												500 1500					
						S																	
						H																	
GRADE APPLICATION AREA		Stable machining, continuous cut				+ Hardness - - Toughness +																	
 main application		General machining, light interruption																					
 applicable		Unstable machining, interrupted cut																					

MEDIUM	 polished surface	VNGG	160404-NMN	RE 0.4	a _p 0.50 f _n 0.10	2.00 0.20	3.50 0.30											●				
			160408-NMN	RE 0.8	a _p 0.50 f _n 0.15	2.00 0.25	3.50 0.35											●				
ROUGHING		VNMG	160408-NRK	RE 0.8	a _p 1.50 f _n 0.20	4.00 0.30	6.50 0.40	○	○													
			160412-NRK	RE 1.2	a _p 1.50 f _n 0.25	4.00 0.35	6.50 0.45	○	○													

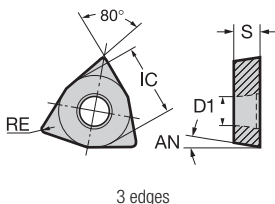
● stock standard, ○ non-standard stock

HOLDERS EXTERNAL



HOLDERS INTERNAL

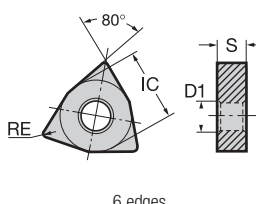
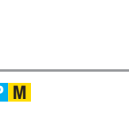
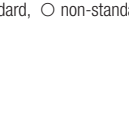


WC		CARBIDE Positive					ISO513	HC-CVD						HC-PVD		HW		HT							
								JC7010	JC7020	JC8005	JC8015	JC8025	JC9010	JC9025	JP5015	JP5025	JP6010	JU6010	JU6020	JU4015	JP4020				
		Size	IC	S	D1	AN	P			200 380	180 360	140 300			80 220	60 180				200 380	200 400				
		12T3□□	9.525	3.97	4.40	7°	M						150 280	120 240	80 160	60 120				160 280	160 300				
							K	180 380	150 300							80 170					200 400	200 420			
							N										600 2200	600 2000	500 1500						
							S								40 80										
							H																		
GRADE APPLICATION AREA		Stable machining, continuous cut					+ Hardness - Toughness																		
 main application		General machining, light interruption																							
 applicable		Unstable machining, interrupted cut																							

MEDIUM	PMU P M K		WCMT	12T304-PMU	RE 0.4	a_p ▶ 0.60 f_n ▶ 0.07	1.80 3.00 0.16 0.25	●					●	●		●					●			
	12T308-PMU			RE 0.8	a_p ▶ 0.60 f_n ▶ 0.08	1.80 3.00 0.19 0.30	●					●	●		●						●			

general purpose

● stock standard

	WN	CARBIDE Negative				ISO513	HC-CVD						HC-PVD	HW	HT				
		Size	IC	S	D1		JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9010	JC9025	JP9015	JP9030	JU6020	JU4015	
TURNING						P			200 380	180 360	140 300	100 240						200 380	
		0604□	9.525	4.76	3.81	M							150 280	120 240	100 220	80 200		160 280	
		0804□	12.70	4.76	5.16	K	180 380	150 300										200 400	
						N											500 1500		
						S													
THREADING	GRADE APPLICATION AREA	Stable machining, continuous cut																	
		General machining, light interruption																	
		Unstable machining, interrupted cut																	
FINISHING	NSP P		WNMG 060404-NSP	RE 0.4	a _p ▶ 0.30 f _n ▶ 0.06	0.70 1.10 0.12 0.18				●	○							●	
			WNMG 060408-NSP	RE 0.8	a _p ▶ 0.30 f _n ▶ 0.08	0.70 1.10 0.16 0.24				●	○							●	
			WNMG 080404-NSP	RE 0.4	a _p ▶ 0.40 f _n ▶ 0.08	1.20 2.00 0.15 0.22			●	●	●							●	
			WNMG 080408-NSP	RE 0.8	a _p ▶ 0.40 f _n ▶ 0.10	1.20 2.00 0.22 0.34			●	●	●							●	
	NFP P		WNMG 060404-NFP	RE 0.4	a _p ▶ 0.50 f _n ▶ 0.05	1.00 1.50 0.10 0.15				▽									
			WNMG 060408-NFP	RE 0.8	a _p ▶ 0.50 f _n ▶ 0.07	1.00 1.50 0.14 0.21				▽									
			WNMG 080404-NFP	RE 0.4	a _p ▶ 0.50 f _n ▶ 0.06	1.50 2.50 0.12 0.18				▽									
			WNMG 080408-NFP	RE 0.8	a _p ▶ 0.50 f _n ▶ 0.08	1.50 2.50 0.17 0.26				▽									
	NFM M		WNMG 060404-NFM	RE 0.4	a _p ▶ 0.30 f _n ▶ 0.05	0.70 1.10 0.10 0.15									●				
			WNMG 060408-NFM	RE 0.8	a _p ▶ 0.30 f _n ▶ 0.07	0.70 1.10 0.15 0.23									●				
			WNMG 080404-NFM	RE 0.4	a _p ▶ 0.40 f _n ▶ 0.08	1.20 2.00 0.14 0.20									●				
			WNMG 080408-NFM	RE 0.8	a _p ▶ 0.40 f _n ▶ 0.10	1.20 2.00 0.20 0.30									●				
MEDIUM	NMP P		WNMG 060404-NMP	RE 0.4	a _p ▶ 1.00 f _n ▶ 0.10	1.50 2.00 0.15 0.20				●	●								
			WNMG 060408-NMP	RE 0.8	a _p ▶ 1.00 f _n ▶ 0.15	1.50 2.00 0.20 0.25				●	●								
			WNMG 080404-NMP	RE 0.4	a _p ▶ 1.50 f _n ▶ 0.12	2.50 3.50 0.20 0.28				●	●							▽	
			WNMG 080408-NMP	RE 0.8	a _p ▶ 1.50 f _n ▶ 0.16	2.50 3.50 0.25 0.34				●	●							▽	
	NUP P M		WNMG 060404-NUP	RE 0.4	a _p ▶ 0.70 f _n ▶ 0.08	1.50 2.30 0.15 0.22				●	●							●	
			WNMG 060408-NUP	RE 0.8	a _p ▶ 0.70 f _n ▶ 0.12	1.50 2.30 0.20 0.28			○	●	●							●	
			WNMG 080404-NUP	RE 0.4	a _p ▶ 1.00 f _n ▶ 0.10	2.50 4.00 0.20 0.30				●	●		●					●	
			WNMG 080408-NUP	RE 0.8	a _p ▶ 1.00 f _n ▶ 0.15	2.50 4.00 0.25 0.35				●	●		●					●	
	NMM M		WNMG 080412-NUP	RE 1.2	a _p ▶ 1.00 f _n ▶ 0.18	2.50 4.00 0.30 0.42				●	●		●						
			WNMG 080416-NUP	RE 1.6	a _p ▶ 1.50 f _n ▶ 0.20	2.50 4.00 0.35 0.50				●	●								
			WNMG 060404-NMM	RE 0.4	a _p ▶ 0.70 f _n ▶ 0.13	1.50 2.30 0.20 0.27							●	●	○				
			WNMG 060408-NMM	RE 0.8	a _p ▶ 0.70 f _n ▶ 0.18	1.50 2.30 0.25 0.32							●	●	●				
			WNMG 060412-NMM	RE 1.2	a _p ▶ 0.70 f _n ▶ 0.20	1.50 2.30 0.28 0.36								●	●				

● stock standard, ○ non-standard stock, ▽ stock exhaustion



WN		CARBIDE Negative				ISO513	HC-CVD								HC-PVD		HW	HT						
		Size	IC	S	D1			JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9010	JC9025	JP9015	JP9030	JU6020	JU4015					
 6 edges						P			200 380	180 360	140 300	100 240						200 380						
		0604□□	9.525	4.76	3.81	M							150 280	120 240	100 220	80 200		160 280						
		0804□□	12.70	4.76	5.16	K	180 380	150 300										200 400						
						N													500 1500					
						S																		
						H																		
GRADE APPLICATION AREA		Stable machining, continuous cut				+ Hardness - Toughness																		
main application		General machining, light interruption																						
applicable		Unstable machining, interrupted cut																						

MEDIUM	NMM M 	WNMG	080404-NMM	RE 0.4	a_p f_n	1.00 0.15	2.50 0.25	4.00 0.35								●	●	●	●	▽				
			080408-NMM	RE 0.8	a_p f_n	1.00 0.20	2.50 0.30	4.00 0.40							●	●	●	●	▽					
			080412-NMM	RE 1.2	a_p f_n	1.00 0.25	2.50 0.35	4.00 0.45							●	●	○	●						
	NMK K 	WNMG	080404-NMK	RE 0.4	a_p f_n	0.50 0.10	2.00 0.20	3.50 0.30	●	○														
			080408-NMK	RE 0.8	a_p f_n	0.50 0.15	2.00 0.25	3.50 0.35	●	●														
			080412-NMK	RE 1.2	a_p f_n	0.50 0.20	2.00 0.30	3.50 0.40	●	●														
	NWU P K wiper edge	WNMG	080408-NWU	RE 0.8	a_p f_n	0.80 0.20	2.00 0.40	3.20 0.60	●			●								●				
			080412-NWU	RE 1.2	a_p f_n	0.80 0.25	2.00 0.45	3.20 0.65	●			●								●				
	NMN N polished surface	WNGG	060404-NMN	RE 0.4	a_p f_n	0.30 0.08	1.00 0.15	1.70 0.22												●				
			060408-NMN	RE 0.8	a_p f_n	0.30 0.10	1.00 0.20	1.70 0.30												●				
		WNGG	080404-NMN	RE 0.4	a_p f_n	0.50 0.10	2.00 0.20	3.50 0.30												●				
			080408-NMN	RE 0.8	a_p f_n	0.50 0.15	2.00 0.25	3.50 0.35												●				
			080412-NMN	RE 1.2	a_p f_n	0.50 0.20	2.00 0.30	3.50 0.40												●				
	ROUGHING	NRP P 	WNMG	080408-NRP	RE 0.8	a_p f_n	2.00 0.25	4.00 0.35	6.00 0.45		●	●	●	●										
				080412-NRP	RE 1.2	a_p f_n	2.00 0.30	4.00 0.40	6.00 0.50		●	●	●	●										
				080416-NRP	RE 1.6	a_p f_n	2.00 0.35	4.00 0.45	6.00 0.55			●	●	●										
		NTP P 	WNMG	080408-NTP	RE 0.8	a_p f_n	3.00 0.30	5.00 0.40	7.00 0.50				▽	▽										

● stock standard, ○ non-standard stock, ▽ stock exhaustion



TURNING

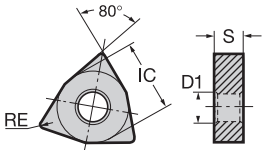
THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

WN		CARBIDE Negative					ISO513	HC-CVD								HC-PVD		HW	HT				
								JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9010	JC9025	JP9015	JP9030	JU6020	JU4015				
 6 edges	Size	IC	S	D1		P			200 380	180 360	140 300	100 240						200 380					
	0604□□	9.525	4.76	3.81		M							150 280	120 240	100 220	80 200		160 280					
	0804□□	12.70	4.76	5.16		K	180 380	150 300										200 400					
						N												500 1500					
						S																	
						H																	
GRADE APPLICATION AREA		Stable machining, continuous cut					+ Hardness - Toughness +																
main application		General machining, light interruption																					
applicable		Unstable machining, interrupted cut																					

ROUGHING	NRK		WNMG 060408-NRK	RE 0.8	a_p 1.00 f_n 0.15	2.00 0.25	3.00 0.35	●	●													
			WNMG 080408-NRK	RE 0.8	a_p 1.50 f_n 0.20	4.00 0.30	6.50 0.40	●	●													
			080412-NRK	RE 1.2	a_p 1.50 f_n 0.25	4.00 0.35	6.50 0.45	●	●													
	Flat		WNMA 080408	RE 0.8	a_p 2.00 f_n 0.25	4.00 0.35	6.00 0.45	●	○													
			080412	RE 1.2	a_p 2.00 f_n 0.35	4.00 0.45	6.00 0.55	●	○													
			080416	RE 1.6	a_p 2.00 f_n 0.45	4.00 0.55	6.00 0.65	●	○													

● stock standard, ○ non-standard stock

HOLDERS EXTERNAL



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HOLDERS INTERNAL



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TURNING PCBN

	MATERIAL	OPERATION	CONDITION	EDGE PREP.	GRADE	Vc (m/min)	fn (mm/rev)	COOLANT
TURNING	Hardened steel	finishing ap < 0.5 mm		SE	NBL050C	140 190 240	0.06 0.14 0.22	
				UE	NBL150C tool life NBL250C reliability	120 170 220 100 150 200	0.06 0.15 0.24	
				RE	NBL350C	80 120 160	0.06 0.16 0.26	
THREADING	Bearing steel	finishing ap < 0.5 mm		SE	NBL050C	120 170 220	0.05 0.10 0.15	
				UE	NBL150C tool life NBL250C reliability	100 150 200 80 130 180	0.06 0.13 0.20	
				RE	NBL350C	60 110 160	0.06 0.14 0.22	
		roughing ap > 0.5 mm SOLID PCBN		UE	NBH900U	100 140 180	0.15 0.30 0.45	
				UE	NBH950U	80 120 160	0.10 0.25 0.40	
GROOVING	Tool steel	finishing ap < 0.5 mm		SE	NBL150C	100 140 180	0.04 0.09 0.14	
				UE	NBL250C	80 120 160	0.05 0.12 0.19	
				RE	NBL350C	60 100 140	0.06 0.13 0.20	
		roughing ap > 0.5 mm SOLID PCBN		UE	NBH900U	60 100 140	0.10 0.30 0.50	
				UE	NBH950U	40 80 120	0.10 0.25 0.40	
MILLING	High speed steel	finishing ap < 0.5 mm		UE	NBL150C	100 120 140	0.05 0.08 0.11	
	White cast iron	finishing ap < 0.5 mm		UE	NBH500C	60 120 180	0.10 0.30 0.50	
				UE	NBH900U	40 80 120	0.10 0.25 0.40	
		roughing ap > 0.5 mm SOLID PCBN		UE	NBH500C	60 90 120	0.20 0.40 0.60	
				UE	NBH950U	40 60 80	0.20 0.35 0.50	
DRILLING	Gray cast iron	finishing ap < 0.5 mm		UE	NBH450C	400 800 1200	0.10 0.25 0.40	
				UE	NBH500C	600 1000 1400	0.10 0.20 0.30	
		roughing ap > 0.5 mm SOLID PCBN		UE	NBH500C	600 1000 1400	0.20 0.40 0.60	
				UE	NBH900U tool life NBH950U reliability	400 800 1200 400 700 1000	0.20 0.35 0.50	
	ADI cast iron	finishing ap < 0.5 mm		UE	NBL150C	500 600 700	0.05 0.15 0.25	
				UE	NBL250C	400 500 600	0.05 0.15 0.25	
		roughing ap > 0.5 mm SOLID PCBN		UE	NBH500C	300 400 500	0.10 0.25 0.40	
				UE	NBH900U tool life NBH950U reliability	200 250 300 180 230 280	0.10 0.25 0.40	
ACCESSORIES	Sintered powder metal, high alloyed	finishing ap < 0.5 mm		UE	NBL150C	80 160 240	0.05 0.10 0.15	
	Sintered powder metal, low alloyed	finishing ap < 0.5 mm		UE	NBH450C	140 220 300	0.10 0.20 0.30	

 Stable machining, continuous cut
  General machining, light interruption
  Unstable machining, interrupted cut

HOLDERS **INTERNAL**

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CN

PCBN
Negative

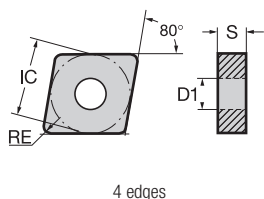
ISO513

BL

BH

NB1050C
NB1150C
NB1250C
NB1350C
NBH450C
NBH500C
NBH900U
NBH950U80
240140
300400
1200300
1400200
1200180
1000120
240100
22080
20060
16060
18040
18040
160

◀ SINTERED POWDER METAL



4 edges

GRADE APPLICATION AREA

Stable machining, continuous cut

main application

General machining, light interruption

applicable

Unstable machining, interrupted cut

+

Hardness

-

+

Toughness

-

+

-

+

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SHARP

SE H



MICRONEGA, vertical

MICRO

CN.R02S-SE-4V

RE 0.2

 a_p 0.06 f_n 0.05

0.13 0.20

0.10 0.15

CN.R04S-SE-4V

RE 0.4

 a_p 0.06 f_n 0.06

0.13 0.20

0.12 0.18

CN.R08S-SE-4V

RE 0.8

 a_p 0.06 f_n 0.06

0.13 0.20

0.13 0.20

SE H



vertical

CNGA

120404S-SE-4V

RE 0.4

 a_p 0.06 f_n 0.06

0.13 0.20

0.12 0.18

120408S-SE-4V

RE 0.8

 a_p 0.06 f_n 0.06

0.13 0.20

0.13 0.20

120412S-SE-4V

RE 1.2

 a_p 0.06 f_n 0.06

0.13 0.20

0.14 0.22

UE K H



MICRONEGA, vertical

MICRO

CN.R02S-UE-4V

RE 0.2

 a_p 0.07 f_n 0.06

0.16 0.25

0.12 0.18

CN.R04S-UE-4V

RE 0.4

 a_p 0.07 f_n 0.08

0.16 0.25

0.14 0.20

CN.R08S-UE-4V

RE 0.8

 a_p 0.07 f_n 0.08

0.16 0.25

0.15 0.22

UE K H



vertical

CNGA

120404S-UE-4V

RE 0.4

 a_p 0.07 f_n 0.08

0.16 0.25

0.14 0.20

120408S-UE-4V

RE 0.8

 a_p 0.07 f_n 0.08

0.16 0.25

0.15 0.22

120412S-UE-4V

RE 1.2

 a_p 0.07 f_n 0.08

0.16 0.25

0.16 0.24

UE K H



solid

CNGA

120408S-UE

RE 0.8

 a_p 1.00 f_n 0.10

2.00 3.00

0.20 0.30

120412S-UE

RE 1.2

 a_p 1.00 f_n 0.10

2.00 3.00

0.22 0.35

UE K H



solid, without hole

CNGN

090308S-UE

RE 0.8

 a_p 0.50 f_n 0.10

1.50 2.50

0.20 0.30

090312S-UE

RE 1.2

 a_p 0.50 f_n 0.10

1.50 2.50

0.22 0.35

090316S-UE

RE 1.6

 a_p 0.50 f_n 0.10

1.50 2.50

0.25 0.40

120408S-UE

RE 0.8

 a_p 1.00 f_n 0.10

2.00 3.00

0.20 0.30

120412S-UE

RE 1.2

 a_p 1.00 f_n 0.10

2.00 3.00

0.22 0.35

120416S-UE

RE 1.6

 a_p 1.00 f_n 0.10

2.00 3.00

0.25 0.40

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

HOLDERS EXTERNAL

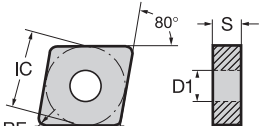


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HOLDERS INTERNAL



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CN		PCBN Negative				ISO513	BL				BH													
							NBL050C	NBL150C	NBL250C	NBL350C	NBH450C	NBH500C	NBH900U	NBH950U										
 4 edges		Size	IC	S	D1	P	80 240				140 300		◀ SINTERED POWDER METAL											
		MICRO CN	7.50	3.18	3.60	M																		
		0903□□	9.525	3.18	-	K					400 1200	300 1400	200 1200	180 1000										
		1204□□	12.70	4.76	(5.16)	N																		
		1207□□	12.70	7.94	-	S																		
							H	120 240	100 220	80 200	60 160	60 160	60 180	40 180	40 160									
GRADE APPLICATION AREA		Stable machining, continuous cut				+ Hardness - Toughness																		
main application		General machining, light interruption																						
applicable		Unstable machining, interrupted cut																						

UNIVERSAL	UE K H	CNGX	120712S-UE	RE 1.2	a_p 1.00 f_n 0.10	2.00 0.22	3.00 0.35					○												
	120716S-UE		RE 1.6	a_p 1.00 f_n 0.10	2.00 0.25	3.00 0.40					○													
solid, with dimple																								

REINFORCED	RE K H	CNGA	120404S-RE-4V	RE 0.4	a_p 0.08 f_n 0.08	0.17 0.14	0.26 0.20			○		●												
	120408S-RE-4V		RE 0.8	a_p 0.08 f_n 0.08	0.17 0.16	0.26 0.24			●		●													
	120412S-RE-4V	RE 1.2	a_p 0.08 f_n 0.08	0.17 0.17	0.26 0.26			●		●														
vertical																								

WIPER	WE H	CNGA	120404S-WE-4V	RE 0.4	a_p 0.07 f_n 0.10	0.16 0.17	0.25 0.24	○	○	○														
	120408S-WE-4V		RE 0.8	a_p 0.07 f_n 0.10	0.16 0.19	0.25 0.28	●	●	●															
	120412S-WE-4V	RE 1.2	a_p 0.07 f_n 0.10	0.16 0.20	0.25 0.30	●	●	●																
vertical																								

● stock standard, ○ non-standard stock

DC

PCBN
Positive

ISO513

BL

BH

NB1050C

NB1150C

NB1250C

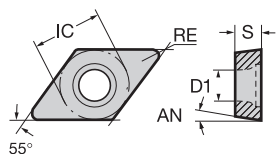
NB1350C

NBH450C

NBH500C

NBH900U

NBH950U



2 edges

GRADE APPLICATION AREA

Size

IC

S

D1

AN

P

80

240

140

300

◀ SINTERED POWDER METAL

0702□□

6.35

2.38

2.80

7°

M

11T3□□

9.525

3.97

4.40

7°

K

400

300

200

180

1200

1400

1200

1000

N

S

H

120

240

100

220

80

200

60

160

60

160

60

180

40

180

40

160

Stable machining, continuous cut

General machining, light interruption

Unstable machining, interrupted cut

+

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+

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○

SE H

SHARP



DCGW

070202S-SE-2S

RE 0.2

a_p ▶ 0.05f_n ▶ 0.04

0.10

0.15

○

●

070204S-SE-2S

RE 0.4

a_p ▶ 0.05f_n ▶ 0.04

0.10

0.15

●

●

070208S-SE-2S

RE 0.8

a_p ▶ 0.05f_n ▶ 0.05

0.10

0.15

○

DCGW

11T302S-SE-2S

RE 0.2

a_p ▶ 0.05f_n ▶ 0.04

0.10

0.15

○

●

11T304S-SE-2S

RE 0.4

a_p ▶ 0.05f_n ▶ 0.04

0.10

0.15

●

●

11T308S-SE-2S

RE 0.8

a_p ▶ 0.05f_n ▶ 0.05

0.10

0.15

●

UE H

UNIVERSAL



DCGW

070202S-UE-2S

RE 0.2

a_p ▶ 0.06f_n ▶ 0.05

0.13

0.20

○

●

070204S-UE-2S

RE 0.4

a_p ▶ 0.06f_n ▶ 0.06

0.13

0.20

●

●

070208S-UE-2S

RE 0.8

a_p ▶ 0.06f_n ▶ 0.06

0.13

0.20

○

○

DCGW

11T302S-UE-2S

RE 0.2

a_p ▶ 0.06f_n ▶ 0.05

0.13

0.20

○

●

11T304S-UE-2S

RE 0.4

a_p ▶ 0.06f_n ▶ 0.06

0.13

0.20

●

●

11T308S-UE-2S

RE 0.8

a_p ▶ 0.06f_n ▶ 0.06

0.13

0.20

●

●

UE KH



tip with carbide backed

DCGW

11T304S-UE-2C

RE 0.4

a_p ▶ 0.06f_n ▶ 0.06

0.13

0.20

●

11T308S-UE-2C

RE 0.8

a_p ▶ 0.06f_n ▶ 0.06

0.13

0.20

●

RE H

REINFORCED



DCGW

070204S-RE-2S

RE 0.4

a_p ▶ 0.08f_n ▶ 0.06

0.16

0.25

○

070208S-RE-2S

RE 0.8

a_p ▶ 0.08f_n ▶ 0.06

0.16

0.25

○

DCGW

11T304S-RE-2S

RE 0.4

a_p ▶ 0.08f_n ▶ 0.06

0.16

0.25

●

11T308S-RE-2S

RE 0.8

a_p ▶ 0.08f_n ▶ 0.06

0.16

0.25

●

● stock standard, ○ non-standard stock

HOLDERS EXTERNAL

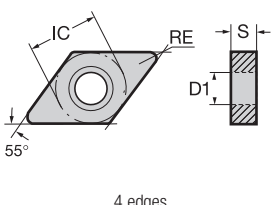


p. 107

HOLDERS INTERNAL



p. 111

DN		PCBN Negative				ISO513	BL				BH																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
		Size	IC	S	D1		NBL050C	NBL150C	NBL250C	NBL350C	NBH450C	NBH500C	NBH900U	NBH950U																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
 4 edges		MICRO DN	7.00	3.18	3.60	P	80 240				140 300			◀ SINTERED POWDER METAL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
		1504□	12.70	4.76	5.16	M																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

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



p. 119



p. 123

DN

PCBN
Negative

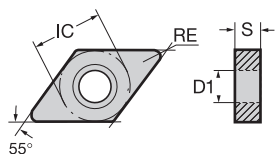
ISO513

BL

BH

NB1050C
NB1150C
NB1250C
NB1350CNBH450C
NBH500C
NBH900U
NBH950U

◀ SINTERED POWDER METAL



4 edges

GRADE APPLICATION AREA

Stable machining, continuous cut

main application

General machining, light interruption

applicable

Unstable machining, interrupted cut

+

-

Hardness

+

-

Toughness

120
240100
22080
20060
16060
16060
18040
18040
160

REINFORCED

RE H



DNGA

150604S-RE-4S

RE 0.4

 a_p

0.08

0.17

0.26

 f_n

0.08

0.14

0.20

150608S-RE-4S

RE 0.8

 a_p

0.08

0.17

0.26

 f_n

0.08

0.16

0.24

150612S-RE-4S

RE 1.2

 a_p

0.08

0.17

0.26

 f_n

0.08

0.17

0.26

○ non-standard stock

HOLDERS EXTERNAL



p. 120

HOLDERS INTERNAL



p. 125

● stock standard. ○ non-standard stock

SN

PCBN
Negative

ISO513

BL

BH

NB1050C

NB1150C

NB1250C

NB1350C

NBH450C

NBH500C

NBH900U

NBH950U

Size

IC

S

D1

P

80

240

140

300

◀ SINTERED POWDER METAL

0903□□

9.525

3.18

-

M

1204□□

12.70

4.76

(5.16)

K

400

300

200

180

1207□□

12.70

7.94

-

N

1200

1400

1200

1000

S

H

120

240

60

160

60

180

40

180

40

160

GRADE APPLICATION AREA

Stable machining, continuous cut

main application

General machining, light interruption

applicable

Unstable machining, interrupted cut

UE **K** **H**

vertical

SNGA

120404S-UE-8V

RE 0.4

 a_p

0.07

0.16

0.25

 f_n

0.08

0.14

0.20

120408S-UE-8V

RE 0.8

 a_p

0.07

0.16

0.25

 f_n

0.08

0.15

0.22

120412S-UE-8V

RE 1.2

 a_p

0.07

0.16

0.25

 f_n

0.08

0.16

0.24

UE **K** **H**

solid

SNGA

120412S-UE

RE 1.2

 a_p

1.00

2.00

3.00

 f_n

0.10

0.22

0.35

UE **K** **H**

solid, without hole

SNGN

090308S-UE

RE 0.8

 a_p

0.50

1.50

2.50

 f_n

0.10

0.20

0.30

090312S-UE

RE 1.2

 a_p

0.50

1.50

2.50

 f_n

0.10

0.22

0.35

090316S-UE

RE 1.6

 a_p

0.50

1.50

2.50

 f_n

0.10

0.25

0.40

SNGN

120408S-UE

RE 0.8

 a_p

1.00

2.00

3.00

 f_n

0.10

0.20

0.30

120412S-UE

RE 1.2

 a_p

1.00

2.00

3.00

 f_n

0.10

0.22

0.35

120416S-UE

RE 1.6

 a_p

1.00

2.00

3.00

 f_n

0.10

0.25

0.40

UE **K** **H**

solid, with dimple

SNGX

120712S-UE

RE 1.2

 a_p

1.00

2.00

3.00

 f_n

0.10

0.22

0.35

120716S-UE

RE 1.6

 a_p

1.00

2.00

3.00

 f_n

0.10

0.25

0.40

● stock standard, ○ non-standard stock

HOLDERS EXTERNAL



p. 129

HOLDERS INTERNAL



p. 133

TC		PCBN Positive					ISO513	BL				BH															
								NBL050C	NBL150C	NBL250C	NBL350C	NBH450C	NBH500C	NBH900U	NBH950U												
 3 edges		Size	IC	S	D1	AN	P	80 240				140 300			◀ SINTERED POWDER METAL												
		1102□□	6.35	2.38	2.80	7°	M																				
		16T3□□	9.525	3.97	4.40	7°	K					400 1200	300 1400	200 1200	180 1000												
							N																				
							S																				
GRADE APPLICATION AREA		Stable machining, continuous cut					+ Hardness - Toughness +	 	 	120 240	100 220	80 200	60 160	60 160	60 180	40 180	40 160										
main application		General machining, light interruption								-																	
applicable		Unstable machining, interrupted cut								-																	

SHARP	SE	TCGW	110204S-SE-3S	RE 0.4	a _p ▶ 0.05 f _n ▶ 0.04	0.10 0.08	0.15 0.12	○	○																
			110208S-SE-3S	RE 0.8	a _p ▶ 0.05 f _n ▶ 0.05	0.10 0.10	0.15 0.15		○																
		TCGW	16T304S-SE-3S	RE 0.4	a _p ▶ 0.05 f _n ▶ 0.05	0.10 0.10	0.15 0.15	○	○																
			16T308S-SE-3S	RE 0.8	a _p ▶ 0.05 f _n ▶ 0.05	0.10 0.10	0.15 0.15		○																
UNIVERSAL	UE	TCGW	110204S-UE-3S	RE 0.4	a _p ▶ 0.06 f _n ▶ 0.06	0.13 0.12	0.20 0.18	○	○	●															
			110208S-UE-3S	RE 0.8	a _p ▶ 0.06 f _n ▶ 0.06	0.13 0.13	0.20 0.20		○	●															
		TCGW	16T304S-UE-3S	RE 0.4	a _p ▶ 0.06 f _n ▶ 0.06	0.13 0.12	0.20 0.18	○	○	●															
			16T308S-UE-3S	RE 0.8	a _p ▶ 0.06 f _n ▶ 0.06	0.13 0.13	0.20 0.20		○	●															
	UE	TCGW	110204S-UE-3C	RE 0.4	a _p ▶ 0.06 f _n ▶ 0.06	0.13 0.12	0.20 0.18					●	○												
			110208S-UE-3C	RE 0.8	a _p ▶ 0.06 f _n ▶ 0.06	0.13 0.13	0.20 0.20					●	○												
		TCGW	16T304S-UE-3C	RE 0.4	a _p ▶ 0.06 f _n ▶ 0.06	0.13 0.12	0.20 0.18					●													
			16T308S-UE-3C	RE 0.8	a _p ▶ 0.06 f _n ▶ 0.06	0.13 0.13	0.20 0.20					●	○												
REINFORCED	RE	TCGW	110204S-RE-3S	RE 0.4	a _p ▶ 0.08 f _n ▶ 0.06	0.16 0.13	0.25 0.20				○														
			110208S-RE-3S	RE 0.8	a _p ▶ 0.08 f _n ▶ 0.06	0.16 0.14	0.25 0.22				○														
		TCGW	16T304S-RE-3S	RE 0.4	a _p ▶ 0.08 f _n ▶ 0.06	0.16 0.13	0.25 0.20				○														
			16T308S-RE-3S	RE 0.8	a _p ▶ 0.08 f _n ▶ 0.06	0.16 0.14	0.25 0.22				○														
	RE	TCGW	110208S-RE-3C	RE 0.8	a _p ▶ 0.08 f _n ▶ 0.06	0.16 0.14	0.25 0.22					●*	●*												
		TCGW	16T308S-RE-3C	RE 0.8	a _p ▶ 0.08 f _n ▶ 0.06	0.16 0.14	0.25 0.22					○*	○*												

● stock standard, ○ non-standard stock

* uncoated (NBH450U / NBH500U)

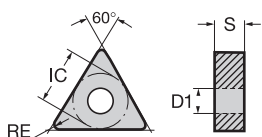
TN**PCBN**
Negative**ISO513**

BL

BH

NB1050C
NB1150C
NB1250C
NB1350C
NBH450C
NBH500C
NBH900U
NBH950U80
240140
300400
1200300
1400200
1200180
1000120
240100
22080
20060
16060
18040
18040
160

◀ SINTERED POWDER METAL



6 edges

GRADE APPLICATION AREA

Stable machining, continuous cut

main application

General machining, light interruption

applicable

Unstable machining, interrupted cut

+

-

Hardness

Toughness

+

-

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SE

vertical

TNGA

160404S-SE-6V

RE 0.4

 a_p

0.06

0.13

0.20

 f_n

0.06

0.12

0.18

○

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○

UE

vertical

TNGA

160404S-UE-6V

RE 0.4

 a_p

0.07

0.16

0.25

 f_n

0.08

0.14

0.20

●

●

●

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●

UE

solid, without hole

TNGN

160408S-UE

RE 0.8

 a_p

1.00

2.00

3.00

 f_n

0.10

0.20

0.30

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RE

vertical

TNGA

160404S-RE-6V

RE 0.4

 a_p

0.08

0.17

0.26

 f_n

0.08

0.14

0.20

○

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○

160408S-RE-6V

RE 0.8

 a_p

0.08

0.17

0.26

 f_n

0.08

0.16

0.24

○

○

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○

160412S-RE-6V

RE 1.2

 a_p

0.08

0.17

0.26

 f_n

0.08

0.17

0.26

○

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○

● stock standard, ○ non-standard stock

HOLDERS EXTERNAL



p. 142

HOLDERS INTERNAL



p. 145

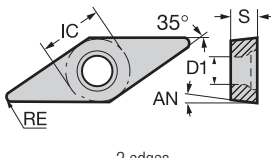
TP		PCBN Positive					ISO513	BL				BH													
								NBL050C	NBL150C	NBL250C	NBL350C	NBH450C	NBH500C	NBH900U	NBH950U										
 3 edges		Size	IC	S	D1	AN	P	80	240			140	300	◀ SINTERED POWDER METAL											
		0902□□	5.56	2.38	3.00	11°	M																		
		1103□□	6.35	3.18	3.30	11°	K					400	300	200	180										
							N					1200	1400	1200	1000										
							S																		
							H	120	240	100	220	80	200	60	160	60	160	60	180	40	180	40	160		
GRADE APPLICATION AREA		Stable machining, continuous cut					+ Hardness - + Toughness																		
main application		General machining, light interruption																							
applicable		Unstable machining, interrupted cut																							

SHARP	SE	TPGW	110304S-SE-3S	RE 0.4	a_p 0.05 f_n 0.04	0.10 0.15 0.08 0.12			○																
			110308S-SE-3S	RE 0.8	a_p 0.05 f_n 0.05	0.10 0.15 0.10 0.15			○																
UNIVERSAL	UE	TPGW	090204S-UE-3S	RE 0.4	a_p 0.06 f_n 0.06	0.13 0.20 0.12 0.18			●																
		TPGW	110302S-UE-3S	RE 0.2	a_p 0.06 f_n 0.05	0.13 0.20 0.10 0.15			○																
			110304S-UE-3S	RE 0.4	a_p 0.06 f_n 0.06	0.13 0.20 0.12 0.18			●																
			110308S-UE-3S	RE 0.8	a_p 0.06 f_n 0.06	0.13 0.20 0.13 0.20			●																

● stock standard, ○ non-standard stock

* uncoated (NBH450U)



VC		PCBN Positive					ISO513	BL				BH																	
								NBL050C	NBL150C	NBL250C	NBL350C	NBH450C	NBH500C	NBH900U	NBH950U														
 2 edges		Size	IC	S	D1	AN	P	80	240			140	300	◀ SINTERED POWDER METAL															
		1103□□	6.35	3.18	2.80	7°	M																						
		1604□□	9.525	4.76	4.40	7°	K					400	300	200	180														
								N																					
								S																					
								H	120	240	100	220	80	200	60	160	60	160	60	180	40	180	40	160					
GRADE APPLICATION AREA		Stable machining, continuous cut					+ Hardness - Toughness	  																					
■ main application		General machining, light interruption																											
■ applicable		Unstable machining, interrupted cut																											

SHARP	SE 		VCGW	110304S-SE-2S	RE 0.4	a _p ▶ 0.05 f _n ▶ 0.04	0.10 0.15 0.08 0.12	●																	
			VCGW	160404S-SE-2S	RE 0.4	a _p ▶ 0.05 f _n ▶ 0.04	0.10 0.15 0.08 0.12	●																	
				160408S-SE-2S	RE 0.8	a _p ▶ 0.05 f _n ▶ 0.05	0.10 0.15 0.10 0.15	●																	
UNIVERSAL	UE 		VCGW	110304S-UE-2S	RE 0.4	a _p ▶ 0.06 f _n ▶ 0.06	0.13 0.20 0.12 0.18		●																
			VCGW	160404S-UE-2S	RE 0.4	a _p ▶ 0.06 f _n ▶ 0.06	0.13 0.20 0.12 0.18		●																
				160408S-UE-2S	RE 0.8	a _p ▶ 0.06 f _n ▶ 0.06	0.13 0.20 0.13 0.20		●																

● stock standard, ○ non-standard stock

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

VN		PCBN Negative				ISO513	BL				BH																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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● stock standard, ○ non-standard stock

HOLDERS EXTERNAL

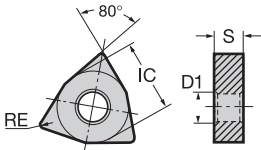


p. 161

HOLDERS INTERNAL



p. 163

WN		PCBN Negative				ISO513	BL				BH																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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 6 edges		0804□□	12.70	4.76	5.16	P	80 240				140 300			◀ SINTERED POWDER METAL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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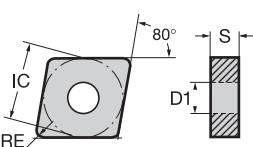
● stock standard, ○ non-standard stock



TURNING Ceramic

[illegible]

- stock standard

CN		CERAMIC Negative				ISO513	Al ₂ O ₃ +TiCN		Si ₃ N ₄		SiAlON			Al ₂ O ₃ +SiC								
		Size	IC	S	D1		NAC150	NAC200	NAC250	NSH350	NSH400	NSH450	NSA600	NSA650	NSA6000	NWR700	NWR750					
 4 edges		1204□	12.70	4.76	(5.16)	P																
		1207□	12.70	7.94	-	M																
		1606□	15.87	6.35	6.35	K		300 600		500 1000	400 1000	400 800										
						N																
						S								150 350	150 300	150 400	200 500	200 400				
GRADE APPLICATION AREA		Stable machining, continuous cut				+ Hardness - Toughness																
 main application		General machining, light interruption																				
 applicable		Unstable machining, interrupted cut																				

SHARP	T01020 	CNGA	120404-CC		a _p ▶ 0.20 RE 0.4 f _n ▶ 0.04	0.70 0.08	1.20 0.12	●	●													
			120408-CC		a _p ▶ 0.20 RE 0.8 f _n ▶ 0.05	0.70 0.10	1.20 0.15	●	●													
			120412-CC		a _p ▶ 0.20 RE 1.2 f _n ▶ 0.06	0.70 0.13	1.20 0.20	●	●													
	T02020   	CNGA	120404-GP		a _p ▶ 0.40 RE 0.4 f _n ▶ 0.06	1.20 0.14	2.00 0.22		●													
					a _p ▶ 1.00 RE 0.4 f _n ▶ 0.10	2.50 0.19	4.00 0.28				○											
					a _p ▶ 0.40 RE 0.8 f _n ▶ 0.10	1.20 0.20	2.00 0.30		●	●												
			120408-GP		a _p ▶ 1.00 RE 0.8 f _n ▶ 0.14	2.50 0.27	4.00 0.40						▽		▲							
					a _p ▶ 0.40 RE 1.2 f _n ▶ 0.12	1.20 0.23	2.00 0.34		●	●												
					a _p ▶ 1.00 RE 1.2 f _n ▶ 0.20	2.50 0.35	4.00 0.50						▽		▲							
		CNGA	160612-GP		a _p ▶ 1.00 RE 1.2 f _n ▶ 0.14	2.50 0.27	4.00 0.40		●													
			160616-GP		a _p ▶ 1.00 RE 1.6 f _n ▶ 0.15	2.50 0.30	4.00 0.45			○												
		CNMA	120408-GP		a _p ▶ 1.00 RE 0.8 f _n ▶ 0.14	2.50 0.27	4.00 0.40				○	●	○									
					a _p ▶ 1.00 RE 1.2 f _n ▶ 0.20	2.50 0.35	4.00 0.50				●	●	●									
					a _p ▶ 1.00 RE 1.6 f _n ▶ 0.20	2.50 0.36	4.00 0.52				○	●	○									
			160612-GP		a _p ▶ 2.00 RE 1.2 f _n ▶ 0.22	4.50 0.39	7.00 0.56					●										
					a _p ▶ 2.00 RE 1.6 f _n ▶ 0.24	4.50 0.43	7.00 0.62					●										

UNIVERSAL	S01525 	CNGA	120404-GS		a _p ▶ 0.40 RE 0.4 f _n ▶ 0.06	1.20 0.14	2.00 0.22	●													
			120408-GS		a _p ▶ 0.40 RE 0.8 f _n ▶ 0.10	1.20 0.20	2.00 0.30	●													
			120412-GS		a _p ▶ 0.40 RE 1.2 f _n ▶ 0.12	1.20 0.23	2.00 0.34	●													
	S02020 	CNGA	120404-GS		a _p ▶ 0.40 RE 0.4 f _n ▶ 0.06	1.20 0.14	2.00 0.22		▽												
			120408-GS		a _p ▶ 0.40 RE 0.8 f _n ▶ 0.10	1.20 0.20	2.00 0.30		●												
			120412-GS		a _p ▶ 0.40 RE 1.2 f _n ▶ 0.12	1.20 0.23	2.00 0.34		●												

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



TURNING

THREADING

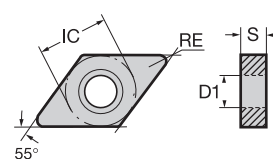
GROOVING

MILLING

DRILLING

ACCESSORIES

* T01520

DN		CERAMIC Negative				ISO513	Al ₂ O ₃ +TiCN		Si ₃ N ₄		SiAlON			Al ₂ O ₃ +SiC							
							NAC150	NAC200	NAC250	NSH350	NSH400	NSH450	NSA600	NSA650	NSA6000	NWR700	NWR750				
 4 edges	Size	IC	S	D1	P																
	1506□□	12.70	6.35	5.16	M																
	1507□□	12.70	7.94	-	K		300 600		500 1000	400 1000	400 800										
					N																
					S							150 350	150 300	150 400	200 500	200 400					
GRADE APPLICATION AREA		Stable machining, continuous cut				+ Hardness - Toughness	  	80 200	60 180	50 150											
main application		General machining, light interruption																			
applicable		Unstable machining, interrupted cut																			

SHARP	T01020 	DNGA	150604-CC		RE 0.4	a _p ▶ 0.20 f _n ▶ 0.04	0.70 1.20 0.08 0.12	●	●												
	150608-CC			RE 0.8	a _p ▶ 0.20 f _n ▶ 0.05	0.70 1.20 0.10 0.15	●	●													
	NAC150 coated		150612-CC		RE 1.2	a _p ▶ 0.20 f _n ▶ 0.06	0.70 1.20 0.13 0.20		●												
UNIVERSAL	T02020  	DNGA	150604-GP		RE 0.4	a _p ▶ 0.40 f _n ▶ 0.06	1.20 2.00 0.14 0.22		●												
	150608-GP			RE 0.8	a _p ▶ 0.40 f _n ▶ 0.10	1.20 2.00 0.20 0.30		●	●												
				RE 0.8	a _p ▶ 1.00 f _n ▶ 0.14	2.50 4.00 0.27 0.40				●											
	150612-GP			RE 1.2	a _p ▶ 0.40 f _n ▶ 0.12	1.20 2.00 0.23 0.34		●	●												
	150616-GP			RE 1.6	a _p ▶ 0.40 f _n ▶ 0.14	1.20 2.00 0.26 0.38		○													
	DNMA		150612-GP		RE 1.2	a _p ▶ 1.00 f _n ▶ 0.20	2.50 4.00 0.35 0.50				●										
	S01525 	DNGA	150604-GS		RE 0.4	a _p ▶ 0.40 f _n ▶ 0.06	1.20 2.00 0.14 0.22	●													
			150608-GS		RE 0.8	a _p ▶ 0.40 f _n ▶ 0.10	1.20 2.00 0.20 0.30	●													
	S02020 	DNGA	150604-GS		RE 0.4	a _p ▶ 0.40 f _n ▶ 0.06	1.20 2.00 0.14 0.22		●												
			150608-GS		RE 0.8	a _p ▶ 0.40 f _n ▶ 0.10	1.20 2.00 0.20 0.30		●												
150612-GS				RE 1.2	a _p ▶ 0.40 f _n ▶ 0.12	1.20 2.00 0.23 0.34		○													
T02020 	DNGN	150708-GP		RE 0.8	a _p ▶ 0.40 f _n ▶ 0.10	1.20 2.00 0.20 0.30		○													
		150712-GP		RE 1.2	a _p ▶ 0.40 f _n ▶ 0.12	1.20 2.00 0.23 0.34		○													
		150716-GP		RE 1.6	a _p ▶ 0.40 f _n ▶ 0.14	1.20 2.00 0.26 0.38		○													

● stock standard, ○ non-standard stock

TURNING

THREADING

GROOVING

MILLING

DRILLING

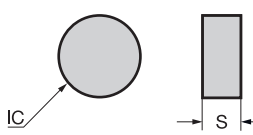
ACCESSORIES

RC		CERAMIC Positive				ISO513	Al ₂ O ₃ +TiCN			Si ₃ N ₄			SiAlON			Al ₂ O ₃ +SiC										
							NAC150	NAC200	NAC250	NSH350	NSH400	NSH450	NSA600	NSA650	NSA6000	NWR700	NWR750									
		Size	IC	S	D1	P																				
		0606□□	6.35	6.35	-	M																				
		0907□□	9.525	7.94	-	K		300 600		500 1000	400 1000	400 800														
		1207□□	12.70	7.94	-	N																				
		1510□□	15.87	10.0	-	S							150 350	150 300	150 400	200 500	200 400									
		1910□□	19.05	10.0	-	H		80 200	60 180	50 150																
GRADE APPLICATION AREA		Stable machining, continuous cut				+ Hardness - Toughness																				
main application		General machining, light interruption																								
applicable		Unstable machining, interrupted cut																								

SHARP	T01020 S	RCGX 060600-CC	S	a _p ▶ 1.00 f _n ▶ 0.15	1.50 2.00 0.30 0.45										○										
		RCGX 090700-CC	S	a _p ▶ 1.00 f _n ▶ 0.20	2.00 3.00 0.38 0.56										○										
	RCGX 120700-CC	S	a _p ▶ 1.00 f _n ▶ 0.22	2.50 4.00 0.40 0.58											●										
UNIVERSAL	T02020 S H	RCGX 090700-GP	H	a _p ▶ 0.60 f _n ▶ 0.12	1.80 3.00 0.26 0.40	●	●	○																	
	S		a _p ▶ 1.00 f _n ▶ 0.22	2.00 3.00 0.35 0.58						▽			○*	○*											
	 NAC150 coated	RCGX 120700-GP	H	a _p ▶ 0.60 f _n ▶ 0.13	1.80 3.00 0.28 0.43	○	○	○																	
	S		a _p ▶ 1.00 f _n ▶ 0.24	2.00 3.00 0.42 0.60						▽	▽		○*	○*											
	S02020 H	RCGX 060600-GS	H	a _p ▶ 0.40 f _n ▶ 0.10	1.20 2.00 0.24 0.38		○																		
		RCGX 060700-GS	H	a _p ▶ 0.40 f _n ▶ 0.10	1.20 2.00 0.24 0.38		●																		
REINFORCED	P15015 H	RCGX 090700-HI	H	a _p ▶ 0.60 f _n ▶ 0.15	1.80 3.00 0.30 0.45	●	●	●																	
	 NAC150 coated	RCGX 120700-HI	H	a _p ▶ 0.60 f _n ▶ 0.18	1.80 3.00 0.34 0.50	●	●	●																	
	P20015 H	RCGX 151000-HI	H	a _p ▶ 1.00 f _n ▶ 0.20	2.50 4.00 0.40 0.60		○	●																	
		RCGX 191000-HI	H	a _p ▶ 1.00 f _n ▶ 0.20	2.50 4.00 0.45 0.70		○	○																	

● stock standard, ○ non-standard stock, ▽ stock exhaustion

* T01520

RN		CERAMIC Negative				ISO513	Al ₂ O ₃ +TiCN			Si ₃ N ₄			SiAlON			Al ₂ O ₃ +SiC										
							NAC150	NAC200	NAC250	NSN350	NSN400	NSN450	NSA600	NSA650	NSA6000	NWR700	NWR750									
		Size	IC	S	D1		P																			
		1204□□	12.70	4.76	-		M																			
		1207□□	12.70	7.94	-		K		300 600		500 1000	400 1000	400 800													
		1907□□	19.05	7.94	-		N																			
								S							150 350	150 300	150 400	200 500	200 400							
							H	80 200	60 180	50 150																
GRADE APPLICATION AREA		Stable machining, continuous cut				+ Hardness - Toughness	  																			
main application		General machining, light interruption																								
applicable		Unstable machining, interrupted cut																								

SHARP	T01020 S																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

* T01520

TURNING

THREADING

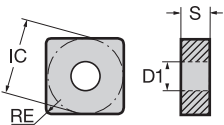
GROOVING

MILLING

DRILLING

ACCESSORIES

● stock standard

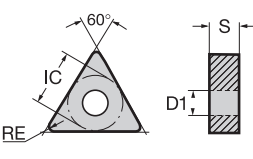
SN		CERAMIC Negative				ISO513	Al ₂ O ₃ +TiCN	Si ₃ N ₄	SiAlON	Al ₂ O ₃ +SiC								
		Size	IC	S	D1	P	NAC150	NAC200	NAC250	NSN350	NSN400	NSN450	NSA600	NSA650	NSA6000	NWR700	NWR750	
 8 edges		0904□	9.525	4.76	-	M												
		1204□	12.70	4.76	(5.16)	K	300 600			500 1000	400 1000	400 800						
		1207□	12.70	7.94	-	N												
						S							150 350	150 300	150 400	200 500	200 400	
						H	80 200	60 180	50 150									
GRADE APPLICATION AREA		Stable machining, continuous cut																
main application		General machining, light interruption																
applicable		Unstable machining, interrupted cut																
SHARP	T01020 H	SNGA	120404-CC	H	a _p 0.20 RE 0.4 f _n 0.04	0.70 0.08	1.20 0.12	●										
			120408-CC	H	a _p 0.20 RE 0.8 f _n 0.05	0.70 0.10	1.20 0.15	●										
			120412-CC	H	a _p 0.20 RE 1.2 f _n 0.06	0.70 0.13	1.20 0.20	●										
	T01020 S	SNGN	120708-CC	S	a _p 1.00 RE 0.8 f _n 0.14	2.50 0.28	4.00 0.42								○			
UNIVERSAL			120712-CC	S	a _p 1.00 RE 1.2 f _n 0.20	2.50 0.35	4.00 0.50								●			
	T02020 K H	SNGA	120404-GP	H	a _p 0.40 RE 0.4 f _n 0.06	1.20 0.14	2.00 0.22	●										
			120408-GP	H	a _p 0.40 RE 0.8 f _n 0.10	1.20 0.20	2.00 0.30	●										
			120412-GP	H	a _p 0.40 RE 1.2 f _n 0.12	1.20 0.23	2.00 0.34	●										
		SNMA	120408-GP	K	a _p 1.00 RE 0.8 f _n 0.14	2.50 0.27	4.00 0.40				●							
			120412-GP	K	a _p 1.00 RE 1.2 f _n 0.20	2.50 0.35	4.00 0.50				●							
			120416-GP	K	a _p 1.00 RE 1.6 f _n 0.20	2.50 0.36	4.00 0.52				○							
	T02020 K H	SNGN	090404-GP	K	a _p 1.00 RE 0.4 f _n 0.12	2.50 0.25	4.00 0.38				▽							
			090408-GP	K	a _p 1.00 RE 0.8 f _n 0.14	2.50 0.28	4.00 0.42				▽							
		SNGN	120404-GP	K	a _p 1.00 RE 0.4 f _n 0.12	2.50 0.25	4.00 0.38				▽							
			120408-GP	K	a _p 1.00 RE 0.8 f _n 0.14	2.50 0.28	4.00 0.42				●							
			120412-GP	K	a _p 1.00 RE 1.2 f _n 0.20	2.50 0.35	4.00 0.50				●	●				▽*		
		SNGN	120708-GP	H	a _p 0.40 RE 0.8 f _n 0.10	1.20 0.20	2.00 0.30	●	●									
			120712-GP	H	a _p 0.40 RE 1.2 f _n 0.12	1.20 0.23	2.00 0.34		●									
			120716-GP	H	a _p 0.40 RE 1.6 f _n 0.14	1.20 0.27	2.00 0.40		○									
	NAC150 coated without hole	SNMN	120416-GP	K	a _p 1.00 RE 1.6 f _n 0.20	2.50 0.36	4.00 0.52				●							
	T02020 K S H	SNGX	120712-GP	H	a _p 0.40 RE 1.2 f _n 0.12	1.20 0.23	2.00 0.34	●										
			120716-GP	H	a _p 0.40 RE 1.6 f _n 0.14	1.20 0.27	2.00 0.40	●										
		SNMX	120712-GP	K S	a _p 1.00 RE 1.2 f _n 0.20	2.50 0.35	4.00 0.50			○	●	○			▲			
	with dimple		120716-GP	K S	a _p 1.00 RE 1.6 f _n 0.20	2.50 0.36	4.00 0.52			○	●	○	▽		▲			

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

*T01520



☐ non-standard stock

TN		CERAMIC Negative				ISO513	Al ₂ O ₃ +TiCN		Si ₃ N ₄		SiAlON			Al ₂ O ₃ +SiC								
							NAC150	NAC200	NAC250	NSN350	NSN400	NSN450	NSA600	NSA650	NSA6000	NWR700	NWR750					
 6 edges		Size	IC	S	D1	P																
		1604□	9.525	4.76	(3.81)	M																
		1607□	12.70	7.94	-	K	300 600		500 1000	400 1000	400 800											
						N																
						S							150 350	150 300	150 400	200 500	200 400					
						H	80 200	60 180	50 150													
GRADE APPLICATION AREA		Stable machining, continuous cut				Hardness Toughness																
main application		General machining, light interruption																				
applicable		Unstable machining, interrupted cut																				

SHARP	 T01020 H NAC150 coated	TNGA	160404-CC	H	a _p ▶ 0.20 RE 0.4 f _n ▶ 0.04	0.70 0.08	1.20 0.12	●	●												
	160408-CC		H	a _p ▶ 0.20 RE 0.8 f _n ▶ 0.05	0.70 0.10	1.20 0.15	●	●													
	160412-CC		H	a _p ▶ 0.20 RE 1.2 f _n ▶ 0.06	0.70 0.13	1.20 0.20	●														
UNIVERSAL	 T02020 K H	TNGA	160404-GP	H	a _p ▶ 0.40 RE 0.4 f _n ▶ 0.06	1.20 0.14	2.00 0.22	●	●												
	160408-GP		H	a _p ▶ 0.40 RE 0.8 f _n ▶ 0.10	1.20 0.20	2.00 0.30	●	●													
	160412-GP		K	a _p ▶ 1.00 RE 0.8 f _n ▶ 0.14	2.50 0.27	4.00 0.40			●												
	160412-GP		H	a _p ▶ 0.40 RE 1.2 f _n ▶ 0.12	1.20 0.23	2.00 0.34	●	●													
	160412-GP		K	a _p ▶ 1.00 RE 1.2 f _n ▶ 0.20	2.50 0.35	4.00 0.50			●												
	160412-GP		K	a _p ▶ 1.00 RE 0.8 f _n ▶ 0.14	2.50 0.27	4.00 0.40			●												
	without hole	 T02020 K H	TNGN	160408-GP	K	a _p ▶ 1.00 RE 0.8 f _n ▶ 0.14	2.50 0.27	4.00 0.40			●										
				160708-GP	H	a _p ▶ 0.40 RE 0.8 f _n ▶ 0.10	1.20 0.20	2.00 0.30	○												
				160712-GP	K	a _p ▶ 1.00 RE 0.8 f _n ▶ 0.14	2.50 0.27	4.00 0.40			○										
			160712-GP	H	a _p ▶ 0.40 RE 1.2 f _n ▶ 0.12	1.20 0.23	2.00 0.34	○													
			160712-GP	K	a _p ▶ 1.00 RE 1.2 f _n ▶ 0.20	2.50 0.35	4.00 0.50			○											
			160712-GP	K	a _p ▶ 1.00 RE 0.8 f _n ▶ 0.14	2.50 0.27	4.00 0.40			○											
coated	 S01525 H	TNGA	160404-GS	H	a _p ▶ 0.40 RE 0.4 f _n ▶ 0.06	1.20 0.14	2.00 0.22	●													
			160408-GS	H	a _p ▶ 0.40 RE 0.8 f _n ▶ 0.10	1.20 0.20	2.00 0.30	●													
			160412-GS	H	a _p ▶ 0.40 RE 1.2 f _n ▶ 0.12	1.20 0.23	2.00 0.34	●													
 S02020 H	TNGA	160404-GS	H	a _p ▶ 0.40 RE 0.4 f _n ▶ 0.06	1.20 0.14	2.00 0.22	●														
		160408-GS	H	a _p ▶ 0.40 RE 0.8 f _n ▶ 0.10	1.20 0.20	2.00 0.30	●														
		160412-GS	H	a _p ▶ 0.40 RE 1.2 f _n ▶ 0.12	1.20 0.23	2.00 0.34	○														

● stock standard, ○ non-standard stock

● stock standard. ○ non-standard stock

● stock standard, ○ non-standard stock

TURNING

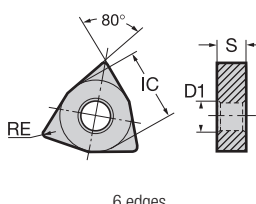
THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

WN		CERAMIC Negative				ISO513	Al ₂ O ₃ +TiCN			Si ₃ N ₄			SiAlON			Al ₂ O ₃ +SiC									
							NAC150	NAC200	NAC250	NSN350	NSN400	NSN450	NSA600	NSA650	NSA6000	NWR700	NWR750								
		Size	IC	S	D1	P																			
		0804□□	12.70	4.76	5.16	M																			
						K	300 600			500 1000	400 1000	400 800													
						N																			
						S							150 350	150 300	150 400	200 500	200 400								
						H	80 200	60 180	50 150																
GRADE APPLICATION AREA		Stable machining, continuous cut																							
main application		General machining, light interruption																							
applicable		Unstable machining, interrupted cut																							
SHARP	T01020 H	WNGA	080404-CC	H	a _p ▶ 0.20 RE 0.4 f _n ▶ 0.04	0.70 0.08	1.20 0.12	●																	
			080408-CC	H	a _p ▶ 0.20 RE 0.8 f _n ▶ 0.05	0.70 0.10	1.20 0.15	●																	
			080412-CC	H	a _p ▶ 0.20 RE 1.2 f _n ▶ 0.06	0.70 0.13	1.20 0.20	●																	
	T02020 K H	WNGA	080404-GP	H	a _p ▶ 0.40 RE 0.4 f _n ▶ 0.06	1.20 0.14	2.00 0.22	●																	
UNIVERSAL			080408-GP	H	a _p ▶ 0.40 RE 0.8 f _n ▶ 0.10	1.20 0.20	2.00 0.30	●																	
				K	a _p ▶ 1.00 RE 0.8 f _n ▶ 0.14	2.50 0.27	4.00 0.40			●															
			080412-GP	H	a _p ▶ 0.40 RE 1.2 f _n ▶ 0.12	1.20 0.23	2.00 0.34	●																	
				K	a _p ▶ 1.00 RE 1.2 f _n ▶ 0.20	2.50 0.35	4.00 0.50			●															

● stock standard



TURNING Diamond

CC

DIAMOND
Positive

ISO513

DP (PCD)

PD

DM

ND050

ND100

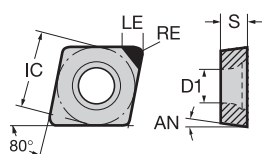
ND120

ND150

ND190

NDC300

NDM500



1 edge

GRADE APPLICATION AREA

Stable machining, continuous cut

main application

General machining, light interruption

applicable

Unstable machining, interrupted cut

+

-

+

H

H

H

HARD METAL (Co ≤ 16%)

STANDARD N

CCGT 060202 RE 0.2 a_p 0.40 1.00 1.60LE 2.8 f_n 0.05 0.10 0.15060204 RE 0.4 a_p 0.40 1.00 1.60LE 2.8 f_n 0.10 0.15 0.20060208 RE 0.8 a_p 0.40 1.00 1.60LE 2.7 f_n 0.15 0.20 0.25CCGT 09T302 RE 0.2 a_p 0.40 1.00 1.60LE 2.8 f_n 0.05 0.10 0.1509T304 RE 0.4 a_p 0.40 1.00 1.60LE 2.8 f_n 0.10 0.15 0.2009T308 RE 0.8 a_p 0.40 1.00 1.60LE 2.7 f_n 0.15 0.20 0.25CCGT 120404 RE 0.4 a_p 0.40 1.00 1.60LE 2.8 f_n 0.10 0.15 0.20120408 RE 0.8 a_p 0.40 1.00 1.60LE 2.7 f_n 0.15 0.20 0.25

tip angle: 7°

LARGE N

CCGT 060204-LRG RE 0.4 a_p 0.40 1.20 2.00LE 3.2 f_n 0.10 0.15 0.20CCGT 09T304-LRG RE 0.4 a_p 0.40 1.50 2.60LE 4.3 f_n 0.10 0.15 0.2009T308-LRG RE 0.8 a_p 0.40 1.50 2.60LE 4.2 f_n 0.15 0.20 0.25CCGT 120404-LRG RE 0.4 a_p 0.40 1.50 2.60LE 4.3 f_n 0.10 0.15 0.20120408-LRG RE 0.8 a_p 0.40 1.50 2.60LE 4.2 f_n 0.15 0.20 0.25

tip angle: 7°

STANDARD N

MICRO CC.R02 RE 0.2 a_p 0.20 0.60 1.00LE 1.5 f_n 0.05 0.10 0.15CC.R04 RE 0.4 a_p 0.20 0.60 1.00LE 1.5 f_n 0.10 0.15 0.20

MICROBORING

STANDARD N

CCGW 060202 RE 0.2 a_p 0.40 1.00 1.60LE 2.8 f_n 0.05 0.10 0.15060204 RE 0.4 a_p 0.40 1.00 1.60LE 2.8 f_n 0.10 0.15 0.20060208 RE 0.8 a_p 0.40 1.00 1.60LE 2.7 f_n 0.15 0.20 0.25CCGW 09T302 RE 0.2 a_p 0.40 1.00 1.60LE 2.8 f_n 0.05 0.10 0.1509T304 RE 0.4 a_p 0.40 1.00 1.60LE 2.8 f_n 0.10 0.15 0.2009T308 RE 0.8 a_p 0.40 1.00 1.60LE 2.7 f_n 0.15 0.20 0.25CCGW 120404 RE 0.4 a_p 0.40 1.00 1.60LE 2.8 f_n 0.10 0.15 0.20120408 RE 0.8 a_p 0.40 1.00 1.60LE 2.7 f_n 0.15 0.20 0.25

SLANT TIP

FLAT TIP

● stock standard, ○ non-standard stock

HOLDERS EXTERNAL

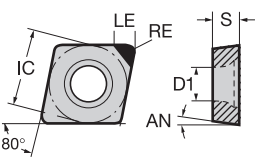


p. 86

HOLDERS INTERNAL



p. 89

CC		DIAMOND Positive					ISO513	DP (PCD)					PD	DM										
		Size	IC	S	D1	AN		ND050	ND100	ND120	ND150	ND190	ND300	NDM500										
 1 edge		MICRO CC	3.50	1.40	1.90	7°	P																	
		0602□□	6.35	2.38	2.80	7°	M																	
		09T3□□	9.525	3.97	4.40	7°	K																	
		1204□□	12.70	4.76	5.50	7°	N	500 1500	500 2000	500 2000	500 2500	500 2500	1000 3000	1000 3000										
							S	50 100																
GRADE APPLICATION AREA		Stable machining, continuous cut					H					10 30			◀ HARD METAL (Co ≤ 16%)									
 main application		General machining, light interruption																						
 applicable		Unstable machining, interrupted cut																						
FLAT TIP	LARGE 	CCGW 060204-LRG	RE 0.4 LE 3.2	$a_p \triangleright$ $f_n \triangleright$	0.40 0.10	1.20 0.15	2.00 0.20	●																
		CCGW 09T304-LRG	RE 0.4 LE 4.3	$a_p \triangleright$ $f_n \triangleright$	0.40 0.10	1.50 0.15	2.60 0.20	●																
		09T308-LRG	RE 0.8 LE 4.2	$a_p \triangleright$ $f_n \triangleright$	0.40 0.15	1.50 0.20	2.60 0.25	●																
		CCGW 120404-LRG	RE 0.4 LE 4.3	$a_p \triangleright$ $f_n \triangleright$	0.40 0.10	1.50 0.15	2.60 0.20	●																
		120408-LRG	RE 0.8 LE 4.2	$a_p \triangleright$ $f_n \triangleright$	0.40 0.15	1.50 0.20	2.60 0.25	●																
CHIPBREAKER	CBF 	CCGX 060202-CBF	RE 0.2 LE 3.3	$a_p \triangleright$ $f_n \triangleright$	0.20 0.04	0.60 0.08	1.00 0.12		●															
		060204-CBF	RE 0.4 LE 3.3	$a_p \triangleright$ $f_n \triangleright$	0.20 0.05	0.60 0.10	1.00 0.15		●															
		CCGX 09T302-CBF	RE 0.2 LE 4.3	$a_p \triangleright$ $f_n \triangleright$	0.20 0.04	0.60 0.08	1.00 0.12		●															
		09T304-CBF	RE 0.4 LE 4.3	$a_p \triangleright$ $f_n \triangleright$	0.20 0.15	0.60 0.10	1.00 0.15		●															
		CCGX 060204-CBG	RE 0.4 LE 3.3	$a_p \triangleright$ $f_n \triangleright$	0.40 0.10	1.20 0.15	2.00 0.20		●															
FULL EDGE	1S 	CCGX 060204*/L-1S	RE 0.4 LE 6.5	$a_p \triangleright$ $f_n \triangleright$	0.50 0.10	2.00 0.15	3.50 0.20	●																
		CCGX 09T304*/L-1S	RE 0.4 LE 9.7	$a_p \triangleright$ $f_n \triangleright$	0.50 0.10	3.00 0.15	5.50 0.20	●																

● stock standard

HOLDERS EXTERNAL



HOLDERS INTERNAL



TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

CN**DIAMOND**
Negative

ISO513

DP (PCD)

PD

DM

ND050

ND100

ND120

ND150

ND190

NDC300

NDM500

P**M****K****N****S****H**

500

1500

50

100

10

30

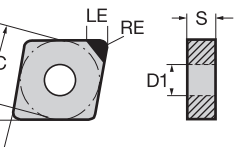
1000

1000

3000

3000

◀ HARD METAL (Co ≤ 16%)



1 edge

GRADE APPLICATION AREA

Stable machining, continuous cut

main application

General machining, light interruption

applicable

Unstable machining, interrupted cut

+

Hardness

-

Toughness

+

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STANDARD N

tip angle: 7°

CNGM 120404

RE 0.4

a_p ▶ 0.40

1.00

1.60

LE 2.8

f_n ▶ 0.10

0.15

0.20

120408

RE 0.8

a_p ▶ 0.40

1.00

1.60

LE 2.7

f_n ▶ 0.15

0.20

0.25

LARGE N

tip angle: 7°

CNGM 120404-LRG

RE 0.4

a_p ▶ 0.40

1.50

2.60

LE 4.3

f_n ▶ 0.10

0.15

0.20

120408-LRG

RE 0.8

a_p ▶ 0.40

1.50

2.60

LE 4.2

f_n ▶ 0.15

0.20

0.25

LARGE N

MICRO CN.R02-LRG

RE 0.2

a_p ▶ 0.40

1.20

2.00

LE 3.3

f_n ▶ 0.05

0.10

0.15

CN.R04-LRG

RE 0.4

a_p ▶ 0.40

1.20

2.00

LE 3.3

f_n ▶ 0.10

0.15

0.20

CN.R08-LRG

RE 0.8

a_p ▶ 0.40

1.20

2.00

LE 3.2

f_n ▶ 0.15

0.20

0.25

STANDARD N

CNGA 120404

RE 0.4

a_p ▶ 0.40

1.00

1.60

LE 2.8

f_n ▶ 0.10

0.15

0.20

120408

RE 0.8

a_p ▶ 0.50

1.00

1.50

LE 2.7

f_n ▶ 0.15

0.20

0.25

LARGE N

CNGA 120404-LRG

RE 0.4

a_p ▶ 0.40

1.50

2.60

LE 4.3

f_n ▶ 0.10

0.15

0.20

120408-LRG

RE 0.8

a_p ▶ 0.40

1.50

2.60

LE 4.2

f_n ▶ 0.15

0.20

0.25

CBF N

MICRO CN.R02-CBF

RE 0.2

a_p ▶ 0.20

0.60

1.00

LE 3.3

f_n ▶ 0.04

0.08

0.12

CN.R04-CBF

RE 0.4

a_p ▶ 0.20

0.60

1.00

LE 3.3

f_n ▶ 0.05

0.10

0.15

MICRONEGA, finishing**CBG N**

MICRO CN.R04-CBG

RE 0.4

a_p ▶ 0.40

1.20

2.00

LE 3.3

f_n ▶ 0.10

0.15

0.20

CN.R08-CBG

RE 0.8

a_p ▶ 0.40

1.20

2.00

LE 3.2

f_n ▶ 0.15

0.20

0.25

MICRONEGA, roughing

● stock standard, ○ non-standard stock

HOLDERS EXTERNAL



p. 96

HOLDERS INTERNAL



p. 102

● stock standard, ○ non-standard stock

ACCESSORIES

TURNING

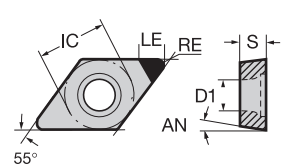
THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

DC		DIAMOND Positive					ISO513	DP (PCD)					PD	DM																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
								ND050	ND100	ND120	ND150	ND190	ND6300	NDM500																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
 1 edge		Size	IC	S	D1	AN	P																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						

● stock standard, ○ non-standard stock

HOLDERS EXTERNAL

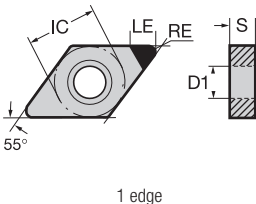


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HOLDERS INTERNAL



p. 111

DN		DIAMOND Negative				ISO513	DP (PCD)					PD	DM										
		Size	IC	S	D1		ND050	ND100	ND120	ND150	ND190	ND300	NDM500										
		MICRO DN	7.00	3.18	3.60	P																	
		1506□□	12.70	6.35	5.16	M																	
						K																	
						N	500 1500	500 2000	500 2000	500 2500	500 2500	1000 3000	1000 3000										
						S	50 100																
GRADE APPLICATION AREA		Stable machining, continuous cut				H					10 30			◀ HARD METAL (Co ≤ 16%)									
main application		General machining, light interruption																					
applicable		Unstable machining, interrupted cut																					
SLANT TIP	STANDARD N	DNGM	150604	RE 0.4 LE 2.4	$a_p \triangleright$ 0.40 $f_n \triangleright$ 0.10	1.00 0.15	1.60 0.20	○															
	tip angle: 7°		150608	RE 0.8 LE 2.0	$a_p \triangleright$ 0.40 $f_n \triangleright$ 0.15	1.00 0.20	1.60 0.25	○															
	LARGE N	DNGM	150604-LRG	RE 0.4 LE 3.9	$a_p \triangleright$ 0.40 $f_n \triangleright$ 0.10	1.50 0.15	2.60 0.20	○															
	tip angle: 7°		150608-LRG	RE 0.8 LE 3.5	$a_p \triangleright$ 0.40 $f_n \triangleright$ 0.15	1.50 0.20	2.60 0.25	○															
FLAT TIP	LARGE N	MICRO	DN.R02-LRG	RE 0.2 LE 3.1	$a_p \triangleright$ 0.40 $f_n \triangleright$ 0.05	1.20 0.10	2.00 0.15		●														
			DN.R04-LRG	RE 0.4 LE 2.9	$a_p \triangleright$ 0.40 $f_n \triangleright$ 0.10	1.20 0.15	2.00 0.20		●														
	MICRONEGA		DN.R08-LRG	RE 0.8 LE 2.5	$a_p \triangleright$ 0.40 $f_n \triangleright$ 0.15	1.20 0.20	2.00 0.25		●														
	STANDARD N	DNGA	150604	RE 0.4 LE 2.4	$a_p \triangleright$ 0.40 $f_n \triangleright$ 0.10	1.00 0.15	1.60 0.20	○															
			150608	RE 0.8 LE 2.0	$a_p \triangleright$ 0.40 $f_n \triangleright$ 0.15	1.00 0.20	1.60 0.25	●															
	LARGE N	DNGA	150604-LRG	RE 0.4 LE 3.9	$a_p \triangleright$ 0.40 $f_n \triangleright$ 0.10	1.50 0.15	2.60 0.20	○															
CHIPBREAKER	CBF N	MICRO	DN.R02-CBF	RE 0.2 LE 3.1	$a_p \triangleright$ 0.20 $f_n \triangleright$ 0.04	0.60 0.08	1.00 0.12		●														
			DN.R04-CBF	RE 0.4 LE 2.9	$a_p \triangleright$ 0.20 $f_n \triangleright$ 0.05	0.60 0.10	1.00 0.15		●														
	MICRONEGA, finishing								●														
	CBG N	MICRO	DN.R04-CBG	RE 0.4 LE 2.9	$a_p \triangleright$ 0.40 $f_n \triangleright$ 0.10	1.20 0.15	2.00 0.20		●														
			DN.R08-CBG	RE 0.8 LE 2.5	$a_p \triangleright$ 0.40 $f_n \triangleright$ 0.15	1.20 0.20	2.00 0.25		●														
	MICRONEGA, roughing								●														

● stock standard, ○ non-standard stock



TURNING

THREADING

GROOVING

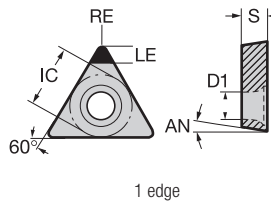
MILLING

DRILLING

ACCESSORIES

● stock standard. ○ non-standard stock



TC		DIAMOND Positive					ISO513	DP (PCD)					PD	DM												
		Size	IC	S	D1	AN		ND050	ND100	ND120	ND150	ND190	ND6300	NDM500												
 1 edge		0902□□	5.56	2.38	2.50	7°	P																			
		1102□□	6.35	2.38	2.80	7°	M																			
		16T3□□	9.525	3.97	4.40	7°	K																			
							N	500 1500	500 2000	500 2000	500 2500	500 2500	1000 3000	1000 3000												
							S	50 100																		
GRADE APPLICATION AREA		Stable machining, continuous cut					H					10 30			◀ HARD METAL (Co ≤ 16%)											
main application		General machining, light interruption					Hardness Toughness + -																			
applicable		Unstable machining, interrupted cut																								

CHIPBREAKER	CBG N	 roughing	TCGX 090204-CBG	RE 0.4	a _p ▶ 0.50	1.50	2.50																			
				LE 3.5	f _n ▶ 0.10	0.15	0.20																			
			TCGX 110204-CBG	RE 0.4	a _p ▶ 0.50	1.50	2.50																			
				LE 4.0	f _n ▶ 0.10	0.15	0.20																			
			TCGX 16T304-CBG	RE 0.8	a _p ▶ 0.50	1.50	2.50																			
				LE 3.7	f _n ▶ 0.15	0.20	0.25																			
FULL EDGE	1S N	 flat tip	TCGX 090204-1S	RE 0.4	a _p ▶ 0.50	1.50	2.50																			
				LE 9.6	f _n ▶ 0.10	0.15	0.20																			
			TCGX 110204-1S	RE 0.4	a _p ▶ 0.50	2.00	3.50																			
				LE 11.0	f _n ▶ 0.10	0.15	0.20																			
			TCGX 16T304-1S	RE 0.4	a _p ▶ 0.50	3.00	5.50																			
				LE 16.5	f _n ▶ 0.10	0.15	0.20																			

● stock standard, ○ non-standard stock

TN**DIAMOND**
Negative

ISO513

DP (PCD)

PD

DM

ND050

ND100

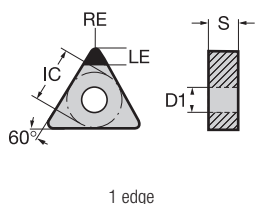
ND120

ND150

ND190

NDC300

NDM500



Size

IC

S

D1

AN

1604□□

9.525

4.76

3.81

P

M

K

N

S

H

500
1500500
2000500
2000500
2500500
25001000
30001000
300050
10010
30

◀ HARD METAL (Co ≤ 16%)

GRADE APPLICATION AREA

Stable machining, continuous cut

main application

General machining, light interruption

applicable

Unstable machining, interrupted cut

+

-

+

Hardness

Toughness

+

○

○

○

SLANT TIP

STANDARD N



tip angle: 7°

TNGM

160404

RE 0.4

a_p ▶

0.40

1.00

1.60

LE 2.5

f_n ▶

0.10

0.15

0.20

160408

RE 0.8

a_p ▶

0.40

1.00

1.60

LE 2.0

f_n ▶

0.15

0.20

0.25

LARGE N



tip angle: 7°

TNGM

160404-LRG

RE 0.4

a_p ▶

0.40

1.50

2.60

LE 4.0

f_n ▶

0.10

0.15

0.20

160408-LRG

RE 0.8

a_p ▶

0.40

1.50

2.60

LE 3.7

f_n ▶

0.15

0.20

0.25

FLAT TIP

STANDARD N



TNGA

160404

RE 0.4

a_p ▶

0.40

1.00

1.60

LE 2.5

f_n ▶

0.10

0.15

0.20

160408

RE 0.8

a_p ▶

0.40

1.00

1.60

LE 2.0

f_n ▶

0.15

0.20

0.25

LARGE N



TNGA

160404-LRG

RE 0.4

a_p ▶

0.40

1.50

2.60

LE 4.0

f_n ▶

0.10

0.15

0.20

160408-LRG

RE 0.8

a_p ▶

0.40

1.50

2.60

LE 3.7

f_n ▶

0.15

0.20

0.25

● stock standard, ○ non-standard stock

HOLDERS EXTERNAL

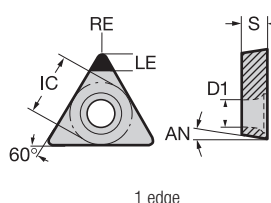


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HOLDERS INTERNAL

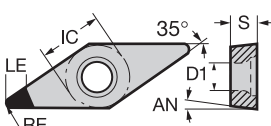


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TP		DIAMOND Positive					ISO513	DP (PCD)					PD	DM																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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● stock standard, ○ non-standard stock

● stock standard. ○ non-standard stock

VC		DIAMOND Positive					ISO513	DP (PCD)						PD	DM																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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● stock standard, ○ non-standard stock



VC

DIAMOND
Positive

ISO513

DP (PCD)

PD

DM

ND050

ND100

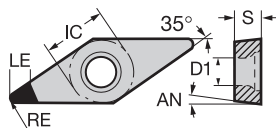
ND120

ND150

ND190

ND6300

NDM500



1 edge

Size

IC

S

D1

AN

P

1103□□

6.35

3.18

2.80

7°

M

1604□□

9.525

4.76

4.40

7°

K

N

S

H

500

500

500

500

500

1000

1000

1500

2000

2000

2500

2500

3000

3000

50

100

10

30

10

30

10

◀ HARD METAL (Co ≤ 16%)

GRADE APPLICATION AREA

Stable machining, continuous cut

main application

General machining, light interruption

applicable

Unstable machining, interrupted cut

+

-

Hardness

+

-

Toughness

○

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1S IV



flat tip, picture: right-hand

VCGX

110304*/L-1S

RE 0.4

a_p ▶

0.50

2.00

3.50

LE 11.2

f_n ▶

0.10

0.15

0.20

VCGX

160404*/L-1S

RE 0.4

a_p ▶

0.50

3.00

5.50

LE 16.6

f_n ▶

0.10

0.15

0.20

● stock standard

HOLDERS EXTERNAL

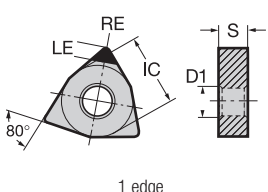


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HOLDERS INTERNAL



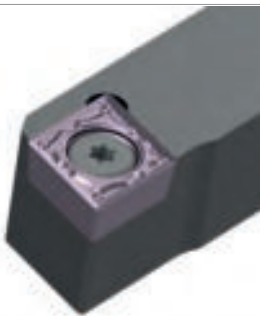
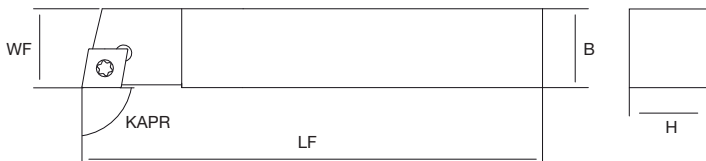
p. 157

WN		DIAMOND Negative				ISO513	DP (PCD)					PD	DM																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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● stock standard, ○ non-standard stock



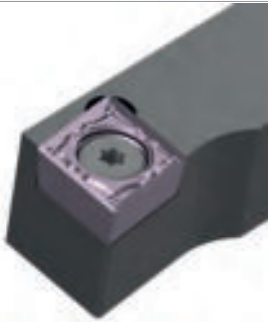
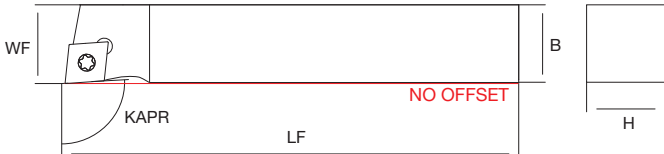
TURNING Holders

CC					Right-hand shown							
EXTERNAL												
S												
SCAC External turning (KAPR 90°)					H	B	WF	LF	 KG	MIID		
					R	L						
06	NT-SCAC%/0808K06	○	○	8	8	8	125		CC□□0602			
	NT-SCAC%/1010K06	●	●	10	10	10	125					
	NT-SCAC%/1212K06	●	●	12	12	12	125					
09	NT-SCAC%/1212K09	●	●	12	12	12	125		CC□□09T3			
	NT-SCAC%/1616K09	●	●	16	16	16	125					

● stock standard, ○ non-standard stock

Spare Parts		INSERT SCREW	INSERT WRENCH
			
NT-SCAC ^R /0808K06	NT-ST010	NT-FT07	
NT-SCAC ^R /1010K06			
NT-SCAC ^R /1212K06			
NT-SCAC ^R /1212K09	NT-ST030	NT-FT15	
NT-SCAC ^R /1616K09			

Inserts		CARBIDE	PCBN	CERAMIC	DIAMOND
					
CC□□0602	page 8	page 39	page 56	page 70	
CC□□09T3	page 8	page 39	page 56	page 70	

CC					Right-hand shown							
EXTERNAL												
S												
SCLC N External turning (KAPR 95°)					H	B	WF	LF	 KG	MIID		
			R	L								
06	NT-SCLC%/0808K06N		○	○	8	8	8	125		CC□□0602		
	NT-SCLC%/1010K06N		●	●	10	10	10	125				
09	NT-SCLC%/1212K09N		●	●	12	12	12	125		CC□□09T3		
	NT-SCLC%/1616K09N		●	●	16	16	16	125				

● stock standard, ○ non-standard stock

Spare Parts	INSERT SCREW	INSERT WRENCH
		

NT-SCLC%/L0808K06N	NT-ST010	NT-FT07
NT-SCLC%/L1010K06N		
NT-SCLC%/L1212K09N	NT-ST030	NT-FT15
NT-SCLC%/L1616K09N		

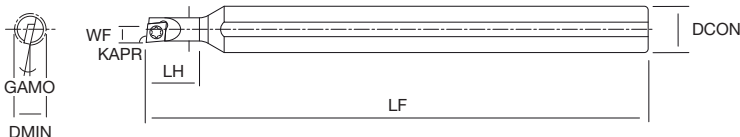
Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
CC□□0602	page 8	page 39	page 56	page 70
CC□□09T3	page 8	page 39	page 56	page 70

CC EXTERNAL S						Right-hand shown							
SCLC External turning (KAPR 95°)						H	B	WF	LF	LH		MIID	
		R	L										
09	NT-SCLC%/2020K09S	●	●	20	20	25	125	22				CC□□09T3	
	NT-SCLC%/2525M09S	●	●	25	25	32	150	25					
12	NT-SCLC%/2020K12S	●	●	20	20	25	125	22				CC□□1204	
	NT-SCLC%/2525M12S	●	●	25	25	32	150	25					

● stock standard

Spare Parts	SHIM	SHIM SCREW	SHIM WRENCH	INSERT SCREW	INSERT WRENCH
NT-SCLC%/2020K09S	NT-SH011	NT-SR010	NT-WR035	NT-ST040	NT-FT15
NT-SCLC%/2525M09S					
NT-SCLC%/2020K12S	NT-SH001	NT-SR001	NT-WR040	NT-ST007	NT-FT15
NT-SCLC%/2525M12S					

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
CC□□09T3	page 8	page 39	page 56	page 70
CC□□1204	page 8	-	page 56	page 70

CC INTERNAL S										STEEL max 3xD INTERNAL COOLANT
A MICRO Internal turning (KAPR 95°)			DMIN	DCON	WF	LF	LH	GAMO	KG	MIID
MICRO	NT-A12H-MICRO-CC-RH	●	5	12	2.5	100	8	15°		MICRO CC
	NT-A16H-MICRO-CC-RH	●	5	16	2.5	100	12	15°		

● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH
		
NT-A12H-MICRO-CC-RH	NT-ST002	NT-FT06
NT-A16H-MICRO-CC-RH		

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
MICRO CC	page 8	page 39	-	page 70

TURNING

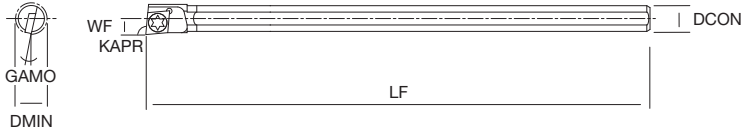
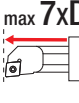
THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

CC INTERNAL  			CARBIDE 		max 7xD 				
			C MICRO Internal turning (KAPR 95°)		R				
		DMIN	DCON	WF	LF	GAMO	 KG	MIID	
MICRO	NT-C04G-MICRO-CC-RH	●	5	4	2.5	90	15°		MICRO CC
	NT-C05H-MICRO-CC-RH	●	6	5	3	100	13°		

● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH
		
NT-C04G-MICRO-CC-RH	NT-ST002	NT-FT06
NT-C05H-MICRO-CC-RH		

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
MICRO CC	page 8	page 39	-	page 70

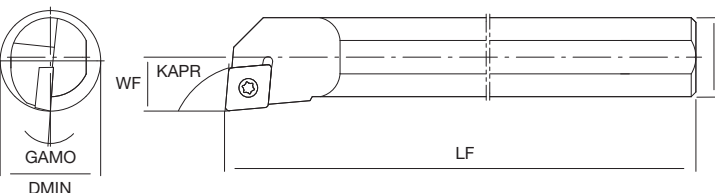




INTERNAL





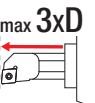


Right-hand shown

STEEL



max 3xD



S SCLC

Internal turning (KAPR 95°)

	R	L	DMIN	DCON	WF	LF	GAMO	KG	MIID
--	---	---	------	------	----	----	------	----	------

06	NT-S08H-SCLC%/06	●	●	10	8	5	100	13°	CC□□0602	
	NT-S10K-SCLC%/06	●	●	12	10	6	125	12°		
	NT-S12M-SCLC%/06	●	●	14	12	7	150	9°		
	NT-S16Q-SCLC%/06	●	●	18	16	9	180	7°		
09	NT-S12M-SCLC%/09	●	●	14	12	7	150	13°	CC□□09T3	
	NT-S16Q-SCLC%/09	●	●	18	16	9	180	9°		
	NT-S20R-SCLC%/09	●	●	22	20	11	200	5°		
12	NT-S20R-SCLC%/12	●	●	25	20	13	200	8°	CC□□1204	
	NT-S25R-SCLC%/12	●	●	32	25	17	200	8°		
	NT-S32S-SCLC%/12S	●	●	40	32	22	250	6°	CC□□1204	
	NT-S40T-SCLC%/12S	●	●	50	40	27	300	4°		

● stock standard

Spare Parts	SHIM	SHIM SCREW	SHIM WRENCH	INSERT SCREW	INSERT WRENCH
					

NT-S08H-SCLC%/06	-	-	-	NT-ST006	NT-FT07
NT-S10K-SCLC%/06				NT-ST010	
NT-S12M-SCLC%/06					
NT-S16Q-SCLC%/06					
NT-S12M-SCLC%/09	-	-	-	NT-ST025	NT-FT15
NT-S16Q-SCLC%/09				NT-ST030	
NT-S20R-SCLC%/09					
NT-S20R-SCLC%/12	-	-	-	NT-ST050	NT-FT15
NT-S25R-SCLC%/12					
NT-S32S-SCLC%/12S	NT-SH001	NT-SR001	NT-WR040	NT-ST007	NT-FT15
NT-S40T-SCLC%/12S					

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
CC□□0602	page 8	page 39	-	page 70
CC□□09T3	page 8	page 39	page 56	page 70
CC□□1204	page 8	-	page 56	page 70

TURNING

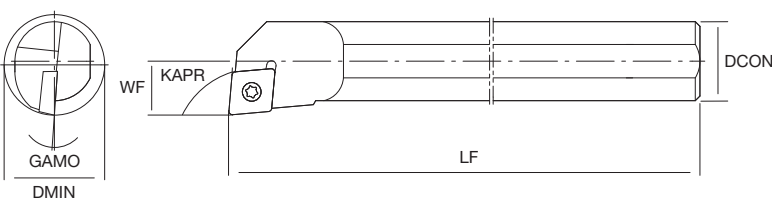
THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

CC INTERNAL  S												Right-hand shown		STEEL  max 3xD  INTERNAL COOLANT 	
A SCLC Internal turning (KAPR 95°)				R	L	DMIN	DCON	WF	LF	GAMO		MIID			
06	NT-A08H-SCLC%/06	●	●	10	8	5	100	13°			CC□□0602				
	NT-A10K-SCLC%/06	●	●	12	10	6	125	12°							
	NT-A12M-SCLC%/06	●	●	14	12	7	150	9°							
	NT-A16Q-SCLC%/06	●	●	18	16	9	180	7°							
09	NT-A12M-SCLC%/09	●	●	14	12	7	150	13°			CC□□09T3				
	NT-A16Q-SCLC%/09	●	●	18	16	9	180	9°							
	NT-A20R-SCLC%/09	●	●	22	20	11	200	5°							

● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH
		

NT-A08H-SCLC [®] /06	NT-ST006	NT-FT07
NT-A10K-SCLC [®] /06	NT-ST010	
NT-A12M-SCLC [®] /06		
NT-A16Q-SCLC [®] /06		
NT-A12M-SCLC [®] /09	NT-ST025	NT-FT15
NT-A16Q-SCLC [®] /09		
NT-A20R-SCLC [®] /09	NT-ST030	

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				

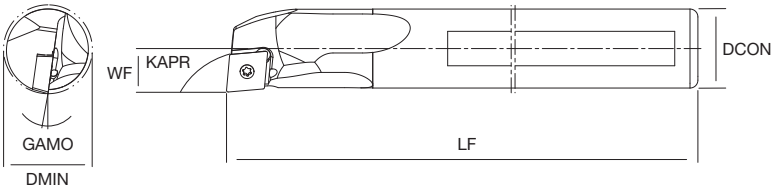
CC□□0602	page 8	page 39	-	page 70
CC□□09T3	page 8	page 39	page 56	page 70



INTERNAL







Right-hand shown



max 5xD



V SCLC
Internal turning (KAPR 95°)

	R	L	DMIN	DCON	WF	LF	GAMO	KG	MIID
--	---	---	------	------	----	----	------	----	------

06	NT-V08H-SCLC%/06-10	●	●	10	8	5	100	14°	CC□0602	
	NT-V10K-SCLC%/06-12	●	●	12	10	6	125	12°		
	NT-V12M-SCLC%/06-14	●	●	14	12	7	150	10°		
09	NT-V12M-SCLC%/09-14	●	●	14	12	7	150	12°	CC□09T3	
	NT-V16Q-SCLC%/09-18	●	●	18	16	9	180	10°		
	NT-V20R-SCLC%/09-22	●	●	22	20	11	200	8°		
	NT-V25S-SCLC%/09-27	●	●	27	25	13.5	250	6°		
12	NT-V20R-SCLC%/12-25	●	●	25	20	13	200	7°	CC□1204	
	NT-V25S-SCLC%/12-32	●	●	32	25	17	250	5°		

● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH
		

NT-V08H-SCLC [®] /06-10	NT-ST006	NT-FT07
NT-V10K-SCLC [®] /06-12	NT-ST010	
NT-V12M-SCLC [®] /06-14		
NT-V12M-SCLC [®] /09-14	NT-ST025	NT-FT15
NT-V16Q-SCLC [®] /09-18		
NT-V20R-SCLC [®] /09-22	NT-ST030	
NT-V25S-SCLC [®] /09-27		
NT-V20R-SCLC [®] /12-25	NT-ST050	NT-FT15
NT-V25S-SCLC [®] /12-32		

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
CC□0602	page 8	page 39	-	page 70
CC□09T3	page 8	page 39	page 56	page 70
CC□1204	page 8	-	page 56	page 70

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

CC INTERNAL S			Right-hand shown CARBIDE max 7xD INTERNAL COOLANT							
E SCLC Internal turning (KAPR 95°)			DMIN	DCON	WF	LF	GAMO	KG	MIID	
		R L								
06	NT-E08K-SCLC%/06	● ●	10	8	5	125	9°		CC□□0602	
	NT-E10K-SCLC%/06	● ●	12	10	6	125	7°			
	NT-E12M-SCLC%/06	● ●	14	12	7	150	6°			
09	NT-E12M-SCLC%/09	● ●	14	12	7	150	6°		CC□□09T3	
	NT-E16R-SCLC%/09	● ●	18	16	9	200	7°			
	NT-E20R-SCLC%/09	● ●	22	20	11	200	5°			

● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH

NT-E08K-SCLC [®] /06	NT-ST006	NT-FT07
NT-E10K-SCLC [®] /06	NT-ST010	
NT-E12M-SCLC [®] /06		
NT-E12M-SCLC [®] /09	NT-ST025	NT-FT15
NT-E16R-SCLC [®] /09		
NT-E20R-SCLC [®] /09	NT-ST030	

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
CC□□0602	page 8	page 39	-	page 70
CC□□09T3	page 8	page 39	page 56	page 70

CC

INTERNAL

S

STEEL

max 3xD

S SCZC

Internal turning (KAPR 93°)

R

L

DMIN

DCON

WF

LF

LPR

GAMO

KG

MIID

06	NT-S08H-SCZC%/L06	● ●	12	8	6.5	100	110	13°	CC□□0602
	NT-S10K-SCZC%/L06	● ●	14	10	7.5	125	135	12°	
	NT-S12M-SCZC%/L06	● ●	16	12	8.5	150	160	10°	
09	NT-S16Q-SCZC%/L09	● ●	21	16	11.5	180	196	10°	CC□□09T3
	NT-S20R-SCZC%/L09	● ●	25	20	13.5	200	218	8°	
	NT-S25R-SCZC%/L09	● ●	32	25	16	200	218	8°	

● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH

NT-S08H-SCZC®/L06	NT-ST006	NT-FT07
NT-S10K-SCZC®/L06	NT-ST010	
NT-S12M-SCZC®/L06		
NT-S16Q-SCZC®/L09	NT-ST030	NT-FT15
NT-S20R-SCZC®/L09		
NT-S25R-SCZC®/L09		

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
CC□□0602	page 8	page 39	-	page 70
CC□□09T3	page 8	page 39	page 56	page 70

TURNING

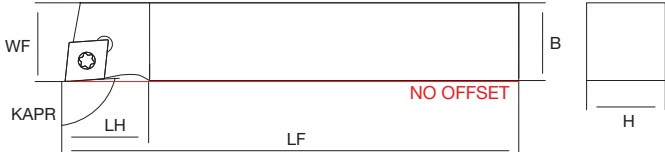
THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

CN				Right-hand shown							
EXTERNAL											
MICRONEGA											
MICRO CN External Turning (KAPR 95°)				H	B	WF	LF	LH		MIID	
		R	L								
MICRO	NT-EX10H-MICRO-CN ^{RH/LH}	●	●	10	10	10	100	15		MICRO CN	
	NT-EX12H-MICRO-CN ^{RH/LH}	●	●	12	12	12	100	15			
	NT-EX16K-MICRO-CN ^{RH/LH}	●	●	16	16	16	120	15			
	NT-EX20K-MICRO-CN ^{RH/LH}	●	●	20	20	20	120	15			
	NT-EX25M-MICRO-CN ^{RH/LH}	●	●	25	25	25	150	15			

● stock standard

Spare Parts		INSERT SCREW	INSERT WRENCH
			
NT-EX10H-MICRO-CN ^{RH/LH}	NT-ST400	NT-FT10	
NT-EX12H-MICRO-CN ^{RH/LH}			
NT-EX16K-MICRO-CN ^{RH/LH}			
NT-EX20K-MICRO-CN ^{RH/LH}			
NT-EX25M-MICRO-CN ^{RH/LH}			

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
MICRO CN	page 10	page 40	-	page 72

CN EXTERNAL D					Right-hand shown 							
DCLN External Turning (KAPR 95°)					H	B	WF	LF	LH	 KG	MIID	
		R	L									
09	NT-DCLN®/L1616H09X	●	●	16	16	20	100	33		CN□□0903		
	NT-DCLN®/L2020K09X	●	●	20	20	25	125	30				
	NT-DCLN®/L2525M09X	●	●	25	25	32	150	30				
12	NT-DCLN®/L2020K12X	●	●	20	20	25	125	40		CN□□1204		
	NT-DCLN®/L2525M12X	●	●	25	25	32	150	36				
	NT-DCLN®/L3225P12X	●	●	32	25	32	170	36				

● stock standard

Spare Parts	SHIM	SHIM SCREW	SHIM WRENCH	CLAMP	SPRING	CLAMP SCREW	CLAMP WRENCH
NT-DCLN [®] /L1616H09X	NT-SH012	NT-ST031	NT-WR020	NT-CS250	NT-SG250	NT-SC250	NT-TX15
NT-DCLN [®] /L2020K09X							
NT-DCLN [®] /L2525M09X							
NT-DCLN [®] /L2020K12X	NT-SH030	NT-ST200	NT-WR025	NT-CS200	NT-SG200	NT-SC200	NT-TX20
NT-DCLN [®] /L2525M12X							
NT-DCLN [®] /L3225P12X							

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
CN□□0903	page 10	-	-	-
CN□□1204	page 10	page 40	page 57	page 72

CN				Right-hand shown									
EXTERNAL													
M													
MCKN External turning (KAPR 75°)													
R L				H	B	WF	LF	LH	LPR	KG	MIID		
12	NT-MCKN®/L2020K12			●	●	20	20	25	122	37	125		CN□□1204
	NT-MCKN®/L2525M12			●	●	25	25	32	147	34	150		
	NT-MCKN®/L3232P12			●	●	32	32	40	167	40	170		
16	NT-MCKN®/L3232P16			○	○	32	32	40	167	40	170		CN□□1606

● stock standard, ○ non-standard stock

Spare Parts	SHIM	ECCENTRIC PIN	CLAMP	CLAMP SCREW	WRENCH
NT-MCKN®/L2020K12	NT-SH030	NT-SP010	NT-CS010	NT-SC010	NT-WR030
NT-MCKN®/L2525M12					
NT-MCKN®/L3232P12					
NT-MCKN®/L3232P16	NT-SH055	NT-SP040	NT-CS010	NT-SC010	NT-WR030

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
CN□□1204	page 10	page 40	page 57	page 72
CN□□1606	page 10	-	page 57	-

CN

EXTERNAL

MCLN

External turning (KAPR 95°)

R

L

H

B

WF

LF

LH

KG

MIID

12	NT-MCLN®/L2020K12	● ●	20	20	25	125	33	CN□□1204
	NT-MCLN®/L2525M12	● ●	25	25	32	150	33	
	NT-MCLN®/L3232P12	● ●	32	32	40	170	33	
16	NT-MCLN®/L2525M16	● ●	25	25	32	150	33	CN□□1606
	NT-MCLN®/L3232P16	● ●	32	32	40	170	33	
19	NT-MCLN®/L3232P19	○ ○	32	32	40	170	38	CN□□1906
	NT-MCLN®/L4040S19	○ ○	40	40	50	250	38	

● stock standard, ○ non-standard stock

Spare Parts	SHIM	ECCENTRIC PIN	CLAMP	CLAMP SCREW	WRENCH
NT-MCLN®/L2020K12	NT-SH030	NT-SP010	NT-CS010	NT-SC010	NT-WR030
NT-MCLN®/L2525M12					
NT-MCLN®/L3232P12					
NT-MCLN®/L2525M16	NT-SH055	NT-SP040	NT-CS010	NT-SC010	NT-WR030
NT-MCLN®/L3232P16					
NT-MCLN®/L3232P19	NT-SH080	NT-SP050	NT-CS015	NT-SC070	NT-WR040
NT-MCLN®/L4040S19					

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
CN□□1204	page 10	page 40	page 57	page 72
CN□□1606	page 10	-	page 57	-
CN□□1906	page 11	-	-	-

CN EXTERNAL M			Right-hand shown 							
	MCRN External turning (KAPR 75°)		H	B	WF	LF	LH	 KG	MIID	
	R	L								
12	NT-MCRN®/L2020K12	●	●	20	20	22	125	37	CN□□1204	
	NT-MCRN®/L2525M12	●	●	25	25	27	150	34		
	NT-MCRN®/L3232P12	●	●	32	32	35	170	40		
16	NT-MCRN®/L3232P16	○	○	32	32	35	170	40	CN□□1606	

● stock standard, ○ non-standard stock

Spare Parts	SHIM	ECCENTRIC PIN	CLAMP	CLAMP SCREW	WRENCH
					
NT-MCRN®/L2020K12	NT-SH030	NT-SP010	NT-CS010	NT-SC010	NT-WR030
NT-MCRN®/L2525M12					
NT-MCRN®/L3232P12					
NT-MCRN®/L3232P16	NT-SH055	NT-SP040	NT-CS010	NT-SC010	NT-WR030

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
CN□□1204	page 10	page 40	page 57	page 72
CN□□1606	page 10	-	page 57	-

CN EXTERNAL P			Right-hand shown 							
	PCLN External turning (KAPR 95°)		H	B	WF	LF	LH	 KG	MIID	
	R	L								
09	NT-PCLN®/L1616H09	●	●	16	16	20	100	20	CN□□0903	
	NT-PCLN®/L2020K09	●	●	20	20	25	125	20		
	NT-PCLN®/L2525M09	●	●	25	25	32	150	23		
12	NT-PCLN®/L2020K12	●	●	20	20	25	125	26	CN□□1204	
	NT-PCLN®/L2525M12	●	●	25	25	32	150	26		

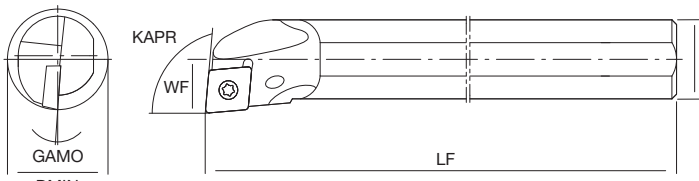
● stock standard

Spare Parts	SHIM	PLUG	LEVER	LEVER SCREW	WRENCH
NT-PCLN®/L1616H09	NT-SH012	NT-SR012	NT-LL012	NT-SC015	NT-WR025
NT-PCLN®/L2020K09					
NT-PCLN®/L2525M09					
NT-PCLN®/L2020K12	NT-SH035	NT-SR020	NT-LL020	NT-SC025	NT-WR030
NT-PCLN®/L2525M12					

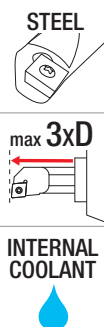
Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
CN□□0903	page 10	-	-	-
CN□□1204	page 10	page 40	page 57	page 72

CN





Right-hand shown



A MICRO CN

Internal turning (KAPR 95°)

DMIN	DCON	WF	LF	GAMO	KG	MIID

MICRO			R	L	DMIN	DCON	WF	LF	GAMO	KG	MIID	
	NT-A08K-MICRO-CN ^{RH/LH}		●	●	10	8	5.5	125	21°			
	NT-A10K-MICRO-CN ^{RH/LH}		●	●	12	10	6	125	21°			
	NT-A12M-MICRO-CN ^{RH/LH}		●	●	14	12	7	150	19°			
	NT-A16R-MICRO-CN ^{RH/LH}		●	●	20	16	10	200	16°			
	NT-A20R-MICRO-CN ^{RH/LH}		●	●	24	20	12.5	200	16°			

● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH
		

NT-A08K-MICRO-CN ^{RH/LH}	NT-ST400	NT-FT10
NT-A10K-MICRO-CN ^{RH/LH}		
NT-A12M-MICRO-CN ^{RH/LH}		
NT-A16R-MICRO-CN ^{RH/LH}		
NT-A20R-MICRO-CN ^{RH/LH}		

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
MICRO CN	page 10	page 40	-	page 72

ACCESSORIES

- stock standard

NT-E08K-MICRO-CN ^{RH/LH}	NT-ST400	NT-FT10
NT-E10K-MICRO-CN ^{RH/LH}		
NT-E12M-MICRO-CN ^{RH/LH}		
NT-E16R-MICRO-CN ^{RH/LH}		
NT-E20R-MICRO-CN ^{RH/LH}		

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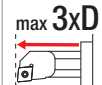
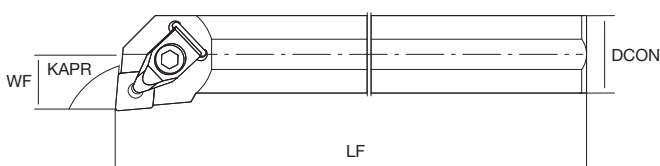
TURNING

Right-hand shown

STEEL

CN

INTERNAL



INTERNAL COOLANT

**A DCLN**

Internal turning (KAPR 95°)

R L

DMIN

DCON

WF

LF

GAMO

KG

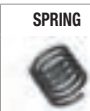
MIID

12	NT-A25R-DCLN [®] /L12	●	●	32	25	17	200	14°	CN□□1204	
	NT-A32S-DCLN [®] /L12	●	●	40	32	22	250	14°		
	NT-A40T-DCLN [®] /L12	●	●	50	40	27	300	12°		

● stock standard

GROOVING

Spare Parts

NT-A25R-DCLN[®]/L12NT-A32S-DCLN[®]/L12NT-A40T-DCLN[®]/L12

NT-SH035

NT-ST200

NT-WR025

NT-CS200

NT-SG200

NT-SC200

NT-TX20

MILLING

Inserts



CN□□1204

page 10

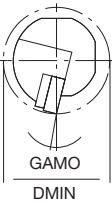
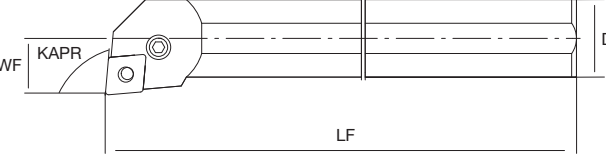
page 40

page 57

page 72

DRILLING

ACCESSORIES

CN INTERNAL P				Right-hand shown					 STEEL	
									 INTERNAL COOLANT	
A PCLN Internal turning (KAPR 95°)			DMIN	DCON	WF	LF	GAMO		MIID	
12	NT-A25R-PCLN®/L12	●	●	32	25	17	200	11°		CN□□1204
	NT-A32S-PCLN®/L12	●	●	40	32	22	250	11°		
	NT-A40T-PCLN®/L12	●	●	50	40	27	300	10°		

● stock standard

Spare Parts	SHIM	PLUG	LEVER	LEVER SCREW	WRENCH
					

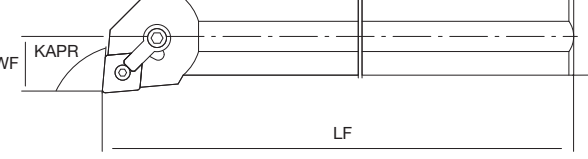
NT-A25R-PCLN®/L12	-	NT-SR015	NT-LL015	NT-SC015	NT-WR025
NT-A32S-PCLN®/L12	NT-SH035	NT-SR020	NT-LL020	NT-SC025	NT-WR030
NT-A40T-PCLN®/L12					

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				

CN□□1204	page 10	page 40	page 57	page 72
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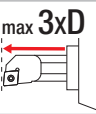
CN





Right-hand shown

STEEL





INTERNAL



M

S MCLN

Internal turning (KAPR 95°)

	R	L	DMIN	DCON	WF	LF	GAMO	KG	MIID
--	---	---	------	------	----	----	------	----	------

12	NT-S20R-MCLN [®] /L12	●	●	25	20	13	200	17°	CN□□1204	
	NT-S25R-MCLN [®] /L12	●	●	32	25	17	200	14°		
	NT-S32S-MCLN [®] /L12	●	●	40	32	22	250	14°		
	NT-S40T-MCLN [®] /L12	●	●	50	40	27	300	12°		
	NT-S50U-MCLN [®] /L12	●	●	63	50	35	350	12°		
16	NT-S40T-MCLN [®] /L16	●	●	50	40	27	300	11°	CN□□1606	
	NT-S50U-MCLN [®] /L16	●	●	63	50	35	350	12°		
19	NT-S50U-MCLN [®] /L19	●	●	63	50	35	350	12°	CN□□1906	

● stock standard, ○ non-standard stock

Spare Parts	SHIM	ECCENTRIC PIN	PIN WRENCH	CLAMP	CLAMP SCREW	CLAMP WRENCH
						

NT-S20R-MCLN®/L12	-	NT-SP035	NT-WR025	NT-CS030	NT-SC030	NT-WR025
NT-S25R-MCLN®/L12				NT-CS010	NT-SC008	NT-WR030
NT-S32S-MCLN®/L12	NT-SC010					
NT-S40T-MCLN®/L12						
NT-S50U-MCLN®/L12						
NT-S40T-MCLN®/L16	NT-SH055	NT-SP040	NT-WR030	NT-CS010	NT-SC010	NT-WR030
NT-S50U-MCLN®/L16						
NT-S50U-MCLN®/L19	NT-SH080	NT-SP050	NT-WR030	NT-CS015	NT-SC070	NT-WR040

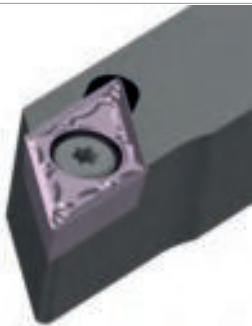
Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				

CN□□1204	page 10	page 40	page 57	page 72
CN□□1606	page 10	-	page 57	-
CN□□1906	page 11	-	-	-

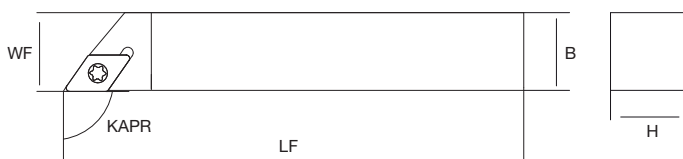
DC

EXTERNAL





WF



B

KAPR

LF

H

Right-hand shown

SDAC

External turning (KAPR 90°)

R

L

H

B

WF

LF



MIID

07

NT-SDAC%/L0808K07

NT-SDAC%/L1010K07

NT-SDAC%/L1212K07

○

○

●

●

●

●

8

10

12

8

10

12

8

10

12

125

125

125

DC□□0702

11

NT-SDAC%/L1212K11

NT-SDAC%/L1616K11

●

●

●

●

12

16

12

16

12

16

125

125

DC□□11T3

● stock standard, ○ non-standard stock

Spare Parts	INSERT SCREW	INSERT WRENCH
		

NT-SDAC%/L0808K07	NT-ST010	NT-FT07
NT-SDAC%/L1010K07		
NT-SDAC%/L1212K07		
NT-SDAC%/L1212K11	NT-ST035	NT-FT15
NT-SDAC%/L1616K11		

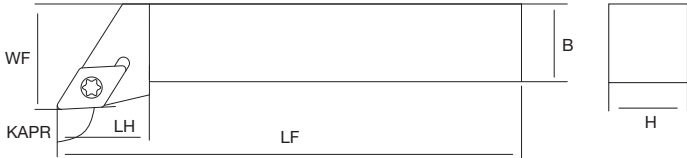
Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
DC□□0702	page 14	page 42	-	page 73
DC□□11T3	page 14	page 42	-	page 73

DC					Right-hand shown							
EXTERNAL												
												
SDJC N External turning (KAPR 93°)					H	B	WF	LF		MIID		
		R	L									
07	NT-SDJC%/L0808K07N	○	○	8	8	8	125		DC□□0702			
	NT-SDJC%/L1010K07N	●	●	10	10	10	125					
	NT-SDJC%/L1212K07N	●	●	12	12	12	125					
11	NT-SDJC%/L1212K11N	●	●	12	12	12	125		DC□□11T3			
	NT-SDJC%/L1616K11N	●	●	16	16	16	125					

● stock standard, ○ non-standard stock

Spare Parts	INSERT SCREW	INSERT WRENCH
		
NT-SDJC%/L0808K07N	NT-ST010	NT-FT07
NT-SDJC%/L1010K07N		
NT-SDJC%/L1212K07N		
NT-SDJC%/L1212K11N	NT-ST035	NT-FT15
NT-SDJC%/L1616K11N		

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
DC□□0702	page 14	page 42	-	page 73
DC□□11T3	page 14	page 42	-	page 73

DC EXTERNAL S			Right-hand shown										
													
			SDJC		External turning (KAPR 93°)		H	B	WF	LF	LH	 KG	MIID
	R	L											
11	NT-SDJC%/L1616H11	●	●	16	16	20	100	18		DC□□11T3			
	NT-SDJC%/L2020K11	●	●	20	20	25	125	23					
	NT-SDJC%/L2525M11	●	●	25	25	32	150	27					
	NT-SDJC%/L2020K11S	●	●	20	20	25	125	22		DC□□11T3			
	NT-SDJC%/L2525M11S	●	●	25	25	32	150	25					

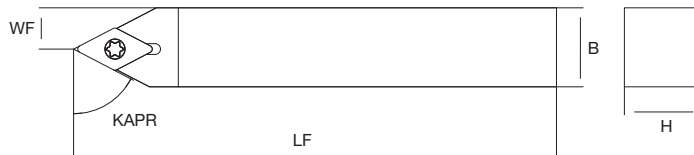
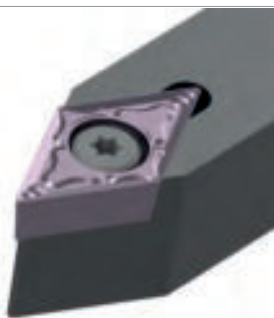
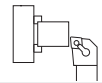
● stock standard

Spare Parts	SHIM	SHIM SCREW	SHIM WRENCH	INSERT SCREW	INSERT WRENCH
					
NT-SDJC%/L1616H11	-	-	-	NT-ST035	NT-FT15
NT-SDJC%/L2020K11					
NT-SDJC%/L2525M11					
NT-SDJC%/L2020K11S	NT-SH007	NT-SR010	NT-WR035	NT-ST040	NT-FT15
NT-SDJC%/L2525M11S					

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
DC□□11T3	page 14	page 42	-	page 73

DC

EXTERNAL

**SDNCN**

External turning (KAPR 62.5°)

H

B

WF

LF

KG

MIID

07	NT-SDNCN0808H07	○	8	8	4	100		DC□□0702		
	NT-SDNCN1010H07	○	10	10	5	100				
11	NT-SDNCN1212H11	●	12	12	6	100		DC□□11T3		
	NT-SDNCN1616H11	●	16	16	8	100				
	NT-SDNCN2020K11	●	20	20	10	125				
	NT-SDNCN2525M11	●	25	25	12.5	150				
	NT-SDNCN2020K11S	○	20	20	10	125		DC□□11T3		
	NT-SDNCN2525M11S	○	25	25	12.5	150				

● stock standard, ○ non-standard stock

Spare Parts

SHIM

SHIM SCREW

SHIM WRENCH

INSERT SCREW

INSERT WRENCH



NT-SDNCN0808H07

NT-SDNCN1010H07

NT-SDNCN1212H11

NT-SDNCN1616H11

NT-SDNCN2020K11

NT-SDNCN2525M11

NT-SDNCN2020K11S

NT-SDNCN2525M11S

-

-

-

NT-ST010

NT-FT07

-

-

-

NT-ST035

NT-FT15

NT-SH007

NT-SR010

NT-WR035

NT-ST040

NT-FT15

Inserts



DC□□0702

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DC□□11T3

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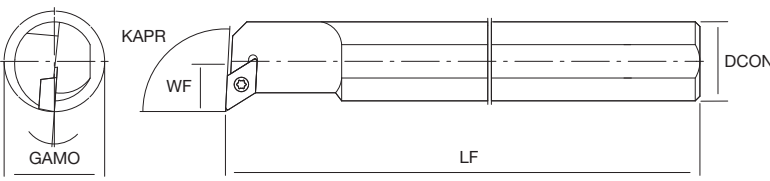
page 73

DC

INTERNAL

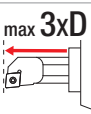






Right-hand shown

STEEL



S SDUC

Internal turning (KAPR 93°)

		R	L	DMIN	DCON	WF	LF	GAMO	KG	MIID	
07	NT-S10M-SDUC%/L07	●	●	13	10	7	150	10°		DC□□0702	
	NT-S12M-SDUC%/L07	●	●	16	12	9	150	8°			
	NT-S16Q-SDUC%/L07	●	●	20	16	11	180	6°			
	NT-S20R-SDUC%/L07	●	●	25	20	13	200	5°			
11	NT-S16Q-SDUC%/L11	●	●	20	16	11	180	7°		DC□□11T3	
	NT-S20R-SDUC%/L11	●	●	25	20	13	200	8°			
	NT-S25R-SDUC%/L11	●	●	32	25	17	200	4°			
	NT-S32S-SDUC%/L11	●	●	39	32	22	250	4°			
	NT-S40T-SDUC%/L11	●	●	50	40	24	300	2°			

● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH
		

NT-S10M-SDUC%/L07	NT-ST010	NT-FT07
NT-S12M-SDUC%/L07		
NT-S16Q-SDUC%/L07		
NT-S20R-SDUC%/L07		
NT-S16Q-SDUC%/L11	NT-ST035	NT-FT15
NT-S20R-SDUC%/L11		
NT-S25R-SDUC%/L11		
NT-S32S-SDUC%/L11		
NT-S40T-SDUC%/L11		

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
DC□□0702	page 14	page 42	-	page 73
DC□□11T3	page 14	page 42	-	page 73

TURNING

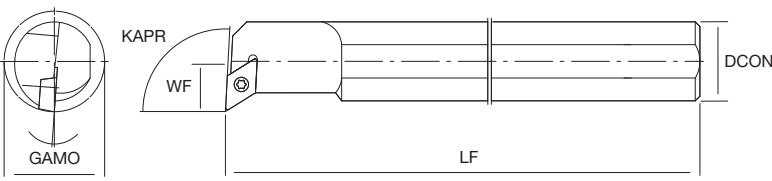
THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

DC INTERNAL 									Right-hand shown		STEEL max 3xD INTERNAL COOLANT 	
A SDUC Internal turning (KAPR 93°)				DMIN	DCON	WF	LF	GAMO		MIID		
		R	L									
07	NT-A10M-SDUC%/07	●	●	13	10	7	150	10°		DC□□0702		
	NT-A12M-SDUC%/07	●	●	16	12	9	150	8°				
	NT-A16Q-SDUC%/07	●	●	20	16	11	180	6°				
	NT-A20R-SDUC%/07	●	●	25	20	13	200	5°				
11	NT-A16Q-SDUC%/11	●	●	20	16	11	180	7°		DC□□11T3		
	NT-A20R-SDUC%/11	●	●	25	20	13	200	8°				

● stock standard

	INSERT SCREW	INSERT WRENCH
Spare Parts		

NT-A10M-SDUC%/L07	NT-ST010	NT-FT07
NT-A12M-SDUC%/L07		
NT-A16Q-SDUC%/L07		
NT-A20R-SDUC%/L07		
NT-A16Q-SDUC%/L11	NT-ST035	NT-FT15
NT-A20R-SDUC%/L11		

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
DC□□0702	page 14	page 42	-	page 73
DC□□11T3	page 14	page 42	-	page 73

DC INTERNAL									Right-hand shown VORTEX max 5xD INTERNAL COOLANT		
V SDUC Internal turning (KAPR 93°)				DMIN	DCON	WF	LF	GAMO		MIID	
		R	L								
07	NT-V10K-SDUC%/07-14	●	●	14	10	8.7	125	5°		DC□□0702	
	NT-V12M-SDUC%/07-16	●	●	16	12	9.7	150	5°			
	NT-V16Q-SDUC%/07-20	●	●	20	16	11.7	180	5°			
	NT-V20R-SDUC%/07-25	●	●	25	20	13.7	200	5°			
11	NT-V16Q-SDUC%/11-23	●	●	23	16	14.5	180	5°		DC□□11T3	
	NT-V20R-SDUC%/11-27	●	●	27	20	16.5	200	5°			
	NT-V25S-SDUC%/11-32	●	●	32	25	19	250	5°			

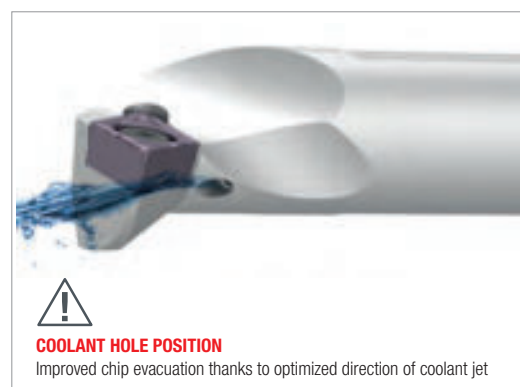
● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH
		

NT-V10K-SDUC%/07-14	NT-ST010	NT-FT07
NT-V12M-SDUC%/07-16		
NT-V16Q-SDUC%/07-20		
NT-V20R-SDUC%/07-25		
NT-V16Q-SDUC%/11-23	NT-ST035	NT-FT15
NT-V20R-SDUC%/11-27		
NT-V25S-SDUC%/11-32		

Inserts	CARBIDE 	PCBN 	CERAMIC 	DIAMOND 
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DC□□0702	page 14	page 42	-	page 73
DC□□11T3	page 14	page 42	-	page 73



TURNING

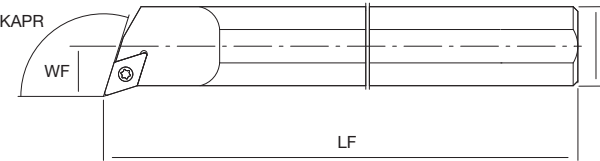
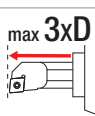
THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

DC				Right-hand shown	STEEL 				
						max 3xD 			
INTERNAL 									
									
S SDQC Internal turning (KAPR 107.5°)									
		DMIN	DCON	WF	LF	GAMO	KG	MIID	

07	NT-S10M-SDQC%/L07	● ●	13	10	7	150	10°	DC□□0702	
	NT-S12M-SDQC%/L07	● ●	16	12	9	150	8°		
	NT-S16Q-SDQC%/L07	● ●	20	16	11	180	6°		
	NT-S20R-SDQC%/L07	● ●	25	20	13	200	6°		
11	NT-S16Q-SDQC%/L11	● ●	20	16	11	180	6°	DC□□11T3	
	NT-S20R-SDQC%/L11	● ●	25	20	13	200	8°		
	NT-S25R-SDQC%/L11	● ●	32	25	17	200	4°		
	NT-S32S-SDQC%/L11	● ●	38	32	20	250	4°		

● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH
		

NT-S10M-SDQC%/L07	NT-ST010	NT-FT07
NT-S12M-SDQC%/L07		
NT-S16Q-SDQC%/L07		
NT-S20R-SDQC%/L07		
NT-S16Q-SDQC%/L11	NT-ST035	NT-FT15
NT-S20R-SDQC%/L11		
NT-S25R-SDQC%/L11		
NT-S32S-SDQC%/L11		

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
DC□□0702	page 14	page 42	-	page 73
DC□□11T3	page 14	page 42	-	page 73

TURNING

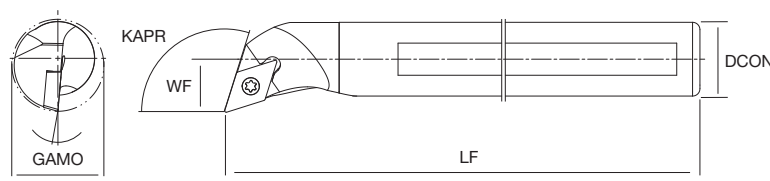
THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

DC INTERNAL 				 Right-hand shown					VORTEX max 5xD INTERNAL COOLANT 		
V SDQC Internal turning (KAPR 107.5°)				DMIN	DCON	WF	LF	GAMO		MIID	
07	NT-V10K-SDQC%/07-13	●	●	13	10	7.7	125	10°	DC□□0702		
	NT-V12M-SDQC%/07-16	●	●	16	12	9.7	150	8°			
	NT-V16Q-SDQC%/07-20	●	●	20	16	11.7	180	6°			
	NT-V20R-SDQC%/07-25	●	●	25	20	13.7	200	5°			
11	NT-V16Q-SDQC%/11-20	●	●	20	16	11.5	180	6°	DC□□11T3		
	NT-V20R-SDQC%/11-25	●	●	25	20	14.4	200	5°			
	NT-V25S-SDQC%/11-30	●	●	30	25	16.9	250	4°			

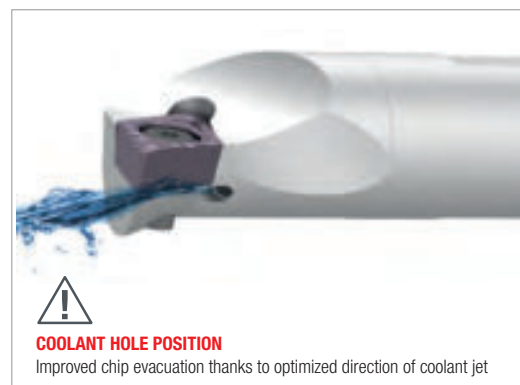
● stock standard

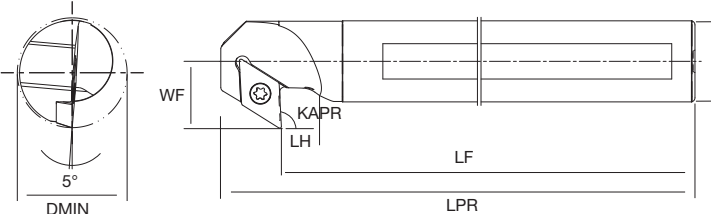
Spare Parts	INSERT SCREW	INSERT WRENCH
		

NT-V10K-SDQC%/07-13	NT-ST010	NT-FT07
NT-V12M-SDQC%/07-16		
NT-V16Q-SDQC%/07-20		
NT-V20R-SDQC%/07-25		
NT-V16Q-SDQC%/11-20	NT-ST035	NT-FT15
NT-V20R-SDQC%/11-25		
NT-V25S-SDQC%/11-30		

Inserts	CARBIDE 	PCBN 	CERAMIC 	DIAMOND 
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DC□□0702	page 14	page 42	-	page 73
DC□□11T3	page 14	page 42	-	page 73



DC INTERNAL S										Right-hand shown		STEEL max 3xD	
S SDZC Internal turning (KAPR 93°)					DMIN	DCON	WF	LF	LPR	GAMO	KG	MIID	
		R	L										
07	NT-S10M-SDZC%/L07	●	●	14	10	8.5	139	150	10°			DC□□0702	
	NT-S12M-SDZC%/L07	●	●	17	12	10.5	139	150	9°				
	NT-S16Q-SDZC%/L07	●	●	21	16	12.5	169	180	8°				
11	NT-S20R-SDZC%/L11	●	●	26	20	15.5	184	200	8°			DC□□11T3	
	NT-S25R-SDZC%/L11	○	○	33	25	18	180	200	6°				
	NT-S32S-SDZC%/L11	○	○	38	32	21.5	230	250	4°				

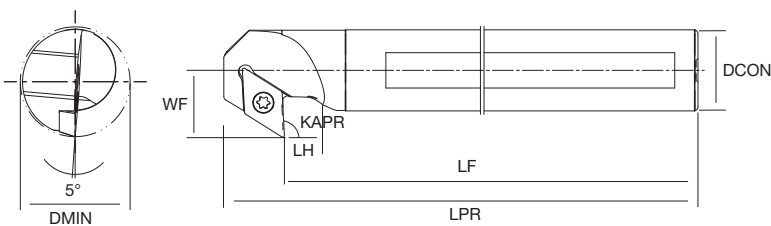
● stock standard, ○ non-standard stock

Spare Parts	INSERT SCREW	INSERT WRENCH
		
NT-S10M-SDZC%/L07	NT-ST010	NT-FT07
NT-S12M-SDZC%/L07		
NT-S16Q-SDZC%/L07		
NT-S20R-SDZC%/L11	NT-ST035	NT-FT15
NT-S25R-SDZC%/L11		
NT-S32S-SDZC%/L11		

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
DC□□0702	page 14	page 42	-	page 73
DC□□11T3	page 14	page 42	-	page 73

DC

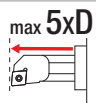




Right-hand shown



max 5xD



INTERNAL COOLANT

V SDZC

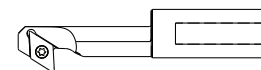
Internal turning (KAPR 93°)

			DMIN	DCON	WF	LF	LH	LPR	KG	MIID
07	NT-V10L-SDZC%/L07-14	● ●	14	10	8.7	130.5	14	140		DC□□0702
	NT-V12M-SDZC%/L07-16	● ●	16	12	9.7	139.5	12.5	150		
	NT-V16Q-SDZC%/L07-14*	● ●	14	16	13	170	30	180		
	NT-V16Q-SDZC%/L07-20	● ●	20	16	11.7	169.5	17.5	180		
11	NT-V16Q-SDZC%/L11-23	● ●	23	16	14.5	165	15	180		DC□□11T3
	NT-V20R-SDZC%/L11-20*	● ●	20	20	16.1	185	40	200		
	NT-V20R-SDZC%/L11-27	● ●	27	20	16.5	185	15	200		
	NT-V25S-SDZC%/L11-32	● ●	32	25	19	235	15	250		

● stock standard

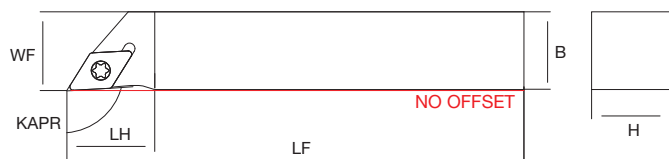
*Reduced neck

Spare Parts	INSERT SCREW	INSERT WRENCH
		



NT-V10L-SDZC%/L07-14	NT-ST010	NT-FT07
NT-V12M-SDZC%/L07-16		
NT-V16Q-SDZC%/L07-14		
NT-V16Q-SDZC%/L07-20		
NT-V16Q-SDZC%/L11-23	NT-ST035	NT-FT15
NT-V20R-SDZC%/L11-20		
NT-V20R-SDZC%/L11-27		
NT-V25S-SDZC%/L11-32		

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
DC□□0702	page 14	page 42	-	page 73
DC□□11T3	page 14	page 42	-	page 73

DN EXTERNAL MICRONEGA		Right-hand shown 								
		MICRO DN External Turning (KAPR 95°)								
		R	L	H	B	WF	LF	LH	 KG	MIID

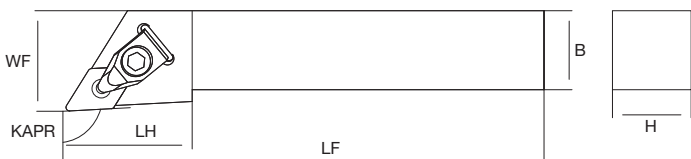
MICRO	NT-EX10H-MICRO-DN ^{RH/LH}	●	●	10	10	10	100	18		MICRO DN	
	NT-EX12H-MICRO-DN ^{RH/LH}	●	●	12	12	12	100	18			
	NT-EX16K-MICRO-DN ^{RH/LH}	●	●	16	16	16	120	18			
	NT-EX20K-MICRO-DN ^{RH/LH}	●	●	20	20	20	120	18			
	NT-EX25M-MICRO-DN ^{RH/LH}	●	●	25	25	25	150	18			

● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH
		

NT-EX10H-MICRO-DN ^{RH/LH}	NT-ST400	NT-FT10
NT-EX12H-MICRO-DN ^{RH/LH}		
NT-EX16K-MICRO-DN ^{RH/LH}		
NT-EX20K-MICRO-DN ^{RH/LH}		
NT-EX25M-MICRO-DN ^{RH/LH}		

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
MICRO DN	page 16	page 43	-	page 75

DN EXTERNAL D					Right-hand shown 							
DDJN External turning (KAPR 93°)					H	B	WF	LF	LH	 KG	MIID	
		R	L									
11	NT-DDJN®/L1616H11X	●	●	16	16	20	100	36		DN□□1104		
	NT-DDJN®/L2020K11X	●	●	20	20	25	125	36				
	NT-DDJN®/L2525M11X	●	●	25	25	32	150	36				
15	NT-DDJN®/L2020K1506X	●	●	20	20	25	125	43		DN□□1506 (DN□□1504)*		
	NT-DDJN®/L2525M1506X	●	●	25	25	32	150	43				
	NT-DDJN®/L3225P1506X	●	●	32	25	32	170	43				

● stock standard

*For DN□□1504 please purchase separately shim NT-SH025

Spare Parts	SHIM	SHIM SCREW	SHIM WRENCH	CLAMP	SPRING	CLAMP SCREW	CLAMP WRENCH
NT-DDJN [®] /L1616H11X	NT-SH007	NT-ST250	NT-WR020	NT-CS250	NT-SG250	NT-SC250	NT-TX15
NT-DDJN [®] /L2020K11X							
NT-DDJN [®] /L2525M11X							
NT-DDJN [®] /L2020K1506X	NT-SH045*	NT-ST200	NT-WR025	NT-CS200	NT-SG200	NT-SC200	NT-TX20
NT-DDJN [®] /L2525M1506X							
NT-DDJN [®] /L3225P1506X							

*Shim for DNMG1504: NT-SH025

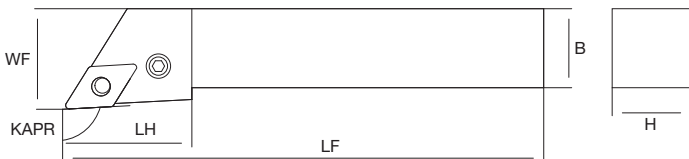
Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
DN□□1104	page 16	-	-	-
DN□□1504	-	page 43	-	-
DN□□1506	page 16	page 43	page 59	page 75

ACCESSORIES

*For DN□□1504 please purchase separately shim **NT-SH025**

*Shim for DNMG1504: NT-SH025

DN□□1504	-	page 43	-	-
DN□□1506	page 16	page 43	page 59	page 75

DN				Right-hand shown 							
EXTERNAL 											
P 											
PDJN External turning (KAPR 93°)				H	B	WF	LF	LH	 KG	MIID	
		R	L								
15	NT-PDJN®/L2525M1506	●	●	25	25	32	150	36		DN□□1506	

15	NT-PDJN®/L2525M1506	●	●	25	25	32	150	36		DN□□1506	
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● stock standard

Spare Parts					
NT-PDJN®/L2525M1506	NT-SH020	NT-SR020	NT-LL020	NT-SC020	NT-WR030

Inserts				
DN□□1506	page 16	page 43	page 59	page 75

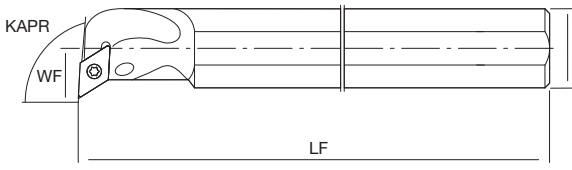
DN

**INTERNAL**

**MICRONEGA**



**DMIN**

**KAPR**
WF
GAMO
LF
DCON

Right-hand shown

**STEEL**

**max 3xD**

**INTERNAL COOLANT**

A MICRO DN
Internal turning (KAPR 95°)

R

L

DMIN

DCON

WF

LF

GAMO

**KG**

MIID

MICRO	NT-A10K-MICRO-DN ^{RH/LH}	●	●	15	10	9.3	125	19°	MICRO DN	
	NT-A12M-MICRO-DN ^{RH/LH}	●	●	16	12	9	150	17°		
	NT-A16R-MICRO-DN ^{RH/LH}	●	●	20	16	11	200	17°		
	NT-A20R-MICRO-DN ^{RH/LH}	●	●	24	20	13	200	17°		

● stock standard

Spare Parts

INSERT SCREW



INSERT WRENCH



NT-A10K-MICRO-DN ^{RH/LH}

NT-A12M-MICRO-DN ^{RH/LH}

NT-A16R-MICRO-DN ^{RH/LH}

NT-A20R-MICRO-DN ^{RH/LH}

NT-ST400

NT-FT10

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
MICRO DN	page 16	page 43	-	page 75

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

TURNING

THREADING

GROOVING

MILLING

DRILLING

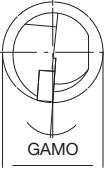
ACCESSORIES

DN

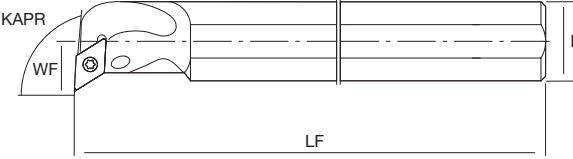
INTERNAL

MICRONEGA





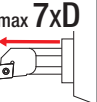
KAPR
GAMO
DMIN



Right-hand shown
WF
LF
DCON



CARBIDE



max 7xD



INTERNAL COOLANT

E MICRO DN Internal turning (KAPR 95°)			DMIN	DCON	WF	LF	GAMO	KG	MIID	
	R	L								

MICRO	NT-E10K-MICRO-DN ^{RH/LH}	●	●	15	10	9.3	125	19°	MICRO DN	
	NT-E12M-MICRO-DN ^{RH/LH}	●	●	16	12	9	150	17°		
	NT-E16R-MICRO-DN ^{RH/LH}	●	●	20	16	11	200	17°		
	NT-E20R-MICRO-DN ^{RH/LH}	●	●	24	20	13	200	17°		

● stock standard

Spare Parts

INSERT SCREW

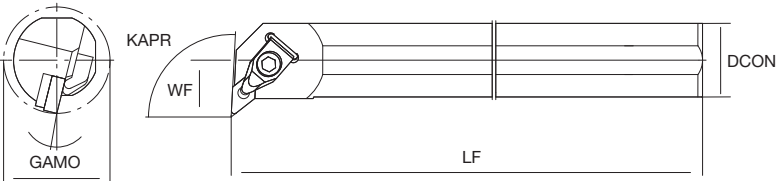


INSERT WRENCH



NT-E10K-MICRO-DN ^{RH/LH}	NT-ST400	NT-FT10
NT-E12M-MICRO-DN ^{RH/LH}		
NT-E16R-MICRO-DN ^{RH/LH}		
NT-E20R-MICRO-DN ^{RH/LH}		

Inserts	CARBIDE 	PCBN 	CERAMIC 	DIAMOND 
MICRO DN	page 16	page 43	-	page 75

DN INTERNAL D			Right-hand shown							STEEL 
									max 3xD 	
										INTERNAL COOLANT 
A DDUN Internal turning (KAPR 93°)			DMIN	DCON	WF	LF	GAMO	 KG	MIID	
R L										
15	NT-A25R-DDUN®/1506	● ●	32	25	17	200	16°	DN□□1506		
	NT-A32S-DDUN®/1506	● ●	40	32	22	250	12°			
	NT-A40T-DDUN®/1506	● ●	50	40	27	300	10°			

● stock standard

Spare Parts	SHIM	SHIM SCREW	SHIM WRENCH	CLAMP	SPRING	CLAMP SCREW	CLAMP WRENCH
NT-A25R-DDUN®/L1506	NT-SH020	NT-ST200	NT-WR025	NT-CS200	NT-SG200	NT-SC200	NT-TX20
NT-A32S-DDUN®/L1506							
NT-A40T-DDUN®/L1506							

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
DN□□1506	page 16	page 43	page 59	page 75

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

TURNING

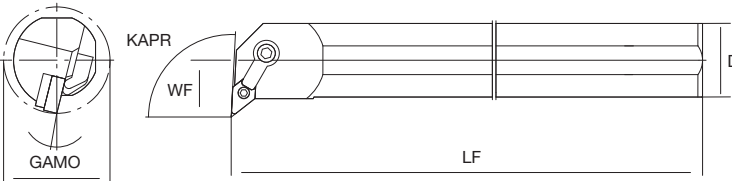
THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

DN INTERNAL M									Right-hand shown		STEEL max 3xD	
S MDUN Internal turning (KAPR 93°)				DMIN	DCON	WF	LF	GAMO	KG	MIID		
15	NT-S32S-MDUN®/L1506	●	●	40	32	22	250	17°		DN□□1506 (DN□□1504)*		
	NT-S40T-MDUN®/L1506	●	●	50	40	27	350	15°				
	NT-S50U-MDUN®/L1506	●	●	63	50	35	300	12°				

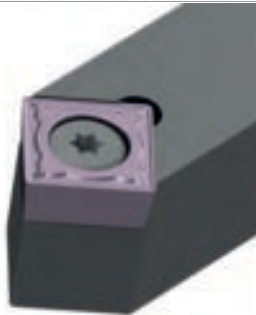
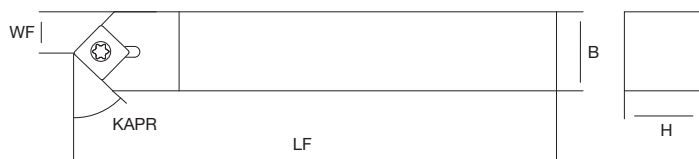
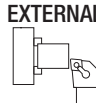
● stock standard

*For DN□□1504 please purchase separately shim NT-SH025

Spare Parts	SHIM	ECCENTRIC PIN	CLAMP	CLAMP SCREW	WRENCH
NT-S32S-MDUN®/L1506	NT-SH045*	NT-SP025	NT-CS025	NT-SC008	NT-WR030
NT-S40T-MDUN®/L1506				NT-SC010	
NT-S50U-MDUN®/L1506					

*Shim for DNMG1504: NT-SH025

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
DN□□1504	-	page 43	-	-
DN□□1506	page 16	page 43	page 59	page 75

SC											
EXTERNAL											
S											
SSDCN External turning (KAPR 45°)				H	B	WF	LF	KG	MIID		
09	NT-SSDCN2020K09	●	20	20	10	125		SC□□09T3			
	NT-SSDCN2525M09	●	25	25	12.5	150					
12	NT-SSDCN2020K12	●	20	20	10	125		SC□□1204			
	NT-SSDCN2525M12	●	25	25	12.5	150					

● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH
		

NT-SSDCN2020K09	NT-ST020	NT-FT15
NT-SSDCN2525M09		
NT-SSDCN2020K12	NT-ST050	NT-FT15
NT-SSDCN2525M12		

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
SC□□09T3	page 20	-	page 62	-
SC□□1204	page 20	-	page 62	-

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

SC

INTERNAL

Right-hand shown

STEEL

S SSKC

Internal turning (KAPR 75°)

R

L

DMIN

DCON

WF

LF

GAMO

KG

MIID

09	NT-S12M-SSKC®/L09	● ●	16	12	8.5	150	12°	SC□□09T3	
	NT-S16Q-SSKC®/L09	● ●	20	16	11	180	11°		
	NT-S20R-SSKC®/L09	● ●	25	20	13	200	6°		
	NT-S25R-SSKC®/L09	● ●	31	25	15	200	6°		
12	NT-S25R-SSKC®/L12	● ●	32	25	17	200	7°	SC□□1204	
	NT-S32S-SSKC®/L12	● ●	40	32	22	250	7°		

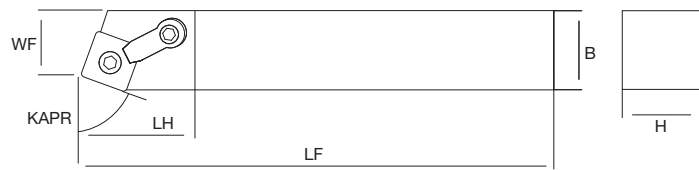
● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH
		

NT-S12M-SSKC [®] /L09	NT-ST020	NT-FT15
NT-S16Q-SSKC [®] /L09		
NT-S20R-SSKC [®] /L09		
NT-S25R-SSKC [®] /L09		
NT-S25R-SSKC [®] /L12	NT-ST050	NT-FT15
NT-S32S-SSKC [®] /L12		

Inserts	CARBIDE 	PCBN 	CERAMIC 	DIAMOND 
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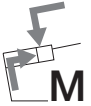
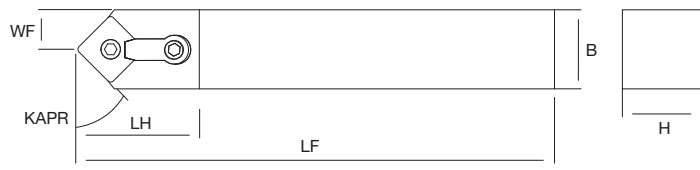
SC□□09T3	page 20	-	page 62	-
SC□□1204	page 20	-	page 62	-

SN EXTERNAL M					Right-hand shown 							
MSBN External turning (KAPR 75°)					H	B	WF	LF	LH	 KG	MIID	
		R	L									
12	NT-MSBN®/L2020K12	●	●	20	20	17	125	37		SN□□1204		
	NT-MSBN®/L2525M12	●	●	25	25	22	150	37				
	NT-MSBN®/L3232P12	○	○	32	32	27	170	42				
19	NT-MSBN®/L3232P19	○	○	32	32	27	170	42		SN□□1906		
	NT-MSBN®/L4040S19	○	○	40	40	35	250	42				

● stock standard, ○ non-standard stock

Spare Parts	SHIM	ECCENTRIC PIN	CLAMP	CLAMP SCREW	WRENCH
NT-MSBN®/L2020K12	NT-SH070	NT-SP010	NT-CS010	NT-SC010	NT-WR030
NT-MSBN®/L2525M12					
NT-MSBN®/L3232P12					
NT-MSBN®/L3232P19	NT-SH090	NT-SP050	NT-CS015	NT-SC070	NT-WR040
NT-MSBN®/L4040S19					

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
SN□□1204	page 21	page 46	page 63	-
SN□□1906	page 22	-	-	-

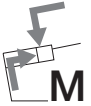
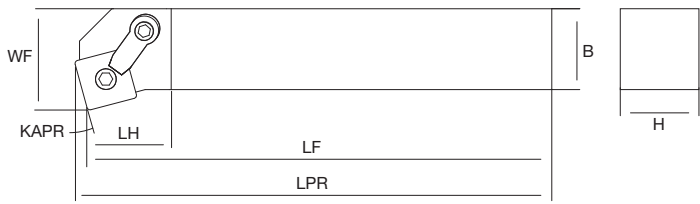
SN EXTERNAL 								
		MSDNN External turning (KAPR 45°)						
		H	B	WF	LF	LH	 KG	MIID

12	NT-MSDNN2020K12	●	20	20	10	125	35		SN□□1204	
	NT-MSDNN2525M12	●	25	25	12.5	150	37			
	NT-MSDNN3232P12	○	32	32	16	170	43			

● stock standard, ○ non-standard stock

Spare Parts	SHIM	ECCENTRIC PIN	CLAMP	CLAMP SCREW	WRENCH
					
NT-MSDNN2020K12	NT-SH070	NT-SP010	NT-CS010	NT-SC010	NT-WR030
NT-MSDNN2525M12					
NT-MSDNN3232P12					

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
SN□□1204	page 21	page 46	page 63	-

SN EXTERNAL  			Right-hand shown 							
MSKN External turning (KAPR 75°)			H	B	WF	LF	LH	LPR		MIID
		R L								
12	NT-MSKN®/L2020K12	● ●	20	20	25	122	37	125		SN□□1204
	NT-MSKN®/L2525M12	● ●	25	25	32	147	37	150		
	NT-MSKN®/L3232P12	○ ○	32	32	40	167	42	170		
19	NT-MSKN®/L4040S19	○ ○	40	40	50	247	42	250		SN□□1906

● stock standard, ○ non-standard stock

Spare Parts	SHIM	ECCENTRIC PIN	CLAMP	CLAMP SCREW	WRENCH
					
NT-MSKN®/L2020K12	NT-SH070	NT-SP010	NT-CS010	NT-SC010	NT-WR030
NT-MSKN®/L2525M12					
NT-MSKN®/L3232P12					
NT-MSKN®/L4040S19	NT-SH090	NT-SP050	NT-CS015	NT-SC070	NT-WR040

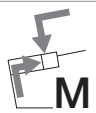
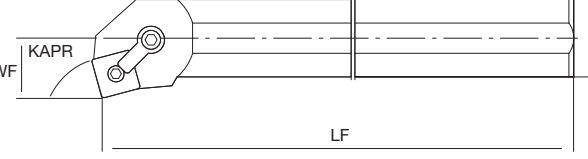
Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
SN□□1204	page 21	page 46	page 63	-
SN□□1906	page 22	-	-	-

SN			Right-hand shown 									
MSSN External turning (KAPR 45°)			H	B	WF	LF	LH	KG	MIID			
			R	L								
12	NT-MSSN®/L2020K12	● ●	20	20	25	125	35		SN□□1204			
	NT-MSSN®/L2525M12	● ●	25	25	32	150	35					
	NT-MSSN®/L3232P12	○ ○	32	32	40	170	42					
19	NT-MSSN®/L3232P19	○ ○	32	32	40	170	42		SN□□1906			
	NT-MSSN®/L4040S19	○ ○	40	40	40	250	42					

● stock standard, ○ non-standard stock

Spare Parts	SHIM	ECCENTRIC PIN	CLAMP	CLAMP SCREW	WRENCH
NT-MSSN®/L2020K12	NT-SH070	NT-SP010	NT-CS010	NT-SC010	NT-WR030
NT-MSSN®/L2525M12					
NT-MSSN®/L3232P12					
NT-MSSN®/L3232P19	NT-SH090	NT-SP050	NT-CS015	NT-SC070	NT-WR040
NT-MSSN®/L4040S19					

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
SN□□1204	page 21	page 46	page 63	-
SN□□1906	page 22	-	-	-

SN INTERNAL 							Right-hand shown STEEL  max 3xD 			
S MSKN Internal turning (KAPR 75°)			DMIN	DCON	WF	LF	GAMO	KG	MIID	
	R	L								
12	NT-S20R-MSKN®/L12	● ●	25	20	13	200	17°		SN□□1204	
	NT-S25R-MSKN®/L12	● ●	32	25	17	200	14°			
	NT-S32S-MSKN®/L12	● ●	40	32	22	250	14°			
	NT-S40T-MSKN®/L12	● ●	50	40	27	300	15°			
	NT-S50U-MSKN®/L12	● ●	63	50	35	350	12°			
19	NT-S50U-MSKN®/L19	○ ○	63	50	35	350	8°		SN□□1906	

● stock standard, ○ non-standard stock

Spare Parts	SHIM	ECCENTRIC PIN	PIN WRENCH	CLAMP	CLAMP SCREW	CLAMP WRENCH
NT-S20R-MSKN®/L12	NT-SH070	NT-SP035	NT-WR025	NT-CS030	NT-SC030	NT-WR025
NT-S25R-MSKN®/L12					NT-SC008	
NT-S32S-MSKN®/L12		NT-SP010	NT-WR030	NT-CS010	NT-SC010	NT-WR030
NT-S40T-MSKN®/L12						
NT-S50U-MSKN®/L12						
NT-S50U-MSKN®/L19	NT-SH090	NT-SP050	NT-WR030	NT-CS015	NT-SC070	NT-WR040

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
SN□□1204	page 21	page 46	page 63	-
SN□□1906	page 22	-	-	-

TURNING

THREADING

GROOVING

MILLING

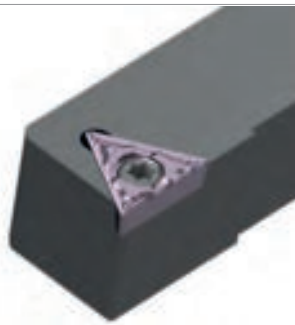
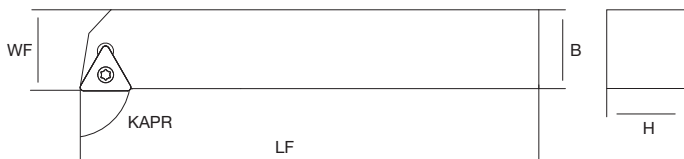
DRILLING

ACCESSORIES

TURNING	TB INTERNAL S		Right-hand shown							STEEL
			S STUB Internal turning (KAPR 93°) R L							
			DMIN	DCON	WF	LF	GAMO		MIID	
06	NT-S08H-STUB®/L06	●	●	10	8	4	100	12°	TB□□061	

● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH
NT-S08H-STUB%/L06	NT-ST003	NT-FT06

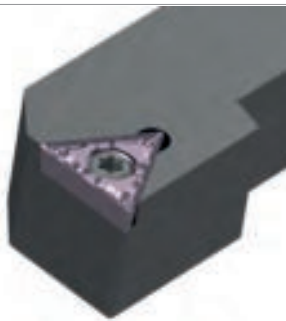
TC				Right-hand shown							
EXTERNAL											
											
STAC External turning (KAPR 90°)				H	B	WF	LF	 KG	MIID		
		R	L								
09	NT-STAC%/0808H09	○	○	8	8	8.5	100		TC□□0902		
	NT-STAC%/1010H09	○	○	10	10	10.5	100				
11	NT-STAC%/1212H11	●	●	12	12	12.5	100		TC□□1102		
	NT-STAC%/1616H11	●	●	16	16	16.5	100				

● stock standard, ○ non-standard stock

Spare Parts	INSERT SCREW	INSERT WRENCH
		

NT-STAC%/L0808H09	NT-ST004	NT-FT07
NT-STAC%/L1010H09		
NT-STAC%/L1212H11	NT-ST010	NT-FT07
NT-STAC%/L1616H11		

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
TC□□0902	page 24	-	-	page 76
TC□□1102	page 24	page 47	-	page 76

TC				Right-hand shown							
EXTERNAL 											
											
STFC External turning (KAPR 91°)				H	B	WF	LF	LH	KG	MIID	
09	NT-STFC%/0808H09	○	○	8	8	10	100	12		TC□□0902	
	NT-STFC%/1010H09	○	○	10	10	12	100	12			
11	NT-STFC%/1212H11	●	●	12	12	16	100	17		TC□□1102	
	NT-STFC%/1616H11	●	●	16	16	20	100	18			
16	NT-STFC%/2020K16	●	●	20	20	25	125	22		TC□□16T3	
	NT-STFC%/2525M16	●	●	25	25	32	150	25			

● stock standard, ○ non-standard stock

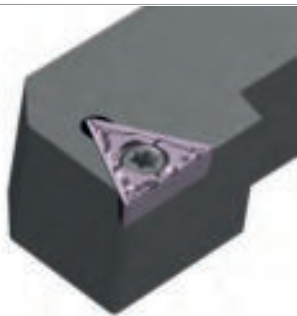
Spare Parts	INSERT SCREW	INSERT WRENCH
		
NT-STFC%/L0808H09	NT-ST004	NT-FT07
NT-STFC%/L1010H09		
NT-STFC%/L1212H11	NT-ST010	NT-FT07
NT-STFC%/L1616H11		
NT-STFC%/L2020K16	NT-ST020	NT-FT15
NT-STFC%/L2525M16		

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
TC□□0902	page 24	-	-	page 76
TC□□1102	page 24	page 47	-	page 76
TC□□16T3	page 24	page 47	-	page 76

TC

EXTERNAL





WF

KAPR

LH

LF

B

H

Right-hand shown

STGC

External turning (KAPR 91°)

R

L

			H	B	WF	LF	LH		MIID	
11	NT-STGC%/1212H11	○	○	12	12	16	100	17	TC□□1102	
	NT-STGC%/1616H11	○	●	16	16	20	100	18		
16	NT-STGC%/2020K16	●	●	20	20	25	125	22	TC□□16T3	
	NT-STGC%/2525M16	●	●	25	25	32	150	25		

● stock standard, ○ non-standard stock

Spare Parts	INSERT SCREW	INSERT WRENCH
		

NT-STGC%/L1212H11	NT-ST010	NT-FT07
NT-STGC%/L1616H11		
NT-STGC%/L2020K16	NT-ST020	NT-FT15
NT-STGC%/L2525M16		

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
TC□□1102	page 24	page 47	-	page 76
TC□□16T3	page 24	page 47	-	page 76

TURNING

THREADING

GROOVING

MILLING

DRILLING

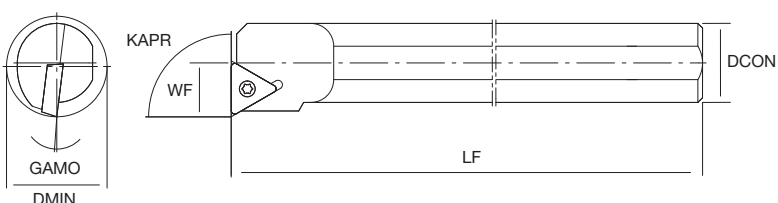
ACCESSORIES

TC

INTERNAL

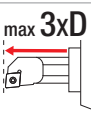






Right-hand shown

STEEL



S STFC

Internal turning (KAPR 91°)

R

L

DMIN

DCON

WF

LF

GAMO

KG

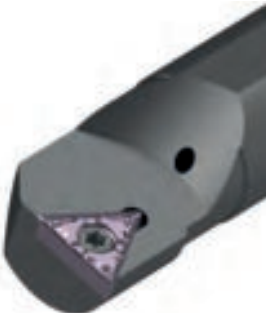
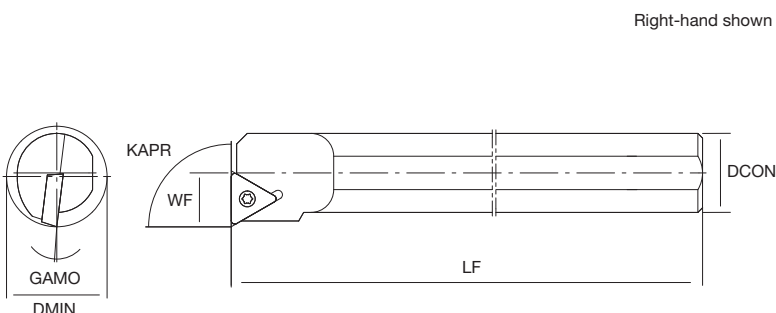
MIID

09	NT-S08H-STFC%/L09	●	●	12	8	6	100	15°	TC□□0902	
	NT-S10K-STFC%/L09	●	●	14	10	7	125	15°		
	NT-S12M-STFC%/L09	●	●	16	12	9	150	10°		
11	NT-S10K-STFC%/L11	●	●	14	10	7	125	15°	TC□□1102	
	NT-S12M-STFC%/L11	●	●	14	12	7	150	10°		
	NT-S16K-STFC%/L11	●	●	18	16	9	180	8°		
	NT-S20R-STFC%/L11	●	●	25	20	13	200	3°		
16	NT-S20R-STFC%/L16	●	●	25	20	13	200	8°	TC□□16T3	
	NT-S25R-STFC%/L16	●	●	32	25	17	200	6°		
	NT-S32S-STFC%/L16	●	●	39	32	22	250	4°		

● stock standard

Spare Parts		INSERT SCREW	INSERT WRENCH
			
NT-S08H-STFC%/L09	NT-ST004	NT-ST004	NT-FT07
NT-S10K-STFC%/L09			
NT-S12M-STFC%/L09			
NT-S10K-STFC%/L11	NT-ST010	NT-ST010	NT-FT07
NT-S12M-STFC%/L11			
NT-S16K-STFC%/L11			
NT-S20R-STFC%/L11			
NT-S20R-STFC%/L16	NT-ST030	NT-ST030	NT-FT15
NT-S25R-STFC%/L16			
NT-S32S-STFC%/L16			

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
TC□□0902	page 24	-	-	page 76
TC□□1102	page 24	page 47	-	page 76
TC□□16T3	page 24	page 47	-	page 76

TC INTERNAL S						Right-hand shown 				STEEL max 3xD INTERNAL COOLANT			
A STFC Internal turning (KAPR 91°)						DMIN	DCON	WF	LF	GAMO	KG	MIID	
R L													
11	NT-A10K-STFC®/L11	●	●	14	10	7	125	15°		TC□□1102			
	NT-A12M-STFC®/L11	●	●	14	12	7	150	10°					
	NT-A16Q-STFC®/L11	●	●	18	16	9	180	8°					
	NT-A20R-STFC®/L11	●	●	25	20	13	200	3°					

● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH
		

NT-A10K-STFC®/L11	NT-ST010	NT-FT07
NT-A12M-STFC®/L11		
NT-A16Q-STFC®/L11		
NT-A20R-STFC®/L11		

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
TC□□1102	page 24	page 47	-	page 76

TURNING

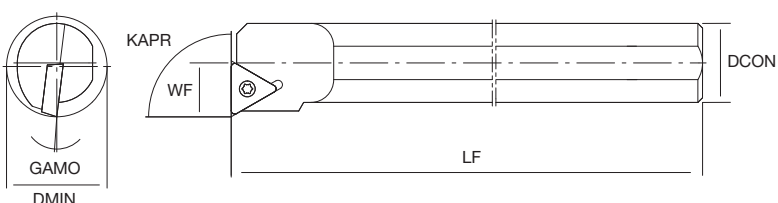
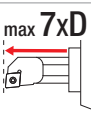
THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

TC INTERNAL  									Right-hand shown CARBIDE  max 7xD INTERNAL COOLANT 	
E STFC Internal turning (KAPR 91°)			DMIN	DCON	WF	LF	GAMO		MIID	
		R L								
11	NT-E10K-STFC [®] /L11	●	●	12	10	6	125	15°	TC□□1102	
	NT-E12M-STFC [®] /L11	●	●	14	12	7	150	10°		
	NT-E16R-STFC [®] /L11	●	●	18	16	9	200	8°		
	NT-E20R-STFC [®] /L11	●	●	22	20	11	200	6°		

● stock standard

Spare Parts		INSERT SCREW 	INSERT WRENCH 
NT-E10K-STFC%/L11	NT-ST010		NT-FT07
NT-E12M-STFC%/L11			
NT-E16R-STFC%/L11			
NT-E20R-STFC%/L11			

Inserts	CARBIDE 	PCBN 	CERAMIC 	DIAMOND 
	TC□□1102	page 24	page 47	-



TC



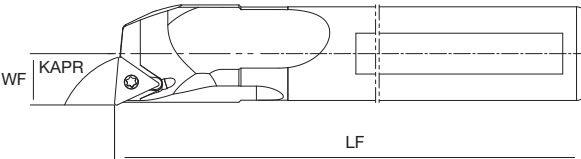
INTERNAL



S





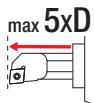


Right-hand shown



VORTEX

max 5xD



INTERNAL COOLANT

V STLC Internal turning (KAPR 95°)			DMIN	DCON	WF	LF	GAMO	KG	MIID
	R	L							

09	NT-V08H-STLC%/09-10	●	●	10	8	5	100	14°	TC□□0902	
	NT-V10K-STLC%/09-12	●	●	12	10	6	125	12°		
	NT-V12M-STLC%/09-14	●	●	14	12	7	150	10°		
11	NT-V10K-STLC%/11-12	●	●	12	10	6	125	12°	TC□□1102	
	NT-V12M-STLC%/11-14	●	●	14	12	7	150	10°		
	NT-V16Q-STLC%/11-18	●	●	18	16	9	180	8°		
	NT-V20R-STLC%/11-22	●	●	22	20	11	200	6°		
16	NT-V20R-STLC%/16-25	●	●	25	20	12.5	200	8°	TC□□16T3	
	NT-V25S-STLC%/16-32	●	●	32	25	16	250	6°		

● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH
		

NT-V08H-STLC%/09-10	NT-ST004	NT-FT07
NT-V10K-STLC%/09-12		
NT-V12M-STLC%/09-14		
NT-V10K-STLC%/11-12	NT-ST010	NT-FT07
NT-V12M-STLC%/11-14		
NT-V16Q-STLC%/11-18		
NT-V20R-STLC%/11-22		
NT-V20R-STLC%/16-25	NT-ST030	NT-FT15
NT-V25S-STLC%/16-32		

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
TC□□0902	page 24	-	-	page 76
TC□□1102	page 24	page 47	-	page 76
TC□□16T3	page 24	page 47	-	page 76

TURNING

THREADING

GROOVING

MILLING

DRILLING

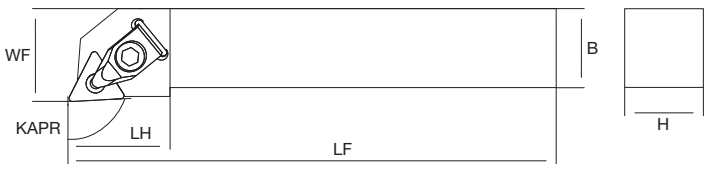
ACCESSORIES

16	TN	Right-hand shown									
	EXTERNAL										
	D										
DTGN External turning (KAPR 91°)											
		R	L	H	B	WF	LF	LH	KG	MIID	
	NT-DTGN®/2020K16X	●	●	20	20	25	125	33		TN□□1604	
	NT-DTGN®/2525M16X	●	●	25	25	32	150	33			

● stock standard

Spare Parts	SHIM	SHIM SCREW	CLAMP	SPRING	CLAMP SCREW	WRENCH
NT-DTGN®/2020K16X						
NT-DTGN®/2525M16X	NT-SH006	NT-ST250	NT-CS250	NT-SG250	NT-SC250	NT-TX15

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
TN□□1604	page 25	page 48	page 65	page 78

TN EXTERNAL  D		Right-hand shown 								
		DTJN External turning (KAPR 93°)		H	B	WF	LF	LH	 KG	MIID
		R	L							
16	NT-DTJN®/L2020K16X	●	●	20	20	25	125	33		TN□□1604
	NT-DTJN®/L2525M16X	●	●	25	25	32	150	33		

● stock standard

Spare Parts	SHIM	SHIM SCREW	CLAMP	SPRING	CLAMP SCREW	WRENCH
NT-DTJN®/L2020K16X	NT-SH006	NT-ST250	NT-CS250	NT-SG250	NT-SC250	NT-TX15
NT-DTJN®/L2525M16X						

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
TN□□1604	page 25	page 48	page 65	page 78

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

TN

EXTERNAL

M



WF

KAPR

LH

LF

B

H

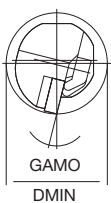
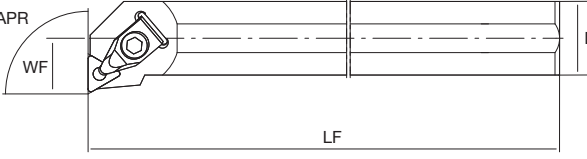
Right-hand shown

MTJN External turning (KAPR 93°)				H	B	WF	LF	LH	KG	MIID	
	R	L									
16	NT-MTJN®/L2020K16	●	●	20	20	25	125	33		TN□□1604	
	NT-MTJN®/L2525M16	●	●	25	25	32	150	35			
	NT-MTJN®/L3232P16	●	●	32	32	40	170	43			
22	NT-MTJN®/L2525M22	●	●	25	25	32	150	43		TN□□2204	
	NT-MTJN®/L3225P22	●	●	32	25	32	170	43			

● stock standard

Spare Parts	SHIM	ECCENTRIC PIN	PIN WRENCH	CLAMP	CLAMP SCREW	CLAMP WRENCH
NT-MTJN®/L2020K16	NT-SH005	NT-SP020	NT-WR020	NT-CS010	NT-SC008	NT-WR030
NT-MTJN®/L2525M16					NT-SC010	
NT-MTJN®/L3232P16						
NT-MTJN®/L2525M22	NT-SH008	NT-SP010	NT-WR030	NT-CS070	NT-SC070	NT-WR040
NT-MTJN®/L3225P22						

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
TN□□1604	page 25	page 48	page 65	page 78
TN□□2204	page 25	-	-	-

TN INTERNAL D								Right-hand shown		STEEL max 3xD INTERNAL COOLANT	
A DTFN Internal turning (KAPR 91°)				DMIN	DCON	WF	LF	GAMO	KG	MIID	
16	NT-A25R-DTFN®/L16	●	●	32	25	17	200	13°		TN□□1604	
	NT-A32S-DTFN®/L16	●	●	40	32	22	250	13°			

● stock standard

Spare Parts	SHIM	SHIM SCREW	CLAMP	SPRING	CLAMP SCREW	WRENCH
NT-A25R-DTFN®/L16	NT-SH006	NT-ST250	NT-CS250	NT-SG250	NT-SC250	NT-TX15
NT-A32S-DTFN®/L16						

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
TN□□1604	page 25	page 48	page 65	page 78

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

TN

INTERNAL

M

Right-hand shown

STEEL

max 3xD

S MTUN

Internal turning (KAPR 93°)

R

L

DMIN

DCON

WF

LF

GAMO

KG

MIID

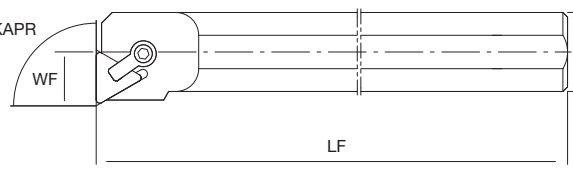
16	NT-S20R-MTUN®/L16	●	●	25	20	13	200	17°	TN001604
	NT-S25R-MTUN®/L16	●	●	32	25	17	200	12°	
	NT-S32S-MTUN®/L16	●	●	40	32	22	250	10°	
	NT-S40T-MTUN®/L16	●	●	50	40	27	300	10°	
	NT-S50U-MTUN®/L16	●	●	63	50	35	350	8°	
22	NT-S40T-MTUN®/L22	○	○	50	40	27	300	15°	TN002204
	NT-S50U-MTUN®/L22	○	○	63	50	35	350	12°	

● stock standard, ○ non-standard stock

Spare Parts	SHIM	ECCENTRIC PIN	PIN WRENCH	CLAMP	CLAMP SCREW	CLAMP WRENCH
						

NT-S20R-MTUN®/L16	-	NT-SP030	NT-WR020	NT-CS030	NT-SC030	NT-WR025
NT-S25R-MTUN®/L16		NT-SP020		NT-CS010	NT-SC008	NT-WR030
NT-S32S-MTUN®/L16					NT-SC010	
NT-S40T-MTUN®/L16						
NT-S50U-MTUN®/L16						
NT-S40T-MTUN®/L22	NT-SH005	NT-SP010	NT-WR030	NT-CS070	NT-SC070	NT-WR040
NT-S50U-MTUN®/L22	NT-SH008					

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
TN□1604	page 25	page 48	page 65	page 78
TN□2204	page 25	-	-	-

TP INTERNAL  							Right-hand shown STEEL max 3xD 			
S CTUP Internal turning (KAPR 93°)			DMIN	DCON	WF	LF	GAMO	 KG	MIID	
		R L								
11	NT-S12M-CTUP ^{R/L} 11	● ●	16	12	9	150	0°		TP□□1103	
	NT-S16Q-CTUP ^{R/L} 11	● ●	20	16	11	180	3°			
	NT-S20R-CTUP ^{R/L} 11	● ●	25	20	13	200	3°			
16	NT-S25R-CTUP ^{R/L} 16	● ●	32	25	17	200	3°		TP□□1604	
	NT-S32S-CTUP ^{R/L} 16	● ●	40	32	22	250	3°			

● stock standard

Spare Parts	SHIM	SHIM SCREW	SHIM WRENCH	CLAMP	CLAMP SCREW	CLAMP WRENCH
						

NT-S12M-CTUP ^{R/L} 11	-	-	-	NT-CS003		NT-WR025
NT-S16Q-CTUP ^{R/L} 11				NT-CS005	NT-SC005	
NT-S20R-CTUP ^{R/L} 11						
NT-S25R-CTUP ^{R/L} 16	NT-SH002	NT-ST022	NT-FT06	NT-CS010	NT-SC008	NT-WR030
NT-S32S-CTUP ^{R/L} 16						

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
TP□□1103	-	-	page 66	-
TP□□1604	-	-	page 66	-

TURNING

THREADING

GROOVING

MILLING

DRILLING

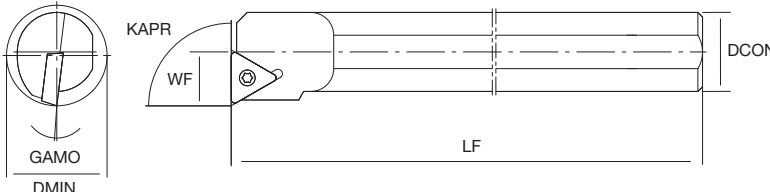
ACCESSORIES

TP

INTERNAL

S





Right-hand shown

STEEL

max 3xD

S STUP

Internal turning (KAPR 93°)

R

L

DMIN

DCON

WF

LF

GAMO

KG

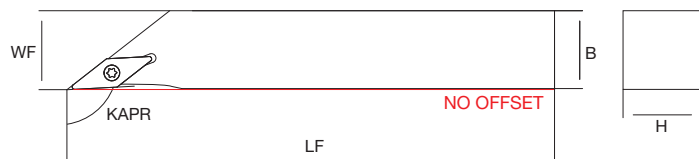
MIID

09	NT-S10K-STUP ^{R/L} 09	●	●	12	10	6	125	8°	TP□□0902	
	NT-S12M-STUP ^{R/L} 09	●	●	14	12	7	150	5°		
11	NT-S10K-STUP ^{R/L} 11	●	●	12	10	6	125	8°	TP□□1103	
	NT-S12M-STUP ^{R/L} 11	●	●	14	12	7	150	7°		
	NT-S16K-STUP ^{R/L} 11	●	●	18	16	9	180	4°		
	NT-S20R-STUP ^{R/L} 11	●	●	22	20	11	200	2°		

● stock standard

Spare Parts		INSERT SCREW	INSERT WRENCH
			
NT-S10K-STUP ^{R/L} 09	NT-ST005		NT-FT08
NT-S12M-STUP ^{R/L} 09			
NT-S10K-STUP ^{R/L} 11	NT-ST014		NT-FT10
NT-S12M-STUP ^{R/L} 11			
NT-S16K-STUP ^{R/L} 11	NT-ST015		
NT-S20R-STUP ^{R/L} 11			

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
TP□□0902	page 28	page 49	-	page 79
TP□□1103	page 28	page 49	-	page 79

VB				Right-hand shown							
EXTERNAL											
											
											
SVJB N											
External turning (KAPR 93°)											
		R	L	H	B	WF	LF		MIID		
11	NT-SVJB%/L1212K11N	●	●	12	12	12	125		VB□□1103		
	NT-SVJB%/L1616K11N	●	●	16	16	16	125				
16	NT-SVJB%/L1616H16N	●	●	16	16	16	100		VB□□1604		

● stock standard

Spare Parts	SHIM	SHIM SCREW	SHIM WRENCH	INSERT SCREW	INSERT WRENCH
					

NT-SVJB%/L1212K11N	-	-	-	NT-ST010	NT-FT07
NT-SVJB%/L1616K11N	-	-	-	NT-ST010	NT-FT07
NT-SVJB%/L1616H16N	NT-SH050	NT-SR010	NT-WR035	NT-ST040	NT-FT15

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
VB□□1103	page 29	page 50	-	page 80
VB□□1604	page 29	page 50	-	page 80

VB					Right-hand shown							
EXTERNAL 												
S												
SVJB External turning (KAPR 93°)					H	B	WF	LF	LH	 KG	MIID	
R		L										
11	NT-SVJB%/L2020K11	●	●	20	20	25	125	22		VB□□1103		
16	NT-SVJB%/L2020K16	●	●	20	20	25	125	33		VB□□1604		
	NT-SVJB%/L2525M16	●	●	25	25	32	150	38				

● stock standard

Spare Parts	SHIM	SHIM SCREW	SHIM WRENCH	INSERT SCREW	INSERT WRENCH
NT-SVJB%/L2020K11	-	-	-	NT-ST010	NT-FT07
NT-SVJB%/L2020K16	NT-SH050	NT-SR010	NT-WR035	NT-ST040	NT-FT15
NT-SVJB%/L2525M16					

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
VB□□1103	page 29	page 50	-	page 80
VB□□1604	page 29	page 50	-	page 80

VB									
EXTERNAL									
									
									
SWBN External turning (KAPR 72.5°)			H	B	WF	LF		MIID	

11	NT-SVBN2020K11	●	20	20	10	125		VB□1103		
	NT-SVBN2525M11	●	25	25	12.5	150				
16	NT-SVBN2020K16	●	20	20	10	125		VB□1604		
	NT-SVBN2525M16	●	25	25	12.5	150				

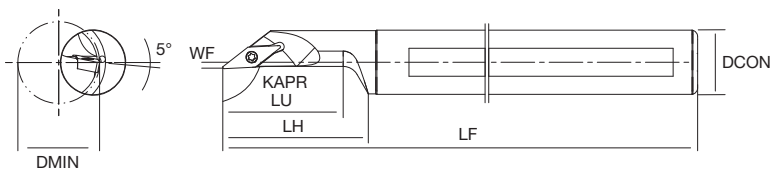
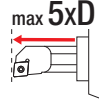
● stock standard

Spare Parts	SHIM	SHIM SCREW	SHIM WRENCH	INSERT SCREW	INSERT WRENCH
					

NT-SVBN2020K11	-	-	-	NT-ST010	NT-FT07
NT-SVBN2525M11					
NT-SVBN2020K16	NT-SH050	NT-SR010	NT-WR035	NT-ST040	NT-FT15
NT-SVBN2525M16					

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				

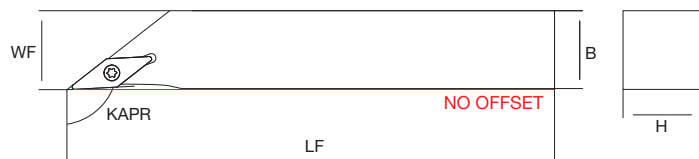
VB□1103	page 29	page 50	-	page 80
VB□1604	page 29	page 50	-	page 80

VB INTERNAL  S   Right-hand shown  max 5xD  INTERNAL COOLANT 			V SVJB Internal turning (KAPR 93°) R L		DMIN	DCON	WF	LF	LH	LU	 KG	MIID
11	NT-V20R-SVJB%/11-25	● ●	25	20	2	200	48	37.5		VB□□1103		
	NT-V25S-SVJB%/11-30	● ●	30	25	3.5	250	58	46				

● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH
		
NT-V20R-SVJB®/11-25	NT-ST010	NT-FT07
NT-V25S-SVJB®/11-30		

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
VB□□1103	page 29	page 50	-	page 80

VC		Right-hand shown							
									
EXTERNAL									
									
S									
SVJC N External turning (KAPR 93°)		H	B	WF	LF		MIID		
	R L								

11	NT-SVJC%/L1010K11N	○	○	10	10	10	125		VC□□1103		
	NT-SVJC%/L1212K11N	●	●	12	12	12	125				
	NT-SVJC%/L1616K11N	●	●	16	16	16	125				
16	NT-SVJC%/L1616H16N	●	●	16	16	16	100		VC□□1604		

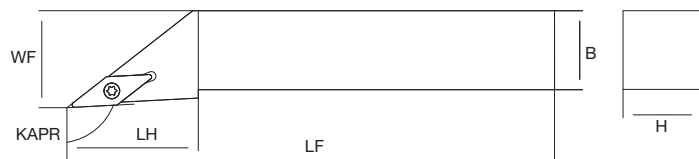
● stock standard, ○ non-standard stock

Spare Parts	SHIM	SHIM SCREW	SHIM WRENCH	INSERT SCREW	INSERT WRENCH
					

NT-SVJC%/L1010K11N	-	-	-	NT-ST010	NT-FT07
NT-SVJC%/L1212K11N					
NT-SVJC%/L1616K11N					
NT-SVJC%/L1616H16N	NT-SH050	NT-SR010	NT-WR035	NT-ST040	NT-FT15

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				

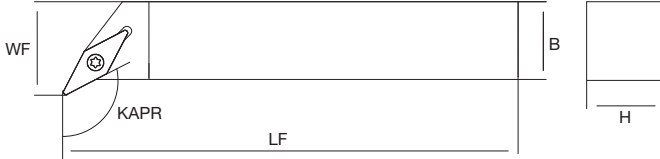
VC□□1103	page 30	page 51	-	page 81
VC□□1604	page 30	page 51	-	page 81

VC				Right-hand shown							
EXTERNAL 											
											
SVJC External turning (KAPR 93°)				H	B	WF	LF	LH		MIID	
		R	L								
16 11	NT-SVJC%/2020K11	●	●	20	20	25	125	22		VC□□1103	
	NT-SVJC%/2020K16	●	●	20	20	25	125	33		VC□□1604	
	NT-SVJC%/2525M16	●	●	25	25	32	150	38			

● stock standard

Spare Parts	SHIM	SHIM SCREW	SHIM WRENCH	INSERT SCREW	INSERT WRENCH
NT-SVJC%/L2020K11	-	-	-	NT-ST010	NT-FT07
NT-SVJC%/L2020K16	NT-SH050	NT-SR010	NT-WR035	NT-ST040	NT-FT15
NT-SVJC%/L2525M16					

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
VC□□1103	page 30	page 51	-	page 81
VC□□1604	page 30	page 51	-	page 81

VC				Right-hand shown									
EXTERNAL													
													
SVPC External turning (KAPR 117.5°)				R	L	H	B	WF	LF	KG	MIID		
11	NT-SVPC%/L1010H11	○	○	10	10	14.5	100		VC□□1103				
	NT-SVPC%/L1212H11	●	●	12	12	16.5	100						
	NT-SVPC%/L1616H11	●	●	16	16	20.5	100						
16	NT-SVPC%/2020K16	●	●	20	20	25	125		VC□□1604				
	NT-SVPC%/2525M16	●	●	25	25	32	150						

● stock standard, ○ non-standard stock

Spare Parts	SHIM	SHIM SCREW	SHIM WRENCH	INSERT SCREW	INSERT WRENCH
NT-SVPC%/L1010H11	-	-	-	NT-ST010	NT-FT07
NT-SVPC%/L1212H11					
NT-SVPC%/L1616H11					
NT-SVPC%/2020K16	NT-SH050	NT-SR010	NT-WR035	NT-ST040	NT-FT15
NT-SVPC%/2525M16					

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
VC□□1103	page 30	page 51	-	page 81
VC□□1604	page 30	page 51	-	page 81

VC										
EXTERNAL										
 S										
SWCN External turning (KAPR 72.5°)			H	B	WF	LF	 KG	MIID		

11	NT-SVVCN1010H11	○	10	10	5	100		VC□□1103		
	NT-SVVCN1212H11	●	12	12	6	100				
	NT-SVVCN1616H11	●	16	16	8	100				
16	NT-SVVCN2020K16	●	20	20	10	125		VC□□1604		
	NT-SVVCN2525M16	●	25	25	12.5	150				

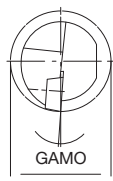
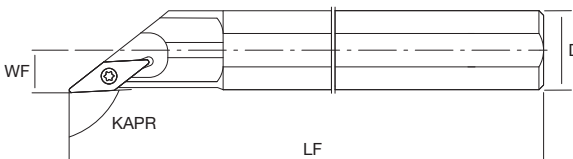
● stock standard, ○ non-standard stock

Spare Parts	SHIM	SHIM SCREW	SHIM WRENCH	INSERT SCREW	INSERT WRENCH
					

NT-SVVCN1010H11	-	-	-	NT-ST010	NT-FT07
NT-SVVCN1212H11					
NT-SVVCN1616H11					
NT-SVVCN2020K16	NT-SH050	NT-SR010	NT-WR035	NT-ST040	NT-FT15
NT-SVVCN2525M16					

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				

VC□□1103	page 30	page 51	-	page 81
VC□□1604	page 30	page 51	-	page 81

VC INTERNAL  S									Right-hand shown		STEEL  max 3xD 		
S SVJC Internal turning (KAPR 93°)					DMIN	DCON	WF	LF	GAMO	 KG	MIID		
					R	L							
11	NT-S12M-SVJC%/11	●	●	14	12	7	150	7°		VC□□1103			
	NT-S16Q-SVJC%/11	●	●	18	16	9	180	7°					
16	NT-S16Q-SVJC%/16	●	●	18	16	9	180	7°		VC□□1604			
	NT-S20R-SVJC%/16	●	●	21	20	10.5	200	6°					
	NT-S25R-SVJC%/16	●	●	27	25	13.5	200	6°					
	NT-S32S-SVJC%/16	●	●	34	32	17	250	4°					
	NT-S40T-SVJC%/16	○	○	44	40	22	300	4°					

● stock standard, ○ non-standard stock

Spare Parts	INSERT SCREW	INSERT WRENCH
		

NT-S12M-SVJC%/L11	NT-ST010	NT-FT07
NT-S16Q-SVJC%/L11		
NT-S16Q-SVJC%/L16	NT-ST030	NT-FT15
NT-S20R-SVJC%/L16		
NT-S25R-SVJC%/L16		
NT-S32S-SVJC%/L16		
NT-S40T-SVJC%/L16		

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				

VC□□1103	page 30	page 51	-	page 81
VC□□1604	page 30	page 51	-	page 81

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

TURNING

THREADING

GROOVING

MILLING

DRILLING

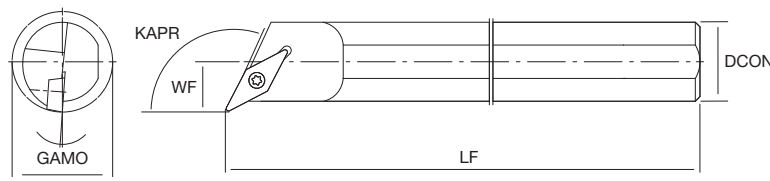
ACCESSORIES

VC

INTERNAL







Right-hand shown

STEEL



max 3xD



S SVQC

Internal turning (KAPR 107.5°)

R

L

DMIN

DCON

WF

LF

GAMO

KG

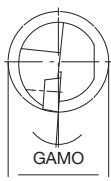
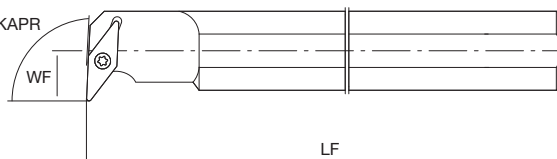
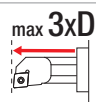
MIID

11	NT-S16Q-SVQC%/L11	● ●	22	16	13	180	7°		VC□□1103	
	NT-S20R-SVQC%/L11	● ●	27	20	15	200	6°			
16	NT-S20R-SVQC%/L16	● ●	30	20	19	200	8°		VC□□1604	
	NT-S25R-SVQC%/L16	● ●	34	25	20.5	200	4°			
	NT-S32S-SVQC%/L16	● ●	41	32	22.5	250	8°			
	NT-S40T-SVQC%/L16	○ ○	50	40	27	300	6°			

● stock standard, ○ non-standard stock

Spare Parts		INSERT SCREW	INSERT WRENCH
NT-S16Q-SVQC%/L11	NT-ST010		
NT-S20R-SVQC%/L11			
NT-S20R-SVQC%/L16	NT-ST030		
NT-S25R-SVQC%/L16			
NT-S32S-SVQC%/L16			
NT-S40T-SVQC%/L16			

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
VC□□1103	page 30	page 51	-	page 81
VC□□1604	page 30	page 51	-	page 81

VC INTERNAL 								Right-hand shown		STEEL 			
S SVUC Internal turning (KAPR 93°)				R	L	DMIN	DCON	WF	LF	GAMO	 KG	MIID	
11	NT-S16Q-SVUC®/L11	●	●	22	16	13	180	7°			VC□□1103		
	NT-S20R-SVUC®/L11	●	●	27	20	15	200	6°					
16	NT-S20R-SVUC®/L16	●	●	31	20	19	200	8°			VC□□1604		
	NT-S25R-SVUC®/L16	●	●	33	25	20.5	200	7°					
	NT-S32S-SVUC®/L16	●	●	42	32	22.5	250	5°					
	NT-S40T-SVUC®/L16	○	○	51	40	27	300	4°					

● stock standard, ○ non-standard stock

Spare Parts	INSERT SCREW	INSERT WRENCH
NT-S16Q-SVUC [®] /L11	NT-ST010	NT-FT07
NT-S20R-SVUC [®] /L11		
NT-S20R-SVUC [®] /L16	NT-ST030	NT-FT15
NT-S25R-SVUC [®] /L16		
NT-S32S-SVUC [®] /L16		
NT-S40T-SVUC [®] /L16		

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
VC□□1103	page 30	page 51	-	page 81
VC□□1604	page 30	page 51	-	page 81

TURNING

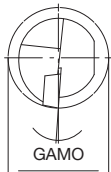
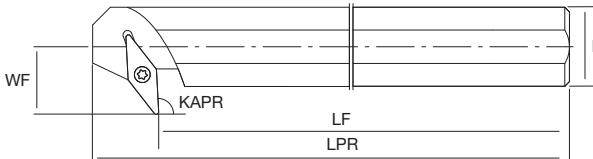
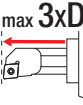
THREADING

GROOVING

MILLING

DRILLING

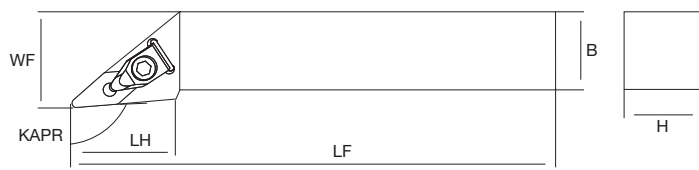
ACCESSORIES

VC INTERNAL  					Right-hand shown			STEEL				
S SVZC Internal turning (KAPR 93°)									max 3xD 			
			R	L	DMIN	DCON	WF	LF	LPR	GAMO	 KG	MIID
16	NT-S20R-SVZC%/L16	●	●	30	20	17	183	200	7.5°			VC□□1604
	NT-S25R-SVZC%/L16	●	●	35	25	19.5	180	200	7.5°			
	NT-S32S-SVZC%/L16	○	○	40	32	23	230	250	7.5°			

● stock standard, ○ non-standard stock

Spare Parts	INSERT SCREW	INSERT WRENCH
		
	NT-S20R-SVZC%/L16	NT-ST030 NT-FT15
	NT-S25R-SVZC%/L16	
	NT-S32S-SVZC%/L16	

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
VC□□1604	page 30	page 51	-	page 81

VN				Right-hand shown							
EXTERNAL											
											
DVJN External turning (KAPR 93°)				H	B	WF	LF	LH	 KG	MIID	
		R	L								
16	NT-DVJN®/L2020K16X	●	●	20	20	25	125	50		VN□□1604	
	NT-DVJN®/L2525M16X	●	●	25	25	32	150	46			

● stock standard

Spare Parts	SHIM	SHIM SCREW	SHIM WRENCH	CLAMP	SPRING	CLAMP SCREW	CLAMP WRENCH
NT-DVJN®/L2020K16X	NT-SH075	NT-ST250	NT-TX15	NT-CS210	NT-SG200	NT-SC200	NT-TX20
NT-DVJN®/L2525M16X							

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
VN□□1604	page 31	page 52	page 67	-

TURNING

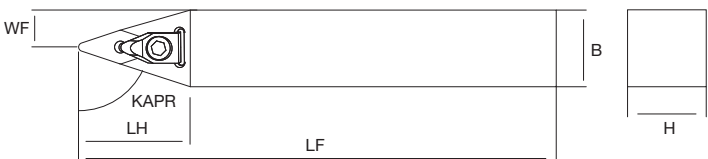
THREADING

GROOVING

MILLING

DRILLING

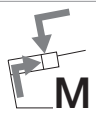
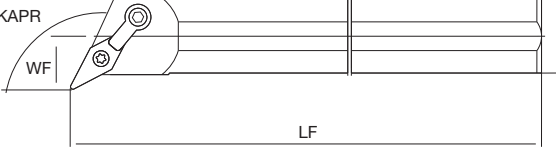
ACCESSORIES

16	VN	 								
	EXTERNAL									
										
DVNN External turning (KAPR 72.5°)		H	B	WF	LF	LH		MIID		
16	NT-DVVNN2020K16X	●	20	20	10	125	47		VN□□1604	
	NT-DVVNN2525M16X	●	25	25	12.5	150	47			

● stock standard

Spare Parts	SHIM	SHIM SCREW	SHIM WRENCH	CLAMP	SPRING	CLAMP SCREW	CLAMP WRENCH
NT-DVVNN2020K16X	NT-SH075	NT-ST250	NT-TX15	NT-CS210	NT-SG200	NT-SC200	NT-TX20
NT-DVVNN2525M16X							

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
VN□□1604	page 31	page 52	page 67	-

VN INTERNAL 							Right-hand shown		STEEL  max 3xD 	
	S MVQN Internal turning (KAPR 107.5°)		DMIN	DCON	WF	LF	GAMO		MIID	
16	NT-S25R-MVQN®/L16	● ●	33	25	20	200	12°		VN□□1604	
	NT-S32S-MVQN®/L16	● ●	40	32	23	250	17°			
	NT-S40T-MVQN®/L16	● ●	50	40	27	300	15°			
	NT-S50U-MVQN®/L16	● ●	63	50	33	350	12°			

● stock standard, ○ non-standard stock

Spare Parts	SHIM	ECCENTRIC PIN	PIN WRENCH	CLAMP	CLAMP SCREW	CLAMP WRENCH
						
NT-S25R-MVQN®/L16	NT-SH075	NT-SP020	NT-WR020	NT-CS010	NT-SC008	NT-WR030
NT-S32S-MVQN®/L16						
NT-S40T-MVQN®/L16						
NT-S50U-MVQN®/L16					NT-SC010	

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
VN□□1604	page 31	page 52	page 67	-

TURNING

THREADING

GROOVING

MILLING

DRILLING

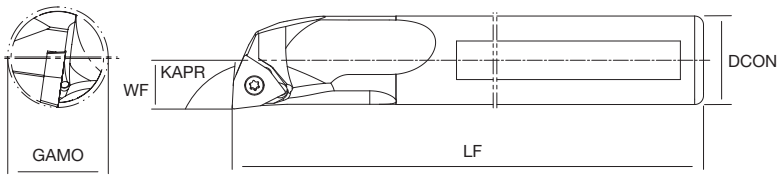
ACCESSORIES

VN	INTERNAL					Right-hand shown		STEEL			
	M										
S MVUN Internal turning (KAPR 93°)				DMIN	DCON	WF	LF	GAMO	KG	MIID	
		R	L								
16	NT-S25R-MVUN®/L16	●	●	37	25	20	200	12°		VN□□1604	
	NT-S32S-MVUN®/L16	●	●	40	32	22	250	12°			
	NT-S40T-MVUN®/L16	●	●	50	40	27	300	15°			
	NT-S50U-MVUN®/L16	○	○	63	50	32	350	12°			

● stock standard, ○ non-standard stock

Spare Parts	SHIM	ECCENTRIC PIN	PIN WRENCH	CLAMP	CLAMP SCREW	CLAMP WRENCH
						
NT-S25R-MVUN®/L16	NT-SH075	NT-SP020	NT-WR020	NT-CS010	NT-SC008	NT-WR030
NT-S32S-MVUN®/L16						
NT-S40T-MVUN®/L16						
NT-S50U-MVUN®/L16					NT-SC010	

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
VN□□1604	page 31	page 52	page 67	-

WC INTERNAL 									Right-hand shown VORTEX max 5xD INTERNAL COOLANT 				
V SWUC Internal turning (KAPR 93°)						DMIN	DCON	WF	LF	GAMO	 KG	MIID	
		R	L										
12	NT-V12M-SWUC [®] /L12-14	●	●	14	12	7	150	13°		WC□□12T3			
	NT-V16Q-SWUC [®] /L12-18	●	●	18	16	9	180	10°					
	NT-V20R-SWUC [®] /L12-22	●	●	22	20	11	200	8°					
	NT-V25S-SWUC [®] /L12-27	●	●	27	25	13.5	250	8°					

● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH
		

NT-V12M-SWUC®/L12-14	NT-ST020	NT-FT15
NT-V16Q-SWUC®/L12-18		
NT-V20R-SWUC®/L12-22		
NT-V25S-SWUC®/L12-27		

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				

WC□□12T3	page 33	-	-	-
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TURNING

THREADING

GROOVING

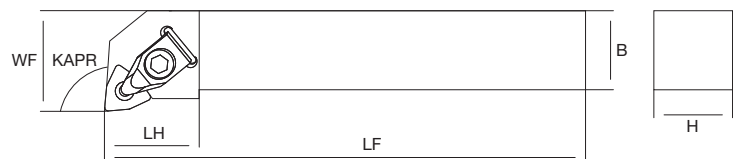
MILLING

DRILLING

ACCESSORIES

WN

EXTERNAL

DWLN

External turning (KAPR 95°)

H

B

WF

LF

LH

KG

MIID

		R	L								
06	NT-DWLN®/L1616H06X	●	●	16	16	20	100	33		WN□□0604	
	NT-DWLN®/L2020K06X	●	●	20	20	25	125	33			
	NT-DWLN®/L2525M06X	●	●	25	25	32	150	33			
08	NT-DWLN®/L2020K08X	●	●	20	20	25	125	40		WN□□0804	
	NT-DWLN®/L2525M08X	●	●	25	25	32	150	40			
	NT-DWLN®/L3225P08X	●	●	32	25	32	170	40			

● stock standard

Spare Parts	SHIM	SHIM SCREW	SHIM WRENCH	CLAMP	SPRING	CLAMP SCREW	CLAMP WRENCH
NT-DWLN®/L1616H06X	NT-SH003	NT-ST250	NT-TX15	NT-CS250	NT-SG250	NT-SC250	NT-TX15
NT-DWLN®/L2020K06X							
NT-DWLN®/L2525M06X							
NT-DWLN®/L2020K08X	NT-SH010	NT-ST200	NT-WR025	NT-CS200	NT-SG200	NT-SC200	NT-TX20
NT-DWLN®/L2525M08X							
NT-DWLN®/L3225P08X							

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
WN□□0604	page 34	-	-	-
WN□□0804	page 34	page 53	page 68	page 83

WN

EXTERNAL




M

MWLN

External turning (KAPR 95°)

H

B

WF

LF

LH

KG

MIID

R

L

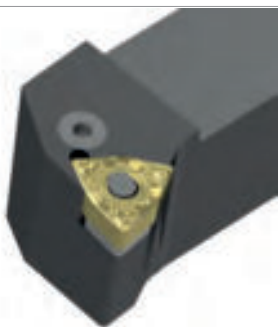
06	NT-MWLN®/2020K06	○	○	20	20	25	125	34		WN□□0604	
	NT-MWLN®/2525M06	○	○	25	25	32	150	34			
08	NT-MWLN®/2020K08	●	●	20	20	25	125	34		WN□□0804	
	NT-MWLN®/2525M08	●	●	25	25	32	150	34			
	NT-MWLN®/3232P08	●	●	32	32	40	170	40			

● stock standard, ○ non-standard stock

Spare Parts	SHIM	ECCENTRIC PIN	PIN WRENCH	CLAMP	CLAMP SCREW	CLAMP WRENCH
NT-MWLN [®] /2020K06	NT-SH003	NT-SP020	NT-WR020	NT-CS009	NT-SC030	NT-WR025
NT-MWLN [®] /2525M06						
NT-MWLN [®] /2020K08	NT-SH010	NT-SP010	NT-WR030	NT-CS010	NT-SC010	NT-WR030
NT-MWLN [®] /2525M08						
NT-MWLN [®] /3232P08						

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
WN□□0604	page 34	-	-	-
WN□□0804	page 34	page 53	page 68	page 83

Right-hand shown

WN**EXTERNAL****PWLN**

External turning (KAPR 95°)

R L

H**B****WF****LF****LH****MIID****08****NT-PWLN®/L2020K08**

● ●

20

20

25

125

20

WN□□0804

NT-PWLN®/L2525M08

● ●

25

25

32

150

26

● stock standard

Spare Parts

SHIM**PLUG****LEVER****LEVER SCREW****WRENCH****NT-PWLN®/L2020K08**

NT-SH015

NT-SR020

NT-LL020

NT-SC025

NT-WR030

NT-PWLN®/L2525M08

Inserts

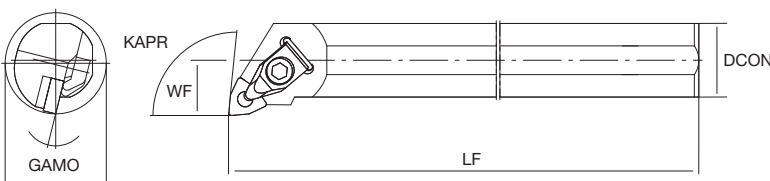
CARBIDE**PCBN****CERAMIC****DIAMOND****WN□□0804**

page 34

page 53

page 68

page 83

WN INTERNAL D										Right-hand shown		STEEL max 3xD INTERNAL COOLANT		
A DWLN Internal turning (KAPR 95°)					DMIN	DCON	WF	LF	GAMO	KG	MIID			
08	NT-A25R-DWLN®/L08	●	●	32	25	17	200	14°		WN□□0804				
	NT-A32S-DWLN®/L08	●	●	40	32	22	250	14°						
	NT-A40T-DWLN®/L08	●	●	50	40	27	300	12°						

● stock standard

Spare Parts	SHIM	SHIM SCREW	SHIM WRENCH	CLAMP	SPRING	CLAMP SCREW	CLAMP WRENCH
NT-A25R-DWLN®/L08	NT-SH015	NT-ST200	NT-WR025	NT-CS200	NT-SG200	NT-SC200	NT-TX20
NT-A32S-DWLN®/L08							
NT-A40T-DWLN®/L08							

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
WN□□0804	page 34	page 53	page 68	page 83

TURNING

THREADING

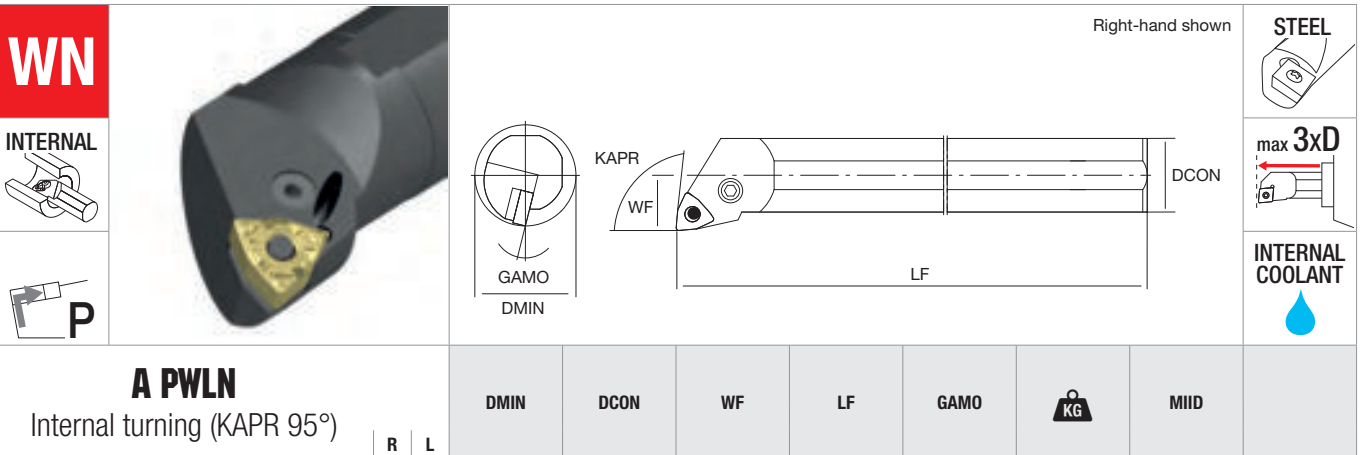
GROOVING

MILLING

DRILLING

ACCESSORIES

nixkoTOOLS



08	NT-A25R-PWLN [®] /08	●	●	30	25	17	200	12°	WN□□0804	
	NT-A32S-PWLN [®] /08	●	●	40	32	22	250	10°		
	NT-A40T-PWLN [®] /08	●	●	48	40	27	300	8°		

- stock standard

Spare Parts	SHIM	PLUG	LEVER	LEVER SCREW	WRENCH
					
NT-A25R-PWLN®/08	-	NT-SR015	NT-LL015	NT-SC015	NT-WR025
NT-A32S-PWLN®/08	NT-SH015	NT-SR020	NT-LL020	NT-SC025	NT-WR030
NT-A40T-PWLN®/08					

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
				
WN□0804	page 34	page 53	page 68	page 83

WN

INTERNAL

M

GAMO

DMIN

KAPR

WF

LF

DCON

Right-hand shown

STEEL

max 3xD

S MWLN

Internal turning (KAPR 95°)

R

L

DMIN

DCON

WF

LF

GAMO

KG

MIID

06	NT-S16Q-MWLN®/.06	○	○	22	16	11	180	18°		WN□□0604	
08	NT-S20R-MWLN®/.08	●	●	25	20	13	200	17°		WN□□0804	
	NT-S25R-MWLN®/.08	●	●	32	25	17	200	14°			
	NT-S32S-MWLN®/.08	●	●	40	32	22	250	14°			
	NT-S40T-MWLN®/.08	●	●	50	40	27	300	12°			
	NT-S50U-MWLN®/.08	●	●	63	50	35	350	12°			

● stock standard, ○ non-standard stock

Spare Parts	SHIM	ECCENTRIC PIN	PIN WRENCH	CLAMP	CLAMP SCREW	CLAMP WRENCH
						

NT-S16Q-MWLN®/.06	-	NT-SP030	NT-WR020	NT-CS030	NT-SC030	NT-WR025
NT-S20R-MWLN®/.08	-	NT-SP035	NT-WR025	NT-CS030	NT-SC030	NT-WR025
NT-S25R-MWLN®/.08					NT-SC008	
NT-S32S-MWLN®/.08	NT-SH010	NT-SP010	NT-WR030	NT-CS010	NT-SC010	NT-WR030
NT-S40T-MWLN®/.08						
NT-S50U-MWLN®/.08						

Inserts	CARBIDE	PCBN	CERAMIC	DIAMOND
WN□□0604	page 34	-	-	-
WN□□0804	page 34	page 53	page 68	page 83

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES



THREADING

Carbide .175
Advanced .181
Holders .185



THREADING Carbide

TURNING

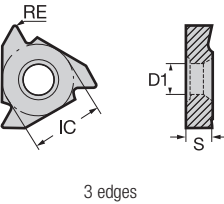
THREADING

GROOVING

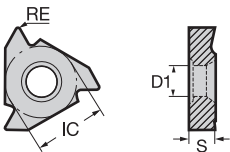
MILLING

DRILLING

ACCESSORIES

TPM		CARBIDE				ISO513	HC-PVD																
		External threading					JP5125																
	Size	IC	S	D1		P	80 180																
	16	9.525	3.65	4.00		M	60 140																
						K	50 120																
						N																	
						S	20 40																
						H																	
GRADE APPLICATION AREA		Stable machining, continuous cut				+																	
main application		General machining, light interruption				-																	
applicable		Unstable machining, interrupted cut				+																	
FULL PROFILE	M P M K S  METRIC 60°	16ER	100ISO-TPM	RE 0.14	pitch: 1.00 mm no. of passes 5÷8	●																	
			125ISO-TPM	RE 0.18	pitch: 1.25 mm no. of passes 6÷9	●																	
			150ISO-TPM	RE 0.22	pitch: 1.50 mm no. of passes 6÷9	●																	
			175ISO-TPM	RE 0.25	pitch: 1.75 mm no. of passes 8÷11	●																	
			200ISO-TPM	RE 0.29	pitch: 2.00 mm no. of passes 8÷11	●																	
			250ISO-TPM	RE 0.36	pitch: 2.50 mm no. of passes 10÷13	●																	
			300ISO-TPM	RE 0.43	pitch: 3.00 mm no. of passes 12÷15	●																	
	UN P M K S  UNIFIED 60°	16ER	24UN-TPM	RE 0.15	pitch: 24 TPI no. of passes 5÷8	●																	
			20UN-TPM	RE 0.18	pitch: 20 TPI no. of passes 6÷9	●																	
			18UN-TPM	RE 0.20	pitch: 18 TPI no. of passes 6÷9	●																	
			16UN-TPM	RE 0.23	pitch: 16 TPI no. of passes 7÷10	●																	
			14UN-TPM	RE 0.26	pitch: 14 TPI no. of passes 8÷11	●																	
			12UN-TPM	RE 0.31	pitch: 12 TPI no. of passes 8÷11	●																	
			08UN-TPM	RE 0.46	pitch: 8 TPI no. of passes 12÷15	●																	
	NPT P M K S  NATIONAL PIPE TAPERED 60°	16ER	18NPT-TPM	RE 0.20	pitch: 18 TPI no. of passes 8÷11	●																	
			14NPT-TPM	RE 0.22	pitch: 14 TPI no. of passes 10÷13	●																	
			11.5NPT-TPM	RE 0.25	pitch: 11.5 TPI no. of passes 12÷15	●																	
	W P M K S  WHITWORTH 55°	16ER	19W-TPM	RE 0.17	pitch: 19 TPI no. of passes 6÷9	●																	
			14W-TPM	RE 0.24	pitch: 14 TPI no. of passes 8÷11	●																	
			11W-TPM	RE 0.30	pitch: 11 TPI no. of passes 9÷12	●																	
	BSPT P M K S  BRITISH STANDARD PIPE TAPERED 55°	16ER	28BSPT-TPM	RE 0.11	pitch: 28 TPI no. of passes 5÷8	●																	
			19BSPT-TPM	RE 0.17	pitch: 19 TPI no. of passes 6÷9	●																	
			14BSPT-TPM	RE 0.24	pitch: 14 TPI no. of passes 9÷12	●																	
			11BSPT-TPM	RE 0.30	pitch: 11 TPI no. of passes 12÷15	●																	

● stock standard

TPM		CARBIDE External threading				ISO513	HC-PVD																
		Size	IC	S	D1		JP5125																
 3 edges		16	9.525	3.65	4.00	P	80 180																
						M	60 140																
						K	50 120																
						N																	
						S	20 40																
						H																	
GRADE APPLICATION AREA		Stable machining, continuous cut				+	+																
main application		General machining, light interruption				-	-																
applicable		Unstable machining, interrupted cut				-	-																

PARTIAL PROFILE	60°	P	M	K	S		16ER	A60-TPM	RE 0.08	pitch: 0.50÷1.50 mm, 48÷16 TPI	●																
	METRIC AND UNIFIED THREADS						G60-TPM	RE 0.25	pitch: 1.75÷3.00 mm, 14÷8 TPI	●																	
							AG60-TPM	RE 0.08	pitch: 0.50÷3.00 mm, 48÷8 TPI	●																	
	55°	P	M	K	S		16ER	A55-TPM	RE 0.08	pitch: 48÷16 TPI	●																
							G55-TPM	RE 0.21	pitch: 14÷8 TPI	●																	
							AG55-TPM	RE 0.08	pitch: 48÷8 TPI	●																	
	WHITWORTH AND GAS THREADS																										

● stock standard

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

TURNING

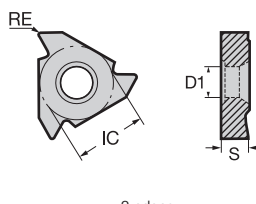
THREADING

GROOVING

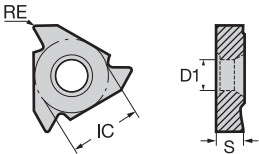
MILLING

DRILLING

ACCESSORIES

TPM		CARBIDE Internal threading				ISO513	HC-PVD														
		Size	IC	S	D1		JP5125														
		11	6.35	3.18	3.20	P	80 180														
		16	9.525	3.65	4.00	M	60 140														
						K	50 120														
						N															
						S	20 40														
						H															
GRADE APPLICATION AREA		Stable machining, continuous cut				+															
main application		General machining, light interruption				-															
applicable		Unstable machining, interrupted cut				+															
M P M K S 		11IR	100ISO-TPM	RE 0.07	pitch: 1.00 mm no. of passes 5÷8	●															
			125ISO-TPM	RE 0.09	pitch: 1.25 mm no. of passes 6÷9	●															
			150ISO-TPM	RE 0.11	pitch: 1.50 mm no. of passes 6÷9	●															
			175ISO-TPM	RE 0.13	pitch: 1.75 mm no. of passes 8÷11	●															
			200ISO-TPM	RE 0.15	pitch: 2.00 mm no. of passes 8÷11	●															
		16IR	100ISO-TPM	RE 0.07	pitch: 1.00 mm no. of passes 5÷8	●															
			125ISO-TPM	RE 0.09	pitch: 1.25 mm no. of passes 6÷9	●															
			150ISO-TPM	RE 0.11	pitch: 1.50 mm no. of passes 6÷9	●															
			175ISO-TPM	RE 0.13	pitch: 1.75 mm no. of passes 8÷11	●															
			200ISO-TPM	RE 0.15	pitch: 2.00 mm no. of passes 8÷11	●															
METRIC 60°			250ISO-TPM	RE 0.18	pitch: 2.50 mm no. of passes 10÷13	●															
			300ISO-TPM	RE 0.22	pitch: 3.00 mm no. of passes 12÷15	●															
UN P M K S 		16IR	24UN-TPM	RE 0.08	pitch: 24 TPI no. of passes 5÷8	●															
			20UN-TPM	RE 0.09	pitch: 20 TPI no. of passes 6÷9	●															
			18UN-TPM	RE 0.10	pitch: 18 TPI no. of passes 6÷9	●															
			16UN-TPM	RE 0.12	pitch: 16 TPI no. of passes 7÷10	●															
			14UN-TPM	RE 0.13	pitch: 14 TPI no. of passes 8÷11	●															
			12UN-TPM	RE 0.16	pitch: 12 TPI no. of passes 8÷11	●															
			08UN-TPM	RE 0.23	pitch: 8 TPI no. of passes 12÷15	●															
NPT P M K S 		16IR	18NPT-TPM	RE 0.20	pitch: 18 TPI no. of passes 8÷11	●															
			14NPT-TPM	RE 0.22	pitch: 14 TPI no. of passes 10÷13	●															
			11.5NPT-TPM	RE 0.25	pitch: 11.5 TPI no. of passes 12÷15	●															
NATIONAL PIPE TAPERED 60°																					
W P M K S 		16IR	19W-TPM	RE 0.17	pitch: 19 TPI no. of passes 6÷9	●															
			14W-TPM	RE 0.24	pitch: 14 TPI no. of passes 8÷11	●															
			11W-TPM	RE 0.30	pitch: 11 TPI no. of passes 9÷12	●															
WHITWORTH 55°																					

● stock standard

TPM		CARBIDE Internal threading				ISO513	HC-PVD																			
		Size	IC	S	D1		JP5125																			
 3 edges						P	80 180																			
	11	6.35	3.18	3.20		M	60 140																			
	16	9.525	3.65	4.00		K	50 120																			
						N																				
						S	20 40																			
						H																				
GRADE APPLICATION AREA		Stable machining, continuous cut				+																				
main application		General machining, light interruption				-																				
applicable		Unstable machining, interrupted cut				+																				

FULL PROFILE	BSPT P M K S	16IR	28BSPT-TPM	RE 0.11	pitch: 28 TPI no. of passes 5÷8	●														
	 BRITISH STANDARD PIPE TAPERED 55°		19BSPT-TPM	RE 0.17	pitch: 19 TPI no. of passes 6÷9	●														
			14BSPT-TPM	RE 0.24	pitch: 14 TPI no. of passes 9÷12	●														
			11BSPT-TPM	RE 0.30	pitch: 11 TPI no. of passes 12÷15	●														
		PARTIAL PROFILE	60° P M K S	11IR	A60-TPM	RE 0.08	pitch: 0.50÷1.50 mm, 48÷16 TPI	●												
 METRIC AND UNIFIED THREADS	16IR		A60-TPM	RE 0.08	pitch: 0.50÷1.50 mm, 48÷16 TPI	●														
			G60-TPM	RE 0.13	pitch: 1.75÷3.00 mm, 14÷8 TPI	●														
			AG60-TPM	RE 0.08	pitch: 0.50÷3.00 mm, 48÷8 TPI	●														
	55° P M K S		11IR	A55-TPM	RE 0.08	pitch: 48÷16 TPI	●													
 WHITWORTH AND GAS THREADS		16IR	A55-TPM	RE 0.08	pitch: 48÷16 TPI	●														
			G55-TPM	RE 0.21	pitch: 14÷8 TPI	●														
			AG55-TPM	RE 0.08	pitch: 48÷8 TPI	●														

● stock standard

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES



THREADING Advanced

TURNING

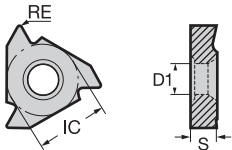
THREADING

GROOVING

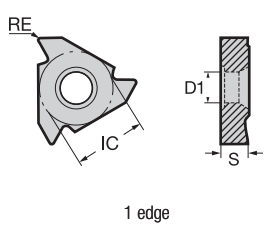
MILLING

DRILLING

ACCESSORIES

16ER		DIAMOND-PCBN External threading				ISO513	DP	BH																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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○ non-standard stock

16IR		DIAMOND-PCBN Internal threading				ISO513	DP	BH														
		Size	IC	S	D1		ND120	NBH450U														
		16	9.525	3.65	4.00		P	140 300	◀ SINTERED POWDER METAL													
							M															
							K	400 1200														
							N	500 2000														
							S															
GRADE APPLICATION AREA		Stable machining, continuous cut					H	60 160														
main application		General machining, light interruption																				
applicable		Unstable machining, interrupted cut																				

FULL PROFILE		METRIC N H																			
		16IR	100ISO	N	pitch: 1.00 mm no. of passes 5÷8	○															
				H	pitch: 1.00 mm no. of passes 7÷10	○															
		125ISO		N	pitch: 1.25 mm no. of passes 6÷9	○															
				H	pitch: 1.25 mm no. of passes 8÷11	○															
		150ISO		N	pitch: 1.50 mm no. of passes 6÷9	○															
				H	pitch: 1.50 mm no. of passes 8÷11	○															
		175ISO		N	pitch: 1.75 mm no. of passes 8÷11	○															
				H	pitch: 1.75 mm no. of passes 10÷13	○															
		200ISO		N	pitch: 2.00 mm no. of passes 8÷11	○															
				H	pitch: 2.00 mm no. of passes 10÷13	○															
		250ISO		N	pitch: 2.50 mm no. of passes 10÷13	○															
				H	pitch: 2.50 mm no. of passes 13÷15	○															
		300ISO		N	pitch: 3.00 mm no. of passes 12÷15	○															
				H	pitch: 3.00 mm no. of passes 14÷17	○															

○ non-standard stock

TURNING

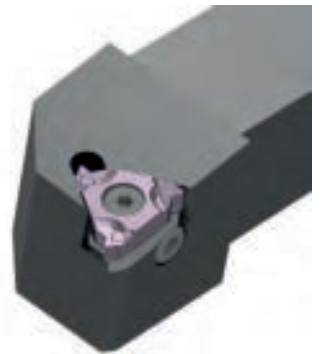
THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

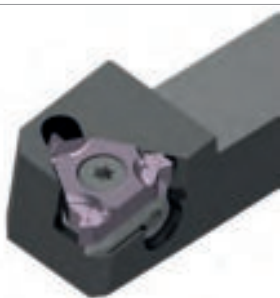


THREADING Holders

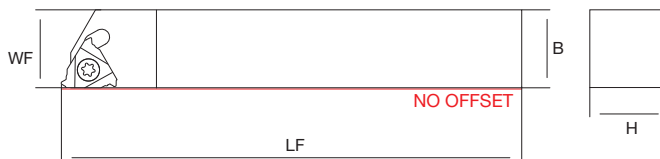
TURNING

16E

EXTERNAL



Right-hand shown



THREADING

SE N

External threading

R L

H

B

WF

LF

KG

MIID

16	NT-SE ^R /1212H16N	●	○	12	12	12	100		16E ^R /□□□		
	NT-SE ^R /1616H16N	○	○	16	16	16	100				

● stock standard, ○ non-standard stock

GROOVING

Spare Parts

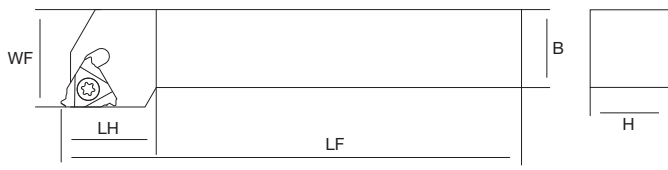


NT-SER1212H16N	NT-SH060	NT-ST080	NT-WR025	NT-ST040	NT-FT15
NT-SER1616H16N					
NT-SEL1212H16N	NT-SH065	NT-ST080	NT-WR025	NT-ST040	NT-FT15
NT-SEL1616H16N					

MILLING

DRILLING

ACCESSORIES

16E				Right-hand shown							
EXTERNAL											
											
SE											
External threading											
		R	L	H	B	WF	LF	LH		MIID	
16	NT-SE ^R /1616H16	●	●	16	16	20	100	22			
	NT-SE ^R /2020K16	●	●	20	20	25	125	25		16E ^R /□□□□	
	NT-SE ^R /2525M16	●	●	32	25	32	150	25			

● stock standard

Spare Parts						
NT-SER1616H16						
NT-SER2020K16	NT-SH060	NT-ST080	NT-WR025	NT-ST040	NT-FT15	
NT-SER2525M16						
NT-SEL1616H16						
NT-SEL2020K16	NT-SH065	NT-ST080	NT-WR025	NT-ST040	NT-FT15	
NT-SEL2525M16						

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

TURNING

THREADING

GROOVING

MILLING

DRILLING

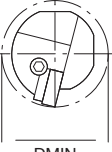
ACCESSORIES

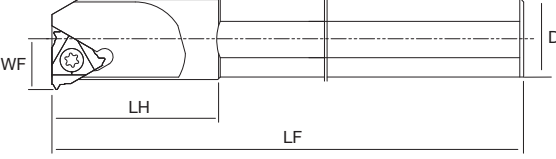
111
161

INTERNAL






DMIN


WF LH LF DCON

Right-hand shown

STEEL



max 3xD

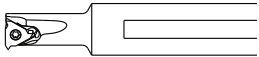


SI Internal threading			DMIN	DCON	WF	LF	LH	KG	MIID	
	R	L								

11	NT-SIR1012-11	●		10	12	5.2	150	25		11IR000	
	NT-SIR1216-11*	●		12	16	6.3	150	25			
	NT-SIR1516-11*	●		15	16	7.5	150	25			
16	NT-SI [®] /2016-16	●	●	20	16	10	150	35		16IR/LO00	
	NT-SI [®] /2420S-16	●	●	24	20	12	180	35			
	NT-SI [®] /3025S-16	●	●	30	25	15	200	35			
	NT-SI [®] /3732S-16	●	●	37	32	18.5	250	35			

● stock standard

*Reduced neck

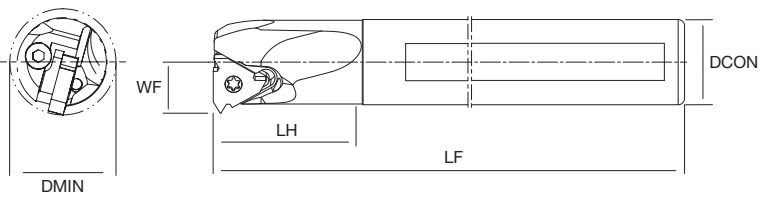


Spare Parts	SHIM	SHIM SCREW	SHIM WRENCH	INSERT SCREW	INSERT WRENCH
					

NT-SIR1012-11	-	-	-	NT-ST041	NT-FT08
NT-SIR1216-11					
NT-SIR1516-11					
NT-SIR2016-16	NT-SH065	NT-ST080	NT-WR025	NT-ST040	NT-FT15
NT-SIR2420S-16					
NT-SIR3025S-16					
NT-SIR3732S-16					
NT-SIL2016-16	NT-SH060	NT-ST080	NT-WR025	NT-ST040	NT-FT15
NT-SIL2420S-16					
NT-SIL3025S-16					
NT-SIL3732S-16					

11
16





Right-hand shown



max 5xD



V SIR

Internal threading

DMIN	DCON	WF	LF	LH	KG	MIID
------	------	----	----	----	----	------

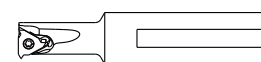
11	NT-V10M-SIR11-10	●	10	10	5.2	150	25		11IR000	
	NT-V16M-SIR11-12*	●	12	16	6.3	150	25			
	NT-V16M-SIR11-15*	●	15	16	7.5	150	25			
16	NT-V16M-SIR16-20	●	20	16	10	150	35		16IR000	
	NT-V20Q-SIR16-24	●	24	20	12	180	35			
	NT-V25R-SIR16-30	●	30	25	15	200	35			
	NT-V32S-SIR16-37	●	37	32	18.5	250	35			

● stock standard

*Reduced neck

Spare Parts	SHIM	SHIM SCREW	SHIM WRENCH	INSERT SCREW	INSERT WRENCH
					

NT-V10M-SIR11-10	-	-	-	NT-ST041	NT-FT08
NT-V16M-SIR11-12					
NT-V16M-SIR11-15					
NT-V16M-SIR16-20	NT-SH065	NT-ST080	NT-WR025	NT-ST030	NT-FT15
NT-V20Q-SIR16-24					
NT-V25R-SIR16-30				NT-ST040	
NT-V32S-SIR16-37					



TURNING

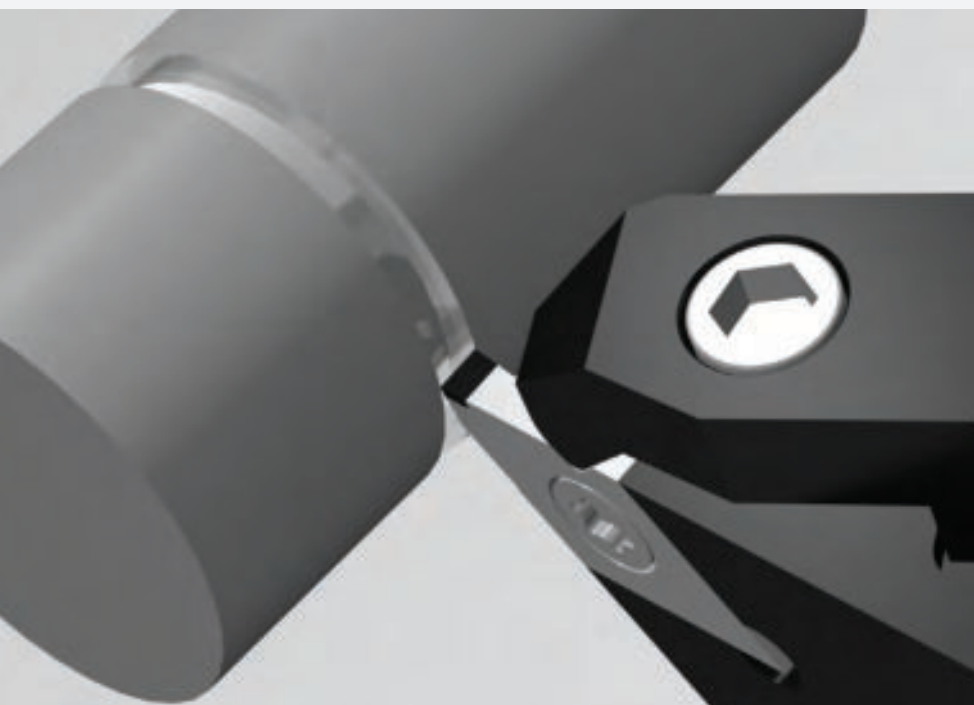
THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES



GROOVING

Advanced .193

Holders .195



GROOVING Advanced

*Only right-hand available

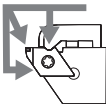


GROOVING Holders

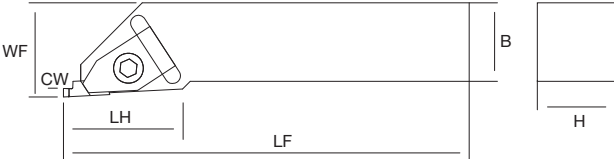
TURNING

BGF

EXTERNAL







Right-hand shown

BGF-HLD External grooving				H	B	WF	LF	LH		MIID	
	R	L		16	16	30	150	45		BGF [®] /□□□	
CW 1÷4			▽	20	20	30	150	45			
			●	25	25	30	150	45			
			●								

● stock standard, ▽ stock exhaustion

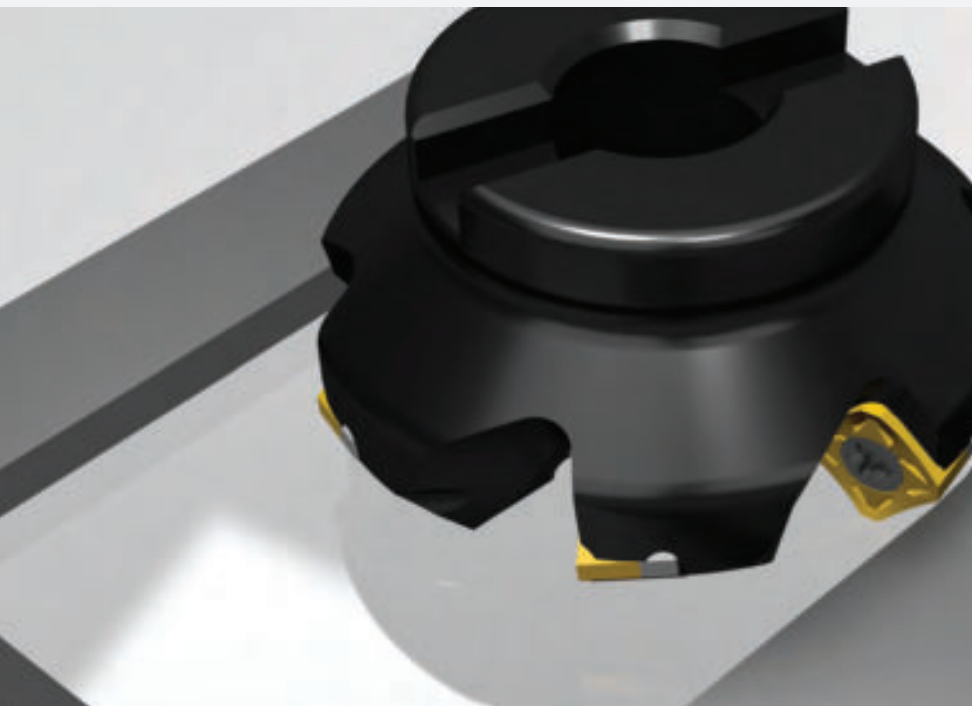
GROOVING

Spare Parts	CLAMP	CLAMP SCREW	CLAMP WRENCH	INSERT SCREW	INSERT WRENCH	
						
	BGF-HLF 1616 [°] /L	NT-CS300 [°] /L	NT-SC300	NT-WR040	NT-ST300	NT-FT15
	BGF-HLF 2020 [°] /L					
BGF-HLF 2525 [°] /L						

MILLING

DRILLING

ACCESSORIES



MILLING

Shouldering	.199
Facing	.209
High Feed	.223
Copying	.229
Chamfering	.237
Advanced	.241



MILLING Shouldering

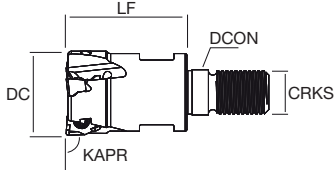
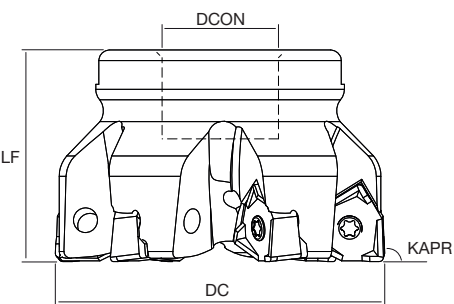
DOUBLE3CON .200

REKPLUS .202

APKT ISO .206

● stock standard. ▲ upcoming introduction. ▽ stock exhaustion

Spare Parts	INSERT SCREW	INSERT WRENCH
		
NT-WX04H D□□□	NT-ST018	NT-FTB08
NT-WX08H D□□□	NT-ST017	NT-FTB15

CYLINDRICAL  INTERNAL COOLANT 			SHOULDERING  90° P M K N S						
SCREW-IN  INTERNAL COOLANT 									
ARBOR  INTERNAL COOLANT 									
DOUBLE3GON Shouldering (KAPR 90°)		DC		DCON	LF	LU	CRKS		MIID

CYLINDRICAL	NT-WX04H	D020-S16-Z3	●	20	3	16	110	20	-	0.30	WNEX04
		D020-S20-Z3	●		3	20	110	28	-	0.30	
		D025-S20-Z4	●	25	4	20	120	22	-	0.50	
		D025-S25-Z4	●		4	25	120	30	-	0.50	
		D032-S25-Z5	●	32	5	25	130	25	-	0.80	
		D032-S32-Z5	●		5	32	130	40	-	0.80	
SCREW-IN	NT-WX04H	D020-M10-Z3	●	20	3	10.5	28	-	M10	0.10	WNEX04
		D025-M12-Z4	●	25	4	12.5	30	-	M12	0.15	
		D032-M16-Z5	●	32	5	17	40	-	M16	0.25	
ARBOR	NT-WX04H	D040-F16-Z7	●	40	7	16	40	-	-	0.25	WNEX04
		D050-F22-Z9	●	50	9	22	40	-	-	0.50	
	NT-WX08H	D050-F22-Z4	●	50	4	22	40	-	-	0.45	WNEX08
		D050-F22-Z5	●		5	22	40	-	-	0.45	
		D063-F22-Z6	●	63	6	22	40	-	-	0.70	
		D063-F27-Z6	●		6	27	40	-	-	0.70	
		D063-F22-Z7	●		7	22	40	-	-	0.80	
		D080-F27-Z7	●	80	7	27	50	-	-	1.00	
		D080-F27-Z9	●		9	27	50	-	-	1.00	
		D100-F32-Z8	●	100	8	32	50	-	-	1.60	
		D100-F32-Z11	●		11	32	50	-	-	1.60	
		D125-F40-Z11	●	125	11	40	63	-	-	2.40	
		D160-F40-Z12	●	160	12	40	63	-	-	4.00	

● stock standard

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

● stock standard. ○ non-standard stock. ▽ stock exhaustion

NT-RKP		REKPLUS Shouldering - positive					ISO513	HC-PVD							CVD	HW	HT																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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● stock standard

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

TURNING

THREADING

GROOVING

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ACCESSORIES

CYLINDRICAL

INTERNAL COOLANT



SCREW-IN

INTERNAL COOLANT



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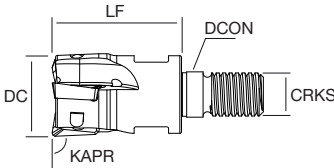
SHOULDERING

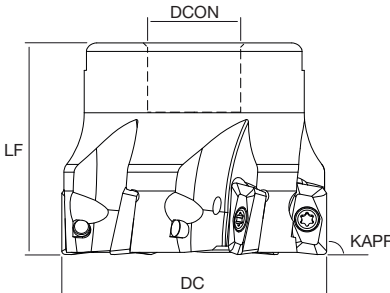
90°

PMK

NS







REKPLUS

Shouldering (KAPR 90°)

DC		DCON	LF	LU	CRKS		MIID				
NT-RKP11	D016-S16-Z2	●	16	2	16	100	25	-	0.15	NT-RKP11	
	D020-S16-Z3	●	20	3	16	110	30	-	0.25		
	D020-S20-Z3	●		3	20	110	30	-	0.30		
	D025-S20-Z3	●	25	3	20	120	35	-	0.40		
	D025-S25-Z3	●		3	25	120	35	-	0.50		
	D025-S25-Z4	●		4	25	120	35	-	0.50		
	D032-S25-Z4	●	32	4	25	130	35	-	0.60		
	D032-S32-Z4	●		4	32	130	35	-	1.00		
	D032-S32-Z5	●		5	32	130	35	-	1.00		
NT-RKP16	D025-S25-Z2	●	25	2	25	120	35	-	0.45	NT-RKP16	
	D032-S32-Z3	●	32	3	32	130	45	-	0.75		
	D040-S32-Z4	●	40	4	32	150	45	-	1.00		
CYLINDRICAL LONG	NT-RKP11	D016-S15-Z2-L160	●	16	2	15	160	25	-	0.25	NT-RKP11
		D016-S16-Z2-L160	●		2	16	160	25	-	0.30	
		D017-S16-Z2-L170	●	17	2	16	170	25	-	0.35	
		D020-S19-Z3-L200	●	20	3	19	200	30	-	0.50	
		D020-S20-Z3-L200	●		3	20	200	30	-	0.50	
		D021-S20-Z3-L210	●	21	3	20	210	30	-	0.50	
		D025-S24-Z3-L250	●	25	3	24	250	35	-	1.00	
		D025-S25-Z3-L250	●		3	25	250	35	-	1.00	
		D026-S25-Z3-L260	●	26	3	25	260	35	-	1.00	

● stock standard

REKPLUS Shouldering (KAPR 90°)				DC		DCON	LF	LU	CRKS		MIID
WELDON	NT-RKP11	D016-W16-Z2-L080	●	16	2	16	80	25	-	0.15	NT-RKP11
		D020-W20-Z3-L090	●	20	3	20	90	30	-	0.20	
		D025-W25-Z4-L100	●	25	4	25	100	35	-	0.35	
SCREW-IN	NT-RKP11	D016-M08-Z2	●	16	2	8.5	25	-	M8	0.05	NT-RKP11
		D020-M10-Z2	▽	20	2	10.5	30	-	M10	0.10	
		D020-M10-Z3	●		3	10.5	38	-	M10	0.10	
		D025-M12-Z3	●	25	3	12.5	38	-	M12	0.15	
		D025-M12-Z4	●		4	12.5	38	-	M12	0.15	
		D032-M16-Z4	●	32	4	17	43	-	M16	0.25	
		D032-M16-Z5	●		5	17	43	-	M16	0.25	
	NT-RKP16	D025-M12-Z2	●	25	2	12.5	38	-	M12	0.15	NT-RKP16
		D032-M16-Z3	●	32	3	17	43	-	M16	0.25	
		D040-M16-Z4	●	40	4	17	43	-	M16	0.30	
ARBOR	NT-RKP11	D040-F16-Z5	●	40	5	16	40	-	-	0.25	NT-RKP11
		D040-F16-Z6	●		6	16	40	-	-	0.25	
		D050-F22-Z5	●	50	5	22	40	-	-	0.45	
		D050-F22-Z7	●		7	22	40	-	-	0.45	
		D063-F22-Z6	●	63	6	22	40	-	-	0.65	
		D063-F22-Z8	●		8	22	40	-	-	0.65	
		D080-F27-Z7	●	80	7	27	50	-	-	1.20	
		D080-F27-Z10	●		10	27	50	-	-	1.20	
	NT-RKP16	D040-F16-Z4	●	40	4	16	40	-	-	0.25	NT-RKP16
		D040-F16-Z5	●		5	16	40	-	-	0.25	
		D050-F22-Z4	●	50	4	22	40	-	-	0.50	
		D050-F22-Z5	●		5	22	40	-	-	0.50	
		D063-F22-Z5	●	63	5	22	40	-	-	0.80	
		D063-F22-Z6	●		6	22	40	-	-	0.80	
		D080-F27-Z6	●	80	6	27	50	-	-	1.20	
		D080-F27-Z8	●		8	27	50	-	-	1.20	
		D100-F32-Z7	●	100	7	32	50	-	-	1.70	
		D100-F32-Z9	●		9	32	50	-	-	1.70	

● stock standard, ▽ stock exhaustion

Spare Parts	INSERT SCREW	INSERT WRENCH
		

NT-RKP11 D□□□	NT-ST018N	NT-FTB08
NT-RKP16 D□□□	NT-ST017N	NT-FTB15

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

TURNING

THREADING

GROOVING

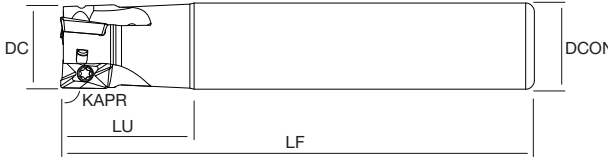
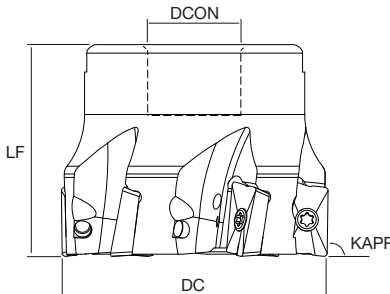
MILLING

DRILLING

ACCESSORIES

APKT		ISO Shouldering - positive					ISO513	HC-PVD		HC-CVD		HW																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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● stock standard, ▲ upcoming introduction, ▽ stock exhaustion

CYLINDRICAL  INTERNAL COOLANT 			SHOULDERING  90° P M K N					
ARBOR  INTERNAL COOLANT 								
APKT ISO Shouldering (KAPR 90°)		DC 	DCON	LF	LU	CRKS	 KG	MIID

CYLINDRICAL	NT-APK10H	D016-S16-Z2	●	16	2	16	100	28	-	0.15	APKT10
		D020-S20-Z3	●	20	3	20	110	30	-	0.25	
		D025-S25-Z3	●	25	3	25	120	30	-	0.45	
		D032-S32-Z4	●	32	4	32	130	40	-	0.75	
ARBOR	NT-APK16H	D025-S25-Z2	●	25	2	25	120	40	-	0.45	APKT16
		D032-S32-Z3	●	32	3	32	130	45	-	0.75	
		D040-F16-Z5	●	50	5	16	40	-	-	0.25	
		D050-F22-Z5	●		5	22	50	-	-	0.45	
ARBOR	NT-APK16H	D050-F22-Z7	●		7	22	50	-	-	0.45	
		D040-F16-Z4	●	40	4	16	40	-	-	0.25	APKT16
		D050-F22-Z4	●	50	4	22	50	-	-	0.55	
		D050-F22-Z5	●		5	22	50	-	-	0.55	
		D063-F22-Z5	●		5	22	40	-	-	0.80	
		D063-F22-Z6	●	63	6	22	40	-	-	0.80	
		D080-F27-Z6	●		6	27	50	-	-	1.20	

● stock standard

Spare Parts	INSERT SCREW 	INSERT WRENCH 
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NT-APK10H D□□□	NT-ST011	NT-FTB09
NT-APK16H D□□□	NT-ST019	NT-FTB15

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES



MILLING Facing

DOUBLE4FACE .210

DOUBLEHEX .212

4FACEPLUS .214

OKTOPLUS .218

SEHX12 ISO .222

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

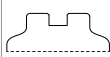
SN□X		DOUBLE4FACE				Facing 45° - double sided		ISO513		HC-PVD				HC-CVD	HW																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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● stock standard, ▲ upcoming introduction



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

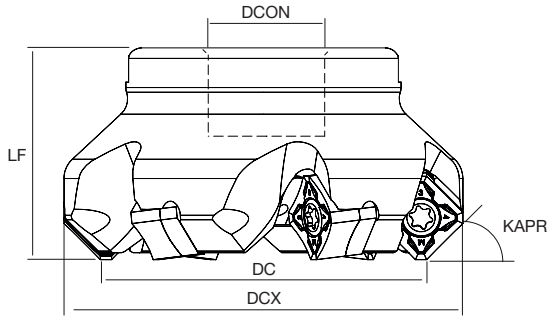
ARBOR



INTERNAL COOLANT







FACING



P M K
N S

DOUBLE4FACE Facing (KAPR 45°)			DC	DCX		DCON	LF		MIID	
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ARBOR	NT-SX12H	D050-F22-Z4	●	50	64	4	22	40	0.60	SNEX12 SNMX12	
		D050-F22-Z5	●			5	22	40	0.60		
		D063-F22-Z5	●	63	77	5	22	50	0.80		
		D063-F22-Z6	●			6	22	50	0.80		
		D080-F27-Z6	●	80	94	6	27	50	1.40		
		D080-F27-Z7	●			7	27	50	1.40		
		D080-F27-Z8	●			8	27	50	1.40		
		D100-F32-Z7	●	100	114	7	32	50	1.80		
		D100-F32-Z8	●			8	32	50	1.80		
		D100-F32-Z9	●			9	32	50	1.80		
		D125-F40-Z10	●	125	139	10	40	63	3.10		
		D160-F40-Z12	●	160	174	12	40	63	4.60		

● stock standard

Spare Parts	SHIM	SHIM SCREW	SHIM WRENCH	INSERT SCREW	INSERT WRENCH
					
NT-SX12H D000	NT-SH009	NT-SR009	NT-WR040	NT-ST029	NT-FTB15

TURNING

THREADING

GROOVING

MILLING

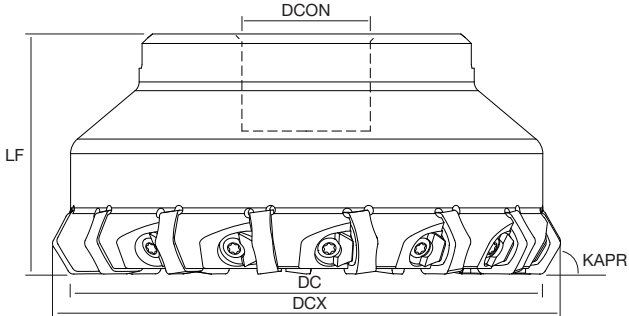
DRILLING

ACCESSORIES

● stock standard

ARBOR





FACING



K

DOUBLEHEX
Facing (KAPR 60°)

DC	DCX		DCON	LF	 KG	MIID
----	-----	---	------	----	--	------

ARBOR	NT-HN09	D080-F27-Z8	●	80	90	8	27	50	1.40	HNEX09 HNMX09	
		D080-F27-Z10	●			10	27	50	1.40		
		D100-F32-Z10	●	100	110	10	32	50	2.00		
		D100-F32-Z14	●			14	32	50	2.00		
		D125-F40-Z12	●	125	135	12	40	63	3.80		
		D125-F40-Z15	●			15	40	63	3.80		
		D160-F40-Z15	●	160	170	15	40	63	5.30		
		D160-F40-Z20	●			20	40	63	5.30		

● stock standard

Spare Parts

WEDGE



WEDGE SCREW



WRENCH



NT-HN09 D□□□	NT-WD090	NT-SC090	NT-WR030
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TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

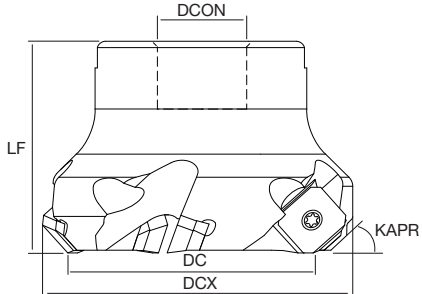
● stock standard, ▲ upcoming introduction, ▽ stock exhaustion

ACCESSORIES

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

ARBOR





FACING



P

M

K

N

S

4FACEPLUS

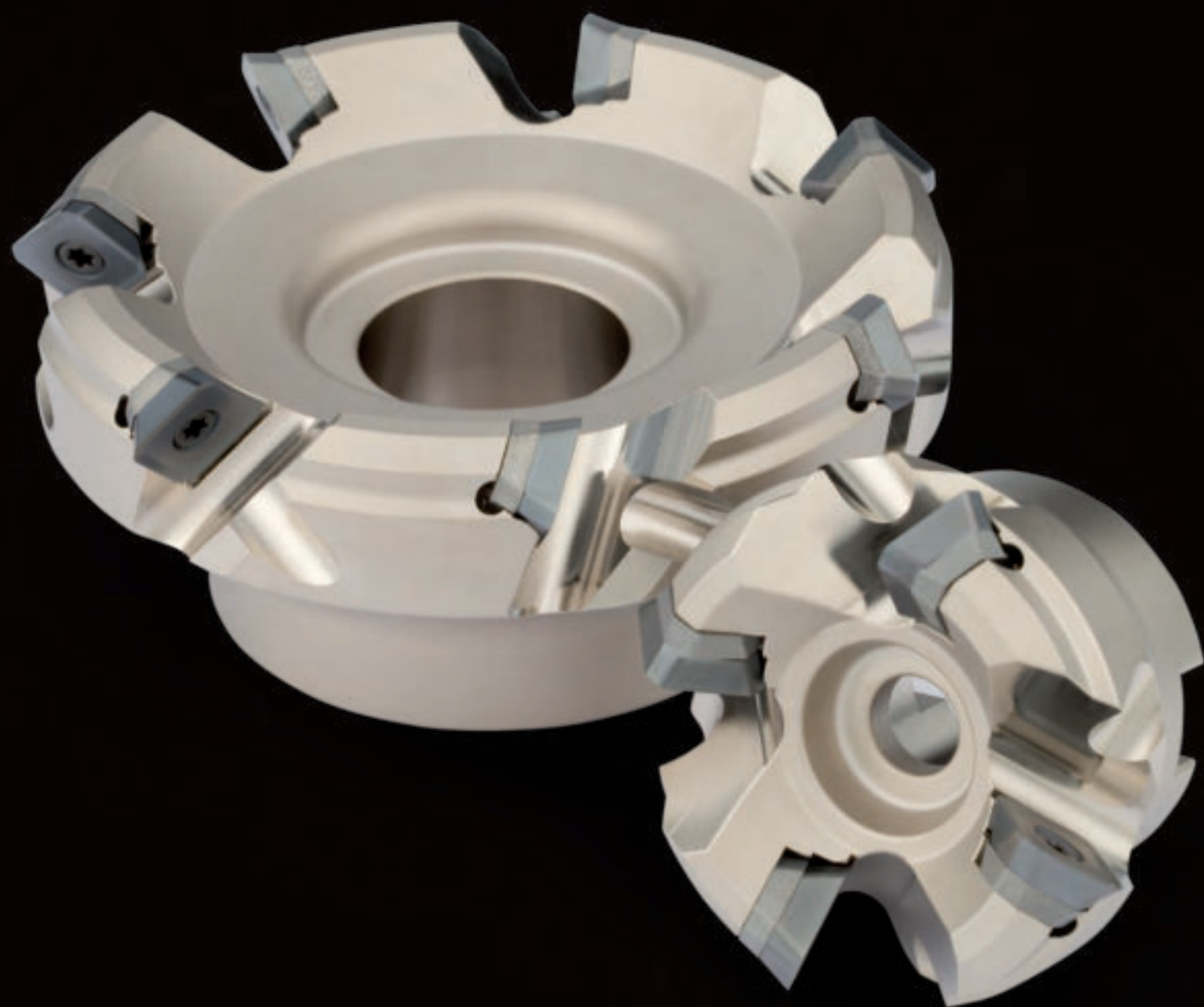
Facing (KAPR 45°)

DC	DCX		DCON	LF	 KG	MIID
----	-----	---	------	----	--	------

ARBOR	NT-SE13	D050-F22-Z4	●	50	63	4	22	40	0.50	SEET13 SEMT13	
		D050-F22-Z5	●			5	22	40	0.50		
		D063-F22-Z5	●	63	76	5	22	50	0.70		
		D063-F22-Z6	●			6	22	50	0.70		
		D080-F27-Z6	●	80	93	6	27	50	1.20		
		D080-F27-Z8	●			8	27	50	1.20		
		D100-F32-Z7	●	100	113	7	32	50	1.80		
		D100-F32-Z10	●			10	32	50	1.80		
		D125-F40-Z8	●	125	138	8	40	63	3.00		
		D125-F40-Z12	●			12	40	63	3.00		
		D160-F40-Z10	●	160	173	10	40	63	5.00		
		D200-F60-Z12	●	200	213	12	60	63	8.00		

● stock standard

Spare Parts	SHIM	SHIM SCREW	SHIM WRENCH	INSERT SCREW	INSERT WRENCH
					
NT-SE13 D□□□	NT-SH004	NT-SR002	NT-WR035	NT-ST040	NT-FTB15



[illegible]

● stock standard

ARBOR

INTERNAL COOLANT



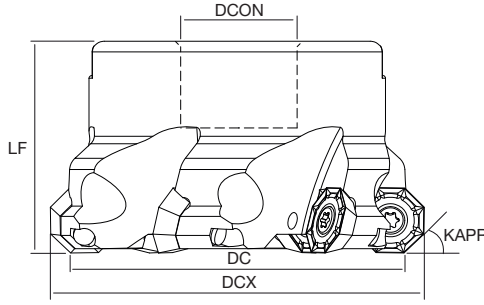
DCON

LF

DC

DCX

KAPR



FACING



P

M

K

N

OKTOPLUS - OF

Facing (KAPR 43°)

DC	DCX		DCON	LF		MIID
----	-----	---	------	----	---	------

ARBOR	NT-OF05H	D050-F22-Z5	●	50	58	5	22	40	0.45	OFKT05	
		D063-F22-Z6	●	63	71	6	22	40	0.65		
		D080-F27-Z7	●	80	88	7	27	50	1.00		
		D100-F32-Z8	●	100	108	8	32	50	1.60		

● stock standard

Spare Parts

INSERT SCREW

INSERT WRENCH

NT-OF05H D□□□	NT-ST024	NT-FTB15
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TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

TURNING

THREADING

GROOVING

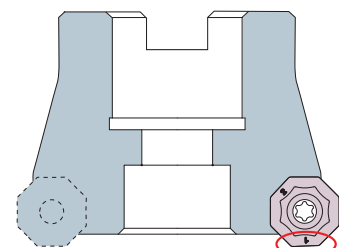
MILLING

DRILLING

ACCESSORIES

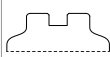
OD□T		OKTOPLUS Facing 43° - positive					ISO513	HC-PVD				HC-CVD																		
		Size	IC	S	D1	AN	P	80 250	60 230	JP5530	JP7525	JP9535	JP7515	JP6520																
		06	15.875	5.56	5.50	15°	M	60 160	60 150			60 200																		
							K			100 240			120 350																	
							N						200 1000																	
							S					40 100																		
							H																							
GRADE APPLICATION AREA		Light cut, stable machining					+ Hardness - Toughness	+ Toughness - Hardness																						
main application		Variable condition, general machining																												
applicable		Heavy cut, unstable machining																												
SHARP	SC	ODKT 060508-SC	RE 0.8 BS 1.8	a_p ▶ f_z ▶	0.50 0.08	1.50 0.15	2.50 0.22			●	●	●	●	●	●	●														
GENERAL	GP	ODKT 060508-GP	RE 0.8 BS 1.8	a_p ▶ f_z ▶	1.00 0.10	2.00 0.21	3.00 0.32			●	●	●	●	●	●	●														
REINFORCED	TE	ODKT 060508-TE	RE 0.8 BS 1.8	a_p ▶ f_z ▶	1.50 0.14	2.50 0.26	3.50 0.38			●	●	●	●	●	●	●														
WIPER	WU	ODKT 060508-WU	RE 0.8 BS 6.4	a_p ▶ f_z ▶	0.50 0.08	1.00 0.16	1.50 0.24			●	●	▲	●	●	●	●														
ALUMINIUM	AL	ODKT 060508-AL	RE 0.8 BS 1.8	a_p ▶ f_z ▶	0.50 0.10	2.00 0.22	3.50 0.35								●															
polished surface																														

● stock standard, ▲ upcoming introduction



Please follow the clamping procedure shown in the picture.
Only 1 wiper insert per setup.

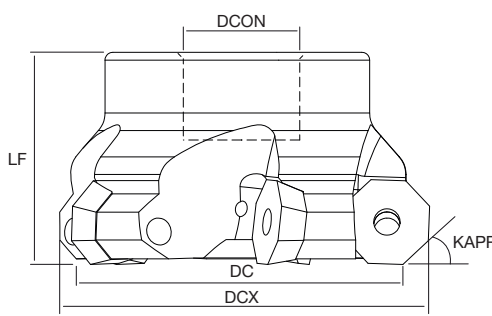
ARBOR



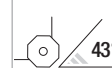
INTERNAL COOLANT







FACING



43°

P M K
N S

OKTOPLUS - OD
Facing (KAPR 43°)

DC	DCX		DCON	LF	 KG	MIID
----	-----	---	------	----	--	------

ARBOR	NT-OD06H	D050-F22-Z4	●	50	60	4	22	40	0.40	ODKT06 ODMT06	
		D063-F22-Z5	●	63	73	5	22	40	0.60		
		D080-F27-Z6	●	80	90	6	27	50	1.10		
		D100-F32-Z7	●	100	110	7	32	50	1.60		
		D125-F40-Z8	●	125	135	8	40	63	2.70		
		D160-F40-Z10	●	160	170	10	40	63	4.20		

● stock standard

Spare Parts

INSERT SCREW



INSERT WRENCH



NT-OD06H D000	NT-ST021	NT-FTB20
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TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

● stock standard

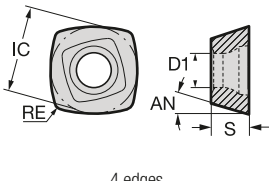


MILLING High Feed

HF4PLUS .224

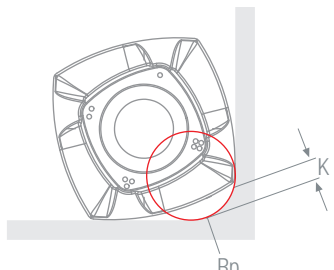
● stock standard

		SPMT07T210
	Rp THEORETICAL RADIUS FOR CNC PROGRAMMING	2.00
	K UNCUT PORTION	0.68

SDMT		HF4PLUS High Feed - positive					ISO513				HC-PVD															
							JP5520		JP5530		JP7525		JP9535													
		Size	IC	S	D1	AN	P	80	60																	
		10	10.00	4.76	4.00	15°	M	250	230																	
		12	12.70	5.56	4.40	15°	K	160	150				60	200												
							N						100	240												
							S						40	100												
							H																			
GRADE APPLICATION AREA		Light cut, stable machining					+																			
main application		Variable condition, general machining					-																			
applicable		Heavy cut, unstable machining					+																			
SHARP	SC P M S	SDMT 100410R-SC	RE1.0	a _p ▶ 0.30 f _z ▶ 0.50	1.00 1.70 1.00 1.50																					
GENERAL	GP P M K	SDMT 100410R-GP	RE1.0	a _p ▶ 0.30 f _z ▶ 0.60	1.00 1.70 1.10 1.60																					
		SDMT 120512R-GP	RE1.2	a _p ▶ 0.50 f _z ▶ 0.80	1.20 2.00 1.30 1.80																					
REINFORCED	TE P K	SDMT 100410R-TE	RE1.0	a _p ▶ 0.30 f _z ▶ 0.70	1.00 1.70 1.20 1.70																					
		SDMT 120512R-TE	RE1.2	a _p ▶ 0.50 f _z ▶ 1.00	1.20 2.00 1.50 2.00																					

● stock standard

IMPORTANT NOTICE FOR CNC PROGRAMMING

		SDMT100410	SDMT120512
	R _p THEORETICAL RADIUS FOR CNC PROGRAMMING	3.00	4.00
	K UNCUT PORTION	0.76	0.85

TURNING

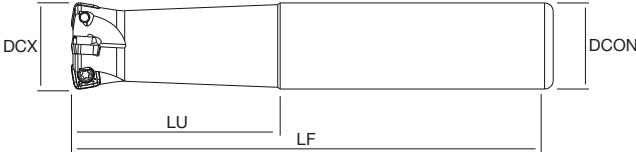
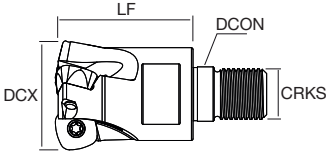
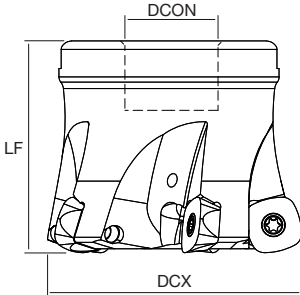
THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

TURNING	CYLINDRICAL 									HIGH FEED 10°-15° P M K S	
	INTERNAL COOLANT 										
THREADING	SCREW-IN 										
	INTERNAL COOLANT 										
GROOVING	ARBOR 										
	INTERNAL COOLANT 										
MILLING	HF4PLUS High Feed		DCX		DCON	LF	LU	CRKS		MIID	
CYLINDRICAL	NT-SP07HF	D020-S20-Z3	●	20	3	20	130	50	-	0.30	SPMT07
		D025-S25-Z4	●	25	4	25	140	60	-	0.50	
		D032-S32-Z5	●	32	5	32	150	70	-	1.00	
SCREW-IN	NT-SP07HF	D020-M10-Z2	●	20	2	10.5	30	-	M10	0.10	SPMT07
		D020-M10-Z3	●		3	10.5	30	-	M10	0.10	
		D025-M12-Z3	●	25	3	12.5	35	-	M12	0.15	
		D025-M12-Z4	●		4	12.5	35	-	M12	0.15	
		D032-M16-Z4	●	32	4	17	40	-	M16	0.30	
		D032-M16-Z5	●		5	17	40	-	M16	0.30	
		D035-M16-Z5	●	35	5	17	40	-	M16	0.30	
		D042-M16-Z6	●	42	6	17	40	-	M16	0.35	
	NT-SD10HF	D035-M16-Z4	●	35	4	17	40	-	M16	0.30	SDMT10
		D042-M16-Z5	●	42	5	17	40	-	M16	0.35	
	NT-SD12HF	D032-M16-Z2	●	32	2	17	43	-	M16	0.25	SDMT12
		D035-M16-Z3	●	35	3	17	43	-	M16	0.25	
		D040-M16-Z4	●	40	4	17	43	-	M16	0.25	
		D042-M16-Z4	●	42	4	17	43	-	M16	0.25	
ARBOR	NT-SP07HF	D040-F16-Z5	●	40	5	16	40	-	-	0.25	SPMT07
		D040-F16-Z6	●		6	16	40	-	-	0.25	
		D042-F16-Z5	●	42	5	16	40	-	-	0.25	
		D042-F16-Z6	●		6	16	40	-	-	0.25	
		D050-F22-Z7	●	50	7	22	50	-	-	0.55	
		D052-F22-Z7	●	52	7	22	50	-	-	0.55	

● stock standard

HF4PLUS High Feed				DCX		DCON	LF	LU	CRKS		MIID
ARBOR	NT-SD10HF	D050-F22-Z6	●	50	6	22	50	-	-	0.55	SDMT10
		D052-F22-Z6	●	52	6	22	50	-	-	0.55	
		D063-F27-Z7	●	63	7	27	50	-	-	0.75	
		D066-F27-Z7	●	66	7	27	50	-	-	0.80	
		D080-F27-Z8	●	80	8	27	50	-	-	1.10	
	NT-SD12HF	D042-F16-Z4	●	42	4	16	40	-	-	0.25	SDMT12
		D050-F22-Z4	●	50	4	22	50	-	-	0.45	
		D050-F22-Z5	●		5	22	50	-	-	0.45	
		D052-F22-Z4	●	52	4	22	50	-	-	0.45	
		D052-F22-Z5	●		5	22	50	-	-	0.45	
		D063-F22-Z4	●	63	4	22	50	-	-	0.70	
		D063-F27-Z4	●		4	27	50	-	-	0.70	
		D063-F22-Z5	●		5	22	50	-	-	0.70	
		D063-F27-Z5	●		5	27	50	-	-	0.70	
		D066-F27-Z6	●	66	6	27	50	-	-	0.70	
		D080-F27-Z6	●	80	6	27	50	-	-	1.10	
		D080-F27-Z7	●		7	27	50	-	-	1.10	

● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH

NT-SP07HF DCX ≤ 25	NT-ST034	NT-FTB10
NT-SP07HF DCX > 25	NT-ST033	
NT-SD10HF D□□□	NT-ST036	NT-FTB15
NT-SD12HF D□□□	NT-ST024	NT-FTB15

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES



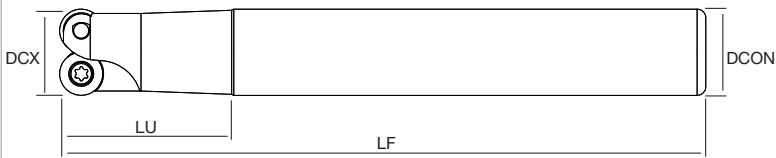
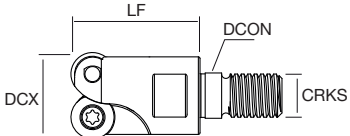
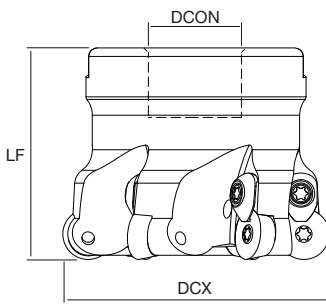
MILLING Copying

ROUNDPLUS .230

RD□□		ROUNDPLUS Copying - positive					ISO513	HC-PVD					HT																
		Size	IC	S	D1	AN	P	80 250	60 230			160 350																	
		05	5.00	1.51	2.20	15°	M	60 160	60 150			100 240																	
		07	7.00	2.38	2.80	15°	K				100 240	160 380																	
		10	10.00	3.18	3.80	15°	N																						
		12	12.00	4.76	4.40	15°	S					40 100																	
		16	16.00	4.76	5.00	15°	H																						
GRADE APPLICATION AREA		Light cut, stable machining				+	+																						
main application		Variable condition, general machining				-	-																						
applicable		Heavy cut, unstable machining				-	+																						

SHARP	SC P M		RDET	1003M0-SC	RE 5.0	a _p 0.50 f _p 0.10	2.00 0.22	3.50 0.34	▽	▽																			
				1204M0-SC	RE 6.0	a _p 0.50 f _p 0.15	2.50 0.30	4.50 0.45	●	●																			
				1604M0-SC	RE 8.0	a _p 1.00 f _p 0.22	3.00 0.44	5.00 0.62	●	●																			
GENERAL	GP P M S		RDET	1003M0-GP	RE 5.0	a _p 0.50 f _p 0.12	2.00 0.25	3.50 0.38	●	●		●																	
				1204M0-GP	RE 6.0	a _p 0.50 f _p 0.18	2.50 0.35	4.50 0.52	●	●		●																	
				1604M0-GP	RE 8.0	a _p 1.00 f _p 0.25	3.00 0.45	5.00 0.65	●	●		●																	
			RDMT	1204M0-GP	RE 6.0	a _p 0.50 f _p 0.18	2.50 0.35	4.50 0.52	●	●																			
REINFORCED	TES P K		RDEW	0501M0-TES	RE 2.5	a _p 0.30 f _p 0.08	1.00 0.15	1.70 0.22	●	●	●	○																	
				0702M0-TES	RE 3.5	a _p 0.30 f _p 0.08	1.50 0.16	2.70 0.24	●			○	▽																
	TE P K		RDEW	0702M0-TE	RE 3.5	a _p 0.30 f _p 0.08	1.50 0.19	2.70 0.30	●	●	●																		
				1003M0-TE	RE 5.0	a _p 0.50 f _p 0.14	2.00 0.27	3.50 0.40	●	●	●																		
				1204M0-TE	RE 6.0	a _p 0.50 f _p 0.20	2.50 0.40	4.50 0.60	●	●	●																		
				1604M0-TE	RE 8.0	a _p 1.00 f _p 0.30	3.00 0.50	5.00 0.70	●	●	●																		
	RDMW	1604M0-TE	RE 8.0	a _p 1.00 f _p 0.30	3.00 0.50	5.00 0.70	●	●																					
	TE-D6 P		RDEW	1204M0-TE-D6	RE 6.0	a _p 0.50 f _p 0.20	2.50 0.40	4.50 0.60	●	●																			
			RDMW	1204M0-TE-D6	RE 6.0	a _p 0.50 f _p 0.20	2.50 0.40	4.50 0.60	●																				
	with 6 dots																												
TE-D8 P		RDEW	1204M0-TE-D8	RE 6.0	a _p 0.50 f _p 0.20	2.50 0.40	4.50 0.60	●	●																				
		RDMW	1204M0-TE-D8	RE 6.0	a _p 0.50 f _p 0.20	2.50 0.40	4.50 0.60	○	●																				
	with 8 dots																												

● stock standard, ○ non-standard stock, ▽ stock exhaustion

CYLINDRICAL  INTERNAL COOLANT 			COPYING  P M K S						
SCREW-IN  INTERNAL COOLANT 									
ARBOR  INTERNAL COOLANT 									
ROUNDPLUS - RD Copying		DCX		DCON	LF	LU	CRKS		MIID

CYLINDRICAL	NT-RD05H	D009-S08-Z2-L100	●*	9	2	8	100	12	-	0.10	RDEW05
		D010-S10-Z2-L100	●	10	2	10	100	18	-	0.10	
		D011-S10-Z2-L100	●*	11	2	10	100	15	-	0.10	
		D012-S12-Z3-L100	●	12	3	12	100	22	-	0.10	
		D013-S12-Z3-L100	●*	13	3	12	100	18	-	0.10	
		D016-S16-Z4-L150	●*	16	4	16	150	30	-	0.25	
		D017-S16-Z4-L150	●*	17	4	16	150	20	-	0.25	
	NT-RD07H	D016-S16-Z2-L150	●	16	2	16	150	25	-	0.25	RDEW07
		D017-S16-Z2-L150	●	17	2	16	150	20	-	0.25	
		D020-S20-Z3-L150	●*	20	3	20	150	35	-	0.40	
		D021-S20-Z3-L150	●*	21	3	20	150	25	-	0.40	
		D025-S25-Z5-L150	●*	25	5	25	150	40	-	0.60	
		D026-S25-Z5-L150	●*	26	5	25	150	25	-	0.60	
		D035-S32-Z6-L150	●*	35	6	32	150	30	-	1.00	
	NT-RD10H	D020-S20-Z2-L150	●	20	2	20	150	40	-	0.35	RDET10 RDEW10
		D021-S20-Z2-L150	●	21	2	20	150	25	-	0.35	
		D025-S25-Z3-L150	●	25	3	25	150	40	-	0.55	
		D026-S25-Z3-L150	●*	26	3	25	150	25	-	0.55	
		D030-S25-Z3-L150	●*	30	3	25	150	25	-	0.60	
		D032-S32-Z3-L150	●	32	3	32	150	40	-	0.90	
		D035-S32-Z4-L150	●*	35	4	32	150	35	-	0.90	

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

ROUNDPLUS - RD Copying				DCX		DCON	LF	LU	CRKS		MIID	
SCREW-IN	NT-RD05H	D012-M06-Z2	●*	12	2	6.5	18	-	M6	0.10	RDEW05	
		D012-M06-Z3	●*		3	6.5	18	-	M6	0.10		
		D013-M06-Z2	●*	13	2	6.5	18	-	M6	0.10		
		D013-M06-Z3	●*		3	6.5	18	-	M6	0.10		
		D016-M08-Z4	●*	16	4	8.5	23	-	M8	0.10		
		D017-M08-Z4	●*	17	4	8.5	23	-	M8	0.10		
	NT-RD07H	D016-M08-Z2	●*	16	2	8.5	23	-	M8	0.10	RDEW07	
		D016-M08-Z3	●*		3	8.5	23	-	M8	0.10		
		D017-M08-Z2	●*	17	2	8.5	23	-	M8	0.10		
		D017-M08-Z3	●*		3	8.5	23	-	M8	0.10		
		D020-M10-Z3	●	20	3	10.5	30	-	M10	0.10		
		D021-M10-Z2	●*	21	2	10.5	30	-	M10	0.10		
		D021-M10-Z3	●*		3	10.5	30	-	M10	0.10		
		D025-M12-Z4	●	25	4	12.5	35	-	M12	0.15		
		D025-M12-Z5	●*		5	12.5	35	-	M12	0.15		
		D026-M12-Z4	●*	26	4	12.5	35	-	M12	0.15		
		D026-M12-Z5	●*		5	12.5	35	-	M12	0.15		
		D035-M16-Z5	●*	35	5	17	43	-	M16	0.25		
		D035-M16-Z6	●*		6	17	43	-	M16	0.25		
	NT-RD10H	D020-M10-Z2	●	20	2	10.5	30	-	M10	0.10	RDET10 RDEW10	
		D021-M10-Z2	●*	21	2	10.5	30	-	M12	0.10		
		D025-M12-Z3	●	25	3	12.5	35	-	M12	0.15		
		D026-M12-Z3	●*	26	3	12.5	35	-	M12	0.15		
		D030-M12-Z3	●*	30	3	12.5	35	-	M12	0.20		
		D032-M16-Z3	●	32	3	17	43	-	M16	0.20		
		D035-M16-Z3	●	35	3	17	43	-	M16	0.25		
		D035-M16-Z4	●		4	17	43	-	M16	0.25		
ARBOR	NT-RD10H	D042-F16-Z5	●	42	5	16	40	-	-	0.25	RDET10 RDEW10	
		D052-F22-Z6	●	52	6	22	40	-	-	0.45		
	NT-RD12H	D042-F16-Z4	●	42	4	16	50	-	-	0.30	RDET12 RDEW12 RDMT12 RDMW12	
		D050-F22-Z4	●*	50	4	22	50	-	-	0.40		
		D050-F22-Z5	●		5	22	50	-	-	0.40		
		D052-F22-Z4	●	52	4	22	50	-	-	0.45		
		D052-F22-Z5	●		5	22	50	-	-	0.45		
		D063-F22-Z5	●	63	5	22	50	-	-	0.65		
		D063-F22-Z6	●		6	22	50	-	-	0.65		
		D066-F22-Z6	●	66	6	22	50	-	-	0.80		
		D080-F27-Z6	▽*	80	6	27	50	-	-	1.00		
		D080-F27-Z7	●		7	27	50	-	-	1.00		
	NT-RD16H	D063-F22-Z5	●	63	5	22	50	-	-	0.60	RDET16 RDEW16 RDMW16	
D066-F22-Z5		▽*	66	5	22	50	-	-	0.60			
D066-F27-Z5		●		5	27	50	-	-	0.60			
D080-F27-Z5		●	80	5	27	50	-	-	0.90			
D080-F27-Z6		●		6	27	50	-	-	0.90			
D100-F32-Z7		●	100	7	32	50	-	-	1.60			
D125-F40-Z8	●	125	8	40	63	-	-	2.90				

● stock standard, ▽ stock exhaustion

**ITEMS MARKED WITH ***

We will continue to supply the equivalent milling cutters without coolant holes until stock exhaustion

Spare Parts	CLAMP SET	INSERT SCREW	INSERT WRENCH
			
NT-RD05H DCX ≤ 10	-	NT-ST026	NT-FTB06
NT-RD05H DCX > 10		NT-ST009	
NT-RD07H D□□□	-	NT-ST018	NT-FTB08
NT-RD10H D□□□ DCX ≤ 26	-	NT-ST012	NT-FTB15
NT-RD10H D□□□ DCX = 30		NT-ST013	
NT-RD10H D□□□ DCX ≥ 32			
NT-RD12H D□□□	NT-CS014	NT-ST017	NT-FTB15
NT-RD16H D□□□	NT-CS021	NT-ST023	NT-FTB20

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

TURNING

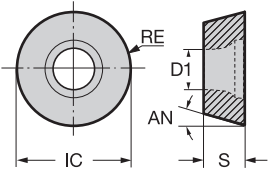
THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

RP□□		ROUNDPLUS Copying					ISO513	HC-PVD																		
		Size	IC	S	D1	AN	P	JP5520	JP5530	JP9535																
		12	12.00	4.76	4.40	11°	M	80 250 160	60 230 60 150 60 200																	
							K																			
							N																			
							S			40 100																
							H																			
		GRADE APPLICATION AREA		Light cut, stable machining				+																		
main application		Variable condition, general machining				-																				
applicable		Heavy cut, unstable machining				+																				

SHARP	SC P M		20~22°	RPET	1204M0-SC	RE 6.0	a _p ▶ f _z ▶	0.50 0.15	2.50 0.30	4.50 0.45	●	●																	
GENERAL	GP P M S		14~18°	RPET	1204M0-GP	RE 6.0	a _p ▶ f _z ▶	0.50 0.18	2.50 0.35	4.50 0.52	●	●	●																
	RPMT	1204M0-GP	RE 6.0	a _p ▶ f _z ▶	0.50 0.18	2.50 0.35	4.50 0.52	●	●																				
REINFORCED	TE P			RPEW	1204M0-TE	RE 6.0	a _p ▶ f _z ▶	0.50 0.20	2.50 0.40	4.50 0.60	○	●																	
	RPMW	1204M0-TE	RE 6.0	a _p ▶ f _z ▶	0.50 0.20	2.50 0.40	4.50 0.60	●	●																				

● stock standard, ○ non-standard stock

ARBOR



INTERNAL COOLANT

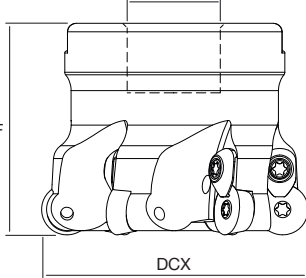




DCON

LF

DCX



COPYING



360°

P

M

S

ROUNDPLUS - RP

Copying

DCX



DCON

LF



MIID

ARBOR	NT-RP12H	D042-F16-Z4	●	42	4	16	50	0.30	RPET12 RPEW12 RPMT12 RPMW12		
		D050-F22-Z5	●	50	5	22	50	0.45			
		D052-F22-Z5	●	52	5	22	50	0.50			
		D063-F22-Z6	●	63	6	22	50	0.70			
		D066-F22-Z6	●	66	6	22	50	0.80			
		D080-F27-Z7	●	80	7	27	50	1.00			

● stock standard

Spare Parts	CLAMP SET	INSERT SCREW	INSERT WRENCH
			
NT-RP12H D□□□	NT-CS013	NT-ST017	NT-FTB15

TURNING

THREADING

GROOVING

MILLING

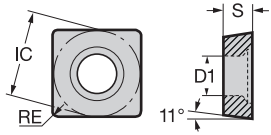
DRILLING

ACCESSORIES



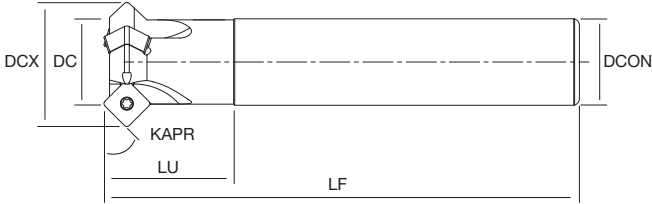
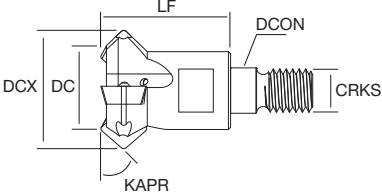
MILLING Chamfering

CHAMFERSQUARE .238

	TURNING	THREADING	GROOVING	MILLING	DRILLING	ACCESSORIES																		
SP□X	CHAMFERSQUARE Chamfering					ISO513	HC-PVD			HW														
	Size	IC	S	D1	AN		JP5625	JP5530	JP9635	JW6520														
	 4 edges	05	5.00	2.38	2.50	11°	P	80 250	60 230															
		07	7.94	3.97	2.80	11°	M	60 160	60 150	60 200														
		09	9.80	4.30	4.10	11°	K	80 200																
							N				200 1000													
							S			40 100														
						H																		
	GRADE APPLICATION AREA					+ Hardness - Toughness																		
main application																								
applicable																								

GENERAL		GP	P	M	K	S	SPMX	050204-GP	RE 0.4	f _z ▶	0.08	0.10	0.12	●	●	●																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				</
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● stock standard

CYLINDRICAL  INTERNAL COOLANT 			CHAMFERING  P M K N S						
SCREW-IN  INTERNAL COOLANT 									
CHAMFERSQUARE Chamfering (KAPR 45°)		DC	DCX		DCON	LF	LU (CRKS)		MILD

CYLINDRICAL	NT-CHS45	D12/19-S12-Z3-05	●	12	19	3	12	80	20		SP-X05
		D16/22-S16-Z4-05	●	16	22	4	16	100	25		
		D20/30-S20-Z3-07	●	20	30	3	20	110	30		
		D25/37-S25-Z3-09	●	25	37	3	25	120	35		SP-X09
		D32/44-S32-Z4-09	●	32	44	4	32	130	40		
SCREW-IN	NT-CHS45	D12/19-M06-Z3-05	●	12	19	3	6.5	20	(M6)		SP-X05
		D16/22-M08-Z4-05	●	16	22	4	8.5	25	(M8)		
		D20/30-M10-Z3-07	●	20	30	3	10.5	30	(M10)		
		D25/37-M12-Z3-09	●	25	37	3	12.5	35	(M12)		SP-X09
		D32/44-M16-Z4-09	●	32	44	4	17	40	(M16)		

● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH
		

NT-CHS45 D12/19-S12-Z3-05	NT-ST059N	NT-FTB06
NT-CHS45 D16/22-S16-Z4-05		
NT-CHS45 D20/30-S20-Z3-07	NT-ST062N	NT-FTB07
NT-CHS45 D25/37-S25-Z3-09	NT-ST063N	NT-FTB15
NT-CHS45 D32/44-S32-Z4-09		
NT-CHS45 D12/19-M06-Z3-05	NT-ST059N	NT-FTB06
NT-CHS45 D16/22-M08-Z4-05		
NT-CHS45 D20/30-M10-Z3-07	NT-ST062N	NT-FTB07
NT-CHS45 D25/37-M12-Z3-09	NT-ST063N	NT-FTB15
NT-CHS45 D32/44-M16-Z4-09		

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES



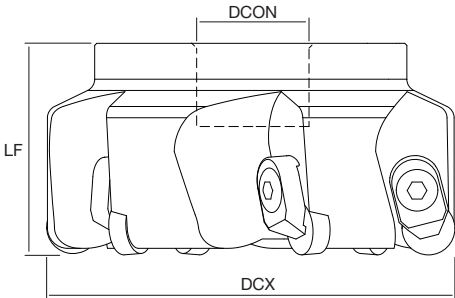
MILLING Advanced

[illegible]

● stock standard

ARBOR





FACING



SH

ROUND ADVANCED	DCX		DCON	LF	 KG	MIID		
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ARBOR	NT-RN12	D050-F22-Z4	●	50	4	22	50	0.50	RNGN1204		
		D063-F22-Z4	●	63	4	22	50	0.70			
		D080-F27-Z5	●	80	5	27	50	1.20			
		D100-F32-Z6	●	100	6	32	50	1.60			
	NT-RN12X	D050-F22-Z4	●	50	4	22	50	0.50	RNGN1207		
		D063-F22-Z4	●	63	4	22	50	0.70			
		D080-F27-Z5	●	80	5	27	50	1.20			
		D100-F32-Z6	●	100	6	32	50	1.60			

● stock standard

Spare Parts	CLAMP	CLAMP SCREW	SPRING	WRENCH
				
NT-RN12 D□□□	NT-CS028	NT-ST028	NT-SG028	NT-WR030

TURNING

THREADING

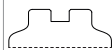
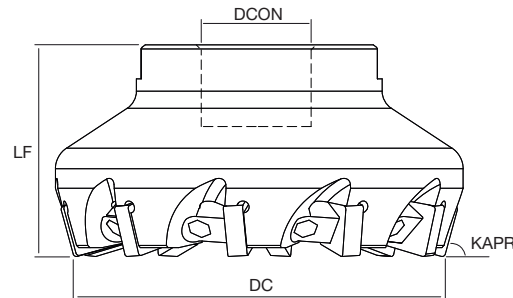
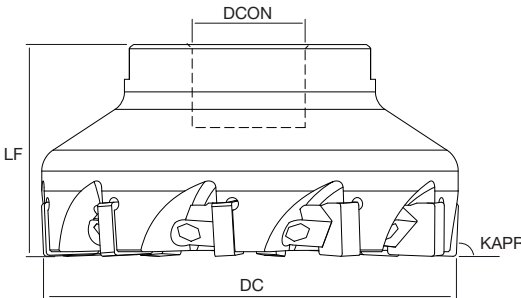
GROOVING

MILLING

DRILLING

ACCESSORIES

● stock standard

ARBOR  							FACING  K			
ARBOR  							FACING  K			
SQUARE ADVANCED (KAPR 75° and 88°)			DC		DCON	LF	 KG	MIID		

75°	NT-SN12-75°	D050-F22-Z5	●	50	5	22	40	0.50	SNGN12 SNGX12 SNMN12 SNXN12		
		D063-F22-Z6	●	63	6	22	40	0.70			
		D080-F27-Z8	●	80	8	27	50	1.40			
		D100-F32-Z10	●	100	10	32	50	1.80			
		D125-F40-Z12	●	125	12	40	63	4.00			
88°	NT-SN12-88°	D063-F22-Z6	●	63	6	22	40	0.70	SNGN12 SNGX12 SNMN12 SNXN12		
		D080-F27-Z8	●	80	8	27	50	1.40			
		D100-F32-Z10	●	100	10	32	50	1.80			
		D125-F40-Z12	●	125	12	40	63	4.00			

● stock standard

Spare Parts	WEDGE	WEDGE SCREW	WRENCH
			
NT-SN12 D□□□	NT-WD070	NT-SC060	NT-WR030

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

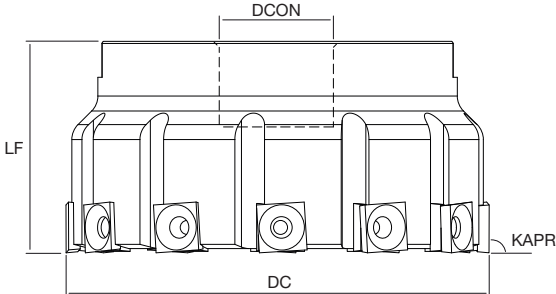
[illegible]

● stock standard

ARBOR



TANGENTIAL



TANGENTIAL ADVANCED
(KAPR 90°)

DC		DCON	LF		MIID		
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ARBOR	NT-SP12-TAN	D050-F22-Z5	●	50	5	22	50	0.40	SPHX12		
		D063-F22-Z7	●	63	7	22	50	0.60			
		D080-F27-Z8	●	80	8	27	50	1.20			
		D100-F32-Z12	●	100	12	32	50	2.00			
		D125-F40-Z15	●	125	15	40	50	3.40			

● stock standard

Spare Parts

INSERT SCREW



INSERT WRENCH



NT-SP12 D□□□	NT-ST027	NT-FTB15
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TURNING

THREADING

GROOVING

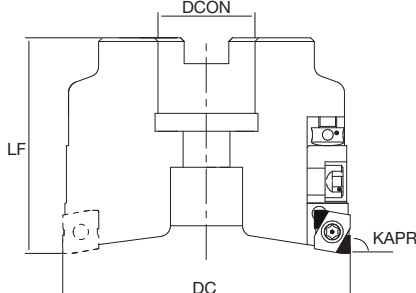
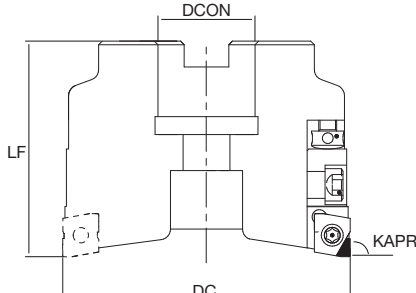
MILLING

DRILLING

ACCESSORIES

	TURNING	THREADING	GROOVING	XP	DIAMOND - PCBN					Positive	ISO513	DP			BH																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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● stock standard

ARBOR			FACING 90° K						
STEEL BODY									
ARBOR			FACING 90° N						
ALUMINIUM BODY									
ADJUSTABLE ADVANCED (KAPR 90°)		DC		DCON	LF		MIID		

STEEL BODY	NT-XP08	D050-F16-Z5-ST	●	50	5	16	50	XPGW08		
		D063-F22-Z6-ST	●	63	6	22	50			
		D080-F27-Z7-ST	●	80	7	27	50			
		D100-F32-Z8-ST	●	100	8	32	50			
ALU BODY	NT-XP08	D063-F22-Z5-AL	●	63	5	22	50	XPGT08		
		D080-F27-Z7-AL	●	80	7	27	50			
		D100-F32-Z8-AL	●	100	8	32	50			
		D125-F40-Z10-AL	●	125	10	40	63			

● stock standard

Spare Parts	CARTRIDGE	CARTRIDGE SCREW	CARTRIDGE WRENCH	ADJUSTING SCREW	CHIP COVER	COVER SCREW	INSERT SCREW	INSERT WRENCH
								
NT-XP08 D000-F00-Z00-ST	NT-CRD-XP08	NT-CW040	NT-WR040	NT-AD040	-	-	NT-ST075	NT-FTB09
NT-XP08 D000-F00-Z00-AL					NT-CH030	NT-ST064		

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES



DRILLING

- DEXdrill .253
- DRSdrill .261
- DRSpilot .271
- SPOTdrill .277



DRILLING DEXdrill

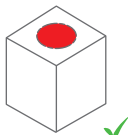
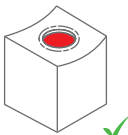
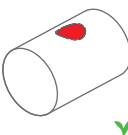
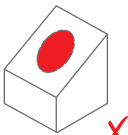
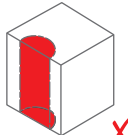
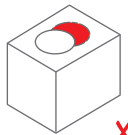
DEXDRILL

3XD
5XD

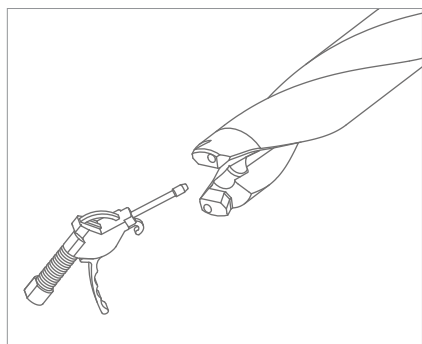


High performance drilling system with interchangeable heads

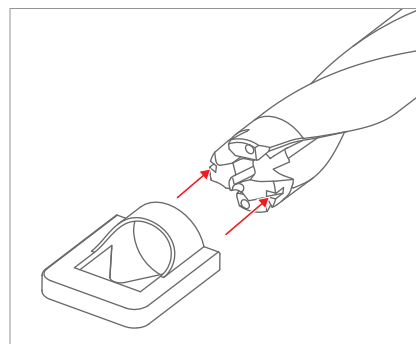
1. Where is DEXdrill applicable?

PLAIN SURFACE	CONCAVE SURFACE	STACKED PLATES	PIPES	SLANT SURFACE	HALF HOLE	HOLE EXPANSION
						

2. Drilling heads installation



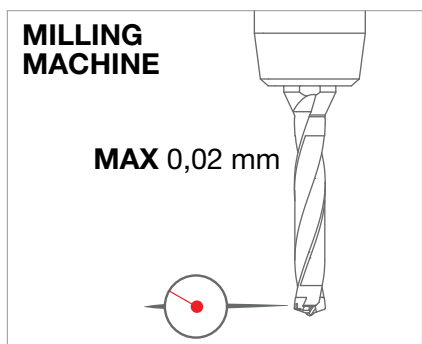
*Clean pocket
with air blast.
Put insert into
drill holder.*



*Set wrench into
slots on insert
flanks.*

*Slowly turn
the wrench
clockwise until
stop.*

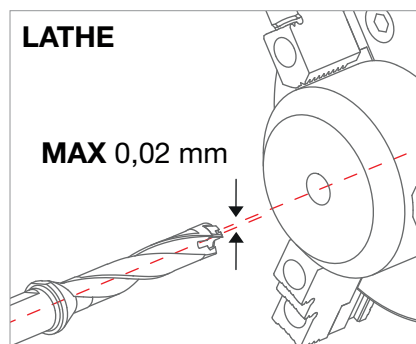
3. Operation recommendations



**MILLING
MACHINE**

MAX 0,02 mm

*Center of
arbor deviation
must be under
0.02mm*



LATHE

MAX 0,02 mm

*Keep under
0.02mm
the maximum
deviation
between drill
and workpiece*

ACCESSORIES	DRILLING	MILLING	GROOVING	THREADING	TURNING
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1

TURNING

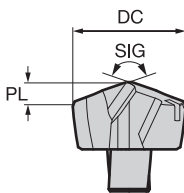
THREADING

GROOVING

MILLING

DRILLING

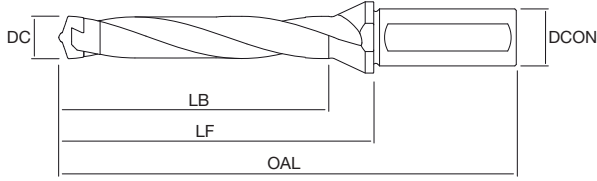
ACCESSORIES

DEX		Self-locking drilling head					ISO513		HC-PVD																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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GENERAL		GP P K		DC 14.80	DEX1480-GP	PL 2.69	f _n ▶	0.16	0.22	0.30	●																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																

● stock standard

ACCESSORIES

- stock standard

							
DEX DRILL	DC min	DC max	DCN	OAL	LF	LB	MIID

3xD	NT-DEX-3D	D12-S16F	●	12.00	12.99	16	108	60	48	DEX1200 ÷ DEX1290
		D13-S16F	●	13.00	13.99	16	112	64	51	DEX1300 ÷ DEX1390
		D14-S16F	●	14.00	14.99	16	117	69	55	DEX1400 ÷ DEX1490
		D15-S20F	●	15.00	15.99	20	123	73	58	DEX1500 ÷ DEX1590
		D16-S20F	●	16.00	16.99	20	127	77	61	DEX1600 ÷ DEX1690
		D17-S20F	●	17.00	17.99	20	132	82	65	DEX1700 ÷ DEX1790
		D18-S25F	●	18.00	18.99	25	142	86	68	DEX1800 ÷ DEX1890
		D19-S25F	●	19.00	19.99	25	146	90	71	DEX1900 ÷ DEX1990
5xD	NT-DEX-5D	D20-S25F	●	20.00	20.99	25	150	94	74	DEX2000 ÷ DEX2090
		D12-S16F	●	12.00	12.99	16	134	86	74	DEX1200 ÷ DEX1290
		D13-S16F	●	13.00	13.99	16	140	92	79	DEX1300 ÷ DEX1390
		D14-S16F	●	14.00	14.99	16	147	99	85	DEX1400 ÷ DEX1490
		D15-S20F	●	15.00	15.99	20	155	105	90	DEX1500 ÷ DEX1590
		D16-S20F	●	16.00	16.99	20	161	111	95	DEX1600 ÷ DEX1690
		D17-S20F	●	17.00	17.99	20	168	118	101	DEX1700 ÷ DEX1790
		D18-S25F	●	18.00	18.99	25	180	124	106	DEX1800 ÷ DEX1890
		D19-S25F	●	19.00	19.99	25	186	130	111	DEX1900 ÷ DEX1990
		D20-S25F	●	20.00	20.99	25	192	136	116	DEX2000 ÷ DEX2090

● stock standard

Spare Parts		WRENCH
		
DC ≤ 17	NT-WR1217	
DC > 18	NT-WR1820	

CUTTING SPEED [m/min]

	MATERIALS (HARDNESS/Rm)	W.-Nr	DIN	AISI-ASTM	TRADE MARK	JP5625	JP7625
P1	Free cutting steel and structural steel (< 500 N/mm ²)	1.0715 1.0765	9 SMn 28 36 SMnPb 14	1213 A29	AVP PR80	100÷160	
P2	Carbon steel and low alloy steel (500-700 N/mm ²)	1.7147 1.0511	20 MnCr 5 C 40	5120 1040	- -	80÷140	
P3	Medium alloy steel and heat treated steel (600-800 N/mm ²)	1.1201 1.6511	42 CrMo 4 36 CrNiMo 4	4142, 4140 9840	- -	60÷100	
P4	High alloy steel (800-1000 N/mm ²)	1.1663 1.3505	C 125 W 100 Cr 6	W1 52100	- -	50÷90	
P5	Tool steel (900-1200 N/mm ²)	1.2080 1.2379	X 210 Cr 12 X 155 CrV Mo 12 1	D3 -	K100 K110	40÷80	
K1	Grey cast iron (150-250 HB)	0.6020 0.6025	GG-20 GG-25	A48 30 B A48 35 B	- -	80÷180	100÷200
K2	Nodular cast iron (150-350 HB)	0.7050 0.7070	GGG-50 GGG-70	A536 80-55-6 A536 100-70-03	- -	80÷140	100÷160

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

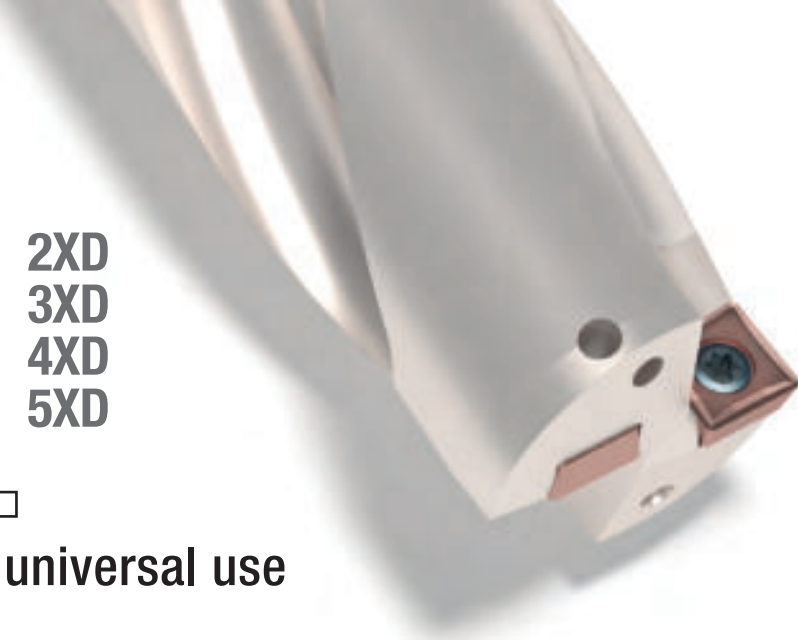


DRILLING DRSdrill

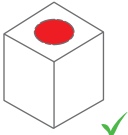
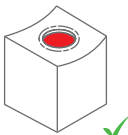
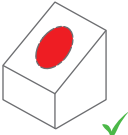
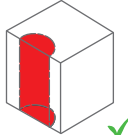
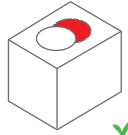
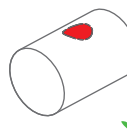
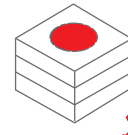
DRSDRILL

2XD
3XD
4XD
5XD

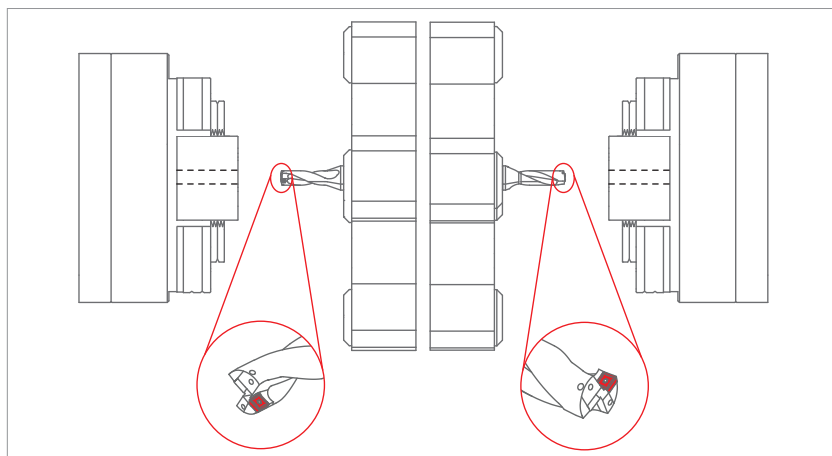
High performance drills for universal use



1. Where is DRSDrill applicable?

PLAIN SURFACE	CONCAVE SURFACE	SLANT SURFACE	HALF HOLE	HOLE EXPANSION	PIPES	STACKED PLATES
						

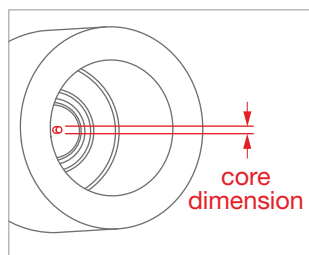
2. Lathe installation



It's recommended to set the outer insert facing the operator as shown in the drawing, both for main and sub-spindle to gain the best results.

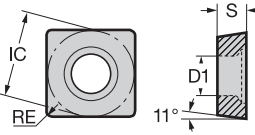
Following this suggestion, generally, the inner insert will be set below the center which is the recommended situation for optimal operation.

3. Quick check of the center height



To check if the machine axis is correctly aligned, a test hole should be drilled checking the remaining core on the hole bottom.

Center-height adjustment is necessary when **no core** remains or if the core diameter is **larger than 1mm**.

SP□X		DRS					ISO513	HC-PVD				HW																
		4 edges drilling inserts						JP5625	JP5530	JP9635	JW6520																	
 4 edges		Size	IC	S	D1	RE	P	80 300	80 300																			
		05	5.00	2.38	2.50	0.40 <th>M</th> <td></td> <td></td> <td>50 220</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	M			50 220																		
		06	6.00	2.38	2.80	0.40 <th>K</th> <td>120 250</td> <td>120 250</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	K	120 250	120 250																			
		07	7.94	3.97	2.80	0.80 <th>N</th> <td></td> <td></td> <td></td> <td>200 400</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	N				200 400																	
		09	9.80	4.30	4.10	0.80 <th>S</th> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	S																					
		11	11.50	4.76	4.40	0.80 <th>S</th> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	S																					
		14	14.30	5.20	5.50	1.20 <th>H</th> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	H																					
GRADE APPLICATION AREA		Stable machining				Hardness Toughness	ISO513	HC-PVD		HW																		
main application		General machining																										
applicable		Unstable machining																										

GENERAL	GP P M K S 	SPMX 050204-GP	2xD	f _n ▶	0.04	0.08	0.12																	
			3xD	f _n ▶	0.04	0.07	0.10	●	●	●														
			4xD	f _n ▶	0.04	0.06	0.08																	
			5xD	f _n ▶	0.04	0.05	0.06																	
		SPMX 060204-GP	2xD	f _n ▶	0.06	0.10	0.14																	
			3xD	f _n ▶	0.06	0.09	0.12	●	●	●														
			4xD	f _n ▶	0.05	0.07	0.10																	
			5xD	f _n ▶	0.04	0.06	0.08																	
		SPMX 07T308-GP	2xD	f _n ▶	0.06	0.11	0.16																	
			3xD	f _n ▶	0.06	0.10	0.14	●	●	●														
			4xD	f _n ▶	0.06	0.09	0.12																	
			5xD	f _n ▶	0.05	0.07	0.09																	
		SPMX 090408-GP	2xD	f _n ▶	0.08	0.14	0.20																	
			3xD	f _n ▶	0.08	0.13	0.18	●	●	●														
			4xD	f _n ▶	0.06	0.11	0.16																	
			5xD	f _n ▶	0.06	0.09	0.12																	
		SPMX 110408-GP	2xD	f _n ▶	0.08	0.15	0.22																	
			3xD	f _n ▶	0.08	0.14	0.20	●	●	●														
			4xD	f _n ▶	0.07	0.12	0.18																	
			5xD	f _n ▶	0.06	0.12	0.16																	
		SPMX 140512-GP	2xD	f _n ▶	0.10	0.17	0.24																	
			3xD	f _n ▶	0.10	0.16	0.22	●	●	●														
			4xD	f _n ▶	0.08	0.14	0.20																	
			5xD	f _n ▶	0.07	0.12	0.18																	

ALUMINIUM	AL N  polished surface	SPGX 050204-AL	2xD	f _n ▶	0.06	0.09	0.12				●												
			3xD	f _n ▶	0.06	0.09	0.12																
			4xD	f _n ▶	0.04	0.07	0.10																
			5xD	f _n ▶	0.04	0.06	0.08																
		SPGX 060204-AL	2xD	f _n ▶	0.08	0.12	0.16							●									
			3xD	f _n ▶	0.08	0.12	0.16																
			4xD	f _n ▶	0.06	0.09	0.12																
			5xD	f _n ▶	0.06	0.08	0.10																
		SPGX 07T308-AL	2xD	f _n ▶	0.10	0.14	0.18																
			3xD	f _n ▶	0.10	0.14	0.18																
			4xD	f _n ▶	0.08	0.11	0.14																
			5xD	f _n ▶	0.08	0.10	0.12																
		SPGX 090408-AL	2xD	f _n ▶	0.10	0.15	0.20																
			3xD	f _n ▶	0.10	0.15	0.20																
			4xD	f _n ▶	0.09	0.12	0.15																
			5xD	f _n ▶	0.09	0.11	0.13																
		SPGX 110408-AL	2xD	f _n ▶	0.11	0.16	0.21																
			3xD	f _n ▶	0.11	0.16	0.21																
			4xD	f _n ▶	0.10	0.14	0.18																
			5xD	f _n ▶	0.10	0.13	0.16																
		SPGX 140512-AL	2xD	f _n ▶	0.12	0.17	0.22																
			3xD	f _n ▶	0.12	0.17	0.22																
			4xD	f _n ▶	0.10	0.15	0.20																
			5xD	f _n ▶	0.10	0.14	0.18																

● stock standard

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

TURNING

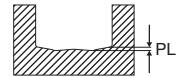
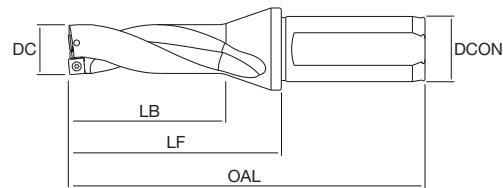
THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES



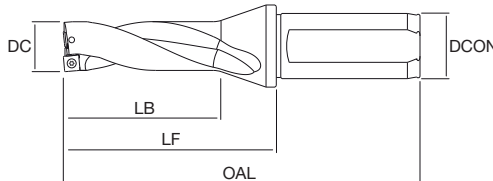
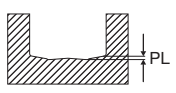
HOLE TOLERANCE 0/+0.20mm

DRS 2XD				DC	DCON	OAL	LF	LB	ADJLX max. radial offset	PL hole bottom shape	MIID
05	NT-DRS-2D	D13.00-S20-05	●	13	20	94	44	26	0.50	0.40	SPMX05 SPGX05
		D14.00-S20-05	●	14	20	96	46	28	0.50	0.40	
		D15.00-S20-05	●	15	20	99	49	30	0.50	0.40	
06	NT-DRS-2D	D16.00-S25-06	●	16	25	108	52	32	0.50	0.50	SPMX06 SPGX06
		D17.00-S25-06	●	17	25	110	54	34	0.50	0.50	
		D18.00-S25-06	●	18	25	113	57	36	0.50	0.50	
		D19.00-S25-06	●	19	25	115	59	38	0.50	0.50	
		D20.00-S25-06	●	20	25	119	63	40	0.50	0.50	
		D21.00-S25-06	●	21	25	121	65	42	0.25	0.50	
07	NT-DRS-2D	D22.00-S25-07	●	22	25	123	67	44	0.50	0.50	SPMX07 SPGX07
		D23.00-S32-07	●	23	32	131	71	46	0.50	0.50	
		D24.00-S32-07	●	24	32	134	74	48	0.50	0.50	
		D25.00-S32-07	●	25	32	137	77	50	0.50	0.50	
		D26.00-S32-07	●	26	32	139	79	52	0.25	0.60	
		D27.00-S32-07	●	27	32	141	81	54	0.25	0.60	
09	NT-DRS-2D	D28.00-S32-09	●	28	32	144	84	56	0.50	0.80	SPMX09 SPGX09
		D29.00-S32-09	●	29	32	146	86	58	0.50	0.80	
		D30.00-S32-09	●	30	32	151	91	60	0.50	0.80	
		D31.00-S32-09	●	31	32	154	94	62	0.25	0.80	
		D32.00-S32-09	●	32	32	156	96	64	0.25	0.80	
		D33.00-S32-09	●	33	32	159	99	66	0.25	0.80	
11	NT-DRS-2D	D34.00-S40-11	●	34	40	171	101	68	0.50	0.90	SPMX11 SPGX11
		D35.00-S40-11	●	35	40	174	104	70	0.50	0.90	
		D36.00-S40-11	●	36	40	177	107	72	0.50	0.90	
		D37.00-S40-11	●	37	40	180	110	74	0.50	0.90	
		D38.00-S40-11	●	38	40	183	113	76	0.50	0.90	
		D39.00-S40-11	●	39	40	185	115	78	0.50	0.90	
		D40.00-S40-11	●	40	40	188	118	80	0.25	0.90	
		D41.00-S40-11	●	41	40	191	121	82	0.25	0.90	
14	NT-DRS-2D	D42.00-S40-14	●	42	40	193	123	84	0.50	1.00	SPMX14 SPGX14
		D43.00-S40-14	●	43	40	196	126	86	0.50	1.00	
		D44.00-S40-14	●	44	40	198	128	88	0.50	1.00	
		D45.00-S40-14	●	45	40	202	132	90	0.50	1.00	
		D46.00-S40-14	●	46	40	205	135	92	0.50	1.00	
		D47.00-S40-14	●	47	40	207	137	94	0.50	1.00	
		D48.00-S40-14	●	48	40	210	140	96	0.25	1.00	
		D49.00-S40-14	●	49	40	212	142	98	0.25	1.00	
		D50.00-S40-14	●	50	40	215	145	100	0.25	1.00	

● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH

NT-DRS-2D D00.00-S00-05	NT-ST059	NT-FTB06
NT-DRS-2D D00.00-S00-06	NT-ST061	NT-FTB06
NT-DRS-2D D00.00-S00-07	NT-ST062	NT-FTB07
NT-DRS-2D D00.00-S00-09	NT-ST063	NT-FTB15
NT-DRS-2D D00.00-S00-11	NT-ST064	NT-FTB15
NT-DRS-2D D00.00-S00-14	NT-ST066	NT-FTB20

												
HOLE TOLERANCE 0/+0.25mm												
DRS 3XD				DC	DCON	OAL	LF	LB	ADJLX max. radial offset	PL hole bottom shape	MIID	
05	NT-DRS-3D	D12.50-S20-05	●	12.5	20	107	57	39	0.50	0.40	SPMX05 SPGX05	
		D13.00-S20-05	●	13	20	107	57	39	0.50	0.40		
		D13.50-S20-05	●	13.5	20	110	60	42	0.50	0.40		
		D14.00-S20-05	●	14	20	110	60	42	0.50	0.40		
		D14.50-S20-05	●	14.5	20	114	64	45	0.50	0.40		
		D15.00-S20-05	●	15	20	114	64	45	0.50	0.40		
06	NT-DRS-3D	D15.50-S25-06	●	15.5	25	124	68	48	0.50	0.50	SPMX06 SPGX06	
		D16.00-S25-06	●	16	25	124	68	48	0.50	0.50		
		D16.50-S25-06	●	16.5	25	127	71	51	0.50	0.50		
		D17.00-S25-06	●	17	25	127	71	51	0.50	0.50		
		D17.50-S25-06	●	17.5	25	131	75	54	0.50	0.50		
		D18.00-S25-06	●	18	25	131	75	54	0.50	0.50		
		D18.50-S25-06	●	18.5	25	134	78	57	0.50	0.50		
		D19.00-S25-06	●	19	25	134	78	57	0.50	0.50		
		D19.50-S25-06	●	19.5	25	139	83	60	0.50	0.50		
		D20.00-S25-06	●	20	25	139	83	60	0.50	0.50		
		D20.50-S25-06	●	20.5	25	142	86	63	0.25	0.50		
		D21.00-S25-06	●	21	25	142	86	63	0.25	0.50		
07	NT-DRS-3D	D21.50-S25-06	●	21.5	25	145	89	66	0.25	0.50	SPMX07 SPGX07	
		D22.00-S25-07	●	22	25	145	89	66	0.50	0.50		
		D22.50-S32-07	●	22.5	32	154	94	69	0.50	0.50		
		D23.00-S32-07	●	23	32	154	94	69	0.50	0.50		
		D23.50-S32-07	●	23.5	32	158	98	72	0.50	0.50		
		D24.00-S32-07	●	24	32	158	98	72	0.50	0.50		
		D24.50-S32-07	●	24.5	32	162	102	75	0.50	0.50		
		D25.00-S32-07	●	25	32	162	102	75	0.50	0.50		
		D25.50-S32-07	●	25.5	32	165	105	78	0.50	0.60		
		D26.00-S32-07	●	26	32	165	105	78	0.25	0.60		
		D26.50-S32-07	●	26.5	32	168	108	81	0.25	0.60		
		D27.00-S32-07	●	27	32	168	108	81	0.25	0.60		
09	NT-DRS-3D	D27.50-S32-07	●	27.5	32	172	112	84	0.25	0.60	SPMX09 SPGX09	
		D28.00-S32-09	●	28	32	172	112	84	0.50	0.80		
		D28.50-S32-09	●	28.5	32	175	115	87	0.50	0.80		
		D29.00-S32-09	●	29	32	175	115	87	0.50	0.80		
		D29.50-S32-09	●	29.5	32	181	121	90	0.50	0.80		
		D30.00-S32-09	●	30	32	181	121	90	0.50	0.80		
		D31.00-S32-09	●	31	32	185	125	93	0.25	0.80		
		D32.00-S32-09	●	32	32	188	128	96	0.25	0.80		
D33.00-S32-09	●	33	32	192	132	99	0.25	0.80				

● stock standard

TURNING

THREADING

GROOVING

MILLING

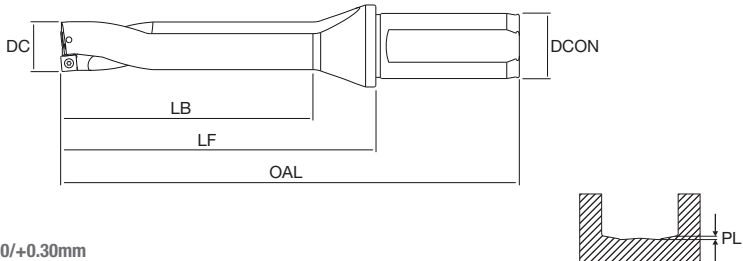
DRILLING

ACCESSORIES

DRS 3XD				DC	DCON	OAL	LF	LB	ADJLX max. radial offset	PL hole bottom shape	MIID
11	NT-DRS-3D	D34.00-S40-11	●	34	40	205	135	102	0.50	0.90	SPMX11 SPGX11
		D35.00-S40-11	●	35	40	209	139	105	0.50	0.90	
		D36.00-S40-11	●	36	40	213	143	108	0.50	0.90	
		D37.00-S40-11	●	37	40	217	147	111	0.50	0.90	
		D38.00-S40-11	●	38	40	221	151	114	0.50	0.90	
		D39.00-S40-11	●	39	40	224	154	117	0.50	0.90	
		D40.00-S40-11	●	40	40	228	158	120	0.25	0.90	
		D41.00-S40-11	●	41	40	232	162	123	0.25	0.90	
14	NT-DRS-3D	D42.00-S40-14	●	42	40	235	165	126	0.50	1.00	SPMX14 SPGX14
		D43.00-S40-14	●	43	40	239	169	129	0.50	1.00	
		D44.00-S40-14	●	44	40	242	172	132	0.50	1.00	
		D45.00-S40-14	●	45	40	247	177	135	0.50	1.00	
		D46.00-S40-14	●	46	40	251	181	138	0.50	1.00	
		D47.00-S40-14	●	47	40	254	184	141	0.50	1.00	
		D48.00-S40-14	●	48	40	258	188	144	0.25	1.00	
		D49.00-S40-14	●	49	40	261	191	147	0.25	1.00	
		D50.00-S40-14	●	50	40	265	195	150	0.25	1.00	

● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH
		
NT-DRS-3D D00.00-S00-05	NT-ST059	NT-FTB06
NT-DRS-3D D00.00-S00-06	NT-ST061	NT-FTB06
NT-DRS-3D D00.00-S00-07	NT-ST062	NT-FTB07
NT-DRS-3D D00.00-S00-09	NT-ST063	NT-FTB15
NT-DRS-3D D00.00-S00-11	NT-ST064	NT-FTB15
NT-DRS-3D D00.00-S00-14	NT-ST066	NT-FTB20

				 HOLE TOLERANCE 0/+0.30mm							
DRS 4XD				DC	DCON	OAL	LF	LB	ADJLX max. radial offset	PL hole bottom shape	MIID
05	NT-DRS-4D	D12.50-S20-05	●	12.5	20	120	70	52	0.50	0.40	SPMX05 SPGX05
		D13.00-S20-05	●	13	20	120	70	52	0.50	0.40	
		D13.50-S20-05	●	13.5	20	124	74	56	0.50	0.40	
		D14.00-S20-05	●	14	20	124	74	56	0.50	0.40	
		D14.50-S20-05	●	14.5	20	129	79	60	0.50	0.40	
		D15.00-S20-05	●	15	20	129	79	60	0.50	0.40	
06	NT-DRS-4D	D15.50-S25-06	●	15.5	25	140	84	64	0.50	0.50	SPMX06 SPGX06
		D16.00-S25-06	●	16	25	140	84	64	0.50	0.50	
		D16.50-S25-06	●	16.5	25	144	88	68	0.50	0.50	
		D17.00-S25-06	●	17	25	144	88	68	0.50	0.50	
		D17.50-S25-06	●	17.5	25	149	93	72	0.50	0.50	
		D18.00-S25-06	●	18	25	149	93	72	0.50	0.50	
		D18.50-S25-06	●	18.5	25	153	97	76	0.50	0.50	
		D19.00-S25-06	●	19	25	153	97	76	0.50	0.50	
		D19.50-S25-06	●	19.5	25	159	103	80	0.50	0.50	
		D20.00-S25-06	●	20	25	159	103	80	0.50	0.50	
		D20.50-S25-06	●	20.5	25	163	107	84	0.25	0.50	
		D21.00-S25-06	●	21	25	163	107	84	0.25	0.50	
07	NT-DRS-4D	D21.50-S25-06	●	21.5	25	167	111	88	0.25	0.50	SPMX07 SPGX07
		D22.00-S25-07	●	22	25	167	111	88	0.50	0.50	
		D22.50-S32-07	●	22.5	32	177	117	92	0.50	0.50	
		D23.00-S32-07	●	23	32	177	117	92	0.50	0.50	
		D23.50-S32-07	●	23.5	32	182	122	96	0.50	0.50	
		D24.00-S32-07	●	24	32	182	122	96	0.50	0.50	
		D24.50-S32-07	●	24.5	32	187	127	100	0.50	0.50	
		D25.00-S32-07	●	25	32	187	127	100	0.50	0.50	
		D25.50-S32-07	●	25.5	32	191	131	104	0.50	0.60	
		D26.00-S32-07	●	26	32	191	131	104	0.25	0.60	
		D26.50-S32-07	●	26.5	32	195	135	108	0.25	0.60	
		D27.00-S32-07	●	27	32	195	135	108	0.25	0.60	
09	NT-DRS-4D	D27.50-S32-07	●	27.5	32	200	140	112	0.25	0.60	SPMX09 SPGX09
		D28.00-S32-09	●	28	32	200	140	112	0.50	0.80	
		D28.50-S32-09	●	28.5	32	204	144	116	0.50	0.80	
		D29.00-S32-09	●	29	32	204	144	116	0.50	0.80	
		D29.50-S32-09	●	29.5	32	211	151	120	0.50	0.80	
		D30.00-S32-09	●	30	32	211	151	120	0.50	0.80	
		D31.00-S32-09	●	31	32	216	156	124	0.25	0.80	
		D32.00-S32-09	●	32	32	220	160	128	0.25	0.80	
		D33.00-S32-09	●	33	32	225	165	132	0.25	0.80	

● stock standard

TURNING

THREADING

GROOVING

MILLING

DRILLING

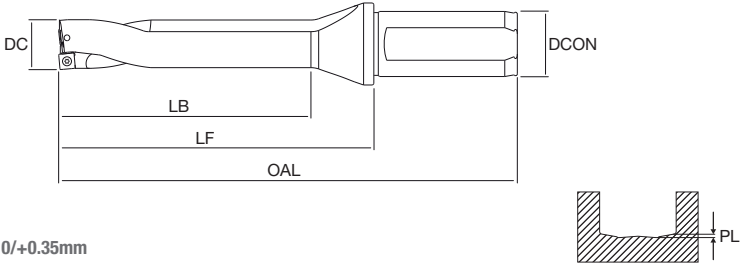
ACCESSORIES

DRS 4XD				DC	DCON	OAL	LF	LB	ADJLX max. radial offset	PL hole bottom shape	MIID
11	NT-DRS-4D	D34.00-S40-11	●	34	40	239	169	136	0.50	0.90	SPMX11 SPGX11
		D35.00-S40-11	●	35	40	244	174	140	0.50	0.90	
		D36.00-S40-11	●	36	40	249	179	144	0.50	0.90	
		D37.00-S40-11	●	37	40	254	184	148	0.50	0.90	
		D38.00-S40-11	●	38	40	259	189	152	0.50	0.90	
		D39.00-S40-11	●	39	40	263	193	156	0.50	0.90	
		D40.00-S40-11	●	40	40	268	198	160	0.25	0.90	
		D41.00-S40-11	●	41	40	273	203	164	0.25	0.90	
14	NT-DRS-4D	D42.00-S40-14	●	42	40	277	207	168	0.50	1.00	SPMX14 SPGX14
		D43.00-S40-14	●	43	40	282	212	172	0.50	1.00	
		D44.00-S40-14	●	44	40	286	216	176	0.50	1.00	
		D45.00-S40-14	●	45	40	292	222	180	0.50	1.00	
		D46.00-S40-14	●	46	40	297	227	184	0.50	1.00	
		D47.00-S40-14	●	47	40	301	231	188	0.50	1.00	
		D48.00-S40-14	●	48	40	306	236	192	0.25	1.00	
		D49.00-S40-14	●	49	40	310	240	196	0.25	1.00	
		D50.00-S40-14	●	50	40	315	245	200	0.25	1.00	

● stock standard

Spare Parts	INSERT SCREW	INSERT WRENCH
		
NT-DRS-4D D00.00-S00-05	NT-ST059	NT-FTB06
NT-DRS-4D D00.00-S00-06	NT-ST061	NT-FTB06
NT-DRS-4D D00.00-S00-07	NT-ST062	NT-FTB07
NT-DRS-4D D00.00-S00-09	NT-ST063	NT-FTB15
NT-DRS-4D D00.00-S00-11	NT-ST064	NT-FTB15
NT-DRS-4D D00.00-S00-14	NT-ST066	NT-FTB20





DRS 5XD

DC	DCON	OAL	LF	LB	ADJLX max. radial offset	PL hole bottom shape	MIID
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05	NT-DRS-5D	D13.00-S20-05	●	13	20	133	83	65	0.50	0.40	SPMX05 SPGX05
		D14.00-S20-05	●	14	20	138	88	70	0.50	0.40	
		D15.00-S20-05	●	15	20	144	94	75	0.50	0.40	
06	NT-DRS-5D	D16.00-S25-06	●	16	25	156	100	80	0.50	0.50	SPMX06 SPGX06
		D17.00-S25-06	●	17	25	161	105	85	0.50	0.50	
		D18.00-S25-06	●	18	25	167	111	90	0.50	0.50	
		D19.00-S25-06	●	19	25	172	116	95	0.50	0.50	
		D20.00-S25-06	●	20	25	179	123	100	0.50	0.50	
		D21.00-S25-06	●	21	25	184	128	105	0.25	0.50	
07	NT-DRS-5D	D22.00-S25-07	●	22	25	189	133	110	0.50	0.50	SPMX07 SPGX07
		D23.00-S32-07	●	23	32	200	140	115	0.50	0.50	
		D24.00-S32-07	●	24	32	206	146	120	0.50	0.50	
		D25.00-S32-07	●	25	32	212	152	125	0.50	0.50	
		D26.00-S32-07	●	26	32	217	157	130	0.25	0.60	
		D27.00-S32-07	●	27	32	222	162	135	0.25	0.60	
09	NT-DRS-5D	D28.00-S32-09	●	28	32	228	168	140	0.50	0.80	SPMX09 SPGX09
		D29.00-S32-09	●	29	32	233	173	145	0.50	0.80	
		D30.00-S32-09	●	30	32	241	181	150	0.50	0.80	
		D31.00-S32-09	●	31	32	247	187	155	0.25	0.80	
		D32.00-S32-09	●	32	32	252	192	160	0.25	0.80	
		D33.00-S32-09	●	33	32	258	198	165	0.25	0.80	
11	NT-DRS-5D	D34.00-S40-11	●	34	40	273	203	170	0.50	0.90	SPMX11 SPGX11
		D35.00-S40-11	●	35	40	279	209	175	0.50	0.90	
		D36.00-S40-11	●	36	40	285	215	180	0.50	0.90	
		D37.00-S40-11	●	37	40	291	221	185	0.50	0.90	
		D38.00-S40-11	●	38	40	297	227	190	0.50	0.90	
		D39.00-S40-11	●	39	40	302	232	195	0.50	0.90	
		D40.00-S40-11	●	40	40	308	238	200	0.25	0.90	
		D41.00-S40-11	●	41	40	314	244	205	0.25	0.90	
14	NT-DRS-5D	D42.00-S40-14	●	42	40	319	249	210	0.50	1.00	SPMX14 SPGX14
		D43.00-S40-14	●	43	40	325	255	215	0.50	1.00	
		D44.00-S40-14	●	44	40	330	260	220	0.50	1.00	
		D45.00-S40-14	●	45	40	337	267	225	0.50	1.00	
		D46.00-S40-14	●	46	40	343	273	230	0.50	1.00	
		D47.00-S40-14	●	47	40	348	278	235	0.50	1.00	
		D48.00-S40-14	●	48	40	354	284	240	0.25	1.00	
		D49.00-S40-14	●	49	40	359	289	245	0.25	1.00	
		D50.00-S40-14	●	50	40	365	295	250	0.25	1.00	

● stock standard

Spare Parts

INSERT SCREW



INSERT WRENCH



NT-DRS-5D D00.00-S00-05	NT-ST059	NT-FTB06
NT-DRS-5D D00.00-S00-06	NT-ST061	NT-FTB06
NT-DRS-5D D00.00-S00-07	NT-ST062	NT-FTB07
NT-DRS-5D D00.00-S00-09	NT-ST063	NT-FTB15
NT-DRS-5D D00.00-S00-11	NT-ST064	NT-FTB15
NT-DRS-5D D00.00-S00-14	NT-ST066	NT-FTB20

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

DRSDRILL

CUTTING SPEED [m/min]

	MATERIALS	HARDNESS/Rm	W.-Nr	DIN	AISI-ASTM	TRADE MARK	JP5625	JP5530	JP9635	JU6520
TURNING	P1 Free cutting steel and structural steel	< 500 N/mm ²	1.0715 1.0765	9 SMn 28 36 SMnPb 14	1213 A29	AVP PR80	180÷300	180÷300		
	P2 Carbon steel and low alloy steel	500-700 N/mm ²	1.7147 1.0511	20 MnCr 5 C 40	5120 1040	- -	140÷240	140÷240		
	P3 Medium alloy steel and heat treated steel	600-800 N/mm ²	1.1201 1.6511	42 CrMo 4 36 CrNiMo 4	4142, 4140 9840	- -	100÷220	100÷220		
	P4 High alloy steel	800-1000 N/mm ²	1.1663 1.3505	C 125 W 100 Cr 6	W1 52100	- -	100÷180	100÷180		
	P5 Tool steel	900-1200 N/mm ²	1.2080 1.2379	X 210 Cr 12 X 155 CrVMo 12 1	D3 -	K100 K110	80÷150	80÷150		
THREADING	M1 Ferritic stainless steel	400-700 N/mm ²	1.4016 1.4104	X 6 Cr 17 X 12 CrMoS 17	430 430 F	- -			120÷220	
	M2 Austenitic stainless steel (good machinability)	500-750 N/mm ²	1.4305 1.4301	X 10 CrNiS 18 9 X 6 CrNi 18 10	303 304, 304 H	- -			80÷180	
	M3 Austenitic stainless steel (medium machinability)	550-850 N/mm ²	1.4401 1.4462	X 5 CrNiMo 17 12 2 X 2 CrNiMoN 22 5	316 F 51-329 A	- DUPLEX			60÷150	
	M4 Martensitic stainless steel	650-950 N/mm ²	1.4021 1.4410	X 20 Cr 13 X 2 CrNiMoN 25 7 4	420 F 53-329 S1	- SUPER DUPLEX			60÷150	
	M5 PH stainless steel	800-1250 N/mm ²	1.4540 1.4542	X 4 CrNiCuNb 16 4 X 5 CrNiNb 16 4	XM-12 631	15-5-PH 17-4-PH			50÷120	
GROOVING	K1 Grey cast iron	150-250 HB	0.6020 0.6025	GG-20 GG-25	A48 30 B A48 35 B	- -	180÷250	180÷250		
	K2 Nodular cast iron	150-350 HB	0.7050 0.7070	GGG-50 GGG-70	A536 80-55-6 A536 100-70-03	- -	120÷180	120÷180		
	N1 Aluminium alloys ≤ 12% Si		3.3547 3.2315	AlMg4.5Mn AlMgSi 1	5083 6082	Peraluman 440 Anticorodal 100				250÷400
	N2 Aluminium alloys > 12% Si		3.2582	GD-AlSi12 G-AlSi6Cu4	A413.0 319					150÷300
	N3 Copper		2.0940-01 2.1176	CuAl10Fe CuPb10Sn	CA952 CA937					200÷300
MILLING	N4 Bronze and brass		2.0401	Cu Zn39Pb3		OT58 AMPCO 18				200÷300

DRILLING

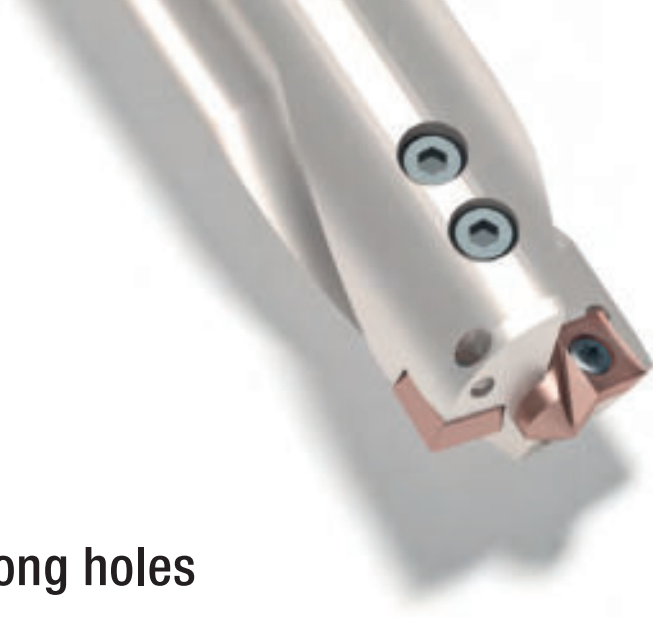
ACCESSORIES



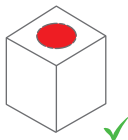
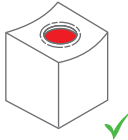
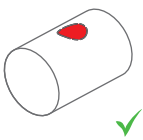
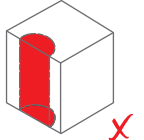
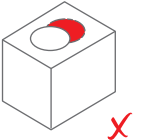
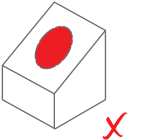
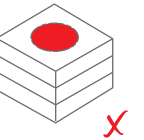
DRILLING DRSpilot

DRSPILOT^{6XD}_{9XD}

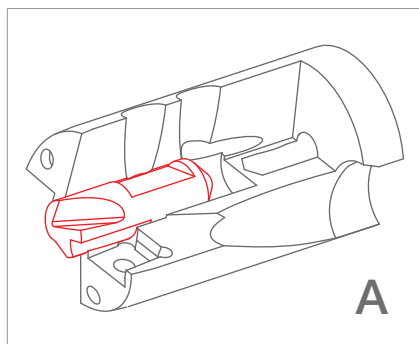
Perfect centering even on extra long holes



1. Where is DRSpilot applicable?

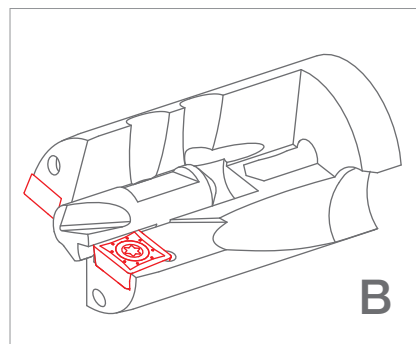
PLAIN SURFACE	CONCAVE SURFACE	PIPES	HALF HOLE	HOLE EXPANSION	SLANT SURFACE	STACKED PLATES
						

2. Installation of inserts and pilot drill



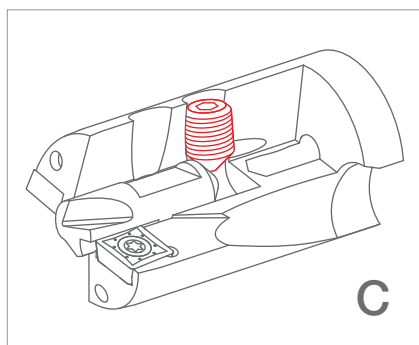
A

Insert DRSP pilot in the drilling body.



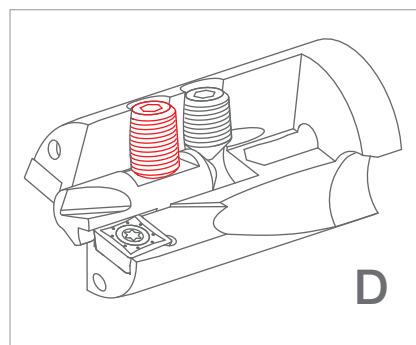
B

Install the SPMX/SPGX inserts.



C

Adjust the DRSP pilot height using the setting grain as shown in the drawing, following the table at pag.273.



D

Screw tight the locking grain.

ACCESSORIES

● stock standard

MATERIAL	6xD	9xD
P M K	1.0 mm	1.4 mm
N	1.5 mm	1.7 mm

TURNING

THREADING

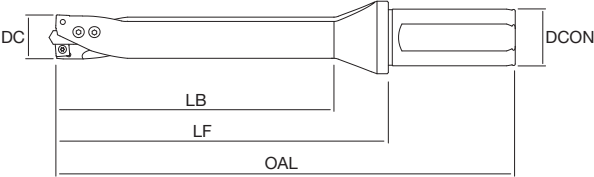
GROOVING

MILLING

DRILLING

ACCESSORIES





DRS PILOT 6XD				DC	DCON	OAL	LF	LB	 KG	MIID (insert)	MIID (pilot)
---------------	--	--	--	----	------	-----	----	----	--	---------------	--------------

05	NT-DRS-6D	D18.00-S25-05P6	●	18	25	191	135	112		SPMX05 SPGX05	DRSP06
		D19.00-S25-05P6	●	19	25	197	141	118			
06	NT-DRS-6D	D20.00-S25-06P6	●	20	25	203	147	124		SPMX06 SPGX06	DRSP06
		D21.00-S25-06P6	●	21	25	209	153	130			
		D22.00-S25-06P6	●	22	25	215	159	136			
		D23.00-S32-06P6	●	23	32	228	168	142			
		D24.00-S32-06P6	●	24	32	234	174	148			
		D25.00-S32-06P6	●	25	32	240	180	154			
07	NT-DRS-6D	D26.00-S32-07P8	●	26	32	246	186	160		SPMX07 SPGX07	DRSP08
		D27.00-S32-07P8	●	27	32	252	192	166			
		D28.00-S32-07P8	●	28	32	258	198	172			
		D29.00-S32-07P8	●	29	32	264	204	178			
		D30.00-S32-07P8	●	30	32	270	210	184			

● stock standard

Spare Parts



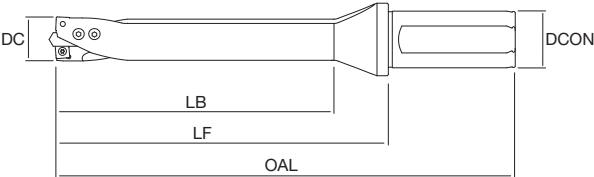
NT-DRS-6D D _{00.00} -S ₀₀ -05P6	NT-ST059	NT-FTB06
NT-DRS-6D D _{00.00} -S ₀₀ -06P6	NT-ST061	NT-FTB06
NT-DRS-6D D _{00.00} -S ₀₀ -07P8	NT-ST062	NT-FTB07

Spare Parts



DC 18÷22	NT-ST042	NT-ST043	NT-WR025
DC 23÷25	NT-ST044	NT-ST045	
DC 26÷30	NT-ST046	NT-ST047	NT-WR030





DRS PILOT 9XD				DC	DCON	OAL	LF	LB	KG	MIID (insert)	MIID (pilot)
---------------	--	--	--	----	------	-----	----	----	----	---------------	--------------

05	NT-DRS-9D	D18.00-S25-05P6	●	18	25	245	189	166		SPMX05 SPGX05	DRSP06
		D19.00-S25-05P6	●	19	25	254	198	175			
06	NT-DRS-9D	D20.00-S25-06P6	●	20	25	263	207	184		SPMX06 SPGX06	DRSP06
		D21.00-S25-06P6	●	21	25	272	216	193			
		D22.00-S25-06P6	●	22	25	281	225	202			
		D23.00-S32-06P6	●	23	32	297	237	211			
		D24.00-S32-06P6	●	24	32	306	246	220			
		D25.00-S32-06P6	●	25	32	315	255	229			
07	NT-DRS-9D	D26.00-S32-07P8	●	26	32	324	264	238		SPMX07 SPGX07	DRSP08
		D27.00-S32-07P8	●	27	32	333	273	247			
		D28.00-S32-07P8	●	28	32	342	282	256			
		D29.00-S32-07P8	●	29	32	351	291	265			
		D30.00-S32-07P8	●	30	32	360	300	274			

● stock standard

Spare Parts

INSERT SCREW

INSERT WRENCH

NT-DRS-9D D _{00.00} -S ₀₀ -05P6	NT-ST059	NT-FTB06
NT-DRS-9D D _{00.00} -S ₀₀ -06P6	NT-ST061	NT-FTB06
NT-DRS-9D D _{00.00} -S ₀₀ -07P8	NT-ST062	NT-FTB07

Spare Parts

LOCKING GRAIN

SETTING GRAIN

GRAIN WRENCH

DC 18÷22	NT-ST042	NT-ST043	NT-WR025
DC 23÷25	NT-ST044	NT-ST045	
DC 26÷30	NT-ST046	NT-ST047	NT-WR030

DRS PILOT

CUTTING SPEED [m/min]

	MATERIALS	HARDNESS/Rm	W.-Nr	DIN	AISI-ASTM	TRADE MARK	JP5625	JP5530	JP9635	JU6520
TURNING	P1 Free cutting steel and structural steel	< 500 N/mm ²	1.0715 1.0765	9 SMn 28 36 SMnPb 14	1213 A29	AVP PR80	130÷220	130÷220		
	P2 Carbon steel and low alloy steel	500-700 N/mm ²	1.7147 1.0511	20 MnCr 5 C 40	5120 1040	- -	100÷180	100÷180		
	P3 Medium alloy steel and heat treated steel	600-800 N/mm ²	1.1201 1.6511	42 CrMo 4 36 CrNiMo 4	4142, 4140 9840	- -	80÷170	80÷170		
	P4 High alloy steel	800-1000 N/mm ²	1.1663 1.3505	C 125 W 100 Cr 6	W1 52100	- -	80÷140	80÷140		
	P5 Tool steel	900-1200 N/mm ²	1.2080 1.2379	X 210 Cr 12 X 155 CrVMo 12 1	D3 -	K100 K110	60÷120	60÷120		
THREADING	M1 Ferritic stainless steel	400-700 N/mm ²	1.4016 1.4104	X 6 Cr 17 X 12 CrMoS 17	430 430 F	- -			90÷160	
	M2 Austenitic stainless steel (good machinability)	500-750 N/mm ²	1.4305 1.4301	X 10 CrNiS 18 9 X 6 CrNi 18 10	303 304, 304 H	- -			60÷130	
	M3 Austenitic stainless steel (medium machinability)	550-850 N/mm ²	1.4401 1.4462	X 5 CrNiMo 17 12 2 X 2 CrNiMoN 22 5	316 F 51-329 A	- DUPLEX			50÷110	
	M4 Martensitic stainless steel	650-950 N/mm ²	1.4021 1.4410	X 20 Cr 13 X 2 CrNiMoN 25 7 4	420 F 53-329 S1	- SUPER DUPLEX			50÷110	
	M5 PH stainless steel	800-1250 N/mm ²	1.4540 1.4542	X 4 CrNiCuNb 16 4 X 5 CrNiNb 16 4	XM-12 631	15-5-PH 17-4-PH			40÷100	
GROOVING	K1 Grey cast iron	150-250 HB	0.6020 0.6025	GG-20 GG-25	A48 30 B A48 35 B	- -	130÷190	130÷190		
	K2 Nodular cast iron	150-350 HB	0.7050 0.7070	GGG-50 GGG-70	A536 80-55-6 A536 100-70-03	- -	100÷140	100÷140		
	N1 Aluminium alloys ≤ 12% Si		3.3547 3.2315	AlMg4.5Mn AlMgSi 1	5083 6082	Peraluman 440 Anticorodal 100				200÷300
	N2 Aluminium alloys > 12% Si		3.2582	GD-AlSi12 G-AlSi6Cu4	A413.0 319					120÷240
	N3 Copper		2.0940-01 2.1176	CuAl10Fe CuPb10Sn	CA952 CA937					150÷240
MILLING	N4 Bronze and brass		2.0401	Cu Zn39Pb3		OT58 AMPCO 18				150÷240

DRILLING

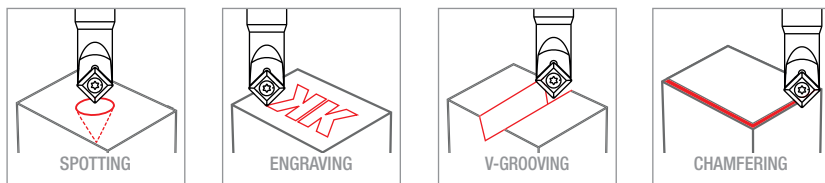
ACCESSORIES



DRILLING SPOTdrill

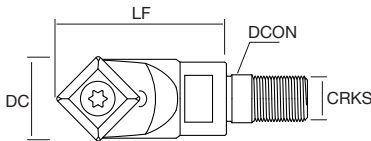
SPOTDRILL

Multipurpose system



SPOT11		SPOTDRILL Multipurpose system				ISO513	COATED				UNCOATED																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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● stock standard feed rate for chamfering

CYLINDRICAL  DCX=14  DCN=2.4				MULTI PURPOSE SYSTEM P M K N													
SCREW-IN  DCX=14  DCN=2.4																	
SPOT DRILL Multipurpose system		DC (DCX)		DCON	LF	LU	CRKS		MIID								

CYLINDRICAL	NT-SPOT	D14-S16-L100	●	15.4 (14)	1	16	100	30	-	0,13	SPOT11
	NT-SPOT	D14-M08-L052	●	15.4 (14)	1	8.5	35	-	M8	0,03	SPOT11

● stock standard DCX = maximum cutting diameter DCON=minimum cutting diameter

Spare Parts	INSERT SCREW	INSERT WRENCH
		
NT-SPOT11 D□□□	NT-ST063	NT-FTB15

TURNING

THREADING

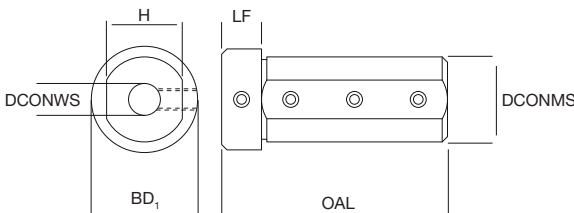
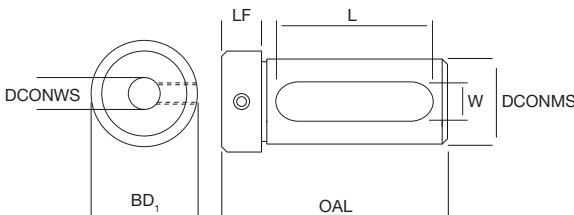
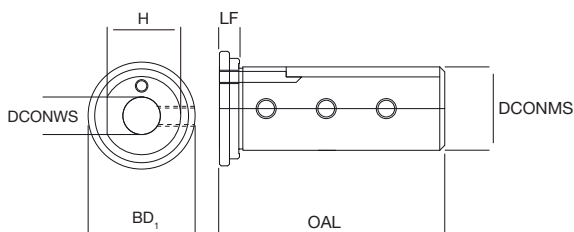
GROOVING

MILLING

DRILLING

ACCESSORIES

ACCESSORIES

SCREWS											
THROUGH HOLE											
SCREWS + COOLANT											
NT-SLB Sleeves for boring bars				DCONWS	DCONMS	OAL	LF	BD₁	H	L	W
SCREWS	NT-SLB S03	D16-L62	●	3	16	62	7	20	14.5	-	-
	NT-SLB S04	D16-L62	●	4	16	62	7	20	14.5	-	-
		D20-L67	●		20	67	7	27	17.5	-	-
		D32-L80	●		32	80	15	38	29.5	-	-
	NT-SLB S05	D16-L62	●	5	16	62	7	20	14.5	-	-
		D20-L67	●		20	67	7	27	17.5	-	-
		D32-L80	●		32	80	15	38	29.5	-	-
		D40-L100	●		40	100	15	46	38.0	-	-
	NT-SLB S06	D16-L62	●	6	16	62	7	20	14.5	-	-
		D20-L52	●		20	52	7	25	17.5	-	-
		D20-L67	●		20	67	7	27	17.5	-	-
		D32-L85	●		32	85	15	38	29.5	-	-
		D40-L100	●		40	100	15	46	38.0	-	-
	NT-SLB S07	D20-L67	●	7	20	67	7	27	17.5	-	-
		D32-L85	●		32	85	15	38	29.5	-	-
		D40-L100	●		40	100	15	46	38.0	-	-
	NT-SLB S08	D16-L62	●	8	16	62	7	20	14.5	-	-
		D20-L52	●		20	52	7	25	17.5	-	-
		D20-L67	●		20	67	7	27	17.5	-	-
		D32-L85	●		32	85	15	38	29.5	-	-
		D40-L100	●		40	100	15	46	38.0	-	-
		D50-L100	●		50	100	15	58	48.0	-	-

● stock standard

TURNING

THREADING

GROOVING

MILLING

DRILLING

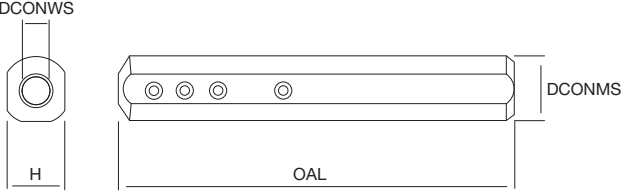
ACCESSORIES

NT-SLB Sleeves for boring bars				DCONWS	DCONMS	OAL	LF	BD ₁	H	L	W
SCREWS	NT-SLB S10	D20-L52	●	10	20	52	7	25	17.5	-	-
		D20-L67	●		20	67	7	27	17.5	-	-
		D32-L100	●		32	100	15	38	29.5	-	-
		D40-L100	●		40	100	15	46	38.0	-	-
		D50-L100	●		50	100	15	58	48.0	-	-
	NT-SLB S12	D20-L52	●	12	20	52	7	25	17.5	-	-
		D20-L67	●		20	67	7	27	17.5	-	-
		D32-L100	●		32	100	15	38	29.5	-	-
		D40-L100	●		40	100	15	46	38.0	-	-
		D50-L100	●		50	100	15	58	48.0	-	-
	NT-SLB S14	D32-L100	●	14	32	100	15	38	29.5	-	-
		D40-L100	●		40	100	15	46	38.0	-	-
		D50-L100	●		50	100	15	58	48.0	-	-
	NT-SLB S15	D32-L100	●	15	32	100	15	38	29.5	-	-
		D40-L100	●		40	100	15	46	38.0	-	-
	NT-SLB S16	D32-L100	●	16	32	100	15	38	29.5	-	-
		D40-L100	●		40	100	15	46	38.0	-	-
		D50-L100	●		50	100	15	58	48.0	-	-
	NT-SLB S18	D32-L100	●	18	32	100	15	38	29.5	-	-
		D40-L100	●		40	100	15	46	38.0	-	-
		D50-L100	●		50	100	15	58	48.0	-	-
	NT-SLB S20	D50-L100	●	20	50	100	15	58	48.0	-	-
	NT-SLB S25	D50-L100	●	25	50	100	15	58	48.0	-	-
THROUGH HOLE	NT-SLB S10	D16-L62	●	10	16	62	7	20	-	50	11
	NT-SLB S12	D16-L62	●	12	16	62	7	20	-	50	11
	NT-SLB S14	D20-L67	●	14	20	67	7	27	-	55	13
		D25-L64	●		25	64	6	35	-	51	12
	NT-SLB S15	D20-L67	●	15	20	67	7	27	-	55	13
		D25-L64	●		25	64	6	35	-	51	12
	NT-SLB S16	D20-L52	●	16	20	52	7	25	-	40	11
		D20-L67	●		20	67	7	27	-	55	13
		D25-L64	●		25	64	6	35	-	51	12
	NT-SLB S17	D25-L64	●	17	25	64	6	35	-	51	12
	NT-SLB S18	D25-L64	●	18	25	64	6	35	-	51	12
	NT-SLB S20	D25-L64	●	20	25	64	6	35	-	51	12
		D32-L100	●		32	100	15	38	-	77	14
		D40-L100	●		40	100	15	46	-	77	14
	NT-SLB S22	D25-L64	●	22	25	64	6	35	-	51	12
		D32-L100	●		32	100	15	38	-	77	14
		D40-L100	●		40	100	15	46	-	77	14
	NT-SLB S25	D32-L100	●	25	32	100	15	38	-	77	14
		D40-L100	●		40	100	15	46	-	77	14
	NT-SLB S32	D40-L100	●	32	40	100	15	46	-	77	14
		D50-L100	●		50	100	15	58	-	77	14
	NT-SLB S40	D50-L100	●	40	50	100	15	58	-	77	14
SCREWS + COOLANT	NT-SLB S04	D25-L64	●	4	25	64	6	35	23.5	-	-
	NT-SLB S05	D25-L64	●	5	25	64	6	35	23.5	-	-
	NT-SLB S06	D25-L64	●	6	25	64	6	35	23.5	-	-
	NT-SLB S07	D25-L64	●	7	25	64	6	35	23.5	-	-
	NT-SLB S08	D25-L64	●	8	25	64	6	35	23.5	-	-
	NT-SLB S09	D25-L64	●	9	25	64	6	35	23.5	-	-
	NT-SLB S10	D25-L64	●	10	25	64	6	35	23.5	-	-
	NT-SLB S11	D25-L64	●	11	25	64	6	35	23.5	-	-
	NT-SLB S12	D25-L64	●	12	25	64	6	35	23.5	-	-

● stock standard



Right-hand shown

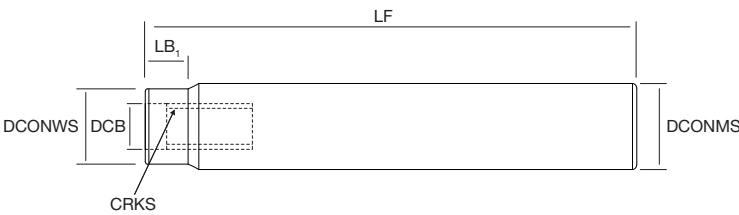
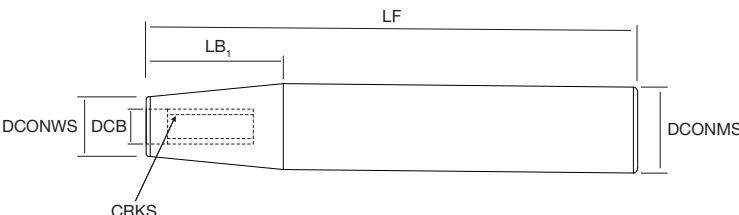
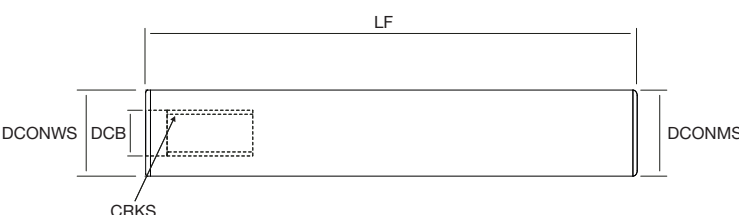


NT-SLV
Sleeves for microboring bars

DCONWS	DCONMS	OAL	H				
--------	--------	-----	---	--	--	--	--

SCREWS	NT-SLV	S03-D16-L100	●	3	16	100	14				
		S04-D16-L100	●	4	16	100	14				
		S05-D16-L100	●	5	16	100	14				
		S06-D16-L100	●	6	16	100	14				

● stock standard

TURNING	CYLINDRICAL STEEL INTERNAL COOLANT										
THREADING	TAPERED STEEL INTERNAL COOLANT										
GROOVING	CYLINDRICAL CARBIDE INTERNAL COOLANT										
MILLING	NT-ARB Arbor for screw-in milling cutters		DCONMS	CRKS	DCONWS	DCB	LF	LB1			
DRILLING	STEEL CYLINDRICAL	NT-ARB	D12-M06-120	●	12	M6	11	6.5	120	10	
			D16-M08-150	●	16	M8	14	8.5	150	10	
			D16-M08-200	●	16	M8	14	8.5	200	10	
			D20-M10-150	●	20	M10	18	10.5	150	12	
			D20-M10-250	●	20	M10	18	10.5	250	12	
			D25-M12-200	●	25	M12	23	12.5	200	15	
			D25-M12-300	●	25	M12	23	12.5	300	15	
			D32-M16-200	●	32	M16	29	17	200	18	
			D32-M16-350	●	32	M16	29	17	350	18	
ACCESSORIES	STEEL TAPERED	NT-ARB	D16-M06-150T	●	16	M6	11	6.5	150	40	
			D16-M06-200T	●	16	M6	11	6.5	200	40	
			D20-M08-200T	●	20	M8	14	8.5	200	50	
			D20-M08-250T	●	20	M8	14	8.5	250	50	
			D25-M10-200T	●	25	M10	18	10.5	200	60	
			D25-M10-250T	●	25	M10	18	10.5	250	60	
			D32-M12-250T	●	32	M12	23	12.5	250	70	
			D32-M12-350T	●	32	M12	23	12.5	350	70	
			CARBIDE CYLINDRICAL	NT-ARB-HM	D12-M06-100	●	12	M6	-	6.5	100
D12-M06-150	●	12			M6	-	6.5	150	-		
D12-M06-200	●	12			M6	-	6.5	200	-		
D16-M08-100	●	16			M8	-	8.5	100	-		
D16-M08-150	●	16			M8	-	8.5	150	-		
D16-M08-200	●	16			M8	-	8.5	200	-		
			D20-M10-100	●	20	M10	-	10.5	100	-	

● stock standard

NT-ARB Arbor for screw-in milling cutters				DCONMS	CRKS	DCONWS	DCB	LF	LB1		
CARBIDE CYLINDRICAL		D20-M10-150	●	20	M10	-	10.5	150	-		
		D20-M10-200	●	20	M10	-	10.5	200	-		
		D20-M10-300	●	20	M10	-	10.5	300	-		
		D25-M12-100	●	25	M12	-	12.5	100	-		
		D25-M12-150	●	25	M12	-	12.5	150	-		
		D25-M12-200	●	25	M12	-	12.5	200	-		
		D25-M12-300	●	25	M12	-	12.5	300	-		

● stock standard

TURNING

THREADING

GROOVING

MILLING

DRILLING

ACCESSORIES

SiNikoTools



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