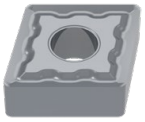
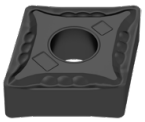
New products for machining technicians

NEW CTPX710 and CTPX715 the universal multi-material grade



CTPX710 and CTPX715 are the first multi-application grade for turning from CERATIZIT. It impresses thanks to outstanding performance in the processing of steel, stainless steel, super alloys and non-ferrous metals.

NEW CTCM120 and CTCM130 for stainless turning

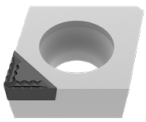


In addition to the all-rounder CTPM125 grade, the CTCM120 and CTCM130 stainless turning grades now provide a tougher and a more wear-resistant option for finer adjustment to the material to be machined. What's more, the stainless range offers geometric compatibility across all three grades.

NEW Standard line

Attractively priced indexable inserts for steel machining – our ISO turning standard line not only impresses on price but also by providing the best levels of performance!

NEW CBN/PCD update



Various cutting edge finishes and chip breakers are being added to the CBN and PCD range to provide a specialist for every application.

Table of contents

CERATIZIT \ Performance

Premium quality tools for high performance.

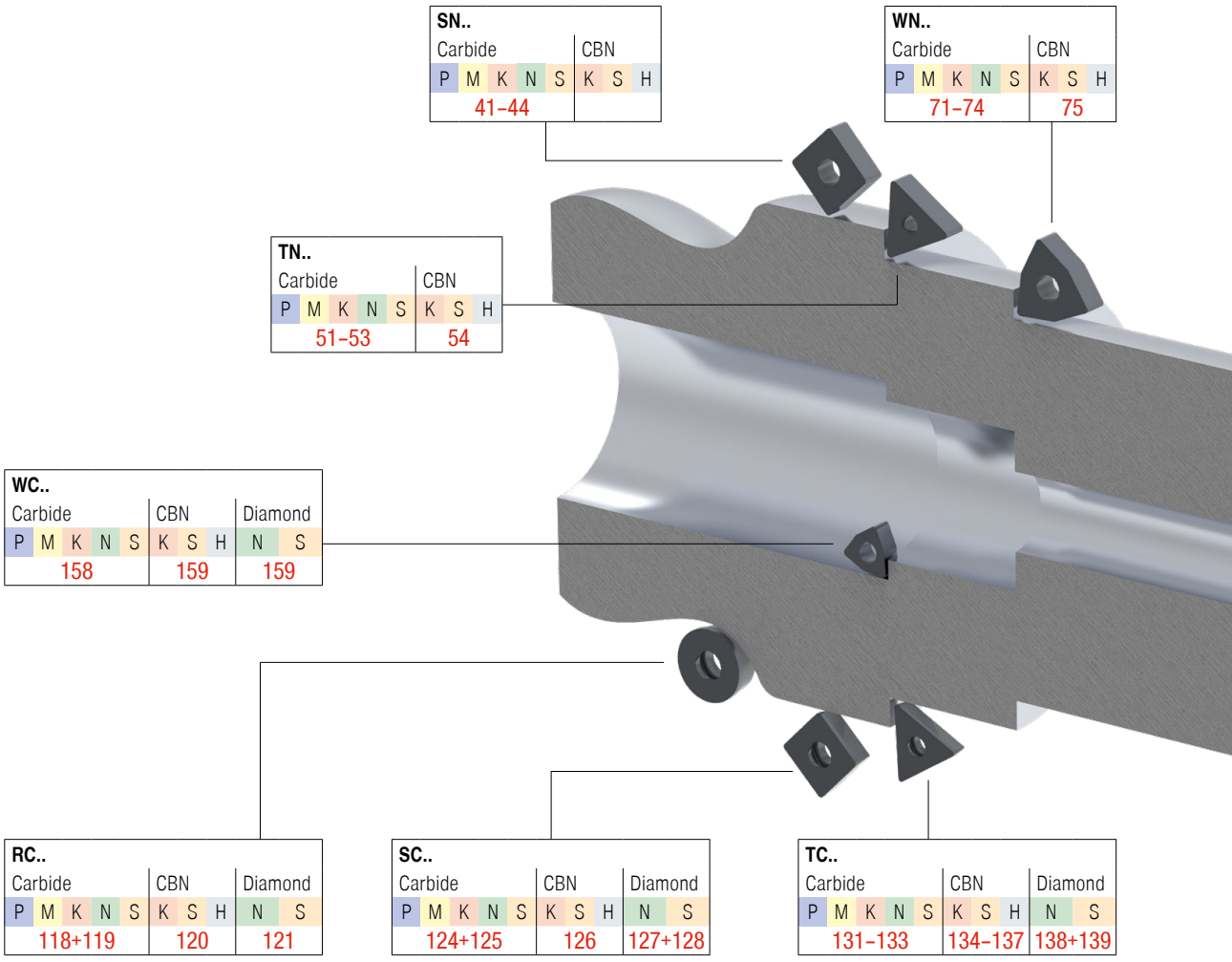
The premium quality tools from the **CERATIZIT Performance** product line have been designed for specific applications and are distinguished by their outstanding performance. If you make high demands on the performance of your production and want to achieve the very best results, we recommend the Premium tools in this product line.

CERATIZIT \ Standard

Quality tools for standard applications.

The quality tools of the **CERATIZIT Standard** product line are high quality, powerful and reliable and enjoy the highest trust of our customers worldwide. Tools from this product line are the first choice for many standard applications and guarantee optimal results.

Toolfinder – Application



Coding of the chip breakers

All new chip breakers are coded according to the following key:

-M50

Inserts – Basic Type	Application range	Material		Chip breaker width
	F = Fine	1 = Steel	5 = Heat Resistant alloys	1 = Narrow
0 | N = Negative Inserts	M = Medium	2 = Stainless steel	6 = Hard	
5 | P = Positive Inserts	R = Rough	3 = Cast Iron	7 = Universal	
		4 = Non Ferrous Metals		9 = Wide

Detailed information on the chip breakers can be found in the technical appendix → **pages 184–191**.

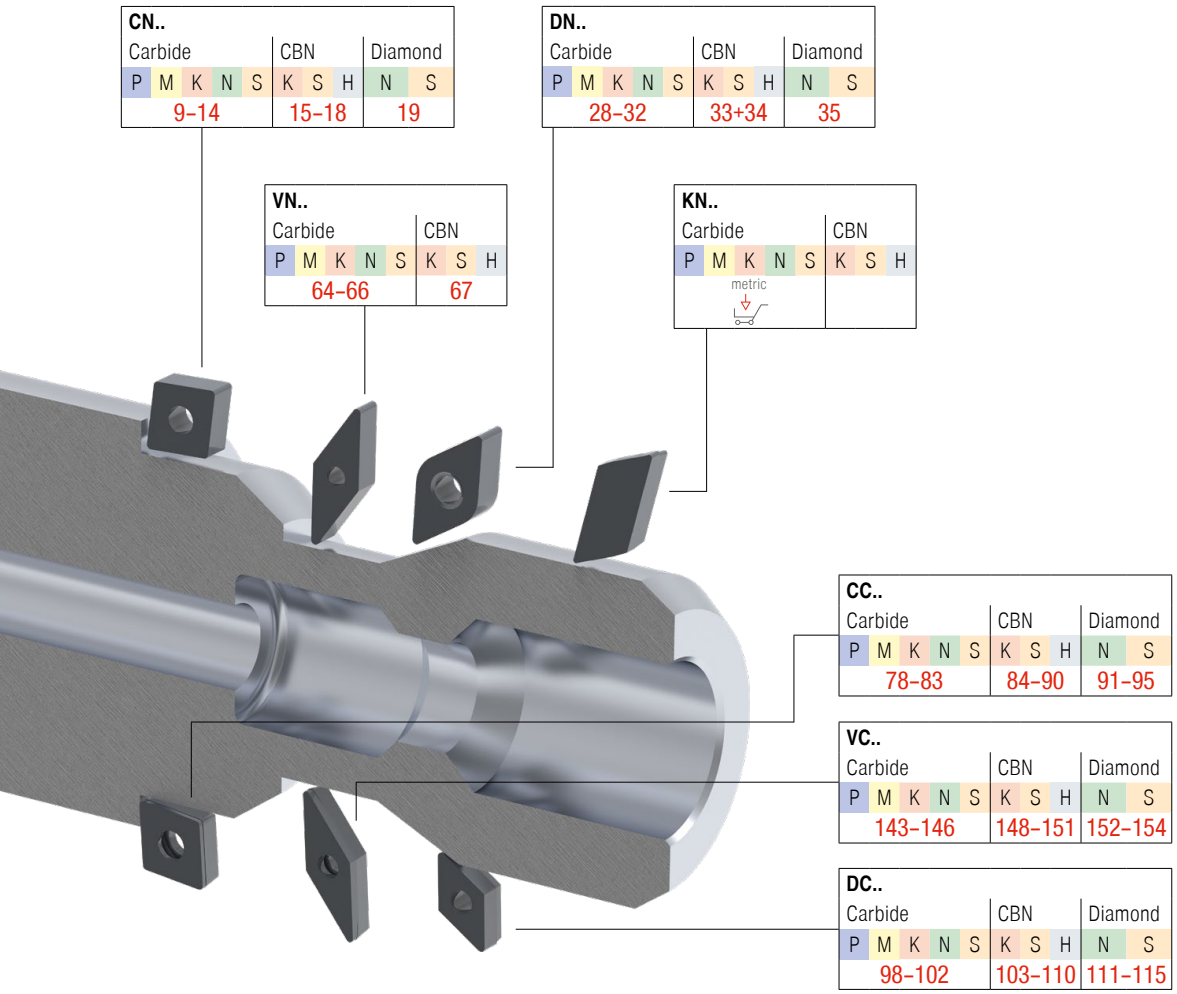
Symbol explanation

CTCP125 *Carbide Grade*

F	Fine Machining
M	Medium Machining
R	Rough Machining

	Smooth cut
	Irregular cutting depth
	Interrupted cut

A detailed overview of grades can be found in the technical appendix on → **page 202**.



metric Additional metric items are available in our Online-Shop at cuttingtools.ceratizit.com and in the metric main catalog

Toolfinder – negative inserts

					Steel	Stainless steel	Cast iron	Non-ferrous metals	Heat-resistant	Tempered steel	Non-metal materials	Geometry						
					P	M	K	N	S	H	O	CN..	DN..	KN..	SN..	TN..	VN..	WN..
Main application: **Steel and cast iron**	Sharp ↕ stable	Fine	-CF / -CF20		●	○	○					9	28			51		71
			-F40		●		○										64	
			-F50		●		○					9	28		41	51	64	71
			-TFQ		●	○	○					9+10	28+29					71
		Medium	-XU		●		○					10	29				64	72
			-FMS		●		○					14	32				66	74
			-M40		●		○										64	
			-M50		●	○	○					10	29+30		41	51	64	72
			-TMQ		●		○					10	30					72
			-MRS		●	○						14	32					74
			-M70 | -11, -12		●	○	○					10+11	30	metric	41+42	52		72
		Rough	.NMA		●	○						11	30		42+43	52		73
			-R28		●	○	○					11	30		43	52		
			-R58		●	○	○					11+12	30+31		43	52+53		
			-R88		●	○	○					12			44			
Main application: **Stainless**	Sharp ↕ stable	Fine	-F30		○	●			○			13	31		44	53	64	73
		Medium	-M30		○	●			○			13	31		44	53	64+65	73
			-M42		○	●			●			metric	metric		metric	metric		metric
			-M60		○	●			○			13	31		44	53		73
Main application: **Heat-resistant**	Sharp ↕ stable	Fine	-F32			●		○	●			metric	metric				metric	
		Medium	-M34		●	●		○	●			13	31		44	53	65	73
			-M42		○	●		○	●			metric	metric			metric		metric
			-M52			●		○	●			metric	metric		metric	metric		metric

metric Additional metric items are available in our Online-Shop at cuttingtools.ceratizit.com and in the metric main catalog.

Toolfinder – negative inserts

				Steel P	Stainless steel M	Cast iron K	Non-ferrous metals N	Heat-resistant S	Tempered steel H	Non-metal materials O	Geometry CN..	DN..	KN..	SN..	TN..	VN..	WN..
Main application: **Cast iron, sintered steels, heat resistant, hardened**	Fine	CTBS05U				●											75
		CTBS10U				●		●			15+16						
		CTBS10C				●		●			15+16						
		CTBS20U				●		●			15+16	33					
		CTBS20C				●		●			15+16	33					75
		CTBH15U							●								
		CTBH15C							●		17	33					
		CTBH20U							●		17	33			54		
		CTBH20C	48–62 HRC						●		17	34			54	67	75
		CTBH21U	52–65 HRC						●								
	Rough	CTBH40U	54–65 HRC						●		18	34			54	67	
		CTBH40C	48–65 HRC						●		18	34			54	67	75
		CTBH41U	48–65 HRC						●		18						
	Diamond	CTD PD20					●			●	19	35					
		CTD PS30					●			●	19						

With the PCBN grades CTB S10 and CTB S20, sintered steels can also be machined. You can find the cutting data on → **page 164–166**.

4

Toolfinder – positive inserts

				Steel P	Stainless steel M	Cast iron K	Non-ferrous metals N	Heat-resistant S	Tempered steel H	Non-metal materials O	Geometry CC..	DC..	RC..	SC..	SP..	TC..	TP..	VC..	WC..
Main application: **Steel and cast iron**	Sharp – stable	Fine	-CF05	●	○	○					78	98		124		131		143	
			-SF	●	○	○					78+79	98		124		131		143	158
		Medium	-CF55	●	○	○					78	98		124		131		143	
			-SMF	●	○	○					78+79	98	118	124		131+132		143+144	
			-FMS	●	○						82	102						146	
			-SM	●	○	●					79	98+99	118	124		132		144	
			-SMQ	●		○					79+80	99							
			-MRS	●	○						82	102						146	
			EN, EL, ER	●	○	●								124	metric		metric		
Main application: **Stainless**	Sharp – stable	Fine	-F43	○	●			●			metric	metric				metric			
			-M81	○	●			○			metric	metric						metric	
		Medium	-M25	○	●			●			80	99				132		144	
			-M55	○	●			●			80	99		125		132		144	
Main application: **Non-ferrous metals**	Sharp – stable	Fine	-23P			○	●			○	80	100							
		Medium	-25P	●	●	○	●	●		○	80	100		125				145	
			-25Q	●	●	○	●	●		○	80	100						145	
			-27	●	●	○	●	●		○	80+81	100+101	119	125		133		145	
			-29			○	●			○	81	101						145	
Main application: **Heat-resistant**	Sharp	Fine	-F05	●	●		●	●				101						145	
	stable		-F23		●	○	○	●			metric	metric						metric	

metric Additional metric items are available in our Online-Shop at cuttingtools.ceratizit.com and in the metric main catalog.

Toolfinder – positive inserts

Main application				Steel P	Stainless steel M	Cast iron K	Non-ferrous metals N	Heat-resistant S	Tempered steel H	Non-metal materials O	Geometry CC..	DC..	RC..	SC..	SP..	TC..	TP..	VC..	WC..
Cast iron, sintered steels, heat resistant, hardened	Fine	CTBS10U				●		●			84	103	120	126		134+135		148+149	159
		CTBS10C				●		●				104+105							
		CTBS20U				●		●			85+86	104+105				134+135		148+149	
		CTBS20C				●		●			85+86	104+105				134+135		148+149	
		CTBH15U	< 32 HRC						●		87	104–106				134+135		148+149	159
		CTBH15C	< 32 HRC						●		87	106				136+137		148+149	
		CTBH21U	52–65 HRC						●		88	106–108						150	
		CTBH21C	52–65 HRC						●			107+108							
		CTBH20U							●		88	107+108				134+135		150	159
		CTBH20C	48–62 HRC						●		85–89	106–108				136+137		150	
	Rough	CTBH40U	54–65 HRC						●		89	107–110				136+137		151	159
		CTBH40C	48–65 HRC						●		90	109+110				136+137		151	
		CTBH41U	48–65 HRC						●									151	
		CTBH41C	48–65 HRC						●			109+110							
	Diamond	CTD PD20					●			●	91+92	111+113	121	127		138		152+153	159
		CTD PS30					●			●	93+94	112–114	121	127+128		138+139		153	
		CTD PU20					●			●	94	112–115		128		139		153+154	
		CTD CD10					●			●	95	115				139		154	
		CTD MD05					●			●	91	111						152	

With the PCBN grades CTB S10 and CTB S20, sintered steels can also be machined. You can find the cutting data on → **page 164–166**.

4

Toolfinder – holders

Toolholders and boring bars for negative inserts

Geometry	Tool holder	Boring bars	Metric Tool holders and boring bars	HSK-T	PSC	Exchangeable head system	
						Exchangeable cutting heads	Basic holder
CN..	20–25	26+27	metric	metric	metric	metric	metric
DN..	36–38	39+40	metric	metric	metric	metric	metric
SN..	45–50	50	metric	metric			
TN..	55–61	62+63	metric				
VN..	68+69	70		metric	metric		
WN..	76	77	metric	metric	metric	metric	metric

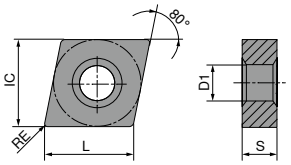
Toolholders and boring bars for positive inserts

Geometry	Tool holder	Boring bars	Metric Tool holders and boring bars	HSK-T	PSC	Exchangeable head system	
						Exchangeable cutting heads	Basic holder
CC..	96	97	metric	metric	metric	metric	metric
DC..	116	117	metric	metric	metric	metric	metric
RC..	122+123			metric			
SC..	129	130	metric				
TC..	140+141	142	metric				
VC..	155+156	157	metric	metric	metric		
WC..		metric	metric				

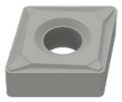
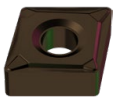
metric Additional metric items are available in our Online-Shop at cuttingtools.ceratizit.com and in the metric main catalog.

CNMG / CNMA / CNMM

Designation	L inch	S inch	D1 inch	IC inch
CNMG 32..	0.382	0.125	0.150	0.375
CNM. 43..	0.508	0.187	0.203	0.500
CNM. 54..	0.634	0.250	0.250	0.625
CNM. 64..	0.760	0.250	0.313	0.750
CNMM 86..	1.016	0.375	0.359	1.000

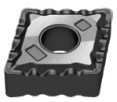
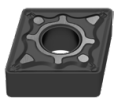
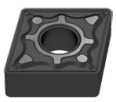
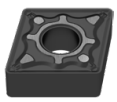
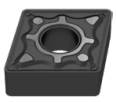


CNMG

	-CF TCM10	-CF20 CTEP110	-TFQ CTEP110	-F50 CTCP115	-F50 CTCP125	-F50 CTCP135	-TFQ CTCP115
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
	F	F	F	F	F	F	F
	CERMET CNMG	CERMET CNMG	CERMET CNMG	CNMG	CNMG	CNMG	CNMG
	70 101 ...	76 101 ...	76 110 ...	76 132 ...	76 132 ...	76 132 ...	76 110 ...
ANSI / RE inch							
321EN 0.016				316	516	716	
322EN 0.031				318	518	718	
431EN 0.016	904	028	028	328	528	728	328
432EN 0.031	908	030	030	330	530	730	330
433EN 0.047			032	332	532	732	320
P	●	●	●	●	●	●	●
M	o	o	o			o	
K	o	o	o	o	o		o
N							
S							
H							
O							

4

CNMG

		-TFQ CTCP125	-XU CTCP115	-XU CTCP125	-M50 CTCK110	-M50 CTCK120	-M50 CTCP115	-M50 CTCP125
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
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		76 110 ...	76 290 ...	76 290 ...	70 132 ...	70 132 ...	76 135 ...	76 135 ...
ANSI	RE inch							
431EN	0.016	528	328	528	028		328	528
432EN	0.031	530	330	530	030	530	330	530
433EN	0.047	532	332	532	032	532	320	532
434EN	0.063						334	534
542EN	0.031						342	542
543EN	0.047						344	544
544EN	0.063						346	546
P		●	●	●	○	○	●	●
M								
K		○	○	○	●	●	○	○
N								
S								
H								
O								

CNMG

		-M50 CTCP135	-TMQ CTCP115	-TMQ CTCP125	-M70 CTCK110	-M70 CTCK120	-M70 CTCP115	-M70 CTCP125
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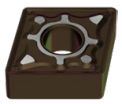
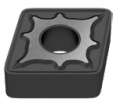
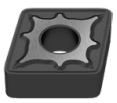
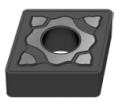
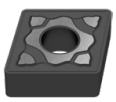
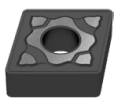
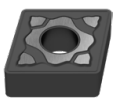
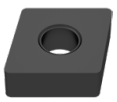
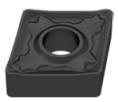
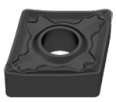
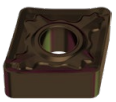
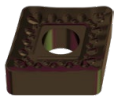
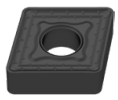
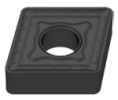
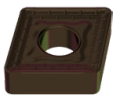
								
		M CNMG	M CNMG	M CNMG	M CNMG	M CNMG	M CNMG	M CNMG
		76 135 ...	76 196 ...	76 196 ...	70 119 ...	70 119 ...	76 119 ...	76 119 ...
ANSI	RE inch							
431EN	0.016	728						
432EN	0.031	730	33000	530	030	530	330	530
433EN	0.047	732	320	532	032	532	320	532
434EN	0.063	734			034	534	334	534
542EN	0.031	742			042	542	342	542
543EN	0.047	744			044	544	344	544
544EN	0.063	746			046	546	346	546
546EN	0.094						348	548
642EN	0.031						354	554
643EN	0.047				056	556	356	556
644EN	0.063				058	558	358	558
646EN	0.094						360	560
P		●	●	●	○	○	●	●
M		○						
K			○	○	●	●	○	○
N								
S								
H								
O								

CNMG / CNMA / CNMM

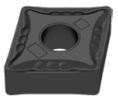
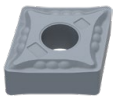
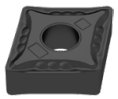
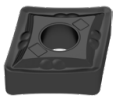
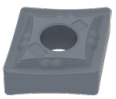
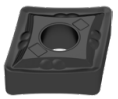
		-M70 CTCP135	CTCK110	CTCK120	-R28 CTCP115	-R28 CTCP125	-R28 CTCP135	-R58 CTCP115
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		M	R	R	R	R	R	R
		CNMG	CNMA	CNMA	CNMM	CNMM	CNMM	CNMM
		76 119 ...	70 100 ...	70 100 ...	76 114 ...	76 114 ...	76 114 ...	76 115 ...
ANSI	RE inch							
431EN	0.016		028	528				
432EN	0.031	730	030	530	330	530		330
433EN	0.047	732	032	532	332	532	732	332
434EN	0.063	734	034	534	334	534	734	334
542EN	0.031	742	042	542				
543EN	0.047	744	044	544	344	544	744	344
544EN	0.063	746	046	546	346	546	746	346
546EN	0.094	748						348
642EN	0.031	754						
643EN	0.047	756	056	556	356	556	756	356
644EN	0.063	758	058	558	358	558	758	358
646EN	0.094	760			360	560	760	360
866EN	0.094				38400	58400	78400	384
P		●	○	○	●	●	●	●
M		○					○	
K			●	●	○	○		○
N								
S								
H								
O								

4

CNMM

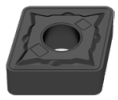
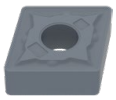
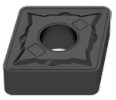
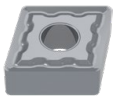
		-R58 CTCP125	-R58 CTCP135	-R88 CTCP115	-R88 CTCP125	-R88 CTCP135
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
		R	R	R	R	R
		CNMM	CNMM	CNMM	CNMM	CNMM
		76 115 ...	76 115 ...	76 133 ...	76 133 ...	76 133 ...
ANSI	RE inch					
432EN	0.031	530	730			
433EN	0.047	532	732			
434EN	0.063	534	734			
543EN	0.047	544	744			
544EN	0.063	546	746			
546EN	0.094	548	748			
546SN	0.094			348	548	748
643EN	0.047	556	756			
644EN	0.063	558	758			
644SN	0.063			358	558	758
646EN	0.094	524	760			
646SN	0.094			360	560	760
866EN	0.094	584	784			
866SN	0.094			384	584	784
P		●	●	●	●	●
M			o			o
K		o		o	o	
N						
S						
H						
O						

CNMG

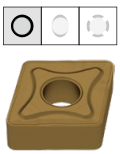
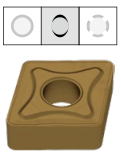
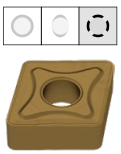
		NEW		NEW	NEW		NEW
		-F30 CTCM120	-F30 CTPM125	-F30 CTCM130	-M30 CTCM120	-M30 CTPM125	-M30 CTCM130
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
		F	F	F	M	M	M
		CNMG	CNMG	CNMG	CNMG	CNMG	CNMG
		75 010 ...	75 010 ...	75 010 ...	75 011 ...	75 011 ...	75 011 ...
ANSI	RE inch						
431EN	0.016	12800	280	32800			
432EN	0.031	13000	230	33000	13000	230	33000
433EN	0.047				13200	232	33200
434EN	0.063				13400	234	33400
P		○	○	○	○	○	○
M		●	●	●	●	●	●
K							
N							
S				○			○
H							
O							

4

CNMG

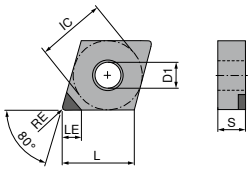
		NEW			NEW	NEW
		-M60 CTCM120	-M60 CTPM125	-M60 CTCM130	-M34 CTPX710	
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	
						
		M	M	M	M	
		CNMG	CNMG	CNMG	CNMG	
		75 012 ...	75 012 ...	75 012 ...	75 003 ...	
ANSI	RE inch					
431EN	0.016				62800	
432EN	0.031	13000	230	33000	63000	
433EN	0.047	13200	232	33200	63200	
434EN	0.063	13400	234	33400	63400	
P		○	○	○	●	
M		●	●	●	●	
K						
N					○	
S				○	●	
H						
O						

CNMG

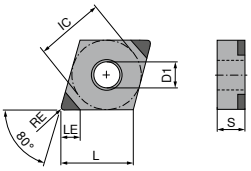
		NEW	NEW	NEW	NEW	NEW
		-FMS CT-P15	-FMS CT-P25	-MRS CT-P15	-MRS CT-P25	-MRS CT-P35
						
		F CNMG	F CNMG	M CNMG	M CNMG	M CNMG
		75 302 ...	75 302 ...	75 303 ...	75 303 ...	75 303 ...
ANSI	RE inch					
431EN	0.016	02809	12809			
432EN	0.031	03009	13009	03009	13009	23009
433EN	0.047	03209	13209	03209	13209	23209
434EN	0.063			03409	13409	23409
543EN	0.047			04409	14409	24409
544EN	0.063			04609	14609	24609
643EN	0.047			05609	15609	25609
644EN	0.063			05809	15809	25809
P		●	●	●	●	●
M		○	○	○	○	○
K						
N						
S						
H						
O						

CNGA

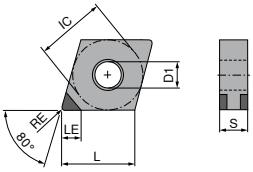
Designation	L inch	S inch	D1 inch	IC inch
CNGA 43..	0.508	0.187	0.202	0.500



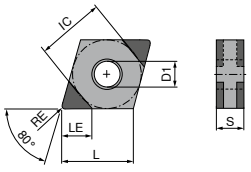
CNGA A



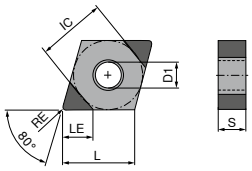
CNGA B



CNGA K



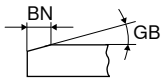
CNGA L

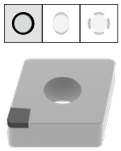
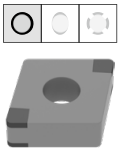
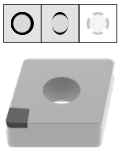
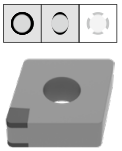
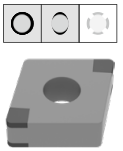


CNGA U

CNGA

▲ TCE(NOI) = Design and number of equipped cutting edge corners



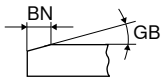
	NEW	NEW	NEW		
	CTBS10U	CTBS10C	CTBS20U	CTBS20C	CTBS20C
					
	F	F	F	F	F
	CBN CNGA	CBN CNGA	CBN CNGA	CBN CNGA	CBN CNGA
	71 406 ...	71 408 ...	71 406 ...	71 400 ...	71 401 ...

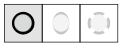
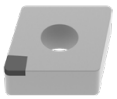
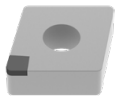
ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch									
43.5FN	0.008			A (1)	0.134	10000								
43.5TN	0.008	0.005	20°	A (1)	0.134	10100								
431SN	0.016	0.004	10°	L (4)	0.110									122
431TN	0.016	0.004	15°	A (1)	0.122					20000				
431SN	0.016	0.004	15°	L (4)	0.110									132
431TN	0.016	0.004	15°	L (4)	0.110			80000						
431SN	0.016	0.004	15°	K (2)	0.110							142		
431SN	0.016	0.004	15°	L (4)	0.110									16200
431SN	0.016	0.004	20°	L (4)	0.110									152
431TN	0.016	0.005	20°	A (1)	0.122	10300								
431SN	0.016	0.006	20°	K (2)	0.110							162		
431SN	0.016	0.006	20°	L (4)	0.110									17100
431FN	0.016			A (1)	0.122	10200								
431TN	0.016	0.006	25°	L (4)	0.110			80100						
431SN	0.016	0.007	30°	K (2)	0.110							182		
431SN	0.016	0.007	30°	L (4)	0.110									182
432TN	0.031	0.004	10°	L (4)	0.098			80200						
432SN	0.031	0.004	10°	L (4)	0.098									124
432TN	0.031	0.004	15°	L (4)	0.098			80300						
432SN	0.031	0.004	15°	L (4)	0.098									134
432SN	0.031	0.004	15°	K (2)	0.098							144		

P					
M					
K	●	●	●	●	●
N					
S	●	●	●	●	●
H					
O					

CNGA

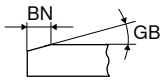
▲ TCE(NOI) = Design and number of equipped cutting edge corners

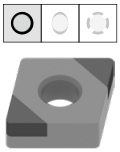
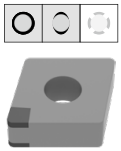
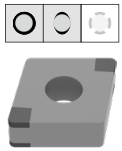
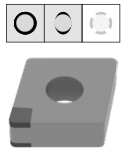


						NEW	NEW	NEW		
						CTBS10U	CTBS10C	CTBS20U	CTBS20C	CTBS20C
										
										
						F	F	F	F	F
						CBN CNGA	CBN CNGA	CBN CNGA	CBN CNGA	CBN CNGA
						71 406 ...	71 408 ...	71 406 ...	71 400 ...	71 401 ...
ANSI	RE inch	BN inch	GB	**TCE (NOI)**	LE inch					
432SN	0.031	0.004	15°	**L (4)**	0.098					**16300**
432SN	0.031	0.004	20°	**L (4)**	0.098					**154**
432TN	0.031	0.004	20°	**L (4)**	0.098		**80400**			
432TN	0.031	0.005	20°	**A (1)**	0.110	**10500**				
432SN	0.031	0.006	20°	**K (2)**	0.098				**164**	
432SN	0.031	0.006	20°	**L (4)**	0.098					**17200**
432FN	0.031			**A (1)**	0.110	**10400**				
432TN	0.031	0.006	25°	**L (4)**	0.098		**80500**			
432SN	0.031	0.006	25°	**L (4)**	0.098					**18000**
432SN	0.031	0.007	30°	**L (4)**	0.098					**184**
432SN	0.031	0.007	30°	**K (2)**	0.098				**184**	
433SN	0.047	0.004	10°	**L (4)**	0.087					**126**
433SN	0.047	0.004	15°	**L (4)**	0.087					**136**
433TN	0.047	0.004	15°	**L (4)**	0.087		**80600**			
433SN	0.047	0.004	15°	**K (2)**	0.087				**146**	
433SN	0.047	0.004	15°	**L (4)**	0.087					**16400**
433FN	0.047			**A (1)**	0.098	**10600**		**20100**		
433SN	0.047	0.004	20°	**L (4)**	0.087					**156**
433TN	0.047	0.005	20°	**A (1)**	0.098	**10700**				
433SN	0.047	0.006	20°	**K (2)**	0.087				**166**	
433SN	0.047	0.006	20°	**L (4)**	0.087					**17300**
433TN	0.047	0.006	25°	**L (4)**	0.087		**80700**			
433SN	0.047	0.007	30°	**K (2)**	0.087				**186**	
433SN	0.047	0.007	30°	**L (4)**	0.087					**186**
P										
M										
K						●	●	●	●	●
N										
S						●	●	●	●	●
H										
O										

CNGA

▲ TCE(NOI) = Design and number of equipped cutting edge corners

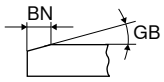


									NEW							NEW							
						CTBH15C		CTBH15C		CTBH20U		CTBH20C		CTBH20C		-Q CTBH20C							
																							
						F		F		F		F		F		F							
						CBN CNGA		CBN CNGA		CBN CNGA		CBN CNGA		CBN CNGA		CBN CNGA							
						71 003 ...		71 005 ...		71 406 ...		71 400 ...		71 401 ...		71 407 ...							
ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch																		
43.5FN	0.008			A (1)	0.134						40000												
43.5TN	0.008	0.005	20°	A (1)	0.134						40100												
431TN	0.016	0.004	15°	K (2)	0.110								222										
431TN	0.016	0.004	15°	L (4)	0.110										21200								
431SN	0.016	0.004	15°	B (2)	0.118		32814																
431SN	0.016	0.004	20°	K (2)	0.110								25800										
431SN	0.016	0.004	20°	L (4)	0.110										242								
431TN	0.016	0.005	20°	A (1)	0.122						40300												
431TN	0.016	0.004	25°	K (2)	0.110								252										
431FN	0.016			L (4)	0.110										20200								
431TN	0.016	0.004	25°	L (4)	0.110										25200								
431FN	0.016			K (2)	0.110								212										
431FN	0.016			A (1)	0.122						40200												
431RN	0.016			B (2)	0.118		22800																
431SN	0.016	0.005	25°	L (4)	0.110										262								
431SN	0.016	0.006	25°	B (2)	0.118		32829																
432TN	0.031	0.004	15°	K (2)	0.098								224										
432SN	0.031	0.004	15°	B (2)	0.106		33014																
432TN	0.031	0.004	20°	K (2)	0.098								234										
432FN	0.031			K (2)	0.098																		30000
432FN	0.031			L (4)	0.098										20300								
432FN	0.031			A (1)	0.110						40400												
432RN	0.031			B (2)	0.106		23000																
432SN	0.031	0.004	20°	K (2)	0.098								26000										
432SN	0.031	0.004	20°	L (4)	0.098										244								
432TN	0.031	0.005	20°	A (1)	0.110						40500												
432TN	0.031	0.004	25°	K (2)	0.098								254										
432TN	0.031	0.004	25°	L (4)	0.098										25300								
432SN	0.031	0.005	25°	L (4)	0.098										264								
432SN	0.031	0.006	25°	B (2)	0.106		33029																
432SN	0.031	0.006	30°	L (4)	0.098										274								
433TN	0.047	0.004	15°	K (2)	0.087								226										
433FN	0.047			K (2)	0.087								216										
433RN	0.047			B (2)	0.094				23200														
433SN	0.047	0.004	15°	B (2)	0.094				33214														
433SN	0.047	0.004	20°	K (2)	0.087								26200										
433SN	0.047	0.004	20°	L (4)	0.087										246								
433TN	0.047	0.004	25°	K (2)	0.087								256										
433TN	0.047	0.004	25°	L (4)	0.087										25400								
433SN	0.047	0.005	25°	L (4)	0.087										266								
433SN	0.047	0.006	25°	B (2)	0.094				33229														
P																							
M																							
K																							
N																							
S																							
H							●		●		●		●		●		●						
O																							

4

CNGA

▲ TCE(NOI) = Design and number of equipped cutting edge corners

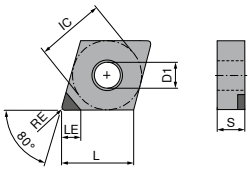


						NEW			NEW	NEW
						CTBH40U	CTBH40C	CTBH40C	-Q CTBH40C	CTBH41U
						F	F	F	F	F
						CBN CNGA	CBN CNGA	CBN CNGA	CBN CNGA	CBN CNGA
						71 406 ...	71 400 ...	71 401 ...	71 407 ...	71 409 ...
ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch					
43.5FN	0.008			A (1)	0.134	50000				
43.5TN	0.008	0.005	25°	A (1)	0.134	50100				
431SN	0.016	0.004	20°	L (4)	0.110			332		
431SN	0.016	0.004	20°	L (4)	0.110			34200		
431SN	0.016	0.004	25°	K (2)	0.110		352			
431SN	0.016	0.004	25°	L (4)	0.110			352		
431FN	0.016			A (1)	0.122	50200				
431TN	0.016	0.005	25°	A (1)	0.122	50300				
431TN	0.016	0.003	30°	U (2)	0.110					70000
431SN	0.016	0.006	30°	L (4)	0.110			372		
431SN	0.016	0.006	35°	L (4)	0.110			38000		
431SN	0.016	0.006	35°	K (2)	0.110		382			
432SN	0.031	0.004	15°	L (4)	0.098			31200		
432EN	0.031			L (4)	0.098			30200		
432EN	0.031			K (2)	0.098		314			
432FN	0.031			A (1)	0.110	50400				
432SN	0.031	0.004	20°	L (4)	0.098			334		
432SN	0.031	0.004	20°	L (4)	0.098			34300		
432SN	0.031	0.004	20°	K (2)	0.098		35800			
432SN	0.031	0.004	25°	K (2)	0.098		354			
432SN	0.031	0.004	25°	L (4)	0.098			354		
432TN	0.031	0.005	25°	A (1)	0.110	50500				
432SN	0.031	0.005	25°	K (2)	0.098		36200			
432SN	0.031	0.005	25°	L (4)	0.098			364		
432TN	0.031	0.003	30°	U (2)	0.102					70100
432SN	0.031	0.006	30°	L (4)	0.098			374		
432SN	0.031	0.006	30°	K (2)	0.098		38800		60000	
432SN	0.031	0.006	35°	L (4)	0.098			38100		
432SN	0.031	0.006	35°	K (2)	0.098		384		60100	
433SN	0.047	0.004	20°	L (4)	0.087			336		
433SN	0.047	0.004	25°	K (2)	0.087		356			
433SN	0.047	0.004	25°	L (4)	0.087			356		
433TN	0.047	0.005	25°	A (1)	0.098	50700				
433SN	0.047	0.005	25°	L (4)	0.087			366		
433TN	0.047	0.003	30°	U (2)	0.094					70200
433SN	0.047	0.006	30°	L (4)	0.087			376		
433FN	0.047			A (1)	0.098	50600				
433SN	0.047	0.006	35°	K (2)	0.087		386			
P										
M										
K										
N										
S										
H						●	●	●	●	●
O										

For fast and efficient determination of the most appropriate edge preparation CNGA test inserts are available. → **Page 182**

CNGA

Designation	L inch	S inch	D1 inch	IC inch
CNGA 43..	0.508	0.187	0.202	0.500



CNGA A

CNGA

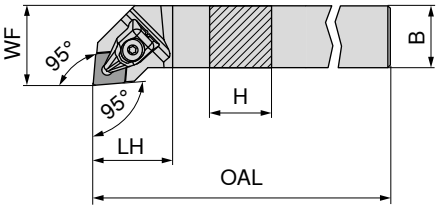
▲ TCE(NOI) = Design and number of equipped cutting edge corners

ANSI	RE inch	TCE (NOI)	LE inch	NEW CTDPD20 F DIAMOND CNGA 71 127 ...	NEW CTDPS30 F DIAMOND CNGA 71 127 ...
431FN	0.016	**A (1)**	0.248	**10001**	**20001**
432FN	0.031	**A (1)**	0.236	**10101**	**20101**
433FN	0.047	**A (1)**	0.224	**10201**	**20201**
P					
M					
K					
N				●	●
S					
H					
O				●	●

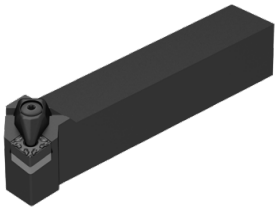
4

MaxiLock-D – DCLN 95° – Toolholder with top clamping

▲ A... = with thru coolant



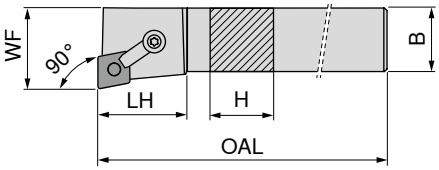
Illustrations show right-hand versions

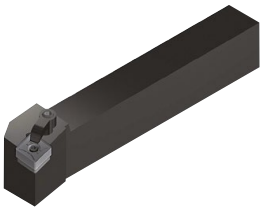


Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 501 ...	Right-hand 78 500 ...
DCLN R/L 12-4B-N	0.750	0.750	4.500	1.250	1.000	CN..43..	01293	01293
DCLN R/L 16-4D-N	1.000	1.000	6.000	1.250	1.250	CN..43..	01689	01689
DCLN R/L 16-4DA-N	1.000	1.000	6.000	1.250	1.250	CN..43..	01690	01690
DCLN R/L 20-4D-N	1.250	1.250	6.000	1.250	1.500	CN..43..	02089	02089
DCLN R/L 20-4DA-N	1.250	1.250	6.000	1.250	1.500	CN..43..	02090	02090
DCLN L 20-5DA-N	1.250	1.250	6.000	1.380	1.500	CN..54..	02085	02085
DCLN R/L 20-5D-N	1.250	1.250	6.000	1.380	1.500	CN..54..	02084	02084
DCLN R/L 24-5E-N	1.500	1.500	7.000	1.380	2.000	CN..54..	02482	02482
DCLN R/L 24-5EA-N	1.500	1.500	7.000	1.380	2.000	CN..54..	02483	02483
DCLN L 20-6D-N	1.250	1.250	6.000	1.650	1.500	CN..64..	02080	02080
DCLN R/L 20-6DA-N	1.250	1.250	6.000	1.650	1.500	CN..64..	02081	02081
DCLN R/L 24-6EA-N	1.500	1.500	7.000	1.650	2.000	CN..64..	02478	02478
DCLN R/L 24-6E-N	1.500	1.500	7.000	1.650	2.000	CN..64..	02477	02477

Spare parts for Article no.	 Clamping claw 78 950 ...	 Key I 78 950 ...	 Clamping screw 78 950 ...	 Carbide type C 78 950 ...	 Threaded bush 78 950 ...	 Spring 78 950 ...
78 500 01293 / 78 501 01293	07600	08100	08300	08800	08500	04900
78 500 01689 / 78 501 01689	07600	08100	08300	08800	08500	04900
78 500 01690 / 78 501 01690	07600	08100	08300	08800	08500	04900
78 500 02089 / 78 501 02089	07600	08100	08300	08800	08500	04900
78 500 02090 / 78 501 02090	07600	08100	08300	08800	08500	04900
78 500 02085 / 78 501 02085	07700	08100	08300	04100	08600	04900
78 500 02084 / 78 501 02084	07700	08100	08300	04100	08600	04900
78 500 02482 / 78 501 02482	07700	08100	08300	04100	08600	04900
78 500 02483 / 78 501 02483	07700	08100	08300	04100	08600	04900
78 500 02080 / 78 501 02080	07800	08100	08300	00900	08700	04900
78 500 02081 / 78 501 02081	07800	08100	08300	00900	08700	04900
78 500 02478 / 78 501 02478	07800	08100	08300	00900	08700	04900
78 500 02477 / 78 501 02477	07800	08100	08300	00900	08700	04900

MaxiLock-M – MCFN 90° – Toolholder with top clamping



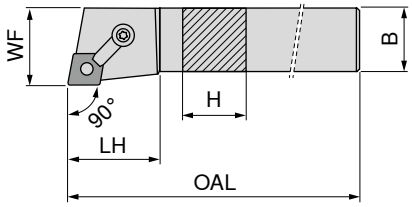


Illustrations show right-hand versions

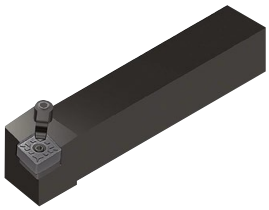
Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 517 ...	Right-hand 78 516 ...
MCFN R/L 12-4B	0.750	0.750	4.500	1.120	1.000	CN..43..	**01224**	**01224**
MCFN R/L 16-4D	1.000	1.000	6.000	1.120	1.250	CN..43..	**01644**	**01644**
MCFN R/L 20-4D	1.250	1.250	6.000	1.120	1.500	CN..43..	**02044**	**02044**
MCFN R/L 85-4D	1.250	1.000	6.000	1.120	1.250	CN..43..	**08544**	**08544**
MCFN R/L 16-5D	1.000	1.000	6.000	1.250	1.250	CN..54..	**01645**	**01645**
MCFN R/L 20-5D	1.250	1.250	6.000	1.250	1.500	CN..54..	**02045**	**02045**
MCFN R/L 24-5D	1.500	1.500	6.000	1.250	2.000	CN..54..	**02445**	**02445**
MCFN R/L 16-6D	1.000	1.000	6.000	1.310	1.250	CN..64..	**01646**	**01646**
MCFN R/L 20-6D	1.250	1.250	6.000	1.310	1.500	CN..64..	**02046**	**02046**
MCFN R/L 24-6D	1.500	1.500	6.000	1.250	2.000	CN..64..	**02446**	**02446**

Spare parts for Article no.	 Clamp 78 950 ...	 Key I 78 950 ...	 Dowel pin 78 950 ...	 Clamping screw 78 950 ...	 Carbide type C 78 950 ...
78 516 01224 / 78 517 01224	**00400**	**06900**	**03100**	**03800**	**00800**
78 516 01644 / 78 517 01644	**00400**	**06900**	**03100**	**03800**	**00800**
78 516 02044 / 78 517 02044	**00400**	**06900**	**03100**	**03800**	**00800**
78 516 08544 / 78 517 08544	**00400**	**06900**	**03100**	**03800**	**00800**
78 516 01645 / 78 517 01645	**00300**	**08100**	**03200**	**03900**	**04100**
78 516 02045 / 78 517 02045	**00300**	**08100**	**03200**	**03900**	**04100**
78 516 02445 / 78 517 02445	**00300**	**08100**	**03200**	**03900**	**04100**
78 516 01646 / 78 517 01646	**00300**	**08100**	**03300**	**03900**	**00900**
78 516 02046 / 78 517 02046	**00300**	**08100**	**03300**	**03900**	**00900**
78 516 02446 / 78 517 02446	**00300**	**08100**	**03300**	**03900**	**00900**

MaxiLock-M – MCGN 90° – Toolholder with top clamping



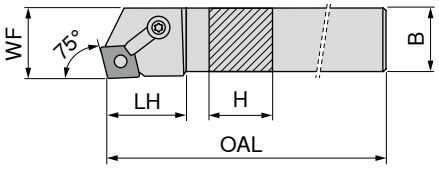
Illustrations show right-hand versions

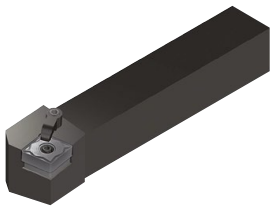


Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 519 ...	Right-hand 78 518 ...
MCGN R/L 12-4B	0.750	0.750	4.500	1.120	1.000	CN..43..	**01224**	**01224**
MCGN R/L 16-4D	1.000	1.000	6.000	1.120	1.250	CN..43..	**01644**	**01644**
MCGN R/L 20-4D	1.250	1.250	6.000	1.120	1.500	CN..43..	**02044**	**02044**
MCGN R/L 24-4D	1.500	1.500	6.000	1.250	2.000	CN..43..	**02444**	**02444**
MCGN R/L 16-5D	1.000	1.000	6.000	1.500	1.250	CN..54..	**01645**	**01645**
MCGN R/L 20-5D	1.250	1.250	6.000	1.500	1.500	CN..54..	**02045**	**02045**
MCGN R/L 24-5D	1.500	1.500	6.000	1.500	2.000	CN..54..	**02445**	**02445**
MCGN R/L 20-6D	1.250	1.250	6.000	1.650	1.500	CN..64..	**02046**	**02046**
MCGN R/L 24-6D	1.500	1.500	6.000	1.650	2.000	CN..64..	**02446**	**02446**

Spare parts for Article no.	 Clamp 78 950 ...	 Key I 78 950 ...	 Dowel pin 78 950 ...	 Clamping screw 78 950 ...	 Carbide type C 78 950 ...
78 518 01224 / 78 519 01224	**00400**	**06900**	**03100**	**03800**	**00800**
78 518 01644 / 78 519 01644	**00400**	**06900**	**03100**	**03800**	**00800**
78 518 02044 / 78 519 02044	**00400**	**06900**	**03100**	**03800**	**00800**
78 518 02444 / 78 519 02444	**00400**	**06900**	**03100**	**03800**	**00800**
78 518 01645 / 78 519 01645	**00300**	**08100**	**03200**	**03900**	**04100**
78 518 02045 / 78 519 02045	**00300**	**08100**	**03200**	**03900**	**04100**
78 518 02445 / 78 519 02445	**00300**	**08100**	**03200**	**03900**	**04100**
78 518 02046 / 78 519 02046	**00300**	**08100**	**03300**	**03900**	**00900**
78 518 02446 / 78 519 02446	**00300**	**08100**	**03300**	**03900**	**00900**

MaxiLock-M – MCKN 75° – Toolholder with top clamping



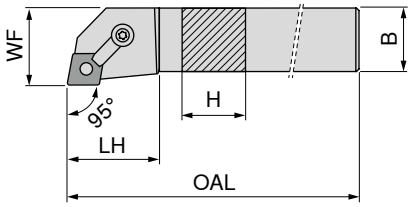


Illustrations show right-hand versions

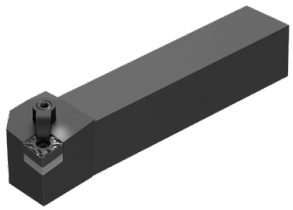
Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 521 ...	Right-hand 78 520 ...
MCKN R/L 12-4B	0.750	0.750	4.500	1.200	1.000	CN..43..	**01224**	**01224**
MCKN R/L 16-4D	1.000	1.000	6.000	1.200	1.250	CN..43..	**01644**	**01644**
MCKN R/L 20-4D	1.250	1.250	6.000	1.200	1.500	CN..43..	**02044**	**02044**
MCKN R/L 16-5D	1.000	1.000	6.000	1.350	1.250	CN..54..	**01645**	**01645**
MCKN R/L 20-5D	1.250	1.250	6.000	1.350	1.500	CN..54..	**02045**	**02045**
MCKN R/L 16-6D	1.000	1.000	6.000	1.470	1.250	CN..64..	**01646**	**01646**
MCKN R/L 20-6D	1.250	1.250	6.000	1.470	1.500	CN..64..	**02046**	**02046**
MCKN R/L 24-6D	1.500	1.500	6.000	1.470	2.000	CN..64..	**02446**	**02446**

Spare parts for Article no.	 Clamp 78 950 ...	 Key I 78 950 ...	 Dowel pin 78 950 ...	 Clamping screw 78 950 ...	 Carbide type C 78 950 ...
78 520 01224 / 78 521 01224	**00400**	**06900**	**03100**	**03800**	**00800**
78 520 01644 / 78 521 01644	**00400**	**06900**	**03100**	**03800**	**00800**
78 520 02044 / 78 521 02044	**00400**	**06900**	**03100**	**03800**	**00800**
78 520 01645 / 78 521 01645	**00300**	**08100**	**03200**	**03900**	**04100**
78 520 02045 / 78 521 02045	**00300**	**08100**	**03200**	**03900**	**04100**
78 520 01646 / 78 521 01646	**00300**	**08100**	**03300**	**03900**	**00900**
78 520 02046 / 78 521 02046	**00300**	**08100**	**03300**	**03900**	**00900**
78 520 02446 / 78 521 02446	**00300**	**08100**	**03300**	**03900**	**00900**

MaxiLock-M – MCLN 95° – Toolholder with top clamping



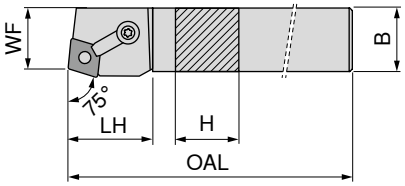
Illustrations show right-hand versions

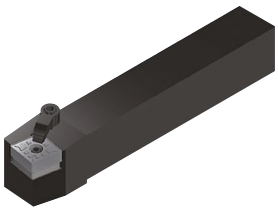


Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 523 ...	Right-hand 78 522 ...
MCLN R/L 12-4B	0.750	0.750	4.500	1.130	1.000	CN..43..	**01224**	**01224**
MCLN R/L 16-4D	1.000	1.000	6.000	1.130	1.250	CN..43..	**01644**	**01644**
MCLN R/L 85-4D	1.250	1.000	6.000	1.130	1.250	CN..43..	**08544**	**08544**
MCLN R/L 20-4D	1.250	1.250	6.000	1.130	1.500	CN..43..	**02044**	**02044**
MCLN R/L 16-5D	1.000	1.000	6.000	1.470	1.250	CN..54..	**01645**	**01645**
MCLN R/L 20-5D	1.250	1.250	6.000	1.470	1.500	CN..54..	**02045**	**02045**
MCLN R/L 24-5D	1.500	1.500	6.000	1.470	2.000	CN..54..	**02445**	**02445**
MCLN R/L 16-6D	1.000	1.000	6.000	1.510	1.250	CN..64..	**01646**	**01646**
MCLN R/L 20-6D	1.250	1.250	6.000	1.510	1.500	CN..64..	**02046**	**02046**
MCLN R/L 85-6D	1.250	1.000	6.000	1.510	1.250	CN..64..	**08546**	**08546**
MCLN R/L 24-6D	1.500	1.500	6.000	1.510	2.000	CN..64..	**02446**	**02446**
MCLN R/L 24-6E	1.500	1.500	7.000	1.500	2.000	CN..64..	**02456**	**02456**
MCLN R/L 86-6E	1.500	1.000	7.000	1.510	1.250	CN..64..	**08656**	**08656**

Spare parts for Article no.	 Clamp 78 950 ...	 Key I 78 950 ...	 Dowel pin 78 950 ...	 Clamping screw 78 950 ...	 Carbide type C 78 950 ...
78 522 01224 / 78 523 01224	**00400**	**06900**	**03100**	**03800**	**00800**
78 522 01644 / 78 523 01644	**00400**	**06900**	**03100**	**03800**	**00800**
78 522 08544 / 78 523 08544	**00400**	**06900**	**03100**	**03800**	**00800**
78 522 02044 / 78 523 02044	**00400**	**06900**	**03100**	**03800**	**00800**
78 522 01645 / 78 523 01645	**00300**	**08100**	**03200**	**03900**	**04100**
78 522 02045 / 78 523 02045	**00300**	**08100**	**03200**	**03900**	**04100**
78 522 02445 / 78 523 02445	**00300**	**08100**	**03200**	**03900**	**04100**
78 522 01646 / 78 523 01646	**00300**	**08100**	**03300**	**03900**	**00900**
78 522 02046 / 78 523 02046	**00300**	**08100**	**03300**	**03900**	**00900**
78 522 08546 / 78 523 08546	**00300**	**08100**	**03300**	**03900**	**00900**
78 522 02446 / 78 523 02446	**00300**	**08100**	**03300**	**03900**	**00900**
78 522 02456 / 78 523 02456	**00300**	**08100**	**03300**	**03900**	**00900**
78 522 08656 / 78 523 08656	**00300**	**08100**	**03300**	**03900**	**00900**

MaxiLock-M – MCRN 75° – Toolholder with top clamping





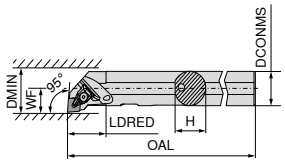
Illustrations show right-hand versions

Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 525 ...	Right-hand 78 524 ...
MCRN R/L 12-4B	0.750	0.750	4.500	1.180	0.878	CN..43..	**01224**	**01224**
MCRN R/L 16-4D	1.000	1.000	6.000	1.180	1.128	CN..43..	**01644**	**01644**
MCRN R/L 20-4D	1.250	1.250	6.000	1.180	1.318	CN..43..	**02044**	**02044**
MCRN R/L 16-5D	1.000	1.000	6.000	1.100	1.101	CN..54..	**01645**	**01645**
MCRN R/L 20-5D	1.250	1.250	6.000	1.350	1.351	CN..54..	**02045**	**02045**
MCRN R/L 20-6D	1.250	1.250	6.000	1.318	1.318	CN..64..	**02046**	**02046**
MCRN R/L 24-6D	1.500	1.500	6.000	1.818	1.818	CN..64..	**02446**	**02446**

Spare parts for Article no.	 Clamp 78 950 ...	 Key I 78 950 ...	 Dowel pin 78 950 ...	 Clamping screw 78 950 ...	 Carbide type C 78 950 ...
78 524 01224 / 78 525 01224	**00400**	**06900**	**03100**	**03800**	**00800**
78 524 01644 / 78 525 01644	**00400**	**06900**	**03100**	**03800**	**00800**
78 524 02044 / 78 525 02044	**00400**	**06900**	**03100**	**03800**	**00800**
78 524 01645 / 78 525 01645	**00300**	**08100**	**03200**	**03900**	**04100**
78 524 02045 / 78 525 02045	**00300**	**08100**	**03200**	**03900**	**04100**
78 524 02046 / 78 525 02046	**00300**	**08100**	**03300**	**03900**	**00900**
78 524 02446 / 78 525 02446	**00300**	**08100**	**03300**	**03900**	**00900**

4

MaxiLock-D – DCLN 95° – Boring bar with top clamping

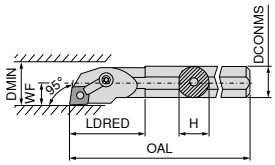


Illustrations show right-hand versions

Designation	DCONMS inch	H inch	OAL inch	LDRED inch	WF inch	DMIN inch	Insert	Left-hand 78 701 ...	Right-hand 78 700 ...
S16T DCLN R/L 4N	1.000	0.900	12.000	1.575	0.640	1.280	CN..43..	**41626**	**41626**
S20U DCLN R/L 4N	1.250	1.180	14.000	1.771	0.765	1.530	CN..43..	**42030**	**42030**
S24U DCLN R/L 4N	1.500	1.370	14.000	1.968	0.890	1.780	DN..43..	**42434**	**42434**

Spare parts for Article no.	 Clamping claw 78 950 ...	 Key I 78 950 ...	 Clamping screw 78 950 ...	 Carbide type C 78 950 ...	 Threaded bush 78 950 ...	 Spring 78 950 ...
78 700 41626 / 78 701 41626	**07600**	**08100**	**08300**	**07200**	**08500**	**04900**
78 700 42030 / 78 701 42030	**07600**	**08100**	**08300**	**07200**	**08500**	**04900**
78 700 42434 / 78 701 42434	**07600**	**08100**	**08300**	**07200**	**08500**	**04900**

MaxiLock-M – MCLN 95° – Boring bar with top clamping



Illustrations show right-hand versions

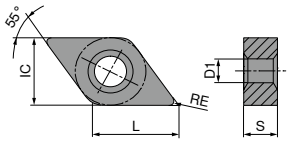
Designation	DCONMS inch	H inch	OAL inch	LDRED inch	WF inch	DMIN inch	Insert	Left-hand 78 705 ...	Right-hand 78 704 ...
A16T MCLN R/L 4	1.000	0.900	12.000	2.500	0.640	1.280	CN..32..	**41616**	**41616**
S16T MCLN R/L 4	1.000	0.900	12.000	2.500	0.640	1.280	CN..43..	**41626**	**41626**
S20U MCLN R/L 4	1.250	1.118	14.000	3.000	0.765	1.530	CN..43..	**42030**	**42030**
A20U MCLN R/L 4	1.250	1.118	14.000	3.000	0.765	1.530	CN..43..	**42020**	**42020**
S24U MCLN R/L 4	1.500	1.370	14.000	3.000	0.890	1.780	CN..43..	**42434**	**42434**
A24U MCLN R/L 4	1.500	1.370	14.000	3.000	0.890	1.780	CN..43..	**42424**	**42424**
S28U MCLN R/L 4	1.750	1.630	14.000	4.000	1.015	2.030	CN..43..	**42838**	**42838**
A28U MCLN R/L 4	1.750	1.630	14.000	4.000	1.015	2.030	CN..43..	**42828**	**42828**
S32V MCLN R/L 4	2.000	1.870	16.000	4.000	1.281	2.562	CN..43..	**43242**	**43242**
S40V MCLN R/L 4	2.500	2.380	16.000	4.000	1.531	3.062	CN..43..	**44050**	**44050**
S32V MCLN R/L 5	2.000	1.870	16.000	4.000	1.281	2.562	CN..54..	**53242**	**53242**
A32V MCLN R/L 5	2.000	1.870	16.000	4.000	1.281	2.562	CN..54..	**53233**	**53233**
S40V MCLN R/L 5	2.500	2.380	16.000	4.000	1.531	3.062	CN..54..	**54050**	**54050**
A32V MCLN R/L 6	2.000	1.870	16.000	4.000	1.281	2.562	CN..64..	**63233**	**63233**
S32V MCLN R/L 6	2.000	1.870	16.000	4.000	1.281	2.562	CN..64..	**63242**	**63242**
S40V MCLN R/L 6	2.500	2.380	16.000	4.000	1.531	3.062	CN..64..	**64050**	**64050**

4

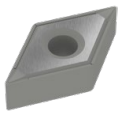
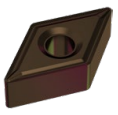
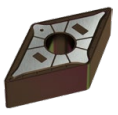
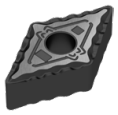
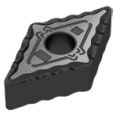
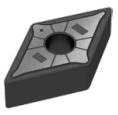
Spare parts for Article no.	 Clamp 78 950 ...	 Key I 78 950 ...	 Dowel pin 78 950 ...	 Clamping screw 78 950 ...	 Carbide type C 78 950 ...
78 704 41616 / 78 705 41616	**00400**	**06900**	**03000**	**03700**	
78 704 41626 / 78 705 41626	**00400**	**06900**	**03000**	**03700**	
78 704 42030 / 78 705 42030	**00400**	**06900**	**03100**	**03800**	**00800**
78 704 42020 / 78 705 42020	**00400**	**06900**	**03100**	**03800**	**00800**
78 704 42434 / 78 705 42434	**00400**	**06900**	**03100**	**03800**	**00800**
78 704 42424 / 78 705 42424	**00400**	**06900**	**03100**	**03800**	**00800**
78 704 42838 / 78 705 42838	**00400**	**06900**	**03100**	**03800**	**00800**
78 704 42828 / 78 705 42828	**00400**	**06900**	**03100**	**03800**	**00800**
78 704 43242 / 78 705 43242	**00400**	**06900**	**03100**	**03800**	**00800**
78 704 44050 / 78 705 44050	**00400**	**06900**	**03100**	**03800**	**00800**
78 704 53242 / 78 705 53242	**00300**	**08100**	**03200**	**03900**	**04100**
78 704 53233 / 78 705 53233	**00300**	**08100**	**03200**	**03900**	**04100**
78 704 54050 / 78 705 54050	**00300**	**08100**	**03200**	**03900**	**04100**
78 704 63233 / 78 705 63233	**00300**	**08100**	**03300**	**03900**	**00900**
78 704 63242 / 78 705 63242	**00300**	**08100**	**03300**	**03900**	**00900**
78 704 64050 / 78 705 64050	**00300**	**08100**	**03300**	**03900**	**00900**

DNMG / DNMA / DNMM

Designation	L inch	S inch	D1 inch	IC inch
DNMG 33..	0.457	0.187	0.150	0.375
DNM. 43..	0.610	0.187	0.203	0.500
DNM. 44..	0.610	0.250	0.203	0.500



DNMG

	-CF TCM10	-CF20 CTEP110	-TFQ CTEP110	-F50 CTCP115	-F50 CTCP125	-F50 CTCP135	-TFQ CTCP115
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
	F	F	F	F	F	F	F
	CERMET DNMG	CERMET DNMG	CERMET DNMG	DNMG	DNMG	DNMG	DNMG
	70 155 ...	76 102 ...	76 153 ...	76 134 ...	76 134 ...	76 134 ...	76 153 ...
ANSI / RE inch							
33.5EN 0.008				302	502	702	
331EN 0.016	904	004		304	504	704	
332EN 0.031		006		306	506	706	
333EN 0.047				308	508	708	
431EN 0.016				316	516	716	
432EN 0.031				318	518	718	
433EN 0.047				320	520	720	
441EN 0.016	914	028	028	328	528	728	32800
442EN 0.031		030	030	330	530	730	330
443EN 0.047		032		332	532	732	
P	●	●	●	●	●	●	●
M	o	o	o			o	
K	o	o	o	o	o		o
N							
S							
H							
O							

DNMG

		-TFQ CTCP125	-XU CTCP115	-XU CTCP125	-M50 CTCK110	-M50 CTCK120	-M50 CTCP115	-M50 CTCP125
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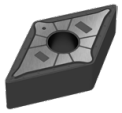
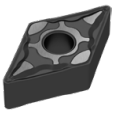
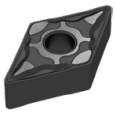
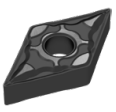
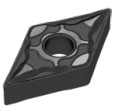
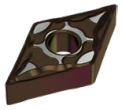
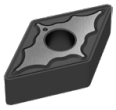
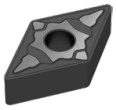
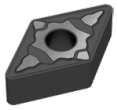
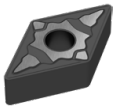
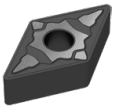
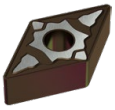
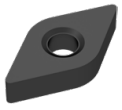
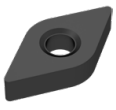
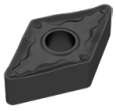
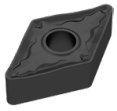
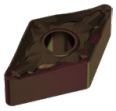
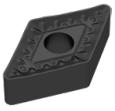
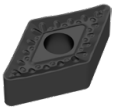
								
		F	M	M	M	M	M	M
		DNMG	DNMG	DNMG	DNMG	DNMG	DNMG	DNMG
		76 153 ...	76 291 ...	76 291 ...	70 133 ...	70 133 ...	76 136 ...	76 136 ...
ANSI	RE inch							
331EN	0.016						304	504
332EN	0.031						306	506
333EN	0.047						308	508
431EN	0.016						316	514
432EN	0.031				018	518	318	518
433EN	0.047				020	520	320	516
434EN	0.063						322	522
441EN	0.016	528	328	528			328	528
442EN	0.031	530	330	530	030	530	330	530
443EN	0.047		332	532	032	532	332	532
444EN	0.063						334	534
P		●	●	●	○	○	●	●
M								
K		○	○	○	●	●	○	○
N								
S								
H								
O								

4

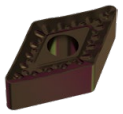
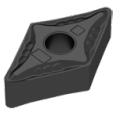
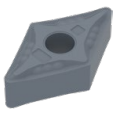
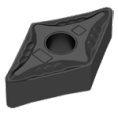
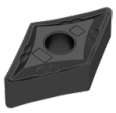
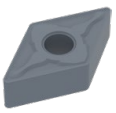
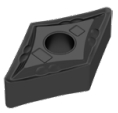
DNMG

	-M50 CTCP135	-TMQ CTCP125	-M70 CTCK110	-M70 CTCK120	-M70 CTCP115	-M70 CTCP125	-M70 CTCP135
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
	M	M	M	M	M	M	M
	DNMG	DNMG	DNMG	DNMG	DNMG	DNMG	DNMG
	76 136 ...	76 197 ...	70 263 ...	70 263 ...	76 263 ...	76 263 ...	76 263 ...
ANSI / RE inch							
331EN 0.016	704						
332EN 0.031	706				306	506	706
333EN 0.047	708				308	508	708
431EN 0.016	716						
432EN 0.031	718		018	518	318	518	718
433EN 0.047	720		020	520	320	520	720
434EN 0.063	722				322	522	722
441EN 0.016	728						
442EN 0.031	730	530	030	530	330	530	730
443EN 0.047	732	532	032	532	332	532	732
444EN 0.063	734		034	534	334	534	734
P	●	●	○	○	●	●	●
M	○						○
K		○	●	●	○	○	
N							
S							
H							
O							

DNMA / DNMM

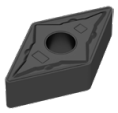
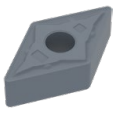
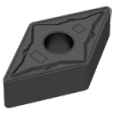
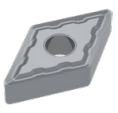
	CTCK110	CTCK120	-R28 CTCP115	-R28 CTCP125	-R28 CTCP135	-R58 CTCP115	-R58 CTCP125
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
	R	R	R	R	R	R	R
	DNMA	DNMA	DNMM	DNMM	DNMM	DNMM	DNMM
	70 156 ...	70 156 ...	76 165 ...	76 165 ...	76 165 ...	76 166 ...	76 166 ...
ANSI / RE inch							
432EN 0.031	018	518					
433EN 0.047	020	520					
442EN 0.031	030	530					
443EN 0.047	032	532	332	532	732	332	532
444EN 0.063			334	534	734	334	534
P	○	○	●	●	●	●	●
M					○		
K	●	●	○	○		○	○
N							
S							
H							
O							

DNMM / DNMG

			NEW			NEW	NEW		NEW
		-R58 CTCP135	-F30 CTCM120	-F30 CTPM125	-F30 CTCM130	-M30 CTCM120	-M30 CTPM125	-M30 CTCM130
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		R	F	F	F	M	M	M
		DNMM	DNMG	DNMG	DNMG	DNMG	DNMG	DNMG
		76 166 ...	75 013 ...	75 013 ...	75 013 ...	75 014 ...	75 014 ...	75 014 ...
ANSI	RE inch							
331EN	0.016		10400	204	30400			
332EN	0.031		10600	206	30600	10600	206	30600
333EN	0.047					10800	208	30800
431EN	0.016		11600		31600			
432EN	0.031		11800		31800	11800		31800
433EN	0.047					12000		32000
441EN	0.016		12800	228	32800			
442EN	0.031		13000	230	33000	13000	230	33000
443EN	0.047	732				13200	232	33200
444EN	0.063	734						
P		●	○	○	○	○	○	○
M		○	●	●	●	●	●	●
K								
N								
S					○			○
H								
O								

4

DNMG

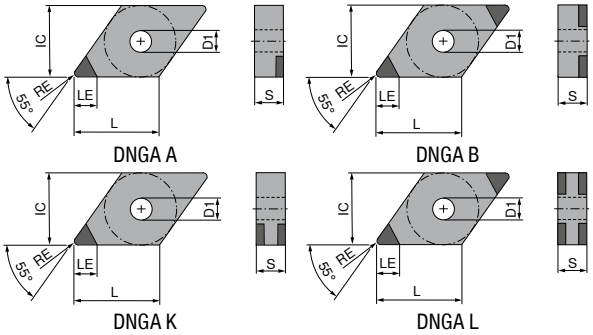
		NEW		NEW	NEW
		-M60 CTCM120	-M60 CTPM125	-M60 CTCM130	-M34 CTPX710
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		M	M	M	M
		DNMG	DNMG	DNMG	DNMG
		75 015 ...	75 015 ...	75 015 ...	75 004 ...
ANSI	RE inch				
431EN	0.016				61600
432EN	0.031	11800		31800	61800
433EN	0.047	12000		32000	62000
442EN	0.031	13000	230	33000	63000
443EN	0.047	13200	232	33200	63200
P		○	○	○	●
M		●	●	●	●
K					
N					○
S				○	●
H					
O					

DNMG

		NEW	NEW	NEW	NEW	NEW
		-FMS CT-P15	-FMS CT-P25	-MRS CT-P15	-MRS CT-P25	-MRS CT-P35
						
		F	F	M	M	M
		DNMG	DNMG	DNMG	DNMG	DNMG
		75 306 ...	75 306 ...	75 307 ...	75 307 ...	75 307 ...
ANSI	RE inch					
431EN	0.016	**01609**	**11609**			
432EN	0.031	**01809**	**11809**	**01809**	**11809**	
441EN	0.016	**02809**	**12809**			
442EN	0.031	**03009**	**13009**	**03009**	**13009**	**23009**
443EN	0.047	**03209**	**13209**	**03209**	**13209**	**23209**
444EN	0.063			**03409**	**13409**	**23409**
P		●	●	●	●	●
M		○	○	○	○	○
K						
N						
S						
H						
O						

DNGA

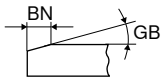
Designation	L inch	S inch	D1 inch	IC inch
DNGA 43..	0.610	0.187	0.203	0.500
DNGA 44..	0.610	0.250	0.203	0.500



DNGA A | DNGA B | DNGA K | DNGA L

DNGA

▲ TCE(NOI) = Design and number of equipped cutting edge corners

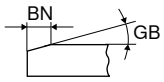


						NEW		NEW						NEW	
						CTBS20U		CTBS20C		CTBS20C		CTBH15C		CTBH20U	
						F		F		F		F		F	
						CBN DNGA		CBN DNGA		CBN DNGA		CBN DNGA		CBN DNGA	
						71 410 ...		71 411 ...		71 403 ...		71 017 ...		71 410 ...	
ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch										
441SN	0.016	0.004	10°	L (4)	0.110						122				
431FN	0.016			A (1)	0.138										40000
441FN	0.016			A (1)	0.138										40400
441SN	0.016	0.004	15°	L (4)	0.110						132				
441TN	0.016	0.004	15°	A (1)	0.138	20000									
441SN	0.016	0.004	15°	B (2)	0.110							32814			
441SN	0.016	0.004	20°	L (4)	0.110						152				
431SN	0.016	0.004	20°	L (4)	0.110						10200				
441SN	0.016	0.004	20°	K (2)	0.110			20000							
441TN	0.016	0.005	20°	A (1)	0.138										40500
431TN	0.016	0.005	20°	A (1)	0.138										40100
441SN	0.016	0.006	25°	B (2)	0.110							32829			
441SN	0.016	0.007	30°	L (4)	0.110						182				
442SN	0.031	0.004	10°	L (4)	0.102						124				
432FN	0.031			A (1)	0.118										40200
442FN	0.031			A (1)	0.118										40600
442TN	0.031	0.004	15°	A (1)	0.118	20100									
442SN	0.031	0.004	15°	L (4)	0.102						134				
442TN	0.031	0.004	15°	A (1)	0.197	20200									
442SN	0.031	0.004	15°	K (2)	0.102			20100							
442SN	0.031	0.004	15°	B (2)	0.102							33014			
442SN	0.031	0.004	20°	L (4)	0.102						154				
432SN	0.031	0.004	20°	L (4)	0.102						10300				
442TN	0.031	0.005	20°	A (1)	0.118										40700
432TN	0.031	0.005	20°	A (1)	0.118										40300
442SN	0.031	0.006	25°	B (2)	0.102							33029			
442SN	0.031	0.006	25°	K (2)	0.102			20200							
442SN	0.031	0.007	30°	L (4)	0.102						184				
443SN	0.047	0.004	15°	B (2)	0.110							33214			
443SN	0.047	0.006	25°	B (2)	0.110							33229			
P															
M															
K						●		●		●					
N															
S						●		●		●					
H												●		●	
O															

4

DNGA

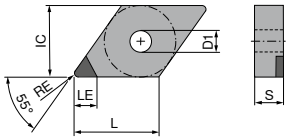
▲ TCE(NOI) = Design and number of equipped cutting edge corners



						CTBH20C		CTBH20C		NEW CTBH40U		CTBH40C		CTBH40C		
						F		F		F		F		F		
						CBN DNGA		CBN DNGA		CBN DNGA		CBN DNGA		CBN DNGA		
						71 402 ...		71 403 ...		71 410 ...		71 402 ...		71 403 ...		
ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch											
441FN	0.016			A (1)	0.138						50400					
441SN	0.016	0.004	20°	L (4)	0.110											332
441SN	0.016	0.004	25°	L (4)	0.110											352
441SN	0.016	0.006	30°	L (4)	0.110											372
431SN	0.016	0.004	20°	L (4)	0.110											30200
431SN	0.016	0.004	20°	L (4)	0.110											30300
431SN	0.016	0.004	25°	L (4)	0.110											30400
441SN	0.016	0.006	35°	L (4)	0.110											37500
441SN	0.016	0.004	25°	K (2)	0.110								352			
441SN	0.016	0.006	35°	K (2)	0.110								382			
441SN	0.016	0.004	20°	K (2)	0.110								32600			
431FN	0.016			A (1)	0.138						50000					
431TN	0.016	0.005	25°	A (1)	0.138						50100					
441TN	0.016	0.005	25°	A (1)	0.138						50500					
441SN	0.016	0.004	20°	L (4)	0.110				242							
441SN	0.016	0.005	25°	L (4)	0.110				262							
431TN	0.016	0.004	25°	L (4)	0.110				20200							
431SN	0.016	0.005	25°	L (4)	0.110				20300							
441FN	0.016			L (4)	0.110				29300							
441TN	0.016	0.004	25°	L (4)	0.110				24800							
441FN	0.016			K (2)	0.110	212										
441TN	0.016	0.004	15°	K (2)	0.110	222										
441TN	0.016	0.004	25°	K (2)	0.110	252										
441SN	0.016	0.004	20°	K (2)	0.110	24200										
432FN	0.031			A (1)	0.118						50200					
442SN	0.031	0.004	20°	L (4)	0.102											334
442SN	0.031	0.004	25°	L (4)	0.102											354
442SN	0.031	0.005	25°	L (4)	0.102				264							364
442SN	0.031	0.006	30°	L (4)	0.102				274							374
432SN	0.031	0.004	20°	L (4)	0.102											30500
432SN	0.031	0.004	25°	L (4)	0.102											30600
432SN	0.031	0.006	30°	L (4)	0.102											30700
442SN	0.031	0.004	20°	L (4)	0.102				244							34400
442SN	0.031	0.006	35°	L (4)	0.102											37600
442SN	0.031	0.004	25°	K (2)	0.102								354			
442SN	0.031	0.006	35°	K (2)	0.102								384			
442SN	0.031	0.004	20°	K (2)	0.102	24300							34200			
432TN	0.031	0.005	25°	A (1)	0.118						50300					
442FN	0.031			A (1)	0.118						50600					
442TN	0.031	0.005	25°	A (1)	0.118						50700					
432FN	0.031			L (4)	0.102				20400							
432TN	0.031	0.004	25°	L (4)	0.102				20500							
442FN	0.031			L (4)	0.102				29400							
442TN	0.031	0.004	25°	L (4)	0.102				24900							
442FN	0.031			K (2)	0.102	214										
442TN	0.031	0.004	15°	K (2)	0.102	224										
442TN	0.031	0.004	25°	K (2)	0.102	254										
442SN	0.031	0.005	25°	K (2)	0.102	26000										
P																
M																
K																
N																
S																
H						●		●		●		●		●		
O																

DNGA

Designation	L inch	S inch	D1 inch	IC inch
DNGA 43..	0.610	0.187	0.203	0.500
DNGA 44..	0.610	0.250	0.203	0.500

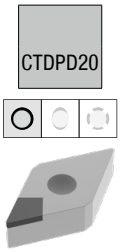


DNGA A

DNGA

▲ TCE(NOI) = Design and number of equipped cutting edge corners

NEW



F
DIAMOND
DNGA

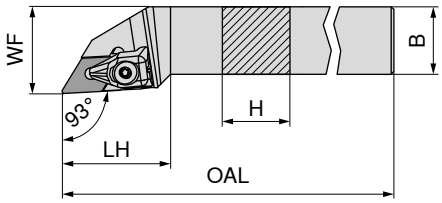
71 128 ...

4

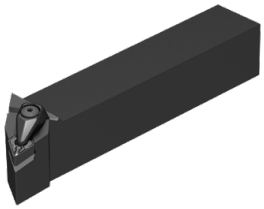
ANSI	RE inch	TCE (NOI)	LE inch	
441FN	0.016	**A (1)**	0.252	**10301**
431FN	0.016	**A (1)**	0.252	**10001**
432FN	0.031	**A (1)**	0.236	**10101**
433FN	0.047	**A (1)**	0.220	**10201**
442FN	0.031	**A (1)**	0.236	**10401**
443FN	0.047	**A (1)**	0.220	**10501**
P				
M				
K				
N				●
S				
H				
O				●

MaxiLock-D – DDJN 93° – Toolholder with top clamping

▲ A... = with thru coolant



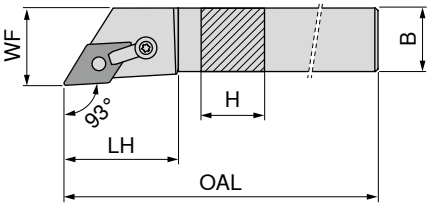
Illustrations show right-hand versions



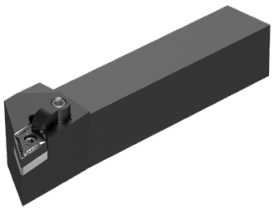
Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 503 ...	Right-hand 78 502 ...
DDJN R/L 12-4B-N	0.750	0.750	4.500	1.535	1.000	DN..43..	**01293**	**01293**
DDJN R/L 16-4D-N	1.000	1.000	6.000	1.535	1.250	DN..43..	**01689**	**01689**
DDJN R/L 16-4DA-N	1.000	1.000	6.000	1.535	1.250	DN..43..	**01692**	**01692**
DDJN R/L 20-4D-N	1.250	1.250	6.000	1.535	1.500	DN..43..	**02089**	**02089**
DDJN R/L 20-4DA-N	1.250	1.250	6.000	1.535	1.500	DN..43..	**02092**	**02092**
DDJN R/L 24-4EA-N	1.500	1.500	7.000	1.535	2.000	DN..43..	**02488**	**02488**
DDJN R/L 24-4E-N	1.500	1.500	7.000	1.535	2.000	DN..43..	**02486**	**02486**

Spare parts for Article no.	 Clamping claw 78 950 ...	 Key I 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat D 78 950 ...	 Threaded bush 78 950 ...	 Spring 78 950 ...
78 502 01293 / 78 503 01293	**07600**	**08100**	**08300**	**06700**	**08500**	**04900**
78 502 01689 / 78 503 01689	**07600**	**08100**	**08300**	**06700**	**08500**	**04900**
78 502 01692 / 78 503 01692	**07600**	**08100**	**08300**	**06700**	**08500**	**04900**
78 502 02089 / 78 503 02089	**07600**	**08100**	**08300**	**06700**	**08500**	**04900**
78 502 02092 / 78 503 02092	**07600**	**08100**	**08300**	**06700**	**08500**	**04900**
78 502 02488 / 78 503 02488	**07600**	**08100**	**08300**	**06700**	**08500**	**04900**
78 502 02486 / 78 503 02486	**07600**	**08100**	**08300**	**06700**	**08500**	**04900**

MaxiLock-M – MDJN 93° – Toolholder with top clamping



Illustrations show right-hand versions

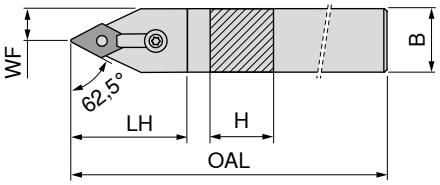


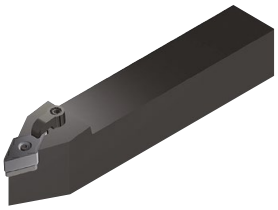
Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 527 ...	Right-hand 78 526 ...
MDJN R/L 08-3A	0.500	0.500	4.000	1.060	0.625	DN..33..	**00813**	**00813**
MDJN R/L 10-3B	0.625	0.625	4.500	1.250	0.875	DN..33..	**01023**	**01023**
MDJN R/L 12-4B	0.750	0.750	4.500	1.500	1.000	DN..43..	**01224**	**01224**
MDJN R/L 16-4D	1.000	1.000	6.000	1.500	1.250	DN..43..	**01644**	**01644**
MDJN R/L 20-4D	1.250	1.250	6.000	1.500	1.500	DN..43..	**02044**	**02044**
MDJN R/L 85-4D	1.250	1.000	6.000	1.500	1.250	DN..43..	**08544**	**08544**
MDJN R/L 24-4D	1.500	1.500	6.000	1.500	2.000	DN..43..	**02444**	**02444**

Spare parts for Article no.	 Clamp 78 950 ...	 Key I 78 950 ...	 Dowel pin 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat D 78 950 ...
78 526 00813 / 78 527 00813	**00700**	**06800**	**02700**	**03600**	
78 526 01023 / 78 527 01023	**00700**	**06800**	**02700**	**03600**	
78 526 01224 / 78 527 01224	**00400**	**06900**	**03100**	**03800**	**04200**
78 526 01644 / 78 527 01644	**00400**	**06900**	**03100**	**03800**	**04200**
78 526 02044 / 78 527 02044	**00400**	**06900**	**03100**	**03800**	**04200**
78 526 08544 / 78 527 08544	**00400**	**06900**	**03100**	**03800**	**04200**
78 526 02444 / 78 527 02444	**00400**	**06900**	**03100**	**03800**	**04200**

4

MaxiLock-M – MDPN 62.5° – Toolholder with top clamping

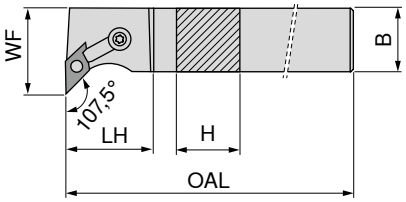




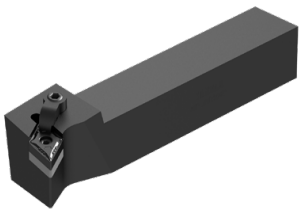
Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Neutral 78 576 ...
MDPN N 12-4B	0.750	0.750	4.500	1.620	0.375	DN..43..	**01224**
MDPN N 16-4D	1.000	1.000	6.000	1.620	0.500	DN..43..	**01644**
MDPN N 20-4D	1.250	1.250	6.000	1.620	0.625	DN..43..	**02044**

Spare parts for Article no.	Clamp 78 950 ...	Key I 78 950 ...	Dowel pin 78 950 ...	Clamping screw 78 950 ...	Solid Carbide Seat D 78 950 ...
78 576 01224	**09000**	**06900**	**03100**	**03800**	**04200**
78 576 01644	**09000**	**06900**	**03100**	**03800**	**04200**
78 576 02044	**09000**	**06900**	**03100**	**03800**	**04200**

MaxiLock-M – MDQN 107.5° – Toolholder with top clamping



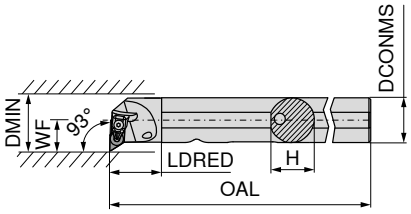
Illustrations show right-hand versions



Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 529 ...	Right-hand 78 528 ...
MDQN R/L 12-4B	0.750	0.750	4.500	1.370	1.000	DN..43..	**01293**	**01293**
MDQN R/L 16-4D	1.000	1.000	6.000	1.370	1.250	DN..43..	**01689**	**01689**
MDQN R/L 20-4D	1.250	1.250	6.000	1.370	1.500	DN..43..	**02089**	**02089**
MDQN R/L 24-4E	1.500	1.500	7.000	1.370	2.000	DN..43..	**02486**	**02486**

Spare parts for Article no.	Clamp 78 950 ...	Key I 78 950 ...	Dowel pin 78 950 ...	Clamping screw 78 950 ...	Solid Carbide Seat D 78 950 ...
78 528 01293 / 78 529 01293	**00400**	**06900**	**03100**	**03800**	**04200**
78 528 01689 / 78 529 01689	**00400**	**06900**	**03100**	**03800**	**04200**
78 528 02089 / 78 529 02089	**00400**	**06900**	**03100**	**03800**	**04200**
78 528 02486 / 78 529 02486	**00400**	**06900**	**03100**	**03800**	**04200**

MaxiLock-D – DDUN 93° – Boring bar with top clamping



Illustrations show right-hand versions

								Left-hand	Right-hand
								78 703 ...	78 702 ...
Designation	DCONMS inch	H inch	OAL inch	LDRED inch	WF inch	DMIN inch	Insert		
S20U DDUN R/L 4N	1.250	1.118	14.000	1.771	0.765	1.530	DN..43..	**42030**	**42030**
S24U DDUN R/L 4N	1.500	1.370	14.000	1.968	0.890	1.780	DN..43..	**42434**	**42434**

	 Clamping claw	 Key I	 Clamping screw	 Solid Carbide Seat D	 Threaded bush	 Spring
	78 950 ...	**78 950 ...**	**78 950 ...**	**78 950 ...**	**78 950 ...**	**78 950 ...**
Spare parts for Article no.						
78 702 42030 / 78 703 42030	**07600**	**08100**	**08300**	**04200**	**08500**	**04900**
78 702 42434 / 78 703 42434	**07600**	**08100**	**08300**	**04200**	**08500**	**04900**

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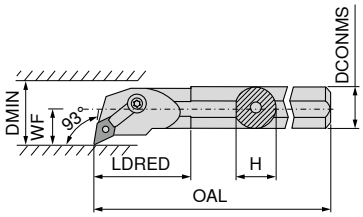
MaxiLock-M – MDUL 93° – Boring bar with top clamping



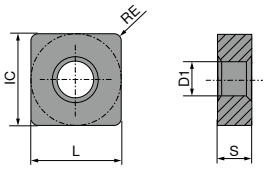
Illustrations show right-hand versions

Designation	DCONMS inch	H inch	OAL inch	LDRED inch	WF inch	DMIN inch	Insert	Left-hand 78 707 ...	Right-hand 78 706 ...
S16T MDUN R/L 4	1.000	0.900	12.000	2.500	0.875	1.750	DN..43..	**41626**	**41626**
A16T MDUN R/L 4	1.000	0.900	12.000	2.500	0.875	1.750	DN..43..	**41616**	**41616**
S20U MDUN R/L 4	1.250	1.118	14.000	3.000	1.000	2.000	DN..43..	**42030**	**42030**
A20U MDUN R/L 4	1.250	1.118	14.000	3.000	1.000	2.000	DN..43..	**42020**	**42020**
S24U MDUN R/L 4	1.500	1.370	14.000	3.000	1.125	2.250	DN..43..	**42434**	**42434**
A24U MDUN R/L 4	1.500	1.370	14.000	3.000	1.125	2.250	DN..43..	**42424**	**42424**
S32V MDUN R/L 4	2.000	1.870	16.000	4.000	1.375	3.000	DN..43..	**43242**	**43242**
A32V MDUN R/L 4	2.000	1.870	16.000	4.000	1.375	3.000	DN..43..	**43233**	**43233**

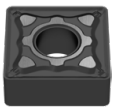
Spare parts for Article no.	 Clamp 78 950 ...	 Key I 78 950 ...	 Dowel pin 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat D 78 950 ...
78 706 41626 / 78 707 41626	**00400**	**06900**	**03000**	**03700**	
78 706 41616 / 78 707 41616	**00400**	**06900**	**03000**	**03700**	
78 706 42030 / 78 707 42030	**00400**	**06900**	**03100**	**03800**	**04200**
78 706 42020 / 78 707 42020	**00400**	**06900**	**03100**	**03800**	**04200**
78 706 42434 / 78 707 42434	**00400**	**06900**	**03100**	**03800**	**04200**
78 706 42424 / 78 707 42424	**00400**	**06900**	**03100**	**03800**	**04200**
78 706 43242 / 78 707 43242	**00400**	**06900**	**03100**	**03800**	**04200**
78 706 43233 / 78 707 43233	**00400**	**06900**	**03100**	**03800**	**04200**

SNMG / SNMA / SNMM

Designation	L inch	S inch	D1 inch	IC inch
SNMG 32..	0.375	0.125	0.150	0.375
SNM. 43..	0.500	0.187	0.203	0.500
SNM. 54..	0.625	0.250	0.250	0.625
SNM. 64..	0.750	0.250	0.313	0.750
SNMM 85..	1.000	0.313	0.359	1.000
SNMM 86..	1.000	0.375	0.359	1.000



SNMG

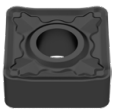
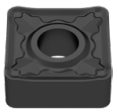
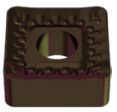
	-F50 CTCP115	-F50 CTCP125	-F50 CTCP135	-M50 CTCP115	-M50 CTCP125	-M50 CTCP135	-M70 CTCK110
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
	F	F	F	M	M	M	M
	SNMG	SNMG	SNMG	SNMG	SNMG	SNMG	SNMG
	76 140 ...	76 140 ...	76 140 ...	76 137 ...	76 137 ...	76 137 ...	70 225 ...
ANSI / RE inch							
322EN 0.031	306	506	706				
431EN 0.016	316	516	716				
432EN 0.031	318	518	718	318	518	718	018
433EN 0.047	320	520	720	320	520	720	020
434EN 0.063				322	522	722	022
542EN 0.031				330	530	730	
543EN 0.047				332	532	732	032
544EN 0.063				334	534	734	034
643EN 0.047							044
644EN 0.063							046
P	●	●	●	●	●	●	○
M			○			○	
K	○	○		○	○		●
N							
S							
H							
O							

4

SNMG / SNMA

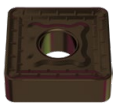
	-M70 CTCK120	-M70 CTCP115	-M70 CTCP125	-M70 CTCP135	CTCP125	CTCP135	CTCK110
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
	M	M	M	M	M	M	R
	SNMG	SNMG	SNMG	SNMG	SNMG	SNMG	SNMA
	70 225 ...	76 225 ...	76 225 ...	76 225 ...	76 116 ...	76 116 ...	70 114 ...
ANSI	RE inch						
322EN	0.031					506	706	
432EN	0.031	518	318	518	718			018
433EN	0.047	520	320	520	720			020
434EN	0.063	522	322	522	722			022
543EN	0.047	532	332	532	732			032
544EN	0.063	534	334	534	734			034
643EN	0.047	544	344	544	744			044
644EN	0.063	546	346	546	746			046
646EN	0.094		348	548	748			
P		○	●	●	●	●	●	○
M					○		○	
K		●	○	○		○		●
N								
S								
H								
O								

SNMA / SNMM

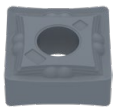
		CTCK120	-R28 CTCP115	-R28 CTCP125	-R28 CTCP135	-R58 CTCP115	-R58 CTCP125	-R58 CTCP135
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		R	R	R	R	R	R	R
		SNMA	SNMM	SNMM	SNMM	SNMM	SNMM	SNMM
		70 114 ...	76 128 ...	76 128 ...	76 128 ...	76 129 ...	76 129 ...	76 129 ...
ANSI	RE inch							
432EN	0.031	**518**				**318**	**518**	**718**
433EN	0.047	**520**				**320**	**520**	**720**
434EN	0.063	**522**						
543EN	0.047	**532**	**332**	**532**	**732**	**332**	**532**	**732**
544EN	0.063	**534**	**334**	**534**	**734**	**334**	**534**	**734**
643EN	0.047	**544**				**344**	**544**	**744**
644EN	0.063	**546**	**346**	**546**	**746**	**346**	**546**	**746**
646EN	0.094					**348**	**548**	**748**
856EN	0.094				**760**	**360**	**560**	**760**
866EN	0.094		**370**	**570**	**770**	**370**	**570**	**770**
P		○	●	●	●	●	●	●
M					○			○
K		●	○	○		○	○	
N								
S								
H								
O								

4

SNMM / SNMG

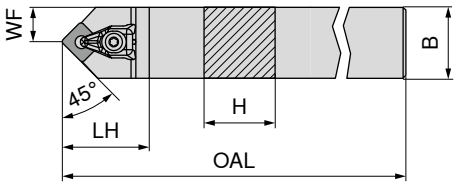
		-R88 CTCP115	-R88 CTCP125	-R88 CTCP135	NEW -F30 CTCM120	-F30 CTPM125	NEW -F30 CTCM130	NEW -M30 CTCM120
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		R	R	R	F	F	F	M
		SNMM	SNMM	SNMM	SNMG	SNMG	SNMG	SNMG
		76 130 ...	76 130 ...	76 130 ...	75 016 ...	75 016 ...	75 016 ...	75 017 ...
ANSI	RE inch							
431EN	0.016				11600	216	31600	
432EN	0.031				11800	218	31800	11800
433EN	0.047							12000
644SN	0.063	346	546	746				
646SN	0.094	348	548	748				
856SN	0.094	36000	56000	760				
866SN	0.094	37000	57000	770				
P		●	●	●	○	○	○	○
M				○	●	●	●	●
K		○	○					
N								
S							○	
H								
O								

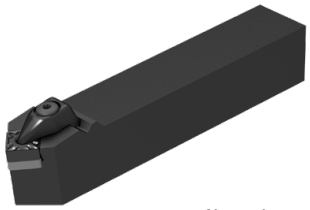
SNMG

		-M30 CTPM125	NEW -M30 CTCM130	NEW -M60 CTCM120	-M60 CTPM125	NEW -M60 CTCM130	NEW -M34 CTPX710
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
		M	M	M	M	M	M
		SNMG	SNMG	SNMG	SNMG	SNMG	SNMG
		75 017 ...	75 017 ...	75 018 ...	75 018 ...	75 018 ...	75 005 ...
ANSI	RE inch						
432EN	0.031	218	31800	11800	218	31800	61800
433EN	0.047		32000	12000	210	32000	62000
434EN	0.063			12200	220	32200	
P		○	○	○	○	○	●
M		●	●	●	●	●	●
K							
N							○
S			○			○	●
H							
O							

MaxiLock-D – DSDN 45° – Toolholder with top clamping

▲ A... = with thru coolant



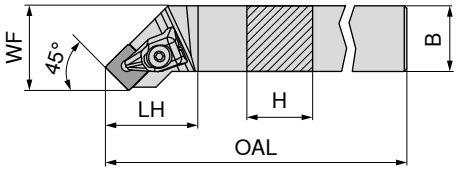


Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Neutral 78 574 ...
DSDN N 12-4BA-N	0.750	0.750	4.500	1.380	0.375	SN..43..	01224
DSDN N 20-6DA-N	1.250	1.250	6.000	1.535	0.625	SN..64..	02081
DSDN N 24-6EA-N	1.500	1.500	7.000	1.650	0.750	SN..64..	02479

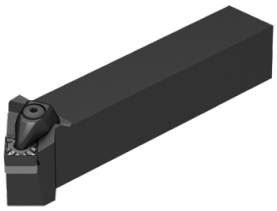
Spare parts for Article no.	Clamping claw 78 950 ...	Key I 78 950 ...	Clamping screw 78 950 ...	Solid Carbide support S 78 950 ...	Threaded bush 78 950 ...	Spring 78 950 ...
78 574 01224	07600	08100	08300	08900	08500	04900
78 574 02081	07800	08100	08300	01700	08700	04900
78 574 02479	07800	08100	08300	01700	08700	04900

4

MaxiLock-D – DSSN 45° – Toolholder with top clamping



Illustrations show right-hand versions

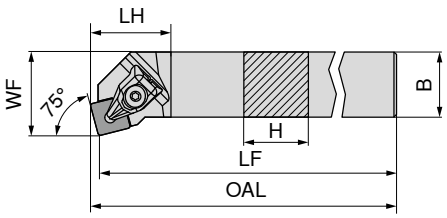


Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 507 ...	Right-hand 78 506 ...
DSSN R/L 12-4B-N	0.750	0.750	4.500	1.457	1.000	SN..43..	01293	01293
DSSN R/L 16-4D-N	1.000	1.000	6.000	1.457	1.250	SN..43..	01689	01689
DSSN R/L 20-4D-N	1.250	1.250	6.000	1.457	1.500	SN..43..	02089	02089
DSSN R/L 20-6D-N	1.250	1.250	6.000	1.772	1.500	SN..64..	02080	02080
DSSN R/L 24-6E-N	1.500	1.500	7.000	1.772	2.000	SN..64..	02477	02477

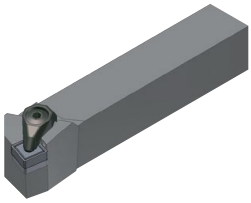
Spare parts for Article no.	Clamping claw 78 950 ...	Key I 78 950 ...	Clamping screw 78 950 ...	Solid Carbide support S 78 950 ...	Threaded bush 78 950 ...	Spring 78 950 ...
78 506 01293 / 78 507 01293	07600	08100	08300	08900	08500	04900
78 506 01689 / 78 507 01689	07600	08100	08300	08900	08500	04900
78 506 02089 / 78 507 02089	07600	08100	08300	08900	08500	04900
78 506 02080 / 78 507 02080	07800	08100	08300	01700	08700	04900
78 506 02477 / 78 507 02477	07800	08100	08300	01700	08700	04900

MaxiLock-D – DSRN 75° – Toolholder with top clamping

▲ A... = with thru coolant



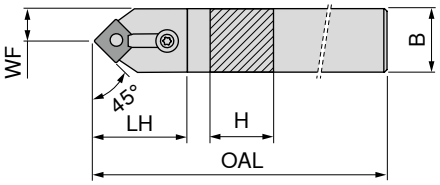
Illustrations show right-hand versions

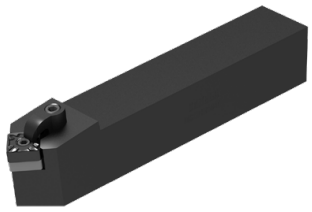


Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 505 ...	Right-hand 78 504 ...
DSRN R/L 12-4BA-N	0.750	0.750	4.500	1.380	0.880	SN..43..	**01294**	**01294**
DSRN R/L 16-4DA-N	1.000	1.000	6.000	1.380	1.130	SN..43..	**01690**	**01690**
DSRN R/L 20-5DA-N	1.250	1.250	6.000	1.380	1.353	SN..54..	**02085**	**02085**
DSRN R/L 20-6DA-N	1.250	1.250	6.000	1.380	1.321	SN..64..	**02081**	**02081**

Spare parts for Article no.	 Clamping claw 78 950 ...	 Key I 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide support S 78 950 ...	 Threaded bush 78 950 ...	 Spring 78 950 ...
78 504 01294 / 78 505 01294	**07600**	**08100**	**08300**	**08900**	**08500**	**04900**
78 504 01690 / 78 505 01690	**07600**	**08100**	**08300**	**08900**	**08500**	**04900**
78 504 02085 / 78 505 02085	**07700**	**08100**	**08300**	**01600**	**08600**	**04900**
78 504 02081 / 78 505 02081	**07800**	**08100**	**08300**	**01700**	**08700**	**04900**

MaxiLock-M – MSDN 45° – Toolholder with top clamping

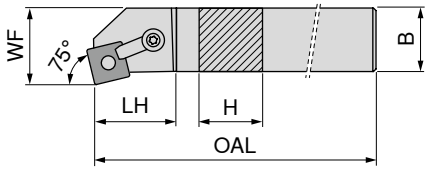


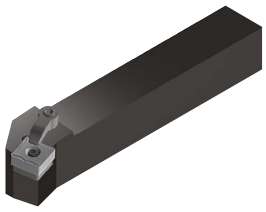


Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Neutral 78 577 ...
MSDN N 08-3A	0.500	0.500	4.000	1.000	0.250	SN..32..	**00813**
MSDN N 10-3B	0.625	0.625	4.500	1.000	0.313	SN..32..	**01023**
MSDN N 12-4B	0.750	0.750	4.500	1.300	0.375	SN..43..	**01224**
MSDN N 16-4D	1.000	1.000	6.000	1.300	0.500	SN..43..	**01644**
MSDN N 85-4D	1.250	1.000	6.000	1.300	0.625	SN..43..	**08544**
MSDN N 16-5D	1.000	1.000	6.000	1.500	0.500	SN..54..	**01645**
MSDN N 85-5D	1.250	1.000	6.000	1.500	0.625	SN..54..	**08545**
MSDN N 20-5D	1.250	1.250	6.000	1.500	0.625	SN..54..	**02045**
MSDN N 16-6D	1.000	1.000	6.000	1.730	0.500	SN..64..	**01646**
MSDN N 85-6D	1.250	1.000	6.000	1.750	0.625	SN..64..	**08546**
MSDN N 20-6D	1.250	1.250	6.000	1.750	0.625	SN..64..	**02046**
MSDN N 24-6E	1.500	1.500	7.000	1.750	0.750	SN..64..	**02456**

Spare parts for Article no.	 Clamp 78 950 ...	 Key I 78 950 ...	 Dowel pin 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide support S 78 950 ...
78 577 00813	**00600**	**07000**	**02800**	**03600**	**01500**
78 577 01023	**00600**	**07000**	**02800**	**03600**	**01500**
78 577 01224	**00400**	**06900**	**03100**	**03800**	**04300**
78 577 01644	**00400**	**06900**	**03100**	**03800**	**04300**
78 577 08544	**00400**	**06900**	**03100**	**03800**	**04300**
78 577 01645	**00300**	**08100**	**03200**	**03900**	**01600**
78 577 08545	**00300**	**08100**	**03200**	**03900**	**01600**
78 577 02045	**00300**	**08100**	**03200**	**03900**	**01600**
78 577 01646	**00300**	**08100**	**03300**	**03900**	**01700**
78 577 08546	**00300**	**08100**	**03300**	**03900**	**01700**
78 577 02046	**00300**	**08100**	**03300**	**03900**	**01700**
78 577 02456	**00300**	**08100**	**03300**	**03900**	**01700**

MaxiLock-M – MSKN 75° – Toolholder with top clamping



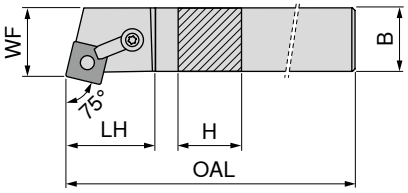


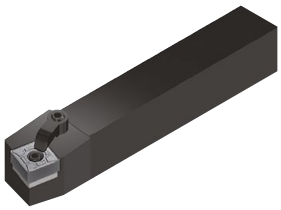
Illustrations show right-hand versions

Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 533 ...	Right-hand 78 532 ...
MSKN R/L 12-4B	0.750	0.750	4.500	1.220	1.000	SN..43..	**01224**	**01224**
MSKN R/L 16-4D	1.000	1.000	6.000	1.220	1.250	SN..43..	**01644**	**01644**
MSKN R/L 16-5D	1.000	1.000	6.000	1.410	1.250	SN..54..	**01645**	**01645**
MSKN R/L 85-5D	1.250	1.000	6.000	1.410	1.250	SN..54..	**08545**	**08545**
MSKN R/L 20-5D	1.250	1.250	6.000	1.410	1.500	SN..54..	**02045**	**02045**
MSKN R/L 20-6D	1.250	1.250	6.000	1.500	1.500	SN..64..	**02046**	**02046**
MSKN R/L 24-6E	1.500	1.500	7.000	1.500	2.000	SN..64..	**02456**	**02456**

Spare parts for Article no.	 Clamp 78 950 ...	 Key I 78 950 ...	 Dowel pin 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide support S 78 950 ...
78 532 01224 / 78 533 01224	**00400**	**06900**	**03100**	**03800**	**04300**
78 532 01644 / 78 533 01644	**00400**	**06900**	**03100**	**03800**	**04300**
78 532 01645 / 78 533 01645	**00300**	**08100**	**03200**	**03900**	**01600**
78 532 08545 / 78 533 08545	**00300**	**08100**	**03200**	**03900**	**01600**
78 532 02045 / 78 533 02045	**00300**	**08100**	**03200**	**03900**	**01600**
78 532 02046 / 78 533 02046	**00300**	**08100**	**03300**	**03900**	**01700**
78 532 02456 / 78 533 02456	**00300**	**08100**	**03300**	**03900**	**01700**

MaxiLock-M – MSRN 75° – Toolholder with top clamping





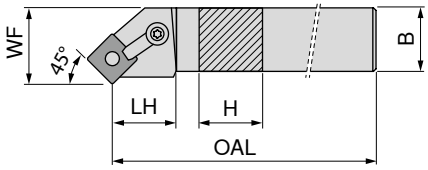
Illustrations show right-hand versions

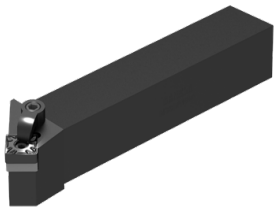
Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 535 ...	Right-hand 78 534 ...
MSRN R/L 12-4B	0.750	0.750	4.500	1.250	0.880	SN..43..	**01224**	**01224**
MSRN R/L 16-4D	1.000	1.000	6.000	1.250	1.130	SN..43..	**01644**	**01644**
MSRN R/L 16-5D	1.000	1.000	6.000	1.500	1.103	SN..54..	**01645**	**01645**
MSRN R/L 20-5D	1.250	1.250	6.000	1.500	1.353	SN..54..	**02045**	**02045**
MSRN R/L 20-6D	1.250	1.250	6.000	1.590	1.321	SN..64..	**02046**	**02046**
MSRN R/L 24-6E	1.500	1.500	7.000	1.590	1.821	SN..64..	**02456**	**02456**

Spare parts for Article no.	 Clamp 78 950 ...	 Key I 78 950 ...	 Dowel pin 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide support S 78 950 ...
78 534 01224 / 78 535 01224	**00400**	**06900**	**03100**	**03800**	**04300**
78 534 01644 / 78 535 01644	**00400**	**06900**	**03100**	**03800**	**04300**
78 534 01645 / 78 535 01645	**00300**	**08100**	**03200**	**03900**	**01600**
78 534 02045 / 78 535 02045	**00300**	**08100**	**03200**	**03900**	**01600**
78 534 02046 / 78 535 02046	**00300**	**08100**	**03300**	**03900**	**01700**
78 534 02456 / 78 535 02456	**00300**	**08100**	**03300**	**03900**	**01700**

4

MaxiLock-M – MSSN 45° – Toolholder with top clamping



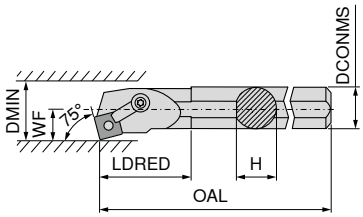


Illustrations show right-hand versions

Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 537 ...	Right-hand 78 536 ...
MSSN R/L 12-4B	0.750	0.750	4.500	1.230	0.675	SN..43..	**01224**	**01224**
MSSN R/L 16-4D	1.000	1.000	6.000	1.230	0.925	SN..43..	**01644**	**01644**
MSSN R/L 16-5D	1.000	1.000	6.000	1.380	0.847	SN..54..	**01645**	**01645**
MSSN R/L 20-5D	1.250	1.250	6.000	1.380	1.097	SN..54..	**02045**	**02045**
MSSN R/L 20-6D	1.250	1.250	6.000	1.470	1.010	SN..64..	**02046**	**02046**
MSSN R/L 24-6E	1.500	1.500	7.000	1.470	1.511	SN..64..	**02456**	**02456**
MSSN R/L 86-6E	1.500	1.000	7.000	1.470	0.761	SN..64..	**08656**	**08656**

Spare parts for Article no.	 Clamp 78 950 ...	 Key I 78 950 ...	 Dowel pin 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide support S 78 950 ...
78 536 01224 / 78 537 01224	**00400**	**06900**	**03100**	**03800**	**04300**
78 536 01644 / 78 537 01644	**00400**	**06900**	**03100**	**03800**	**04300**
78 536 01645 / 78 537 01645	**00300**	**08100**	**03200**	**03900**	**01600**
78 536 02045 / 78 537 02045	**00300**	**08100**	**03200**	**03900**	**01600**
78 536 02046 / 78 537 02046	**00300**	**08100**	**03300**	**03900**	**01700**
78 536 02456 / 78 537 02456	**00300**	**08100**	**03300**	**03900**	**01700**
78 536 08656 / 78 537 08656	**00300**	**08100**	**03300**	**03900**	**01700**

MaxiLock-M – MSKN 75° – Boring bar with top clamping



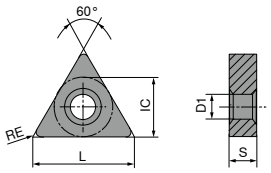
Illustrations show right-hand versions

Designation	H inch	OAL inch	LDRED inch	WF inch	Insert	Left-hand 78 709 ...	Right-hand 78 708 ...
S20U MSKN R/L 4	1.180	14.000	3.000	0.765	SN..43..	**42030**	**42030**
S24U MSKN R/L 4	1.370	14.000	3.000	0.890	SN..43..	**42434**	**42434**
S32V MSKN R/L 5	1.870	16.000	4.000	1.281	SN..54..	**53242**	**53242**
S32V MSKN R/L 6	1.870	16.000	4.000	1.281	SN..64..	**63242**	**63242**
S40V MSKN R/L 6	2.380	16.000	4.000	1.531	SN..64..	**64050**	**64050**

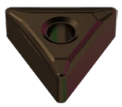
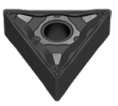
Spare parts for Article no.	 Clamp 78 950 ...	 Key I 78 950 ...	 Dowel pin 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide support S 78 950 ...
78 708 42030 / 78 709 42030	**00400**	**06900**	**03100**	**03800**	**04300**
78 708 42434 / 78 709 42434	**00400**	**06900**	**03100**	**03800**	**04300**
78 708 53242 / 78 709 53242	**00300**	**08100**	**03200**	**03900**	**01600**
78 708 63242 / 78 709 63242	**00300**	**08100**	**03300**	**03900**	**01700**
78 708 64050 / 78 709 64050	**00300**	**08100**	**03300**	**03900**	**01700**

TNMG / TNMA / TNMM

Designation	L inch	S inch	D1 inch	IC inch
TNMG 22..	0.433	0.125	0.089	0.250
TNM. 33..	0.650	0.187	0.150	0.375
TNM. 43..	0.866	0.187	0.203	0.500



TNMG

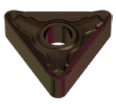
	-CF20 CTEP110	-F50 CTCP115	-F50 CTCP125	-F50 CTCP135	-M50 CTCP115	-M50 CTCP125	-M50 CTCP135
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
	F	F	F	F	M	M	M
	CERMET TNMG	TNMG	TNMG	TNMG	TNMG	TNMG	TNMG
	76 149 ...	76 146 ...	76 146 ...	76 146 ...	76 138 ...	76 138 ...	76 138 ...
ANSI	RE inch						
221EN	0.016	304	504	704			
222EN	0.031	306	506	706			
331EN	0.016	016	316	516	716	316	516	716
332EN	0.031	018	318	518	718	318	518	718
333EN	0.047	020	320	520	720	320	520	720
432EN	0.031					330	530	730
433EN	0.047					332	532	732
P		●	●	●	●	●	●	●
M		○			○			○
K		○	○	○		○	○	
N								
S								
H								
O								

4

TNMG

	-M70 CTCK110	-M70 CTCK120	-M70 CTCP115	-M70 CTCP125	-M70 CTCP135	CTCP125	CTCP135
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
	M	M	M	M	M	M	M
	TNMG	TNMG	TNMG	TNMG	TNMG	TNMG	TNMG
	70 155 ...	70 155 ...	76 155 ...	76 155 ...	76 155 ...	76 142 ...	76 142 ...
ANSI / RE inch							
22.5EN 0.008							702
331ER 0.016						516	716
332EL 0.031						518	
332EN 0.031	018	518	318	518	718		
332ER 0.031						517	717
333EN 0.047	020	520	320	520	720		
431EN 0.016				528			
432EN 0.031	030	530	330	530	730		
433EN 0.047	032	532	332	532	732		
434EN 0.063	034	534	334	534	734		
P	○	○	●	●	●	●	●
M					○		○
K	●	●	○	○		○	
N							
S							
H							
O							

TNMA / TNMM

	CTCK110	CTCK120	-R28 CTCP115	-R28 CTCP125	-R28 CTCP135	-R58 CTCP115	-R58 CTCP125
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
	R	M	R	R	R	R	R
	TNMA	TNMA	TNMM	TNMM	TNMM	TNMM	TNMM
	70 134 ...	70 134 ...	76 154 ...	76 154 ...	76 154 ...	76 152 ...	76 152 ...
ANSI / RE inch							
332EN 0.031	018	518					
333EN 0.047	020	520					
334EN 0.063	022	522					
432EN 0.031	030	530					
433EN 0.047	032	532				332	532
434EN 0.063	034	534	334	534	734		
P	○	○	●	●	●	●	●
M					○		
K	●	●	○	○		○	○
N							
S							
H							
O							

TNMM / TNMG

			NEW		NEW	NEW		NEW
		-R58 CTCP135	-F30 CTCM120	-F30 CTPM125	-F30 CTCM130	-M30 CTCM120	-M30 CTPM125	-M30 CTCM130
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		R	F	F	F	M	M	M
		TNMM	TNMG	TNMG	TNMG	TNMG	TNMG	TNMG
		76 152 ...	75 019 ...	75 019 ...	75 019 ...	75 020 ...	75 020 ...	75 020 ...
ANSI	RE inch							
331EN	0.016		11600	216	31600			
332EN	0.031		11800	218	31800	11800	218	31800
333EN	0.047					12000	220	32000
433EN	0.047	732						
P		●	○	○	○	○	○	○
M		○	●	●	●	●	●	●
K								
N								
S					○			○
H								
O								

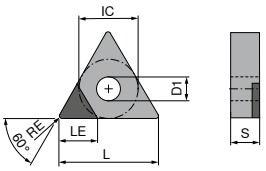
4

TNMG

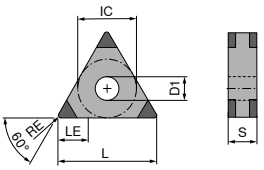
		NEW		NEW	NEW
		-M60 CTCM120	-M60 CTPM125	-M60 CTCM130	-M34 CTPX710
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		M	M	M	M
		TNMG	TNMG	TNMG	TNMG
		75 021 ...	75 021 ...	75 021 ...	75 006 ...
ANSI	RE inch				
332EN	0.031	11800	218	31800	61800
333EN	0.047	12000	220	32000	
431EN	0.016				62800
432EN	0.031				63000
434EN	0.063				63400
P		○	○	○	●
M		●	●	●	●
K					
N					○
S				○	●
H					
O					

TNGA

Designation	L inch	S inch	D1 inch	IC inch
TNGA 22..	0.433	0.125	0.089	0.250
TNGA 33..	0.650	0.187	0.150	0.375



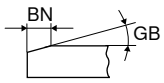
TNGA A

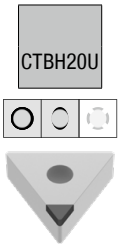


TNGA M

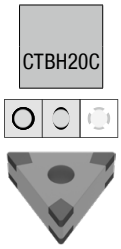
TNGA

▲ TCE(NOI) = Design and number of equipped cutting edge corners

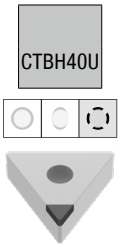




F
CBN
TNGA
71 108 ...



F
CBN
TNGA
71 404 ...



F
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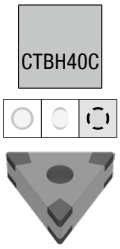


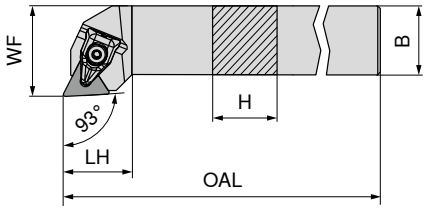
F
CBN
TNGA
71 404 ...

ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch	CTBH20U	CTBH20C	CTBH40U	CTBH40C
221TN	0.016	0.005	20°	A (1)	0.110	500			
222FN	0.031			A (1)	0.098			802 [1]	
222TN	0.031	0.005	20°	A (1)	0.098	502			
331FN	0.016			A (1)	0.138	404 [1]		804 [1]	
331SN	0.016	0.004	20°	M (6)	0.110				332
331SN	0.016	0.004	20°	M (6)	0.110		242		342
331SN	0.016	0.004	25°	M (6)	0.110				352
331SN	0.016	0.006	30°	M (6)	0.110				372
331SN	0.016	0.006	35°	M (6)	0.110				382
331TN	0.016	0.005	25°	A (1)	0.138			904	
331FN	0.016			M (6)	0.110		212		
331TN	0.016	0.004	15°	M (6)	0.110		222		
331TN	0.016	0.004	25°	M (6)	0.110		252		
331SN	0.016	0.005	25°	M (6)	0.110		262		
331TN	0.016	0.005	20°	A (1)	0.138	504			
332TN	0.031	0.004	15°	M (6)	0.098		224		
332SN	0.031	0.004	15°	M (6)	0.098				324
332TN	0.031	0.004	20°	M (6)	0.098		234		
332SN	0.031	0.004	20°	M (6)	0.098				334
332SN	0.031	0.004	20°	M (6)	0.098		244		344
332TN	0.031	0.005	20°	A (1)	0.118	506			
332TN	0.031	0.004	25°	M (6)	0.098		254		
332SN	0.031	0.004	25°	M (6)	0.098				354
332TN	0.031	0.005	25°	A (1)	0.118			906	
332EN	0.031			M (6)	0.098				314
332FN	0.031			A (1)	0.118	406 [1]		80500	
332FN	0.031			M (6)	0.098		214		
332SN	0.031	0.005	25°	M (6)	0.098		264		364
332SN	0.031	0.006	30°	M (6)	0.098		27200		374
332SN	0.031	0.006	35°	M (6)	0.098				384
333TN	0.047	0.004	15°	M (6)	0.087		226		
333SN	0.047	0.004	20°	M (6)	0.087				336
333SN	0.047	0.004	20°	M (6)	0.087		246		346
333SN	0.047	0.004	25°	M (6)	0.087				356
333TN	0.047	0.004	25°	M (6)	0.087		256		
333FN	0.047			M (6)	0.087		216		
333SN	0.047	0.005	25°	M (6)	0.087		266		366
333SN	0.047	0.006	30°	M (6)	0.087				376
333SN	0.047	0.006	35°	M (6)	0.087				386
P									
M									
K									
N									
S									
H						●	●	●	●
O									

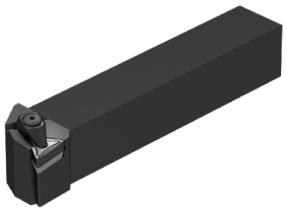
1) Machining to 60 HRC

MaxiLock-D – DTJN 93° – Toolholder with top clamping

▲ A... = with thru coolant



Illustrations show right-hand versions

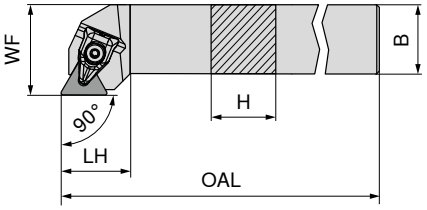


Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 511 ...	Right-hand 78 510 ...
DTJN R/L 16-3DA-N	1.000	1.000	6.000	1.250	1.250	TN..33..	01698	01698
DTJN R/L 16-4DA-N	1.000	1.000	6.000	1.380	1.250	TN..43..	01690	01690
DTJN R/L 20-4DA-N	1.250	1.250	6.000	1.250	1.500	TN..43..	02090	02090
DTJN R/L 24-4EA-N	1.500	1.500	7.000	1.380	2.000	TN..43..	02487	02487

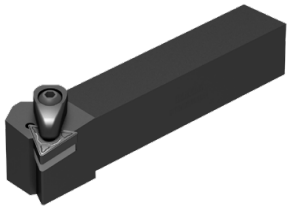
Spare parts for Article no.	 Clamping claw 78 950 ...	 Key I 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat T 78 950 ...	 Threaded bush 78 950 ...	 Spring 78 950 ...
78 510 01698 / 78 511 01698	07500	08100	07900	07400	08400	08000
78 510 01690 / 78 511 01690	07600	08100	08300	01900	08500	04900
78 510 02090 / 78 511 02090	07600	08100	08300	01900	08500	04900
78 510 02487 / 78 511 02487	07600	08100	08300	01900	08500	04900

4

MaxiLock-D – DTGN 90° – Toolholder with top clamping



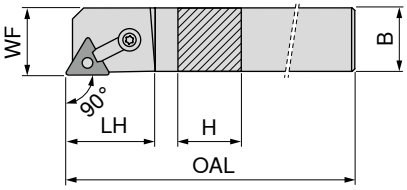
Illustrations show right-hand versions

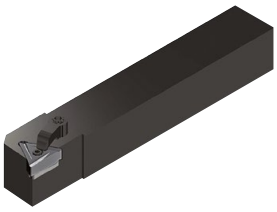


Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 509 ...	Right-hand 78 508 ...
DTGN R/L 12-3B-N	0.750	0.750	4.500	1.100	1.000	TN..33..	01299	01299
DTGN R/L 16-3D-N	1.000	1.000	6.000	1.100	1.250	TN..33..	01697	01697
DTGN R/L 16-4D-N	1.000	1.000	6.000	1.338	1.250	TN..43..	01689	01689
DTGN R/L 20-4D-N	1.250	1.250	6.000	1.338	1.500	TN..43..	02089	02089

Spare parts for Article no.	 Clamping claw 78 950 ...	 Key I 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat T 78 950 ...	 Threaded bush 78 950 ...	 Spring 78 950 ...
78 508 01299 / 78 509 01299	07500	08100	07900	07400	08400	08000
78 508 01697 / 78 509 01697	07500	08100	07900	07400	08400	08000
78 508 01689 / 78 509 01689	07600	08100	08300	01900	08500	04900
78 508 02089 / 78 509 02089	07600	08100	08300	01900	08500	04900

MaxiLock-M – MTAN 90° – Toolholder with top clamping



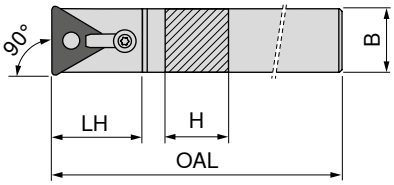


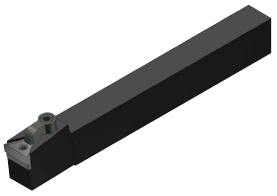
Illustrations show right-hand versions

Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 539 ...	Right-hand 78 538 ...
MTAN R/L 08-2A	0.500	0.500	4.000	0.875	0.500	TN..22..	**00812**	**00812**
MTAN R/L 12-3B	0.750	0.750	4.500	1.060	0.750	TN..33..	**01223**	**01223**
MTAN R/L 16-3D	1.000	1.000	6.000	1.060	1.000	TN..33..	**01643**	**01643**
MTAN R/L 16-4D	1.000	1.000	6.000	1.220	1.000	TN..43..	**01644**	**01644**

Spare parts for Article no.	 Clamp 78 950 ...	 Key I 78 950 ...	 Dowel pin 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat T 78 950 ...
78 538 00812 / 78 539 00812	**00700**	**07000**	**02500**	**05000**	
78 538 01223 / 78 539 01223	**00400**	**06900**	**02900**	**03800**	**01800**
78 538 01643 / 78 539 01643	**00400**	**06900**	**02900**	**03800**	**01800**
78 538 01644 / 78 539 01644	**00400**	**06900**	**03100**	**03800**	**01900**

MaxiLock-M – MTCN 90° – Toolholder with top clamping

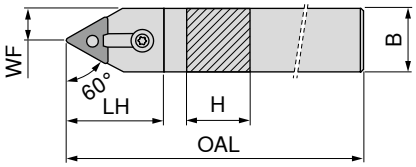


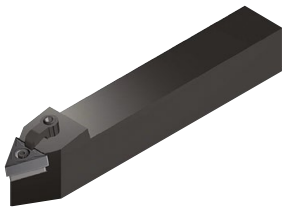


Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Neutral 78 578 ...
MTCN N 44-3F	1.000	0.500	8.000	1.000	0.325	TN..33..	**04463**
MTCN N 12-4B	0.750	0.750	4.500	1.380	0.433	TN..43..	**01224**
MTCN N 64-4F	1.000	0.750	8.000	1.380	0.433	TN..43..	**06464**
MTCN N 66-4F	1.500	0.750	8.000	1.380	0.433	TN..43..	**06664**

Spare parts for Article no.	 Clamp 78 950 ...	 Key I 78 950 ...	 Dowel pin 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat T 78 950 ...
78 578 04463	**00400**	**06800**	**02900**	**04000**	**01800**
78 578 01224	**00400**	**07000**	**03100**	**03800**	**01900**
78 578 06464	**00300**	**07000**	**03100**	**03900**	**01900**
78 578 06664	**00300**	**07000**	**03100**	**03900**	**01900**

MaxiLock-M – MTEN 60° – Toolholder with top clamping



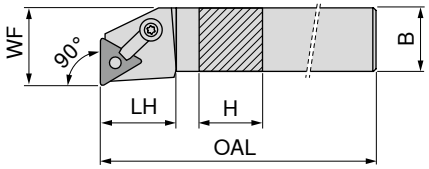


Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Neutral 78 580 ...
MTEN NS 08-2A	0.500	0.500	4.000	1.000	0.250	TN..22..	**00812**
MTEN NS 10-3B	0.625	0.625	4.500	1.130	0.313	TN..33..	**01023**
MTEN NS 12-3B	0.750	0.750	4.500	1.300	0.375	TN..33..	**01223**
MTEN NS 16-3D	1.000	1.000	6.000	1.300	0.500	TN..33..	**01643**
MTEN NS 16-4D	1.000	1.000	6.000	1.500	0.500	TN..43..	**01644**

Spare parts for Article no.	 Clamp 78 950 ...	 Key I 78 950 ...	 Dowel pin 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat T 78 950 ...
78 580 00812	**00700**	**07000**	**02500**	**05000**	
78 580 01023	**00600**	**06800**	**02900**	**03600**	**01800**
78 580 01223	**00400**	**06800**	**02900**	**03800**	**01800**
78 580 01643	**00400**	**06800**	**02900**	**03800**	**01800**
78 580 01644	**00400**	**07000**	**03100**	**03800**	**01900**

4

MaxiLock-M – MTFN 90° – Toolholder with top clamping

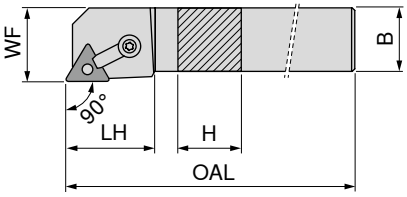


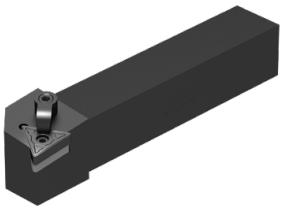
Illustrations show right-hand versions

Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 541 ...	Right-hand 78 540 ...
MTFN R/L 12-3B	0.750	0.750	4.500	1.000	1.000	TN..33..	**01223**	**01223**
MTFN R/L 16-3D	1.000	1.000	6.000	1.250	1.250	TN..33..	**01643**	**01643**
MTFN R/L 16-4D	1.000	1.000	6.000	1.250	1.250	TN..43..	**01644**	**01644**
MTFN R/L 20-4D	1.250	1.250	6.000	1.500	1.500	TN..43..	**02044**	**02044**
MTFN R/L 85-4D	1.250	1.000	6.000	1.250	1.250	TN..43..	**08544**	**08544**
MTFN R/L 86-4D	1.500	1.000	6.000	1.250	1.250	TN..43..	**08644**	**08644**

Spare parts for Article no.	 Clamp 78 950 ...	 Key I 78 950 ...	 Dowel pin 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat T 78 950 ...
78 540 01223 / 78 541 01223	**00400**	**06800**	**02900**	**03800**	**01800**
78 540 01643 / 78 541 01643	**00400**	**06800**	**02900**	**03800**	**01800**
78 540 01644 / 78 541 01644	**00400**	**07000**	**03100**	**03800**	**01900**
78 540 02044 / 78 541 02044	**00400**	**07000**	**03100**	**03800**	**01900**
78 540 08544 / 78 541 08544	**00400**	**07000**	**03100**	**03800**	**01900**
78 540 08644 / 78 541 08644	**00400**	**07000**	**03100**	**03800**	**01900**

MaxiLock-M – MTGN 90° – Toolholder with top clamping



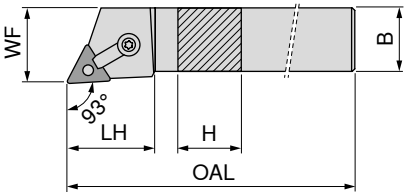


Illustrations show right-hand versions

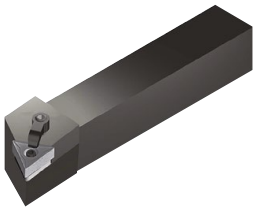
Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 543 ...	Right-hand 78 542 ...
MTGN R/L 08-2A	0.500	0.500	4.000	0.875	0.625	TN..22..	**00812**	**00812**
MTGN R/L 10-3B	0.625	0.625	4.500	1.000	0.875	TN..33..	**01023**	**01023**
MTGN R/L 12-3B	0.750	0.750	4.500	1.060	1.000	TN..33..	**01223**	**01223**
MTGN R/L 16-3D	1.000	1.000	6.000	1.060	1.250	TN..33..	**01643**	**01643**
MTGN R/L 16-4D	1.000	1.000	6.000	1.220	1.250	TN..43..	**01644**	**01644**
MTGN R/L 20-4D	1.250	1.250	6.000	1.220	1.500	TN..43..	**02044**	**02044**
MTGN R/L 85-4D	1.250	1.000	6.000	1.220	1.250	TN..43..	**08544**	**08544**
MTGN R/L 86-4D	1.500	1.000	6.000	1.220	1.250	TN..43..	**08644**	**08644**

Spare parts for Article no.	 Clamp 78 950 ...	 Key I 78 950 ...	 Dowel pin 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat T 78 950 ...
78 542 00812 / 78 543 00812	**00700**	**07000**	**02500**	**05000**	
78 542 01023 / 78 543 01023	**00400**	**06800**	**02900**	**03800**	**01800**
78 542 01223 / 78 543 01223	**00400**	**06800**	**02900**	**03800**	**01800**
78 542 01643 / 78 543 01643	**00400**	**06800**	**02900**	**03800**	**01800**
78 542 01644 / 78 543 01644	**00400**	**07000**	**03100**	**03800**	**01900**
78 542 02044 / 78 543 02044	**00400**	**07000**	**03100**	**03800**	**01900**
78 542 08544 / 78 543 08544	**00400**	**07000**	**03100**	**03800**	**01900**
78 542 08644 / 78 543 08644	**00400**	**07000**	**03100**	**03800**	**01900**

MaxiLock-M – MTJN 93° – Toolholder with top clamping



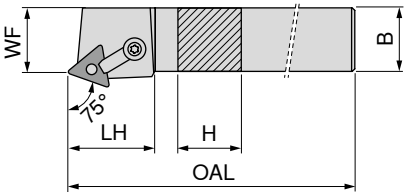
Illustrations show right-hand versions

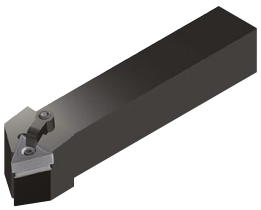


Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 545 ...	Right-hand 78 544 ...
MTJN R/L 12-3B	0.750	0.750	4.500	1.030	1.000	TN..33..	**01223**	**01223**
MTJN R/L 16-3D	1.000	1.000	6.000	1.030	1.250	TN..33..	**01643**	**01643**
MTJN R/L 16-4D	1.000	1.000	6.000	1.250	1.250	TN..43..	**01644**	**01644**
MTJN R/L 20-4D	1.250	1.250	6.000	1.250	1.500	TN..43..	**02044**	**02044**

Spare parts for Article no.	 Clamp 78 950 ...	 Key I 78 950 ...	 Dowel pin 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat T 78 950 ...
78 544 01223 / 78 545 01223	**00400**	**06800**	**02900**	**03800**	**01800**
78 544 01643 / 78 545 01643	**00400**	**06800**	**02900**	**03800**	**01800**
78 544 01644 / 78 545 01644	**00400**	**07000**	**03100**	**03800**	**01900**
78 544 02044 / 78 545 02044	**00400**	**07000**	**03100**	**03800**	**01900**

MaxiLock-M – MTRN 75° – Toolholder with top clamping



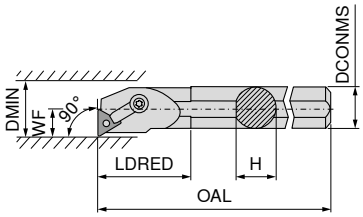


Illustrations show right-hand versions

Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 547 ...	Right-hand 78 546 ...
MTRN R/L 12-3B	0.750	0.750	4.500	1.160	0.855	TN..33..	**01223**	**01223**
MTRN R/L 16-3D	1.000	1.000	6.000	1.160	1.105	TN..33..	**01643**	**01643**
MTRN R/L 16-4D	1.000	1.000	6.000	1.380	1.048	TN..43..	**01644**	**01644**
MTRN R/L 20-4D	1.250	1.250	6.000	1.380	1.298	TN..43..	**02044**	**02044**

Spare parts for Article no.	 Clamp 78 950 ...	 Key I 78 950 ...	 Dowel pin 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat T 78 950 ...
78 546 01223 / 78 547 01223	**00400**	**06800**	**02900**	**03800**	**01800**
78 546 01643 / 78 547 01643	**00400**	**06800**	**02900**	**03800**	**01800**
78 546 01644 / 78 547 01644	**00400**	**07000**	**03100**	**03800**	**01900**
78 546 02044 / 78 547 02044	**00400**	**07000**	**03100**	**03800**	**01900**

MaxiLock-M – MTFN 90° – Boring bar with top clamping

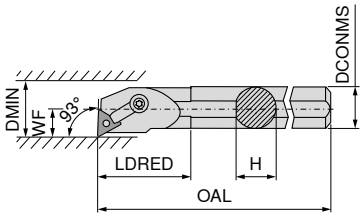


Illustrations show right-hand versions

Designation	DCONMS inch	H inch	OAL inch	LDRED inch	WF inch	DMIN inch	Insert	Left-hand 78 711 ...	Right-hand 78 710 ...
A16T MTFN R/L 3	1.000	0.900	12.000	2.500	0.640	1.280	TN..33..	**31616**	**31616**
S16T MTFN R/L 3	1.000	0.900	12.000	2.500	0.640	1.280	TN..33..	**31626**	**31626**
S20U MTFN R/L 3	1.250	1.180	14.000	3.000	0.765	1.530	TN..33..	**32030**	**32030**
A20U MTFN R/L 3	1.250	1.180	14.000	3.000	0.765	1.530	TN..33..	**32020**	**32020**
S24U MTFN R/L 3	1.500	1.370	14.000	3.000	0.890	1.780	TN..33..	**32434**	**32434**
S20U MTFN R/L 4	1.250	1.180	14.000	3.000	0.765	1.530	TN..43..	**42030**	**42030**
S24U MTFN R/L 4	1.500	1.370	14.000	3.000	0.890	1.780	TN..43..	**42434**	**42434**
A24U MTFN R/L 4	1.500	1.370	14.000	3.000	0.890	1.780	TN..43..	**42424**	**42424**
S28U MTFN R/L 4	1.750	1.630	14.000	4.000	1.015	2.030	TN..43..	**42838**	**42838**
A28U MTFN R/L 4	1.750	1.630	14.000	4.000	1.015	2.030	TN..43..	**42828**	**42828**
S32V MTFN R/L 4	2.000	1.870	16.000	4.000	1.281	2.562	TN..43..	**43242**	**43242**
A32V MTFN R/L 4	2.000	1.870	16.000	4.000	1.281	2.562	TN..43..	**43233**	**43233**
S40V MTFN R/L 4	2.500	2.380	16.000	4.000	1.531	3.062	TN..43..	**44050**	**44050**

Spare parts for Article no.	 Clamp 78 950 ...	 Key I 78 950 ...	 Dowel pin 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat T 78 950 ...
78 710 31616 / 78 711 31616	**00400**	**06800**	**02700**	**03700**	
78 710 31626 / 78 711 31626	**00400**	**06800**	**02700**	**03700**	
78 710 32030 / 78 711 32030	**00400**	**06800**	**02900**	**03800**	**01800**
78 710 32020 / 78 711 32020	**00400**	**06800**	**02900**	**03800**	**01800**
78 710 32434 / 78 711 32434	**00400**	**06800**	**02900**	**03800**	**01800**
78 710 42030 / 78 711 42030	**00400**	**06900**	**03100**	**03800**	**01900**
78 710 42434 / 78 711 42434	**00400**	**06900**	**03100**	**03800**	**01900**
78 710 42424 / 78 711 42424	**00400**	**06900**	**03100**	**03800**	**01900**
78 710 42838 / 78 711 42838	**00400**	**06900**	**03100**	**03800**	**01900**
78 710 42828 / 78 711 42828	**00400**	**06900**	**03100**	**03800**	**01900**
78 710 43242 / 78 711 43242	**00400**	**06900**	**03100**	**03800**	**01900**
78 710 43233 / 78 711 43233	**00400**	**06900**	**03100**	**03800**	**01900**
78 710 44050 / 78 711 44050	**00400**	**06900**	**03100**	**03800**	**01900**

MaxiLock-M – MTUN 93° – Boring bar with top clamping



Illustrations show right-hand versions

Designation	DCONMS inch	H inch	OAL inch	LDRED inch	WF inch	DMIN inch	Insert	Left-hand 78 713 ...	Right-hand 78 712 ...
S16T MTUN R/L 3	1.000	0.900	12.000	2.500	0.640	1.280	TN..33..	**31626**	**31626**
S24U MTUN R/L 4	1.500	1.370	14.000	3.000	0.890	1.780	TN..43..	**42434**	**42434**


Clamp


Key I


Dowel pin

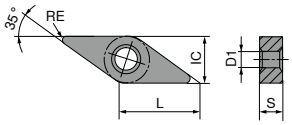

Clamping screw

Spare parts for Article no.	78 950 ...	78 950 ...	78 950 ...	78 950 ...
78 712 31626 / 78 713 31626	**00400**	**06800**	**02700**	**03700**
78 712 42434 / 78 713 42434	**00400**	**06900**	**03100**	**03800**

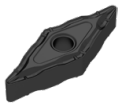
4

VNMG

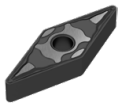
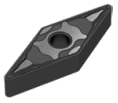
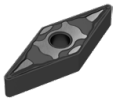
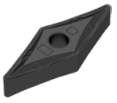
Designation	L inch	S inch	D1 inch	IC inch
VNMG 33..	0.654	0.187	0.150	0.375



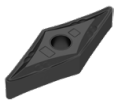
VNMG

	-F40 CTCP125	-F50 CTCP115	-F50 CTCP125	-F50 CTCP135	-XU CTCP115	-XU CTCP125	-M40 CTCP125
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
	F	F	F	F	M	M	M
	VNMG	VNMG	VNMG	VNMG	VNMG	VNMG	VNMG
	76 000 ...	76 156 ...	76 156 ...	76 156 ...	76 294 ...	76 294 ...	76 001 ...
ANSI / RE inch							
331EN 0.016	516	316	516	716	316	516	516
332EN 0.031	518	318	518	718	318	518	518
P	●	●	●	●	●	●	●
M				○			
K	○	○	○		○	○	○
N							
S							
H							
O							

VNMG

		-M50 CTCK120	-M50 CTCP115	-M50 CTCP125	NEW -F30 CTCM120	-F30 CTPM125	NEW -F30 CTCM130	NEW -M30 CTCM120
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		M	M	M	F	F	F	M
		VNMG	VNMG	VNMG	VNMG	VNMG	VNMG	VNMG
		70 131 ...	76 131 ...	76 131 ...	75 022 ...	75 022 ...	75 022 ...	75 023 ...
ANSI	RE inch							
331EN	0.016		316	516	11600	216	31600	
332EN	0.031	518	318	518	11800	218	31800	11800
333EN	0.047	520	320	520				
P		○	●	●	○	○	○	○
M					●	●	●	●
K		●	○	○				
N								
S							○	
H								
O								

VNMG

			NEW	NEW
		-M30 CTPM125	-M30 CTCM130	-M34 CTPX710
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
				
		M	M	M
		VNMG	VNMG	VNMG
		75 023 ...	75 023 ...	75 009 ...
ANSI	RE inch			
331EN	0.016			61600
332EN	0.031	218	31800	61800
333EN	0.047			62000
P		○	○	●
M		●	●	●
K				
N				○
S			○	●
H				
O				

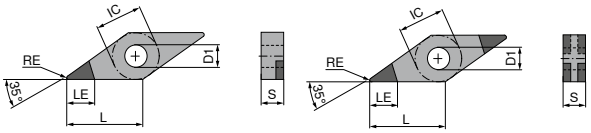
4

VNMG

		NEW	NEW
		-FMS CT-P15	-FMS CT-P25
			
		F	F
		VNMG	VNMG
		75 310 ...	75 310 ...
ANSI	RE inch		
331EN	0.016	**01609**	**11609**
332EN	0.031	**01809**	**11809**
P		●	●
M		○	○
K			
N			
S			
H			
O			

VNGA

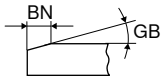
Designation	L inch	S inch	D1 inch	IC inch
VNGA 33..	0.654	0.187	0.150	0.375



VNGA A VNGA L

VNGA

▲ TCE(NOI) = Design and number of equipped cutting edge corners

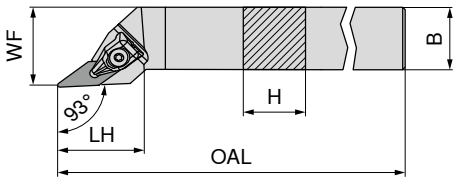


						NEW CTBH20C		NEW CTBH40U		NEW CTBH40C	
						F		F		F	
						CBN VNGA		CBN VNGA		CBN VNGA	
						71 413 ...		71 412 ...		71 413 ...	
ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch						
331FN	0.016			A (1)	0.197				50000		
331SN	0.016	0.004	20°	L (4)	0.110						60000
331SN	0.016	0.004	25°	L (4)	0.110						60100
331SN	0.016	0.005	25°	L (4)	0.110						60200
331SN	0.016	0.006	30°	L (4)	0.110						60300
331SN	0.016	0.006	35°	L (4)	0.110						60400
331TN	0.016	0.005	25°	A (1)	0.197				50100		
331FN	0.016			L (4)	0.110		30000				
331SN	0.016	0.004	20°	L (4)	0.110		30100				
331TN	0.016	0.004	25°	L (4)	0.110		30200				
332SN	0.031	0.004	15°	L (4)	0.087						60500
332SN	0.031	0.004	20°	L (4)	0.087		30400				60600
332SN	0.031	0.004	25°	L (4)	0.087						60700
332TN	0.031	0.004	25°	L (4)	0.087		30500				
332TN	0.031	0.005	25°	A (1)	0.173				50300		
332SN	0.031	0.005	25°	L (4)	0.087		30600				60800
332SN	0.031	0.006	30°	L (4)	0.087						60900
332SN	0.031	0.006	35°	L (4)	0.087						61000
332FN	0.031			A (1)	0.173				50200		
332FN	0.031			L (4)	0.087		30300				
P											
M											
K											
N											
S											
H							●		●		●
O											

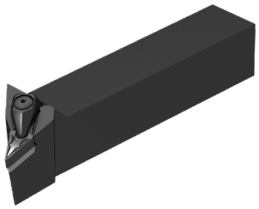
4

MaxiLock-D – DVJN 93° – Toolholder with top clamping

▲ A... = with thru coolant



Illustrations show right-hand versions



Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 513 ...	Right-hand 78 512 ...
DVJN R/L 20-3DA-N	1.250	1.250	6.000	1.750	1.500	VN..33..	02098	02098
DVJN R/L 24-3EA-N	1.500	1.500	7.000	1.750	2.000	VN..33..	02495	02495


Clamping claw


Key I


Clamping screw

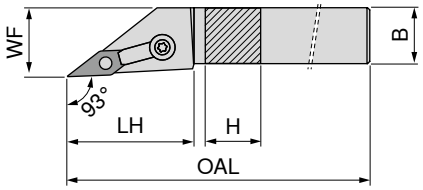

Solid Carbide Seat V


Threaded bush

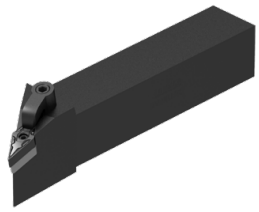

Spring

Spare parts for Article no.	78 950 ... Clamping claw	Key I	Clamping screw	Solid Carbide Seat V	Threaded bush	Spring
78 512 02098 / 78 513 02098	07500	08100	07900	02200	08400	08000
78 512 02495 / 78 513 02495	07500	08100	07900	02200	08400	08000

MaxiLock-M – MVJN 93° – Toolholder with top clamping



Illustrations show right-hand versions



Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 549 ...	Right-hand 78 548 ...
MVJN R/L 12-3B	0.750	0.750	4.500	1.620	1.000	VN..33..	01223	01223
MVJN R/L 16-3D	1.000	1.000	6.000	1.620	1.250	VN..33..	01643	01643
MVJN R/L 20-3D	1.250	1.250	6.000	1.620	1.500	VN..33..	02043	02043


Clamp


Key I

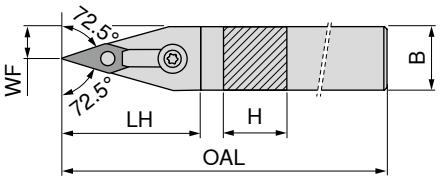

Dowel pin

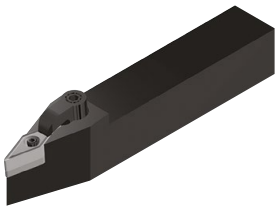

Clamping screw


Solid Carbide Seat V

Spare parts for Article no.	78 950 ... Clamp	Key I	Dowel pin	Clamping screw	Solid Carbide Seat V
78 548 01223 / 78 549 01223	09000	06800	02900	03800	02200
78 548 01643 / 78 549 01643	09000	06800	02900	03800	02200
78 548 02043 / 78 549 02043	09000	06800	02900	03800	02200

MaxiLock-M – MVVN 72.5° – Toolholder with top clamping

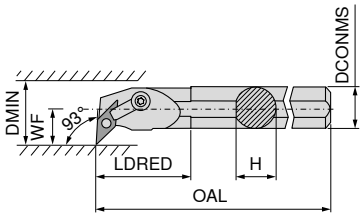




Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Neutral 78 581 ...
MVVN N 12-3B	0.750	0.750	4.500	1.620	0.375	VN..33..	**01223**
MVVN N 16-3B	1.000	1.000	4.500	1.620	0.500	VN..33..	**01623**
MVVN N 20-3D	1.250	1.250	6.000	1.620	0.625	VN..33..	**02043**
MVVN N 24-3E	1.500	1.500	7.000	1.620	0.750	VN..33..	**02453**

Spare parts for Article no.	 Clamp 78 950 ...	 Key I 78 950 ...	 Dowel pin 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat V 78 950 ...
78 581 01223	**09000**	**06800**	**02900**	**03800**	**02200**
78 581 01623	**09000**	**06800**	**02900**	**03800**	**02200**
78 581 02043	**09000**	**06800**	**02900**	**03800**	**02200**
78 581 02453	**09000**	**06800**	**02900**	**03800**	**02200**

MaxiLock-M – MVUN 93° – Boring bar with top clamping



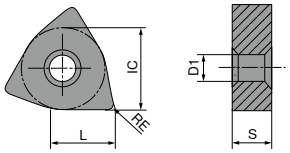
Illustrations show right-hand versions

Designation	DCONMS inch	H inch	OAL inch	LDRED inch	WF inch	DMIN inch	Insert	Left-hand 78 715 ...	Right-hand 78 714 ...
A16T MVUN R/L 3	1.000	0.900	12.000	2.500	1.000	2.000	VN..33..	**31616**	**31616**
S16T MVUN R/L 3	1.000	0.900	12.000	2.500	1.000	2.000	VN..33..	**31626**	**31626**
A20U MVUN R/L 3	1.250	1.180	14.000	3.000	1.125	2.250	VN..33..	**32020**	**32020**
S20U MVUN R/L 3	1.250	1.180	14.000	3.000	1.125	2.250	VN..33..	**32030**	**32030**
S24U MVUN R/L 3	1.500	1.370	14.000	3.000	1.250	2.500	VN..33..	**32434**	**32434**
A24U MVUN R/L 3	1.500	1.370	14.000	3.000	1.250	2.500	VN..33..	**32424**	**32424**

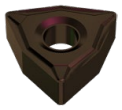
Spare parts for Article no.	 Clamp 78 950 ...	 Key I 78 950 ...	 Dowel pin 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat V 78 950 ...
78 714 31616 / 78 715 31616	**09000**	**06800**	**02900**	**03700**	**02200**
78 714 31626 / 78 715 31626	**09000**	**06800**	**02900**	**03700**	**02200**
78 714 32020 / 78 715 32020	**09000**	**06800**	**02900**	**03800**	**02200**
78 714 32030 / 78 715 32030	**09000**	**06800**	**02900**	**03800**	**02200**
78 714 32434 / 78 715 32434	**09000**	**06800**	**02900**	**03800**	**02200**
78 714 32424 / 78 715 32424	**09000**	**06800**	**02900**	**03800**	**02200**

WNMG / WNMA

Designation	L inch	S inch	D1 inch	IC inch
WNMG 33..	0.256	0.187	0.150	0.375
WNM. 43..	0.339	0.187	0.203	0.500

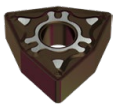


WNMG

	-CF20 CTEP110	-TFQ CTEP110	-F50 CTCP115	-F50 CTCP125	-F50 CTCP135	-TFQ CTCP115	-TFQ CTCP125
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
	F	F	F	F	F	F	F
	CERMET WNMG	CERMET WNMG	WNMG	WNMG	WNMG	WNMG	WNMG
	76 171 ...	76 177 ...	76 157 ...	76 157 ...	76 157 ...	76 177 ...	76 177 ...
ANSI RE inch							
331EN 0.016	**004**		**304**	**504**	**704**	**304**	**514**
332EN 0.031	**006**	**006**	**306**	**506**	**706**	**306**	**506**
431EN 0.016		**016**	**316**	**516**	**716**		
432EN 0.031	**018**	**018**	**318**	**518**	**718**	**318**	**518**
433EN 0.047			**320**	**520**	**720**	**320**	**520**
P	●	●	●	●	●	●	●
M	○	○			○		
K	○	○	○	○		○	○
N							
S							
H							
O							

4

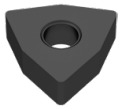
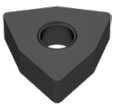
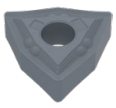
WNMG

	-XU CTCP115	-XU CTCP125	-M50 CTCK110	-M50 CTCK120	-M50 CTCP115	-M50 CTCP125	-M50 CTCP135
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
	M	M	M	M	M	M	M
	WNMG	WNMG	WNMG	WNMG	WNMG	WNMG	WNMG
	76 295 ...	76 295 ...	70 139 ...	70 139 ...	76 139 ...	76 139 ...	76 139 ...
ANSI / RE inch							
331EN 0.016					304	504	704
332EN 0.031					306	506	706
333EN 0.047					308	508	708
431EN 0.016	316	516			316	516	716
432EN 0.031	318	518	018	518	318	518	718
433EN 0.047	320	520	020	520	320	520	720
434EN 0.063					322	522	722
P	●	●	○	○	●	●	●
M							○
K	○	○	●	●	○	○	
N							
S							
H							
O							

WNMG

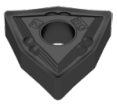
	-TMQ CTCP115	-TMQ CTCP125	-M70 CTCK110	-M70 CTCK120	-M70 CTCP115	-M70 CTCP125	-M70 CTCP135
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
	M	M	M	M	M	M	M
	WNMG	WNMG	WNMG	WNMG	WNMG	WNMG	WNMG
	76 198 ...	76 198 ...	70 273 ...	70 273 ...	76 273 ...	76 273 ...	76 273 ...
ANSI / RE inch							
332EN 0.031					306	506	706
333EN 0.047					308	508	708
432EN 0.031	31800	518	018	518	318	518	718
433EN 0.047	320	520	020	520	320	520	720
434EN 0.063			022	522	322	522	722
P	●	●	○	○	●	●	●
M							○
K	○	○	●	●	○	○	
N							
S							
H							
O							

WNMA / WNMG

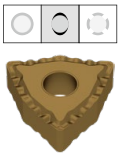
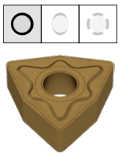
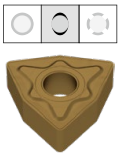
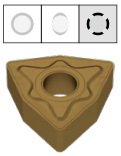
				NEW		NEW	NEW	
		CTCK110	CTCK120	-F30 CTCM120	-F30 CTPM125	-F30 CTCM130	-M30 CTCM120	-M30 CTPM125
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		R	R	F	F	F	M	M
		WNMA	WNMA	WNMG	WNMG	WNMG	WNMG	WNMG
		70 169 ...	70 169 ...	75 024 ...	75 024 ...	75 024 ...	75 025 ...	75 025 ...
ANSI	RE inch							
331EN	0.016			10400	204	30400		
332EN	0.031			10600	206	30600	10600	206
333EN	0.047						10800	208
431EN	0.016			11600	216	31600		
432EN	0.031	018	518	11800	218	31800	11800	218
433EN	0.047	020	520				12000	220
434EN	0.063	022	522					
P		○	○	○	○	○	○	○
M				●	●	●	●	●
K		●	●					
N								
S						○		
H								
O								

4

WNMG

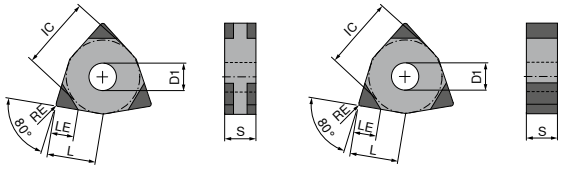
		NEW	NEW		NEW	NEW
		-M30 CTCM130	-M60 CTCM120	-M60 CTPM125	-M60 CTCM130	-M34 CTPX710
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
		M	M	M	M	M
		WNMG	WNMG	WNMG	WNMG	WNMG
		75 025 ...	75 026 ...	75 026 ...	75 026 ...	75 008 ...
ANSI	RE inch					
332EN	0.031	30600	10600	206	30600	
333EN	0.047	30800	10800	208	30800	
432EN	0.031	31800	11800	218	31800	61800
433EN	0.047	32000	12000	220	32000	62000
P		○	○	○	○	●
M		●	●	●	●	●
K						
N						○
S		○			○	●
H						
O						

WNMG

		NEW	NEW	NEW	NEW	NEW
		-FMS CT-P15	-FMS CT-P25	-MRS CT-P15	-MRS CT-P25	-MRS CT-P35
						
		F WNMG	F WNMG	M WNMG	M WNMG	M WNMG
		75 311 ...	75 311 ...	75 312 ...	75 312 ...	75 312 ...
ANSI	RE inch					
431EN	0.016	01609	11609			
432EN	0.031	01809	11809	01809	11809	21809
433EN	0.047	02009	12009	02009	12009	22009
P		●	●	●	●	●
M		o	o	o	o	o
K						
N						
S						
H						
O						

WNGA

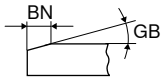
Designation	L inch	S inch	D1 inch	IC inch
WNGA 43..	0.335	0.187	0.202	0.500



WNGA M WNGA V

WNGA

▲ TCE(NOI) = Design and number of equipped cutting edge corners

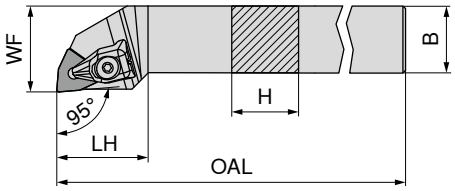


				NEW				NEW
				CTBS05U	CTBS20C	CTBH20C	CTBH40C	-Q CTBH40C
				F	F	F	F	F
				CBN WNGA	CBN WNGA	CBN WNGA	CBN WNGA	CBN WNGA
				71 415 ...	71 405 ...	71 405 ...	71 405 ...	71 414 ...
ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch			
431FN	0.016			M (6)	0.110			20200		
431SN	0.016	0.004	20°	M (6)	0.110		152		332	
431SN	0.016	0.004	25°	M (6)	0.110				352	
431SN	0.016	0.006	30°	M (6)	0.110				372	
431SN	0.016	0.004	20°	M (6)	0.110			242		
431SN	0.016	0.005	25°	M (6)	0.110			262		
431TN	0.016	0.004	15°	M (6)	0.110			23200		
431TN	0.016	0.004	25°	M (6)	0.110			25200		
431SN	0.016	0.004	10°	M (6)	0.110		122			
431SN	0.016	0.004	15°	M (6)	0.110		132			
431TN	0.016	0.008	30°	V (3)	0.110	00100				
431TN	0.016	0.008	30°	V (3)	0.177	00200				
432SN	0.031	0.004	10°	M (6)	0.098		124			
432TN	0.031	0.004	15°	M (6)	0.098			23300		
432SN	0.031	0.004	15°	M (6)	0.098		134			
432SN	0.031	0.004	20°	M (6)	0.098		154		334	
432SN	0.031	0.004	20°	M (6)	0.098			244		
432EN	0.031			M (6)	0.098					60000
432TN	0.031	0.004	25°	M (6)	0.098			25300		
432SN	0.031	0.004	25°	M (6)	0.098				354	60100
432SN	0.031	0.005	25°	M (6)	0.098			264	364	
432SN	0.031	0.006	25°	M (6)	0.098		174			
432SN	0.031	0.006	30°	M (6)	0.098			274	376	
432TN	0.031	0.008	30°	V (3)	0.102	00300				
432TN	0.031	0.008	30°	V (3)	0.165	00400				
432SN	0.031	0.006	35°	M (6)	0.098				38200	
433SN	0.047	0.004	20°	M (6)	0.087				34200	
433SN	0.047	0.004	25°	M (6)	0.087				35100	
433SN	0.047	0.006	30°	M (6)	0.087				36100	
433TN	0.047	0.008	30°	V (3)	0.157	00600				
433TN	0.047	0.008	30°	V (3)	0.094	00500				
433SN	0.047	0.006	35°	M (6)	0.087				38300	
P										
M										
K						●	●			
N										
S							●			
H								●	●	●
O										

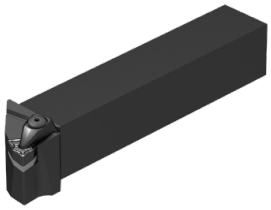
4

MaxiLock-D – DWLN 95° – Toolholder with top clamping

▲ A... = with thru coolant



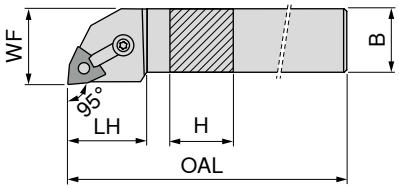
Illustrations show right-hand versions



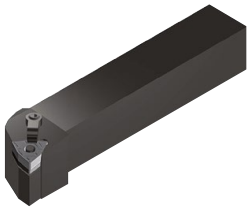
Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 515 ...	Right-hand 78 514 ...
DWLN R/L 12-4B-N	0.750	0.750	4.500	1.250	1.000	WN..43..	**01293**	**01293**
DWLN R/L 16-4D-N	1.000	1.000	6.000	1.250	1.250	WN..43..	**01689**	**01689**
DWLN R/L 20-4D-N	1.250	1.250	6.000	1.250	1.500	WN..43..	**02089**	**02089**
DWLN R/L 20-4DA-N	1.250	1.250	6.000	1.250	1.500	WN..43..	**02092**	**02091**
DWLN R/L 24-4E-N	1.500	1.500	7.000	1.250	2.000	WN..43..	**02486**	**02486**
DWLN R/L 24-4EA-N	1.500	1.500	7.000	1.250	2.000	WN..43..	**02488**	**02488**

Spare parts for Article no.	 Clamping claw 78 950 ...	 Key I 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat W 78 950 ...	 Threaded bush 78 950 ...	 Spring 78 950 ...
78 514 01293 / 78 515 01293	**07600**	**08100**	**08300**	**02400**	**08500**	**04900**
78 514 01689 / 78 515 01689	**07600**	**08100**	**08300**	**02400**	**08500**	**04900**
78 514 02089 / 78 515 02089	**07600**	**08100**	**08300**	**02400**	**08500**	**04900**
78 514 02091 / 78 515 02092	**07600**	**08100**	**08300**	**02400**	**08500**	**04900**
78 514 02486 / 78 515 02486	**07600**	**08100**	**08300**	**02400**	**08500**	**04900**
78 514 02488 / 78 515 02488	**07600**	**08100**	**08300**	**02400**	**08500**	**04900**

MaxiLock-M – MWLN 95° – Toolholder with top clamping



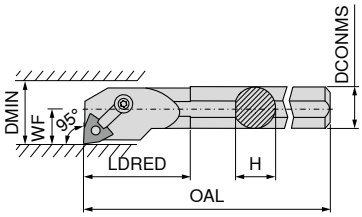
Illustrations show right-hand versions



Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 551 ...	Right-hand 78 550 ...
MWLN L 12-3B	0.750	0.750	4.500	1.000	1.000	WN..33..	**01223**	**01223**
MWLN R/L 16-3D	1.000	1.000	6.000	1.000	1.250	WN..33..	**01643**	**01643**
MWLN R/L 12-4B	0.750	0.750	4.500	1.070	1.000	WN..43..	**01224**	**01224**
MWLN R/L 16-4D	1.000	1.000	6.000	1.070	1.250	WN..43..	**01644**	**01644**
MWLN R/L 20-4D	1.250	1.250	6.000	1.070	1.500	WN..43..	**02044**	**02044**
MWLN R/L 24-4E	1.500	1.500	7.000	1.070	2.000	WN..43..	**02454**	**02454**

Spare parts for Article no.	 Clamp 78 950 ...	 Key I 78 950 ...	 Dowel pin 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat V 78 950 ...
78 551 01223	**00600**	**06800**	**02900**	**03600**	**02200**
78 550 01643 / 78 551 01643	**00600**	**06800**	**02900**	**03600**	**02200**
78 550 01224 / 78 551 01224	**00400**	**07000**	**03100**	**03800**	**02300**
78 550 01644 / 78 551 01644	**00400**	**07000**	**03100**	**03800**	**02300**
78 550 02044 / 78 551 02044	**00400**	**07000**	**03100**	**03800**	**02300**
78 550 02454 / 78 551 02454	**00400**	**07000**	**03100**	**03800**	**02300**

MaxiLock-M – MWLN 95° – Boring bar with top clamping



Illustrations show right-hand versions

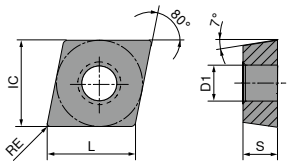
Designation	DCONMS inch	H inch	OAL inch	LDRED inch	WF inch	DMIN inch	Insert	Left-hand 78 717 ...	Right-hand 78 716 ...
S16T MWLN R/L 4	1.000	0.900	12.000	2.500	0.640	1.280	WN..43..	**41626**	**41626**
A16T MWLN R/L 4	1.000	0.900	12.000	2.500	0.640	1.280	WN..43..	**41616**	**41616**
S20U MWLN R/L 4	1.250	1.180	14.000	3.000	0.765	1.530	WN..43..	**42030**	**42030**
A20U MWLN R/L 4	1.250	1.180	14.000	3.000	0.765	1.530	WN..43..	**42020**	**42020**
S24U MWLN R/L 4	1.500	1.370	14.000	3.000	0.890	1.780	WN..43..	**42434**	**42434**
A24U MWLN R/L 4	1.500	1.370	14.000	3.000	0.890	1.780	WN..43..	**42424**	**42424**

Spare parts for Article no.	 Clamp 78 950 ...	 Key I 78 950 ...	 Dowel pin 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat W 78 950 ...
78 716 41626 / 78 717 41626	**00400**	**06900**	**03000**	**03700**	
78 716 41616 / 78 717 41616	**00400**	**06900**	**03000**	**03700**	
78 716 42030 / 78 717 42030	**00400**	**06900**	**03100**	**03800**	**02400**
78 716 42020 / 78 717 42020	**00400**	**06900**	**03100**	**03800**	**02400**
78 716 42434 / 78 717 42434	**00400**	**06900**	**03100**	**03800**	**02400**
78 716 42424 / 78 717 42424	**00400**	**06900**	**03100**	**03800**	**02400**

4

CCGT / CCMT

Designation	L inch	S inch	D1 inch	IC inch
CC.T 21..	0.252	0.094	0.110	0.250
CC.T 32..	0.382	0.156	0.173	0.375
CC.T 43..	0.508	0.187	0.217	0.500



CCGT / CCMT

	-CF05 CTEP110	-CF55 CTEP110	-SF TCM10	-SMF TCM10	-SF TCM407	-SF CTCP125	-SF CTCP135
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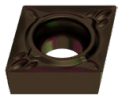
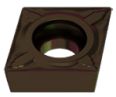
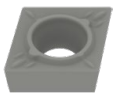
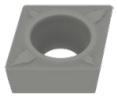
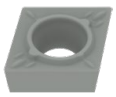
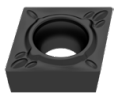
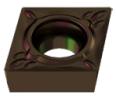
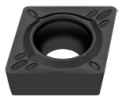
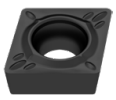
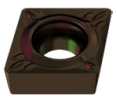
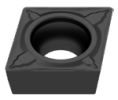
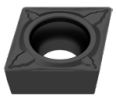
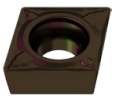
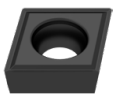
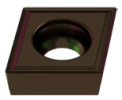
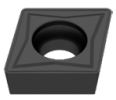
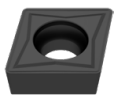
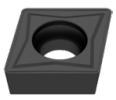
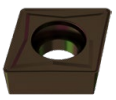
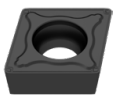
							
	F	F	F	F	F	F	F
	CERMET CCGT	CERMET CCMT	CERMET CCGT	CERMET CCMT	CERMET CCGT	CCGT	CCGT
	76 247 ...	76 248 ...	70 251 ...	70 249 ...	70 251 ...	76 251 ...	76 251 ...
ANSI / RE inch							
21.5.5EN 0.008	002		900		850	502	702
21.51EN 0.016	004	004	902	900	852		
32.5.5EN 0.008	014		904		854		
32.51EN 0.016	016	016	906	904			
32.52EN 0.031	018	018	908	906			
431EN 0.016		028	910				
P	●	●	●	●	●	●	●
M	○	○	○	○	○		○
K	○	○	○	○	○	○	
N							
S							
H							
O							

CCMT / CCGT

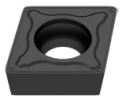
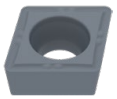
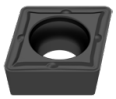
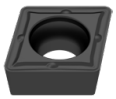
	-SF CTCP115	-SF CTCP125	-SF CTCP135	-SMF CTCP115	-SMF CTCP125	-SMF CTCP135	-SM CTCP125
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
	F	F	F	F	F	F	M
	CCMT	CCMT	CCMT	CCMT	CCMT	CCMT	CCGT
	76 253 ...	76 253 ...	76 253 ...	76 249 ...	76 249 ...	76 249 ...	76 250 ...
ANSI / RE inch							
21.5.5EN 0.008							502
21.51EN 0.016	304	504	704		504	704	
21.52EN 0.031					506		
32.51EN 0.016	316	516	716	316	516	716	
32.52EN 0.031	318	518		318	518		
431EN 0.016		528			528		
432EN 0.031		530		330		730	
P	●	●	●	●	●	●	●
M			○			○	
K	○	○		○	○		○
N							
S							
H							
O							

CCGT / CCMT

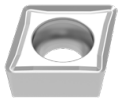
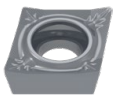
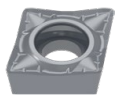
	-SM CTCP135	-SM CTCK110	-SM CTCK120	-SM CTCP115	-SM CTCP125	-SM CTCP135	-SMQ CTCP115
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
	M	M	M	M	M	M	F
	CCGT	CCMT	CCMT	CCMT	CCMT	CCMT	CCMT
	76 250 ...	70 252 ...	70 252 ...	76 252 ...	76 252 ...	76 252 ...	76 194 ...
ANSI / RE inch							
21.5.5EN 0.008	702						
21.51EN 0.016		004	554	304	504	704	
21.52EN 0.031		006	506	306		706	
32.51EN 0.016		016	516	316	516	716	31600
32.52EN 0.031		018	518	318	518	718	31800
32.53EN 0.047		020	520				
431EN 0.016		028	528	328	528	728	32800
432EN 0.031		030	530	330	530	730	330
433EN 0.047					532		
P	●	○	○	●	●	●	●
M	○					○	
K		●	●	○	○		○
N							
S							
H							
O							

4

CCMT

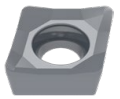
			NEW		NEW	NEW		NEW
		-SMQ CTCP125	-M25 CTCM120	-M25 CTPM125	-M25 CTCM130	-M55 CTCM120	-M55 CTPM125	-M55 CTCM130
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		F	F	F	F	M	M	M
		CCMT	CCMT	CCMT	CCMT	CCMT	CCMT	CCMT
		76 194 ...	75 210 ...	75 210 ...	75 210 ...	75 211 ...	75 211 ...	75 211 ...
ANSI	RE inch							
21.51EN	0.016		10400	204	30400	10400	204	
32.51EN	0.016	516	11600	216	31600	11600	216	31600
32.52EN	0.031	518	11800	218	31800	11800	218	31800
431EN	0.016	528				12800	228	32800
432EN	0.031	530				13000	230	33000
P		●	○	○	○	○	○	○
M			●	●	●	●	●	●
K		○						
N								
S					○			○
H								
O								

CCGT

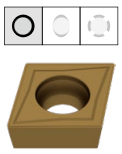
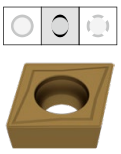
		-23P H216T	-25P H210T	NEW -25P CTPX710 DRAGONSKIN	-25Q H210T	NEW -25Q CTPX710 DRAGONSKIN	-27 H10T	-27 CWN15
								
		F	F	M	M	M	M	M
		CCGT	CCGT	CCGT	CCGT	CCGT	CCGT	CCGT
		70 255 ...	70 248 ...	70 248 ...	70 248 ...	70 248 ...	70 254 ...	70 254 ...
ANSI	RE inch							
21.5.5FN	0.008	652	636	70200			600	300
21.51FN	0.016	654	638	70400	678	75400	602	302
32.5.5FN	0.008		639	71400			604	304
32.51FN	0.016	656	640	71600	680	76600	606	306
32.52FN	0.031	658	641	71800	681	76800	608	308
43.5FN	0.008		643				610	310
431FN	0.016		642	72800	682	77800	612	312
432FN	0.031		644	73000	686	78000	614	314
P				●		●		
M				●		●		○
K		○	○		○		○	
N		●	●	●	●	●	●	●
S			○	●	○	●		
H								
O		○	○		○		○	

4

CCGT / CCMT

		NEW	NEW
		-27 CTPX715	-29 H216T
		DRAGONSKIN	
			
		M	M
		CCGT	CCMT
		70 254 ...	70 245 ...
ANSI	RE inch		
21.5.5FN	0.008	80200	
21.51EN	0.016		60400
21.51FN	0.016	80400	
32.5.5FN	0.008	81400	
32.51EN	0.016		61600
32.51FN	0.016	81600	
32.52EN	0.031		61800
32.52FN	0.031	81800	
43.5FN	0.008	82600	
431FN	0.016	82800	
432FN	0.031	83000	
P		●	
M		●	
K		○	○
N		●	●
S		●	
H			
O		○	○

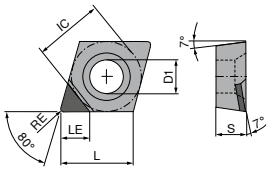
CCMT

		NEW -FMS CT-P15	NEW -FMS CT-P25	NEW -MRS CT-P15	NEW -MRS CT-P25
					
		F CCMT 75 300 ...	F CCMT 75 300 ...	M CCMT 75 301 ...	M CCMT 75 301 ...
ANSI	RE inch				
32.51EN	0.016	**01609**	**11609**	**01609**	**11609**
32.52EN	0.031	**01809**	**11809**	**01809**	**11809**
431EN	0.016	**02809**	**12809**	**02809**	**12809**
432EN	0.031	**03009**	**13009**	**03009**	**13009**
433EN	0.047			**03209**	**13209**
P		●	●	●	●
M		○	○	○	○
K					
N					
S					
H					
O					

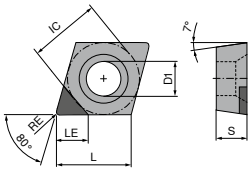
4

CCGW / CCGT

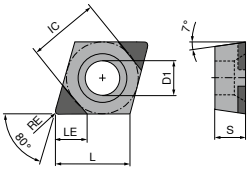
Designation	L inch	S inch	D1 inch	IC inch
CCG. 21..	0.252	0.094	0.110	0.250
CCGW 21..	0.254	0.094	0.110	0.250
CCG. 32..	0.382	0.156	0.173	0.375
CCGW 43..	0.508	0.187	0.217	0.500



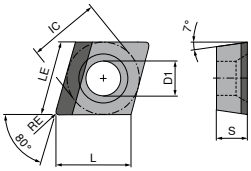
CCGT A



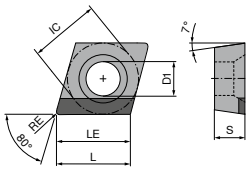
CCGW A



CCGW B



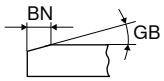
CCGW A LL



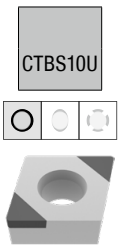
CCGW A RR

CCGW / CCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners



NEW

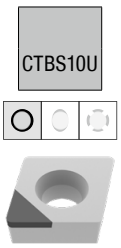


F

CBN
CCGW

71 419 ...

NEW



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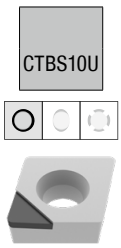
CBN
CCGW

71 120 ...

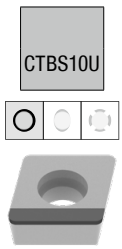


F

CBN
CCGT

71 124 ...

NEW

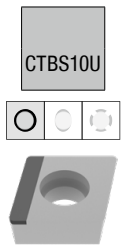


F

CBN
CCGW

71 420 ...

NEW



F

CBN
CCGW

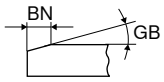
71 420 ...

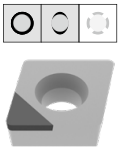
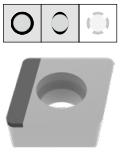
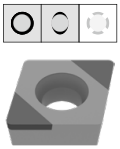
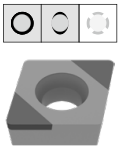
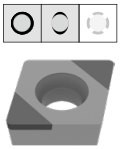
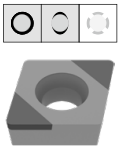
ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch									
21.5.5TN	0.008	0.005	20°	A (1)	0.134			300						
21.5.5FN	0.008			A (1)	0.134			200		200				
21.51TN	0.016	0.005	20°	A (1)	0.122			302						
21.51FN	0.016			A (1)	0.122			202		202				
21.52TN	0.031	0.005	20°	A (1)	0.110			30300						
32.5.5FN	0.008			A (1)	0.134					25000				
32.51FN	0.016			A (1)	0.110			204						
32.51TLL	0.016	0.005	20°	A (1)	0.382									10000
32.51TRR	0.016	0.005	20°	A (1)	0.382							10100		
32.51FN	0.016			A (1)	0.122					25200				
32.51TN	0.016	0.005	20°	A (1)	0.110			304						
32.51FN	0.016			B (2)	0.122	10000								
32.51TN	0.016	0.005	20°	B (2)	0.122	10100								
32.52FN	0.031			A (1)	0.098			206						
32.52TLL	0.031	0.005	20°	A (1)	0.382									10200
32.52TRR	0.031	0.005	20°	A (1)	0.382							10300		
32.52TN	0.031	0.005	20°	A (1)	0.098			306						
431FN	0.016			A (1)	0.122			208						
431TN	0.016	0.005	20°	A (1)	0.122			308						
432TN	0.031	0.005	20°	A (1)	0.110			310						
432FN	0.031			A (1)	0.110			210						

P					
M					
K	●	●	●	●	●
N					
S	●	●	●	●	●
H					
O					

CCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners

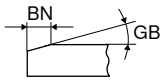


						NEW	NEW				
						CTBS20U	CTBS20U	-Q CTBS20C	CTBS20C	CTBH20C	-Q CTBH20C
											
						F	F	F	F	F	F
						CBN CCGW	CBN CCGW	CBN CCGW	CBN CCGW	CBN CCGW	CBN CCGW
						71 418 ...	71 420 ...	71 162 ...	71 161 ...	71 161 ...	71 162 ...
ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch						
21.5.5SN	0.008	0.004	10°	B (2)	0.134			120		230	230
21.5.5SN	0.008	0.004	15°	B (2)	0.134			130			240
21.5.5TN	0.008	0.005	15°	A (1)	0.134	20000					
21.5.5SN	0.008	0.004	20°	B (2)	0.134					250	
21.5.5TN	0.008	0.006	20°	B (2)	0.134			140			
21.5.5SN	0.008	0.006	20°	B (2)	0.134			150	150		
21.5.5TN	0.008	0.006	25°	B (2)	0.134					260	
21.5.5SN	0.008	0.006	25°	B (2)	0.134					270	
21.5.5FN	0.008			B (2)	0.134						210
21.5.5EN	0.008			B (2)	0.134			110	110		220
21.5.5TN	0.008	0.007	25°	B (2)	0.134			160	160		
21.51SN	0.016	0.004	10°	B (2)	0.122			121	121	231	231
21.51SN	0.016	0.004	15°	B (2)	0.122			131	131	241	241
21.51SN	0.016	0.005	15°	A (1)	0.122	20200					
21.51SN	0.016	0.004	20°	B (2)	0.122					251	251
21.51TN	0.016	0.006	20°	B (2)	0.122			141	141		
21.51EN	0.016			B (2)	0.122					221	
21.51FN	0.016			A (1)	0.122	20100					
21.51SN	0.016	0.006	20°	B (2)	0.122			151	151		
21.51TN	0.016	0.006	25°	B (2)	0.122					261	261
21.51SN	0.016	0.006	25°	B (2)	0.122					271	
21.51TN	0.016	0.007	25°	B (2)	0.122			161	161		
21.51SN	0.016	0.007	25°	B (2)	0.122			171			
21.52EN	0.031			B (2)	0.110				112		
21.52FN	0.031			B (2)	0.110					212	
21.52SN	0.031	0.004	10°	B (2)	0.110				122	232	
21.52SN	0.031	0.004	20°	B (2)	0.110					252	
21.52TN	0.031	0.006	25°	B (2)	0.110					262	
21.52SN	0.031	0.007	30°	B (2)	0.110				182	282	
21.52TN	0.031	0.006	20°	B (2)	0.110				142		
21.52TN	0.031	0.007	25°	B (2)	0.110				162		
21.52SN	0.031	0.004	15°	B (2)	0.110				132		
21.52SN	0.031	0.007	25°	B (2)	0.110				172		
32.5.5SN	0.008	0.004	10°	B (2)	0.134				123	233	
32.5.5SN	0.008	0.004	15°	B (2)	0.134				133	243	
32.5.5SN	0.008	0.004	20°	B (2)	0.134					253	
32.5.5SN	0.008	0.006	20°	B (2)	0.134				153		
32.5.5SN	0.008	0.006	25°	B (2)	0.134					273	
32.5.5EN	0.008			B (2)	0.134				113		
32.5.5TN	0.008	0.007	25°	B (2)	0.134				163		
32.5.5SN	0.008	0.007	25°	B (2)	0.134				173		
32.51SN	0.016	0.004	10°	B (2)	0.122			124	124	234	
32.51SN	0.016	0.004	15°	B (2)	0.122			134	134	244	
32.51SN	0.016	0.005	15°	A (1)	0.110	20400					
32.51SN	0.016	0.004	20°	B (2)	0.122					254	
32.51TN	0.016	0.006	20°	B (2)	0.122			144	144		
32.51EN	0.016			B (2)	0.122				114	224	
32.51FN	0.016			A (1)	0.110	20300					
32.51SN	0.016	0.006	20°	B (2)	0.122			154	154		
32.51TN	0.016	0.006	25°	B (2)	0.122					264	
32.51SN	0.016	0.006	25°	B (2)	0.122					274	
32.51TN	0.016	0.007	25°	B (2)	0.122			164	164		
P											
M											
K						●	●	●	●		
N											
S						●	●	●	●		
H										●	●
O											

4

CCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners



						NEW	NEW				
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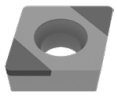
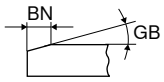
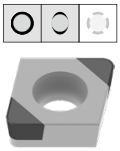
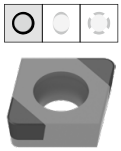
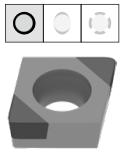
											
						F	F	F	F	F	F
						CBN CCGW	CBN CCGW	CBN CCGW	CBN CCGW	CBN CCGW	CBN CCGW
						71 418 ...	71 420 ...	71 162 ...	71 161 ...	71 161 ...	71 162 ...
ANSI	RE inch	BN inch	GB	**TCE (NOI)**	LE inch						
32.51SN	0.016	0.007	25°	**B (2)**	0.122			**174**	**174**		
32.51SN	0.016	0.007	30°	**B (2)**	0.122				**184**	**284**	
32.52SN	0.031	0.004	10°	**B (2)**	0.110			**125**	**125**	**235**	**235**
32.52SN	0.031	0.004	15°	**B (2)**	0.110			**135**		**245**	**245**
32.52TLL	0.031	0.005	15°	**A (1)**	0.382		**20000**				
32.52TN	0.031	0.005	15°	**A (1)**	0.098	**20600**					
32.52SN	0.031	0.004	20°	**B (2)**	0.110						**255**
32.52TN	0.031	0.006	20°	**B (2)**	0.110			**145**	**145**		
32.52SN	0.031	0.006	20°	**B (2)**	0.110			**155**	**155**		
32.52FN	0.031			**B (2)**	0.110						**215**
32.52EN	0.031			**B (2)**	0.110			**115**			**225**
32.52FN	0.031			**A (1)**	0.098	**20500**					
32.52TN	0.031	0.006	25°	**B (2)**	0.110					**265**	**265**
32.52SN	0.031	0.006	25°	**B (2)**	0.110					**275**	
32.52TN	0.031	0.007	25°	**B (2)**	0.110			**165**	**165**		
32.52SN	0.031	0.007	25°	**B (2)**	0.110				**175**		
32.52SN	0.031	0.007	30°	**B (2)**	0.110				**185**		
431TN	0.016	0.005	15°	**A (1)**	0.122	**20800**					
431FN	0.016			**A (1)**	0.122	**20700**					
432TN	0.031	0.005	15°	**A (1)**	0.110	**20900**					
P											
M											
K						●	●	●	●		
N											
S						●	●	●	●		
H										●	●
O											

CCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners

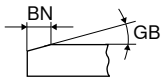


						NEW	NEW	NEW
						CTBH15U	CTBH15C	-Q CTBH15C
								
						F	F	F
						CBN CCGW	CBN CCGW	CBN CCGW
						71 001 ...	71 000 ...	71 002 ...
ANSI	RE inch	BN inch	GB	**TCE (NOI)**	LE inch			
21.5.5SN	0.008	0.004	15°	**B (2)**	0.134	**30214**	**30214**	
21.5.5EN	0.008			**B (2)**	0.134	**00200**	**00200**	
21.51SN	0.016	0.004	15°	**B (2)**	0.122	**30414**	**30414**	
21.51EN	0.016			**B (2)**	0.122	**00400**	**00400**	
21.51SN	0.016	0.006	25°	**B (2)**	0.122	**30429**	**30429**	
21.52EN	0.031			**B (2)**	0.110	**00600**	**00600**	
21.52SN	0.031	0.004	15°	**B (2)**	0.110	**30614**	**30614**	
21.52SN	0.031	0.006	25°	**B (2)**	0.110	**30629**	**30629**	
32.5.5SN	0.008	0.004	15°	**B (2)**	0.134		**31414**	
32.5.5SN	0.008	0.006	25°	**B (2)**	0.134		**31429**	
32.51SN	0.016	0.004	15°	**B (2)**	0.122		**31614**	**31614**
32.51SN	0.016	0.006	25°	**B (2)**	0.122		**31629**	**31629**
32.52SN	0.031	0.004	15°	**B (2)**	0.110		**31814**	**31814**
32.52SN	0.031	0.006	25°	**B (2)**	0.110		**31829**	**31829**
P								
M								
K								
N								
S								
H						●	●	●
O								

4

CCGW / CCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners



	CTBH21U	CTBH20U	CTBH20U	-Q CTBH20U	CTBH20U	CTBH20C
	F	F	F	F	F	F
	CBN CCGW	CBN CCGT	CBN CCGW	CBN CCGW	CBN CCGW	CBN CCGW
	71 120 ...	71 124 ...	71 121 ...	71 123 ...	71 120 ...	71 161 ...

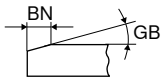
ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch											
21.5.5SN	0.008	0.004	10°	B (2)	0.134											230
21.5.5SN	0.008	0.004	20°	B (2)	0.134											250
21.5.5TN	0.008	0.005	20°	A (1)	0.134									500		
21.5.5TN	0.008	0.006	25°	B (2)	0.134											260
21.5.5SN	0.008	0.006	25°	B (2)	0.134											270
21.5.5FN	0.008			A (1)	0.134			400						400 [1]		
21.51SN	0.016	0.004	10°	B (2)	0.122											231
21.51SN	0.016	0.004	15°	B (2)	0.122											241
21.51SN	0.016	0.004	20°	B (2)	0.122											251
21.51TN	0.016	0.005	20°	A (1)	0.122									502		
21.51TN	0.016	0.006	25°	B (2)	0.122											261
21.51SN	0.016	0.006	25°	B (2)	0.122											271
21.51EN	0.016			B (2)	0.122											221
21.51FN	0.016			A (1)	0.122			402						402 [1]		
21.52SN	0.031	0.004	10°	B (2)	0.110											232
21.52SN	0.031	0.004	20°	B (2)	0.110											252
21.52FN	0.031			B (2)	0.110											212
21.52TN	0.031	0.006	25°	B (2)	0.110											262
21.52SN	0.031	0.007	30°	B (2)	0.110											282
32.5.5SN	0.008	0.004	10°	B (2)	0.134											233
32.5.5SN	0.008	0.004	15°	B (2)	0.134											243
32.5.5SN	0.008	0.004	20°	B (2)	0.134											253
32.5.5TN	0.008	0.005	20°	B (2)	0.134					50100						
32.5.5SN	0.008	0.006	25°	B (2)	0.134											273
32.51SN	0.016	0.004	10°	B (2)	0.122											234
32.51SN	0.016	0.004	15°	B (2)	0.122											244
32.51SN	0.016	0.004	20°	B (2)	0.122											254
32.51TN	0.016	0.005	20°	A (1)	0.110									504		
32.51TN	0.016	0.005	20°	B (2)	0.122					502		502				
32.51TN	0.016	0.006	25°	B (2)	0.122											264
32.51SN	0.016	0.006	25°	B (2)	0.122											274
32.51EN	0.016			B (2)	0.122											224
32.51FN	0.016			A (1)	0.110									404 [1]		
32.51FN	0.016			B (2)	0.122					402 [1]						
32.51FN	0.016			A (1)	0.122	40500		45000								
32.51SN	0.016	0.007	30°	B (2)	0.122											284
32.52SN	0.031	0.004	10°	B (2)	0.110											235
32.52SN	0.031	0.004	15°	B (2)	0.110											245
32.52TN	0.031	0.005	20°	A (1)	0.098									506		
32.52FN	0.031			A (1)	0.098									406 [1]		
32.52FN	0.031			B (2)	0.110					404 [1]		404 [1]				
32.52TN	0.031	0.005	20°	B (2)	0.110					504		504				
32.52FN	0.031			A (1)	0.110			45200								
32.52TN	0.031	0.006	25°	B (2)	0.110											265
32.52SN	0.031	0.006	25°	B (2)	0.110											275
431TN	0.016	0.005	20°	A (1)	0.122									508		
432TN	0.031	0.005	20°	A (1)	0.110									510		

P						
M						
K						
N						
S						
H	●	●	●	●	●	●
O						

1) Machining to 60 HRC

CCGW / CCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners



	-Q CTBH20C	CTBH40U	CTBH40U	CTBH40U	-Q CTBH40U
	F	F	F	F	F
	CBN CCGW	CBN CCGW	CBN CCGT	CBN CCGW	CBN CCGW
	71 162 ...	71 120 ...	71 124 ...	71 121 ...	71 123 ...

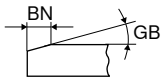
ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch									
21.5.5SN	0.008	0.004	10°	B (2)	0.134	230								
21.5.5FN	0.008			A (1)	0.134		800		800					
21.5.5FN	0.008			B (2)	0.134	210								
21.5.5EN	0.008			B (2)	0.134	220								
21.5.5SN	0.008	0.004	15°	B (2)	0.134	240								
21.5.5TN	0.008	0.005	25°	A (1)	0.134		900							
21.51SN	0.016	0.004	10°	B (2)	0.122	231								
21.51FN	0.016			A (1)	0.122		802		802					
21.51SN	0.016	0.004	15°	B (2)	0.122	241								
21.51SN	0.016	0.004	20°	B (2)	0.122	251								
21.51TN	0.016	0.005	25°	A (1)	0.122		902							
21.51TN	0.016	0.006	25°	B (2)	0.122	261								
21.52TN	0.031	0.005	25°	A (1)	0.110		90300							
32.5.5FN	0.008			B (2)	0.134						80100			
32.51FN	0.016			A (1)	0.122				85000					
32.51FN	0.016			B (2)	0.122						802		802	
32.51TN	0.016	0.005	25°	B (2)	0.122						902		902	
32.51FN	0.016			A (1)	0.110		804							
32.51TN	0.016	0.005	25°	A (1)	0.110		904							
32.52FN	0.031			A (1)	0.098		806							
32.52FN	0.031			B (2)	0.110	215					804		804	
32.52TN	0.031	0.005	25°	B (2)	0.110						904		904	
32.52TN	0.031	0.005	25°	A (1)	0.098		906							
32.52EN	0.031			B (2)	0.110	225								
32.52SN	0.031	0.004	10°	B (2)	0.110	235								
32.52SN	0.031	0.004	15°	B (2)	0.110	245								
32.52SN	0.031	0.004	20°	B (2)	0.110	255								
32.52TN	0.031	0.006	25°	B (2)	0.110	265								
431TN	0.016	0.005	25°	A (1)	0.122		908							
431FN	0.016			A (1)	0.122		808							
432TN	0.031	0.005	25°	A (1)	0.110		910							

P										
M										
K										
N										
S										
H						●	●	●	●	●
O										

4

CCGW

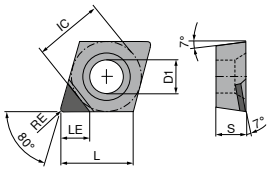
▲ TCE(NOI) = Design and number of equipped cutting edge corners



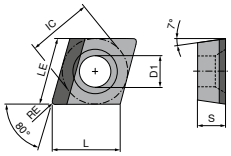
						F	F
						CBN	CBN
						CCGW	CCGW
						71 161 ...	71 162 ...
ANSI	RE inch	BN inch	GB	**TCE (NOI)**	LE inch		
21.5.5TN	0.008	0.004	20°	**B (2)**	0.134	320	
21.5.5SN	0.008	0.004	20°	**B (2)**	0.134		330
21.5.5SN	0.008	0.004	25°	**B (2)**	0.134	350	350
21.5.5TN	0.008	0.004	25°	**B (2)**	0.134	340	340
21.5.5TN	0.008	0.006	30°	**B (2)**	0.134	360	360
21.51SN	0.016	0.004	20°	**B (2)**	0.122	331	
21.51TN	0.016	0.004	20°	**B (2)**	0.122	32100	
21.51SN	0.016	0.004	25°	**B (2)**	0.122	351	351
21.51TN	0.016	0.004	25°	**B (2)**	0.122	341	341
21.51TN	0.016	0.006	30°	**B (2)**	0.122	361	361
21.51SN	0.016	0.006	30°	**B (2)**	0.122	371	371
21.51SN	0.016	0.007	35°	**B (2)**	0.122	381	381
21.52TN	0.031	0.004	20°	**B (2)**	0.110	322	
21.52SN	0.031	0.004	25°	**B (2)**	0.110	352	
21.52TN	0.031	0.004	25°	**B (2)**	0.110	342	
21.52TN	0.031	0.006	30°	**B (2)**	0.110	362	
21.52SN	0.031	0.006	30°	**B (2)**	0.110	372	
21.52SN	0.031	0.007	35°	**B (2)**	0.110	382	
32.5.5TN	0.008	0.004	20°	**B (2)**	0.134	323	
32.5.5SN	0.008	0.004	25°	**B (2)**	0.134	353	
32.5.5TN	0.008	0.004	25°	**B (2)**	0.134	343	
32.5.5SN	0.008	0.006	30°	**B (2)**	0.134	373	
32.5.5SN	0.008	0.007	35°	**B (2)**	0.134	383	
32.51SN	0.016	0.004	20°	**B (2)**	0.122	334	334
32.51TN	0.016	0.004	20°	**B (2)**	0.122	324	324
32.51SN	0.016	0.004	25°	**B (2)**	0.122	354	354
32.51TN	0.016	0.004	25°	**B (2)**	0.122	344	344
32.51TN	0.016	0.006	30°	**B (2)**	0.122	364	364
32.51EN	0.016			**B (2)**	0.122	314	
32.51SN	0.016	0.006	30°	**B (2)**	0.122	374	
32.51SN	0.016	0.007	35°	**B (2)**	0.122	384	
32.52SN	0.031	0.004	20°	**B (2)**	0.110	335	335
32.52TN	0.031	0.004	20°	**B (2)**	0.110	325	325
32.52SN	0.031	0.004	25°	**B (2)**	0.110	355	355
32.52TN	0.031	0.004	25°	**B (2)**	0.110	345	345
32.52TN	0.031	0.006	30°	**B (2)**	0.110	365	365
32.52SN	0.031	0.006	30°	**B (2)**	0.110		375
32.52EN	0.031			**B (2)**	0.110		315
32.52SN	0.031	0.007	35°	**B (2)**	0.110	385	
P							
M							
K							
N							
S							
H						●	●
O							

CCGW / CCGT

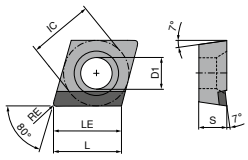
Designation	L inch	S inch	D1 inch	IC inch
CCG. 21..	0.252	0.094	0.110	0.250
CCG. 32..	0.382	0.156	0.173	0.375
CCG. 43..	0.508	0.187	0.217	0.500



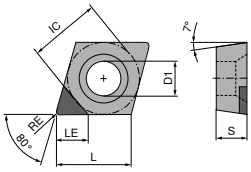
CCGT A



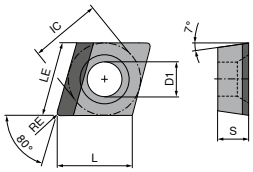
CCGT A LL



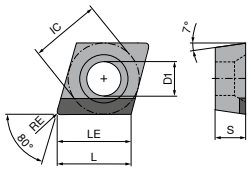
CCGT A RR



CCGW A



CCGW A LL



CCGW A RR

CCGW / CCGT

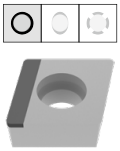
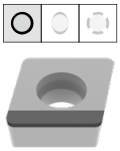
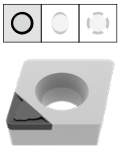
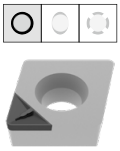
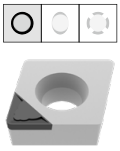
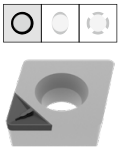
▲ TCE(NOI) = Design and number of equipped cutting edge corners

4

				CTDMD05	CTDPD20	CTDPD20	-Q CTDPD20	-Q CTDPD20
				F	F	F	F	F
				DIAMOND CCGW	DIAMOND CCGW	DIAMOND CCGT	DIAMOND CCGW	DIAMOND CCGT
				71 120 ...	71 120 ...	71 124 ...	71 125 ...	71 126 ...
ANSI	RE inch	TCE (NOI)	LE inch					
21.50FN	0.004	A (1)	0.134					101
21.50FN	0.004	A (1)	0.138			10100		
21.5.5FN	0.008	A (1)	0.098	050				
21.5.5FN	0.008	A (1)	0.130				102	102
21.5.5FN	0.008	A (1)	0.134		100	100		
21.51FN	0.016	A (1)	0.098	052				
21.51FN	0.016	A (1)	0.122					104
21.51FN	0.016	A (1)	0.126		102	102	104	
21.52FN	0.031	A (1)	0.098	05300				
21.52FN	0.031	A (1)	0.118		10300	10300		
32.50FN	0.004	A (1)	0.177				111	111
32.5.5FN	0.008	A (1)	0.173				112	112
32.5.5FN	0.008	A (1)	0.177		10500	10500		
32.51FN	0.016	A (1)	0.098	054				
32.51FN	0.016	A (1)	0.165				114	114
32.51FN	0.016	A (1)	0.169		104	104		
32.52FN	0.031	A (1)	0.098	056				
32.52FN	0.031	A (1)	0.161		106	106		
43.5FN	0.008	A (1)	0.173				122	122
431FN	0.016	A (1)	0.165				124	124
431FN	0.016	A (1)	0.169		108	108		
432FN	0.031	A (1)	0.161		110	110		
P								
M								
K								
N				●	●	●	●	●
S								
H								
O				●	●	●	●	●

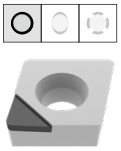
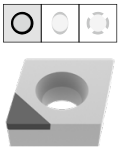
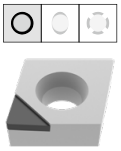
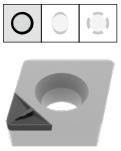
CCGW / CCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners

				NEW	NEW		NEW		NEW
				CTDPD20	CTDPD20	-CB1 CTDPD20	-CB2 CTDPD20	-CB1 CTDPD20	-Q-CB2 CTDPD20
									
				F	F	F	M	F	M
				DIAMOND CCGW	DIAMOND CCGW	DIAMOND CCGT	DIAMOND CCGT	DIAMOND CCGT	DIAMOND CCGT
				71 172 ...	71 172 ...	71 300 ...	71 168 ...	71 305 ...	71 169 ...
ANSI	RE inch	**TCE (NOI)**	LE inch						
21.5.5FN	0.008	**A (1)**	0.134			**102**			
21.51FN	0.016	**A (1)**	0.122					**104**	
21.51FN	0.016	**A (1)**	0.126			**104**	**10001**		
21.51FRR	0.016	**A (1)**	0.254		**10101**				
21.51FLL	0.016	**A (1)**	0.254	**10001**					
21.52FN	0.031	**A (1)**	0.118			**10600**			
32.5.5FN	0.008	**A (1)**	0.173						**10001**
32.5.5FN	0.008	**A (1)**	0.177			**112**			
32.51FN	0.016	**A (1)**	0.165					**114**	**10101**
32.51FN	0.016	**A (1)**	0.169			**114**			
32.52FN	0.031	**A (1)**	0.161			**118**			
32.52FRR	0.031	**A (1)**	0.382		**10301**				
32.52FLL	0.031	**A (1)**	0.382	**10201**					
32.53FLL	0.047	**A (1)**	0.382	**10401**					
431FN	0.016	**A (1)**	0.165					**124**	**10201**
431FN	0.016	**A (1)**	0.169			**124**			
432FN	0.031	**A (1)**	0.161			**128**			
433FRR	0.047	**A (1)**	0.508		**10601**				
433FLL	0.047	**A (1)**	0.508	**10501**					
P									
M									
K									
N				●	●	●	●	●	●
S									
H									
O				●	●	●	●	●	●

CCGT / CCGW

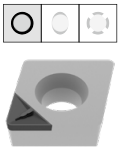
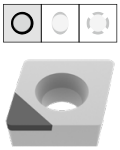
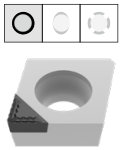
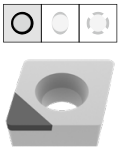
▲ TCE(NOI) = Design and number of equipped cutting edge corners

				NEW				NEW	NEW	
				CTDPS30	-Q CTDPS30	-Q CTDPS30	CTDPS30	CTDPS30	-CB2 CTDPS30
									
				F	F	F	F	F	M
				DIAMOND CCGT	DIAMOND CCGW	DIAMOND CCGT	DIAMOND CCGT	DIAMOND CCGT	DIAMOND CCGT
				71 166 ...	71 125 ...	71 126 ...	71 170 ...	71 170 ...	71 301 ...
ANSI	RE inch	TCE (NOI)	LE inch						
21.50FN	0.004	A (1)	0.138	20001					
21.5.5FN	0.008	A (1)	0.130		152	152			
21.5.5FN	0.008	A (1)	0.134	20101					202
21.51FN	0.016	A (1)	0.126						204
21.51FRR	0.016	A (1)	0.254					20101	
21.51FLL	0.016	A (1)	0.254				20001		
21.52FN	0.031	A (1)	0.118						208
21.52FRR	0.031	A (1)	0.254					20301	
21.52FLL	0.031	A (1)	0.254				20201		
32.50FN	0.004	A (1)	0.177		16300				
32.5.5FN	0.008	A (1)	0.173		162	162			
32.5.5FN	0.008	A (1)	0.177	20201					212
32.51FN	0.016	A (1)	0.169						214
32.52FN	0.031	A (1)	0.161						218
32.52FRR	0.031	A (1)	0.382					20501	
32.52FLL	0.031	A (1)	0.382				20401		
43.5FN	0.008	A (1)	0.173			172			
431FN	0.016	A (1)	0.165			174			
431FN	0.016	A (1)	0.169	20301					224
432FN	0.031	A (1)	0.161						228
433FRR	0.047	A (1)	0.508					20701	
433FLL	0.047	A (1)	0.508				20601		
P									
M									
K									
N				●	●	●	●	●	●
S									
H									
O				●	●	●	●	●	●

4

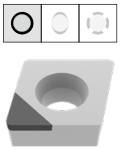
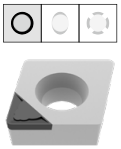
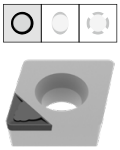
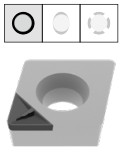
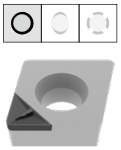
CCGT / CCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners

				NEW		NEW
			-Q-CB2 CTDPS30	CTDPU20	-CB3 CTDPU20	CTDPS30
						
			M	F	R	F
			DIAMOND CCGT	DIAMOND CCGW	DIAMOND CCGT	DIAMOND CCGW
			71 306 ...	71 171 ...	71 302 ...	71 171 ...
ANSI	RE inch	TCE (NOI)	LE inch							
21.50FN	0.004	A (1)	0.138							20001
21.5.5FN	0.008	A (1)	0.130	202						
21.5.5FN	0.008	A (1)	0.134							20101
21.51FN	0.016	A (1)	0.122	204						
21.51FN	0.016	A (1)	0.126					204		20201
32.5.5FN	0.008	A (1)	0.173	212						
32.5.5FN	0.008	A (1)	0.177							20301
32.51FN	0.016	A (1)	0.165	214						
32.51FN	0.016	A (1)	0.169		30001			214		20401
32.52FN	0.031	A (1)	0.161		30101			218		
43.5FN	0.008	A (1)	0.173	222						
431FN	0.016	A (1)	0.165	224						
431FN	0.016	A (1)	0.169							20501
P										
M										
K										
N				●	●			●		●
S										
H										
O				●	●			●		●

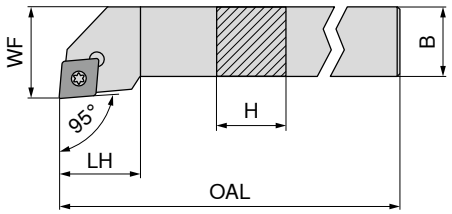
CCGW / CCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners

				NEW			NEW			
				CTDCD10	-CB1 CTDCD10		-Q-CB1 CTDCD10		-CB2 CTDCD10		-Q-CB2 CTDCD10	
												
				F	F		F		M		M	
				DIAMOND CCGW	DIAMOND CCGT		DIAMOND CCGT		DIAMOND CCGT		DIAMOND CCGT	
				71 171 ...	71 300 ...		71 167 ...		71 301 ...		71 306 ...	
ANSI	RE inch	TCE (NOI)	LE inch									
21.5.5FN	0.008	A (1)	0.091					40001				
21.5.5FN	0.008	A (1)	0.094	40001		302				30200		
21.51FN	0.016	A (1)	0.083					40101				304
21.51FN	0.016	A (1)	0.087	40101		304				304		
21.52FN	0.031	A (1)	0.079			30600						
32.5.5FN	0.008	A (1)	0.091									31200
32.5.5FN	0.008	A (1)	0.094	40201						31200		
32.51FN	0.016	A (1)	0.083					40201				314
32.51FN	0.016	A (1)	0.087	40301		314				314		
32.52FN	0.031	A (1)	0.079	40401						31600		
431FN	0.016	A (1)	0.083					40301				324
431FN	0.016	A (1)	0.087							32600		
432FN	0.031	A (1)	0.079	40501								
432FN	0.031	A (1)	0.083							328		
P												
M												
K												
N				●	●		●		●		●	
S												
H												
O				●	●		●		●		●	

4

MaxiLock-S – SCLC 95° – Toolholder with screw clamping

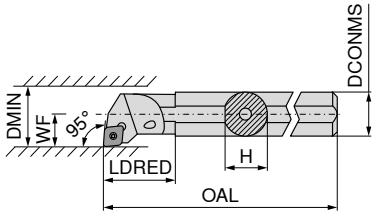


Illustrations show right-hand versions

Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 553 ...	Right-hand 78 552 ...
SCLC R/L 06-2	0.375	0.375	2.500	0.390	0.500	CC..21.5..	00602	00602
SCLC R/L 08-3	0.500	0.500	3.500	0.630	0.625	CC..32.5..	00803	00803
SCLC R/L 10-3	0.625	0.625	4.000	0.630	0.750	CC..32.5..	01003	01003
SCLC R/L 12-3B	0.750	0.750	4.500	0.630	1.000	CC..32.5..	01223	01223
SCLC R/L 16-3D	1.000	1.000	6.000	0.630	1.250	CC..32.5..	01643	01643
SCLC R/L 12-4B	0.750	0.750	4.500	1.000	1.000	CC..43..	01224	01224
SCLC R/L 16-4D	1.000	1.000	6.000	1.000	1.250	CC..43..	01644	01644
SCLC R/L 20-4D	1.250	1.250	6.000	1.000	1.500	CC..43..	02044	02044

Spare parts for Article no.	 Key I 78 950 ...	 Clamping screw 78 950 ...	 Carbide type C 78 950 ...	 Threaded sleeve 78 950 ...
78 552 00602 / 78 553 00602	06400	06200		
78 552 00803 / 78 553 00803	05700	05600		
78 552 01003 / 78 553 01003	05700	05600		
78 552 01223 / 78 553 01223	05700	05600		
78 552 01643 / 78 553 01643	05700	05600		
78 552 01224 / 78 553 01224	04700		04500	04800
78 552 01644 / 78 553 01644	04700		04500	04800
78 552 02044 / 78 553 02044	04700		04500	04800

MaxiLock-S – SCLC 95° – Boring bar with screw clamping



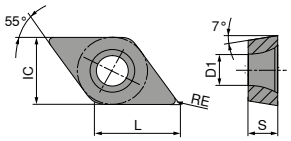
Illustrations show right-hand versions

Designation	DCONMS inch	H inch	OAL inch	LDRED inch	WF inch	DMIN inch	Insert	Left-hand 78 719 ...	Right-hand 78 718 ...
S06M SCLC R/L 2	0.375	0.340	6.000	0.830	0.250	0.500	CC..21.5..	**20617**	**20617**
A06M SCLC R/L 2	0.375	0.340	6.000	0.830	0.250	0.500	CC..21.5..	**20606**	**20606**
S08M SCLC R/L 2	0.500	0.460	6.000	0.910	0.312	0.625	CC..21.5..	**20818**	**20818**
A08M SCLC R/L 2	0.500	0.460	6.000	0.910	0.312	0.625	CC..21.5..	**20808**	**20808**
S10R SCLC R/L 2	0.625	0.580	8.000	1.060	0.406	0.812	CC..21.5..	**21021**	**21021**
A10R SCLC R/L 2	0.625	0.580	8.000	1.060	0.406	0.812	CC..21.5..	**21010**	**21010**
S10R SCLC R/L 3	0.625	0.580	8.000	1.060	0.406	0.812	CC..32.5..	**31021**	**31021**
A10R SCLC R/L 3	0.625	0.580	8.000	1.060	0.406	0.812	CC..32.5..	**31010**	**31010**
S12S SCLC R/L 3M	0.750	0.710	10.000	1.580	0.500	1.000	CC..32.5..	**91222**	**91222**
A12S SCLC R/L 3M	0.750	0.710	10.000	1.580	0.500	1.000	CC..32.5..	**91212**	**91212**
S16T SCLC R/L 3M	1.000	0.900	12.000	1.810	0.640	1.280	CC..32.5..	**91626**	**91626**
S16T SCLC R/L 4	1.000	0.900	12.000	3.000	0.640	1.280	CC..43..	**41626**	**41626**
S20U SCLC R/L 4	1.250	1.180	14.000	3.000	0.765	1.530	CC..43..	**42030**	**42030**
S24V SCLC R/L 4	1.500	1.370	16.000	3.000	0.890	1.780	CC..43..	**42435**	**42435**

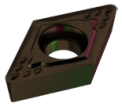
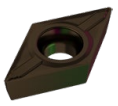
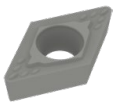
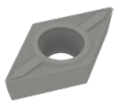
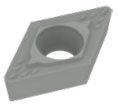
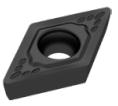
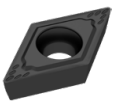
Spare parts for Article no.	 Key I **78 950 ...**	 Clamping screw **78 950 ...**	 Carbide type C **78 950 ...**	 Threaded sleeve **78 950 ...**
78 718 20617 / 78 719 20617	**06400**	**05200**		
78 718 20606 / 78 719 20606	**06400**	**05200**		
78 718 20818 / 78 719 20818	**06400**	**05200**		
78 718 20808 / 78 719 20808	**06400**	**05200**		
78 718 21021 / 78 719 21021	**06400**	**05200**		
78 718 21010 / 78 719 21010	**06400**	**05200**		
78 718 31021 / 78 719 31021	**06400**	**05200**		
78 718 31010 / 78 719 31010	**05700**	**05800**		
78 718 91222 / 78 719 91222	**05700**	**05800**		
78 718 91212 / 78 719 91212	**05700**	**05800**		
78 718 91626 / 78 719 91626	**05700**	**05800**		
78 718 41626 / 78 719 41626	**06600**	**06500**		
78 718 42030 / 78 719 42030	**04700**	**04600**	**04500**	**04800**
78 718 42435 / 78 719 42435	**04700**	**04600**	**04500**	**04800**

DCGT / DCMT / DCET

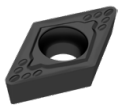
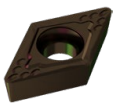
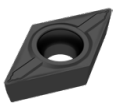
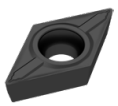
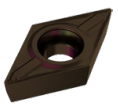
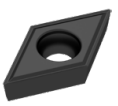
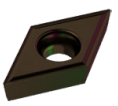
Designation	L inch	S inch	D1 inch	IC inch
DC.T 21..	0.305	0.094	0.110	0.250
DC.T 32..	0.457	0.156	0.173	0.375



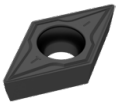
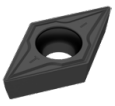
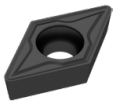
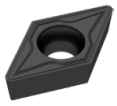
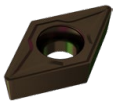
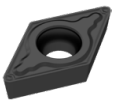
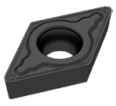
DCGT / DCMT

	-CF05 CTEP110	-CF55 CTEP110	-SF TCM10	-SMF TCM10	-SF TCM407	-SF CTCP125	-SF CTCP115
	DRAGONSKIN	DRAGONSKIN				DRAGONSKIN	DRAGONSKIN
							
	F	F	F	F	F	F	F
	CERMET DCGT	CERMET DCMT	CERMET DCGT	CERMET DCMT	CERMET DCGT	DCGT	DCMT
	76 245 ...	76 246 ...	70 257 ...	70 265 ...	70 257 ...	76 257 ...	76 259 ...
ANSI / RE inch							
21.5.5EN 0.008	002	002	900	898		502	
21.50EN 0.004			898				
21.51EN 0.016	004	004	902	900	852		304
32.5.5EN 0.008	014		904		854		
32.51EN 0.016	016	016	906	904	856		316
32.52EN 0.031	018	018	908	906	858		318
P	●	●	●	●	●	●	●
M	○	○	○	○	○		
K	○	○	○	○	○	○	○
N							
S							
H							
O							

DCMT / DCGT

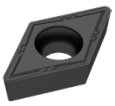
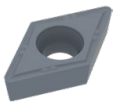
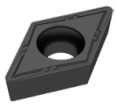
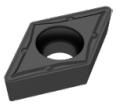
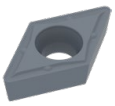
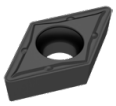
	-SF CTCP125	-SF CTCP135	-SMF CTCP115	-SMF CTCP125	-SMF CTCP135	-SM CTCP125	-SM CTCP135
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
	F	F	F	F	F	M	M
	DCMT	DCMT	DCMT	DCMT	DCMT	DCGT	DCGT
	76 259 ...	76 259 ...	76 265 ...	76 265 ...	76 265 ...	76 256 ...	76 256 ...
ANSI / RE inch							
21.5.5EN 0.008						502	702
21.51EN 0.016	504	704		504	704		
21.52EN 0.031					706		
32.51EN 0.016	516	716	316	516	716		
32.52EN 0.031	518	718	318	518	718		
P	●	●	●	●	●	●	●
M		○			○		○
K	○		○	○		○	
N							
S							
H							
O							

DCMT

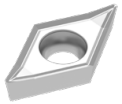
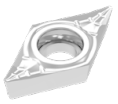
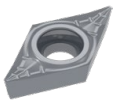
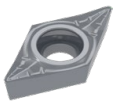
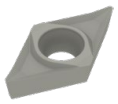
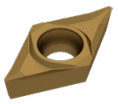
	-SM CTCK110	-SM CTCK120	-SM CTCP115	-SM CTCP125	-SM CTCP135	-SMQ CTCP115	-SMQ CTCP125
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
	M	M	M	M	M	M	M
	DCMT	DCMT	DCMT	DCMT	DCMT	DCMT	DCMT
	70 258 ...	70 258 ...	76 258 ...	76 258 ...	76 258 ...	76 195 ...	76 195 ...
ANSI / RE inch							
21.51EN 0.016	004	554	304	504	704	304	504
21.52EN 0.031	006	506	306	506	706		
32.51EL 0.016						31600	516
32.51EN 0.016	016	516	316	516	716	31500	515
32.51ER 0.016						31700	517
32.52EN 0.031	018	518	318	518	718	31800	518
32.53EN 0.047				520			
P	○	○	●	●	●	●	●
M					○		
K	●	●	○	○		○	○
N							
S							
H							
O							

4

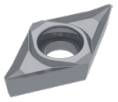
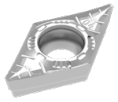
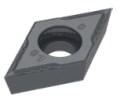
DCMT

	NEW -M25 CTCM120	-M25 CTPM125	NEW -M25 CTCM130	NEW -M55 CTCM120	-M55 CTPM125	NEW -M55 CTCM130
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
	F	F	F	M	M	M
	DCMT	DCMT	DCMT	DCMT	DCMT	DCMT
	75 213 ...	75 213 ...	75 213 ...	75 214 ...	75 214 ...	75 214 ...
ANSI / RE inch						
21.5.5EN 0.008	10200	202	30200			
21.51EN 0.016	10400	204	30400	10400	204	30400
21.52EN 0.031				10600	206	30600
32.5.5EN 0.008	11400	214	31400			
32.51EN 0.016	11600	216	31600	11600	216	31600
32.52EN 0.031	11800	218	31800	11800	218	31800
P	○	○	○	○	○	○
M	●	●	●	●	●	●
K						
N						
S			○			○
H						
O						

DCGT

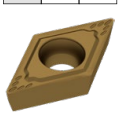
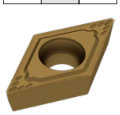
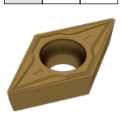
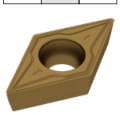
		-23P H216T	-25P H210T	NEW -25P CTPX710 DRAGONSKIN	-25Q H210T	NEW -25Q CTPX710 DRAGONSKIN	-27 H10T	-27 CWN15
								
		F	F	M	M	M	M	M
		DCGT	DCGT	DCGT	DCGT	DCGT	DCGT	DCGT
		70 261 ...	70 263 ...	70 263 ...	70 263 ...	70 263 ...	70 260 ...	70 260 ...
ANSI	RE inch							
21.5.5FN	0.008		632	70200			600	300
21.51FN	0.016	654	634	70400			602	302
32.5.5FN	0.008		635	71400			604	304
32.51FL	0.016				670	75700		
32.51FN	0.016	664	636	71600	660	75600	606	306
32.51FR	0.016				680	75800		
32.52FL	0.031				672			
32.52FN	0.031	666	638	71800	662	76000	608	308
32.52FR	0.031				682			
P				●		●		
M				●		●		○
K		○	○		○		○	
N		●	●	●	●	●	●	●
S			○	●	○	●		
H								
O		○	○		○		○	

DCGT / DCMT / DCET

		NEW	NEW	NEW
		-27 CTPX715	-29 H216T	-F05 CTPX710
		DRAGONSKIN		DRAGONSKIN
				
		M	M	F
		DCGT	DCMT	DCET
		70 260 ...	70 246 ...	76 254 ...
ANSI	RE inch			
21.5X0FN	0.002			10200
21.50FN	0.004			10400
21.505FN	0.006			10600
21.5.5FN	0.008	80200		10800
21.51FN	0.016	80400		
21.51EN	0.016		60400	
32.5X0FN	0.002			11400
32.50FN	0.004			11600
32.5X0FN	0.006			11800
32.5.5FN	0.008	81400		12000
32.51EN	0.016		61600	
32.51FN	0.016	81600		12200
32.52EN	0.031		61800	
32.52FN	0.031	81800		
P		●		●
M		●		●
K		○	○	
N		●	●	●
S		●		●
H				
O		○	○	

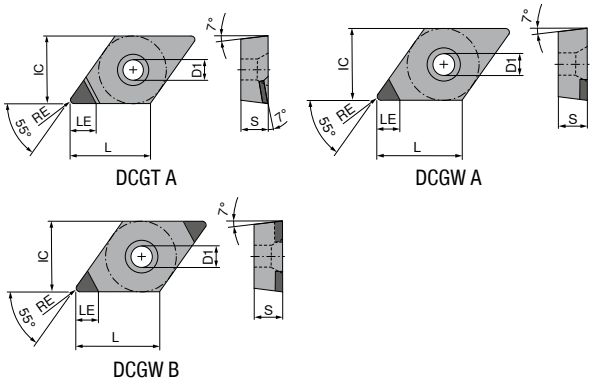
4

DCMT

		NEW	NEW	NEW	NEW
		-FMS CT-P15	-FMS CT-P25	-MRS CT-P15	-MRS CT-P25
					
		F	F	M	M
		DCMT	DCMT	DCMT	DCMT
		75 304 ...	75 304 ...	75 305 ...	75 305 ...
ANSI	RE inch				
21.51EN	0.016	**00409**	**10409**	**00409**	**10409**
21.52EN	0.031	**00609**	**10609**	**00609**	**10609**
32.51EN	0.016	**01609**	**11609**	**01609**	**11609**
32.52EN	0.031	**01809**	**11809**	**01809**	**11809**
P		●	●	●	●
M		○	○	○	○
K					
N					
S					
H					
O					

DCGW / DCGT

Designation	L inch	S inch	D1 inch	IC inch
DCG. 21..	0.305	0.094	0.110	0.250
DCG. 32..	0.457	0.156	0.173	0.375



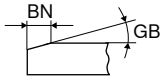
DCGT A

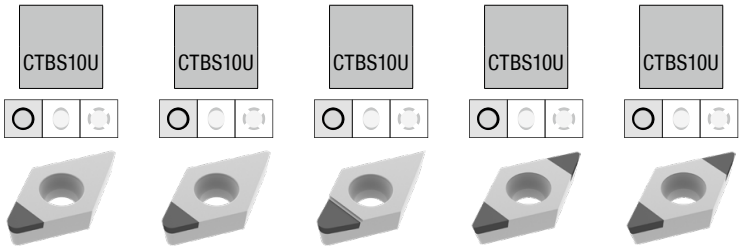
DCGW A

DCGW B

DCGW / DCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners



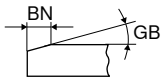


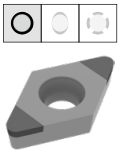
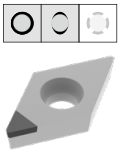
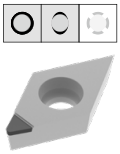
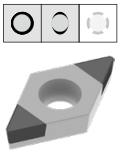
						F		F		F		F		F	
						CBN DCGW		CBN DCGW		CBN DCGT		CBN DCGW		CBN DCGW	
						71 130 ...		71 130 ...		71 134 ...		71 131 ...		71 131 ...	
ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch										
21.5.5TN	0.008	0.005	20°	A (1)	0.154		300								
21.5.5FN	0.008			A (1)	0.154				200		200				
21.51TN	0.016	0.005	20°	A (1)	0.138		302								
21.51FN	0.016			A (1)	0.138				202		202				
21.52TN	0.031	0.005	20°	A (1)	0.118		304								
21.52FN	0.031			A (1)	0.118				204		204				
32.5.5FN	0.008			A (1)	0.154				206		206				
32.5.5FN	0.008			B (2)	0.154										200
32.5.5TN	0.008	0.005	20°	B (2)	0.154								300		
32.5.5TN	0.008	0.005	20°	A (1)	0.154		306								
32.51FN	0.016			A (1)	0.138				208		208				
32.51FN	0.016			B (2)	0.138										202
32.51TN	0.016	0.005	20°	B (2)	0.138								302		
32.51TN	0.016	0.005	20°	A (1)	0.138		308								
32.52FN	0.031			A (1)	0.118				210		210				
32.52FN	0.031			B (2)	0.118										204
32.52TN	0.031	0.005	20°	B (2)	0.118								304		
32.52TN	0.031	0.005	20°	A (1)	0.118		310								
P															
M															
K							●		●		●		●		●
N															
S							●		●		●		●		●
H															
O															

4

DCGW / DCGT

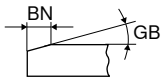
▲ TCE(NOI) = Design and number of equipped cutting edge corners



						NEW	NEW	NEW	NEW		NEW
						CTBS10C	CTBS20U	CTBS20U	CTBS20U	CTBS20C	CTBH15U
											
						F	F	F	F	F	F
						CBN DCGW	CBN DCGW	CBN DCGT	CBN DCGW	CBN DCGW	CBN DCGW
						71 424 ...	71 422 ...	71 421 ...	71 163 ...	71 163 ...	71 008 ...
ANSI	**RE inch**	**BN inch**	**GB**	**TCE (NOI)**	**LE inch**						
21.5.5SN	0.008	0.004	10°	**B (2)**	0.154	**80100**				**120**	
21.5.5SN	0.008	0.004	15°	**B (2)**	0.154					**130**	**30214**
21.5.5TN	0.008	0.005	15°	**A (1)**	0.154		**20100**				
21.5.5TN	0.008	0.006	20°	**B (2)**	0.154					**140**	
21.5.5SN	0.008	0.006	20°	**B (2)**	0.154					**150**	
21.5.5TN	0.008	0.007	25°	**B (2)**	0.154					**160**	
21.5.5EN	0.008			**B (2)**	0.154						**00200**
21.5.5FN	0.008			**A (1)**	0.154		**20000**				
21.5.5FN	0.008			**B (2)**	0.154	**80000**					
21.51SN	0.016	0.004	10°	**B (2)**	0.138					**121**	
21.51TN	0.016	0.004	15°	**B (2)**	0.138	**80300**					
21.51SN	0.016	0.004	15°	**B (2)**	0.138					**131**	**30414**
21.51TN	0.016	0.005	15°	**A (1)**	0.138		**20200**				
21.51SN	0.016	0.006	15°	**B (2)**	0.138	**80400**					
21.51TN	0.016	0.006	20°	**B (2)**	0.138					**141**	
21.51SN	0.016	0.006	20°	**B (2)**	0.138					**151**	
21.51SN	0.016	0.006	25°	**B (2)**	0.138						**30429**
21.51TN	0.016	0.007	25°	**B (2)**	0.138					**161**	
21.51EN	0.016			**B (2)**	0.138						**00400**
21.51FN	0.016			**B (2)**	0.138	**80200**					
21.51SN	0.016	0.007	30°	**B (2)**	0.138					**181**	
21.52SN	0.031	0.004	15°	**B (2)**	0.118					**132**	
21.52TN	0.031	0.006	20°	**B (2)**	0.118					**142**	
21.52SN	0.031	0.006	20°	**B (2)**	0.118					**152**	
21.52TN	0.031	0.007	25°	**B (2)**	0.118					**162**	
21.52SN	0.031	0.007	25°	**B (2)**	0.118					**172**	
21.52EN	0.031			**B (2)**	0.118					**112**	
32.5.5SN	0.008	0.004	15°	**B (2)**	0.154					**133**	
32.5.5TN	0.008	0.005	15°	**A (1)**	0.154		**20400**				
32.5.5TN	0.008	0.006	20°	**B (2)**	0.154					**143**	
32.5.5SN	0.008	0.006	20°	**B (2)**	0.154					**153**	
32.5.5TN	0.008	0.007	25°	**B (2)**	0.154					**163**	
32.5.5EN	0.008			**B (2)**	0.154					**113**	
32.5.5FN	0.008			**A (1)**	0.154		**20300**				
32.51SN	0.016	0.004	10°	**B (2)**	0.138					**124**	
32.51TN	0.016	0.004	15°	**B (2)**	0.138	**80600**					
32.51SN	0.016	0.005	15°	**A (1)**	0.138		**20500**				
32.51SN	0.016	0.005	15°	**B (2)**	0.138				**13400**		
32.51SN	0.016	0.006	15°	**B (2)**	0.138	**80700**					
32.51SN	0.016	0.006	20°	**B (2)**	0.138	**80800**					
32.51TN	0.016	0.006	20°	**B (2)**	0.138					**144**	
32.51SN	0.016	0.006	20°	**B (2)**	0.138					**154**	
32.51TN	0.016	0.007	25°	**B (2)**	0.138					**164**	
32.51FN	0.016			**A (1)**	0.138			**20000**			
32.51FN	0.016			**B (2)**	0.138	**80500**					
32.51SN	0.016	0.007	25°	**B (2)**	0.138					**174**	
32.51SN	0.016	0.007	30°	**B (2)**	0.138					**184**	
P											
M											
K						●	●	●	●	●	
N											
S						●	●	●	●	●	
H											●
O											

DCGW / DCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners



						NEW	NEW	NEW	NEW		NEW
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						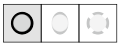					
						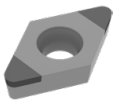	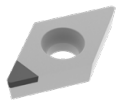	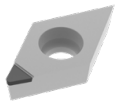	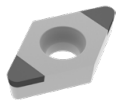	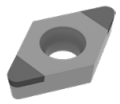	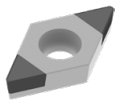
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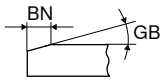
						CBN DCGW	CBN DCGW	CBN DCGT	CBN DCGW	CBN DCGW	CBN DCGW
						71 424 ...	71 422 ...	71 421 ...	71 163 ...	71 163 ...	71 008 ...
ANSI	RE inch	BN inch	GB	**TCE (NOI)**	LE inch						
32.52SN	0.031	0.004	10°	**B (2)**	0.118	**81000**					
32.52TN	0.031	0.004	15°	**B (2)**	0.118	**81100**					
32.52SN	0.031	0.004	15°	**B (2)**	0.118					**135**	
32.52TN	0.031	0.005	15°	**A (1)**	0.118		**20600**				
32.52SN	0.031	0.006	15°	**B (2)**	0.118	**81200**					
32.52SN	0.031	0.006	20°	**B (2)**	0.118	**81300**					
32.52TN	0.031	0.006	20°	**B (2)**	0.118					**145**	
32.52SN	0.031	0.006	20°	**B (2)**	0.118					**155**	
32.52TN	0.031	0.007	25°	**B (2)**	0.118					**165**	
32.52EN	0.031			**B (2)**	0.118	**80900**				**115**	
32.52FN	0.031			**A (1)**	0.118			**20100**			
32.52SN	0.031	0.007	30°	**B (2)**	0.118					**185**	
P											
M											
K						●	●	●	●	●	
N											
S						●	●	●	●	●	
H											●
O											

4

DCGW / DCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners



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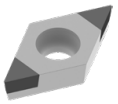
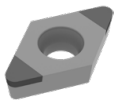
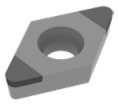
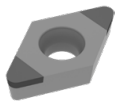
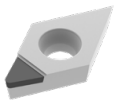
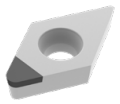
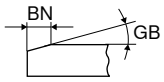
											
						F	F	F	F	F	F
						CBN DCGW	CBN DCGW	CBN DCGW	CBN DCGW	CBN DCGT	CBN DCGW
						71 012 ...	71 163 ...	71 007 ...	71 009 ...	71 134 ...	71 422 ...
ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch						
21.5.5SN	0.008	0.004	10°	B (2)	0.154		230				
21.5.5SN	0.008	0.004	15°	B (2)	0.154		240	30214			
21.5.5FN	0.008			A (1)	0.154					400	
21.5.5EN	0.008			B (2)	0.154			00200			
21.5.5SN	0.008	0.004	20°	B (2)	0.154		250				
21.5.5TN	0.008	0.005	25°	A (1)	0.154						40000
21.5.5TN	0.008	0.006	25°	B (2)	0.154		260				
21.51FN	0.016			B (2)	0.138		211				
21.51TN	0.016	0.005	25°	A (1)	0.138						40100
21.51FN	0.016			A (1)	0.138					402	
21.51EN	0.016			B (2)	0.138			00400			
21.51SN	0.016	0.004	15°	B (2)	0.138		241	30414			
21.51SN	0.016	0.006	25°	B (2)	0.138			30429			
21.51SN	0.016	0.004	10°	B (2)	0.138		231				
21.51SN	0.016	0.004	20°	B (2)	0.138		251				
21.51TN	0.016	0.006	25°	B (2)	0.138		261				
21.51SN	0.016	0.006	25°	B (2)	0.138		271				
21.52FN	0.031			B (2)	0.118		212				
21.52EN	0.031			B (2)	0.118	00600	222		00600		
21.52SN	0.031	0.004	15°	B (2)	0.118	30614			30614		
21.52SN	0.031	0.006	25°	B (2)	0.118	30629			30629		
21.52SN	0.031	0.004	10°	B (2)	0.118		232				
21.52SN	0.031	0.004	20°	B (2)	0.118		252				
21.52TN	0.031	0.006	25°	B (2)	0.118		262				
32.5.5SN	0.008	0.004	15°	B (2)	0.154		233				
32.5.5FN	0.008			A (1)	0.154					406	
32.5.5RN	0.008			B (2)	0.154			21400			
32.5.5SN	0.008	0.004	15°	B (2)	0.154		243	31414			
32.5.5SN	0.008	0.004	20°	B (2)	0.154		253				
32.5.5TN	0.008	0.006	25°	B (2)	0.154		263				
32.5.5SN	0.008	0.006	25°	B (2)	0.154			31429			
32.5.5SN	0.008	0.006	25°	B (2)	0.154		273				
32.51FN	0.016			B (2)	0.138		214				
32.51FN	0.016			A (1)	0.138					408	
32.51SN	0.016	0.004	15°	B (2)	0.138		244	31614			
32.51SN	0.016	0.006	25°	B (2)	0.138			31629			
32.51RN	0.016			B (2)	0.138			21600			
32.51EN	0.016			B (2)	0.138		224				
32.51SN	0.016	0.004	10°	B (2)	0.138		234				
32.51SN	0.016	0.004	20°	B (2)	0.138		254				
32.51TN	0.016	0.006	25°	B (2)	0.138		264				
32.51SN	0.016	0.006	25°	B (2)	0.138		274				
32.51SN	0.016	0.007	30°	B (2)	0.138		284				
32.52FN	0.031			B (2)	0.118		215				
32.52FN	0.031			A (1)	0.118					410	
32.52SN	0.031	0.004	15°	B (2)	0.118		245		31814		
32.52SN	0.031	0.006	25°	B (2)	0.118				31829		
32.52RN	0.031			B (2)	0.118				21800		
32.52EN	0.031			B (2)	0.118		225				
32.52SN	0.031	0.004	20°	B (2)	0.118		255				
32.52TN	0.031	0.006	25°	B (2)	0.118		265				
32.52SN	0.031	0.007	30°	B (2)	0.118		285				
P											
M											
K											
N											
S											
H						●	●	●	●	●	●
O											

DCGW / DCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners



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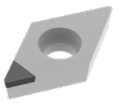
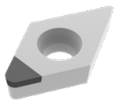
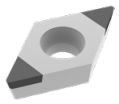
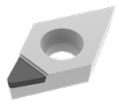
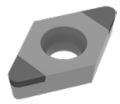
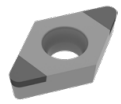
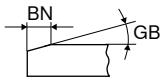
											
						F	F	F	F	F	F
						CBN DCGW	CBN DCGW	CBN DCGW	CBN DCGT	CBN DCGW	CBN DCGW
						71 423 ...	71 130 ...	71 131 ...	71 134 ...	71 163 ...	71 424 ...
ANSI	RE inch	BN inch	GB	**TCE (NOI)**	LE inch						
21.50FL	0.004			**A (1)**	0.118	**40000**					
21.50FR	0.004			**A (1)**	0.118	**40100**					
21.5.5SN	0.008	0.004	10°	**B (2)**	0.154					**230**	
21.5.5SN	0.008	0.004	15°	**B (2)**	0.154					**240**	
21.5.5SN	0.008	0.004	20°	**B (2)**	0.154					**250**	
21.5.5EN	0.008			**B (2)**	0.134						**90000**
21.5.5FN	0.008			**A (1)**	0.154		**400** [1]		**800**		
21.5.5TN	0.008	0.004	20°	**B (2)**	0.134						**90100**
21.5.5TN	0.008	0.005	20°	**B (2)**	0.154			**53000**			
21.5.5TN	0.008	0.005	20°	**A (1)**	0.154		**500**				
21.5.5TN	0.008	0.006	25°	**B (2)**	0.154					**260**	
21.51SN	0.016	0.004	10°	**B (2)**	0.138					**231**	
21.51SN	0.016	0.004	10°	**B (2)**	0.118						**90300**
21.51SN	0.016	0.004	15°	**B (2)**	0.138					**241**	
21.51SN	0.016	0.004	20°	**B (2)**	0.138					**251**	
21.51EN	0.016			**B (2)**	0.118						**90200**
21.51FN	0.016			**B (2)**	0.138					**211**	
21.51FN	0.016			**A (1)**	0.138		**402** [1]		**802**		
21.51TN	0.016	0.004	20°	**B (2)**	0.118						**90400**
21.51TN	0.016	0.005	20°	**B (2)**	0.138			**53200**			
21.51TN	0.016	0.005	20°	**A (1)**	0.138		**502**				
21.51TN	0.016	0.006	25°	**B (2)**	0.138					**261**	
21.51SN	0.016	0.006	25°	**B (2)**	0.138					**271**	
21.52SN	0.031	0.004	10°	**B (2)**	0.118					**232**	
21.52SN	0.031	0.004	20°	**B (2)**	0.118					**252**	
21.52EN	0.031			**B (2)**	0.102						**90500**
21.52FN	0.031			**B (2)**	0.118					**212**	
21.52EN	0.031			**B (2)**	0.118					**222**	
21.52FN	0.031			**A (1)**	0.118		**404** [1]				
21.52TN	0.031	0.004	20°	**B (2)**	0.102						**90600**
21.52TN	0.031	0.005	20°	**A (1)**	0.118		**504**				
21.52TN	0.031	0.006	25°	**B (2)**	0.118					**262**	
21.52TN	0.031	0.006	35°	**B (2)**	0.102						**90700**
32.5.5SN	0.008	0.004	15°	**B (2)**	0.154					**233**	
32.5.5SN	0.008	0.004	15°	**B (2)**	0.154					**243**	
32.5.5SN	0.008	0.004	20°	**B (2)**	0.154					**253**	
32.5.5EN	0.008			**B (2)**	0.134						**90800**
32.5.5FN	0.008			**A (1)**	0.154		**406** [1]		**806**		
32.5.5FN	0.008			**B (2)**	0.154			**400** [1]			
32.5.5TN	0.008	0.004	20°	**B (2)**	0.134						**90900**
32.5.5TN	0.008	0.005	20°	**B (2)**	0.154			**500**			
32.5.5TN	0.008	0.005	20°	**A (1)**	0.154		**506**				
32.5.5TN	0.008	0.006	25°	**B (2)**	0.154					**263**	
32.5.5SN	0.008	0.006	25°	**B (2)**	0.154					**273**	
32.51SN	0.016	0.004	10°	**B (2)**	0.138					**234**	
32.51SN	0.016	0.004	10°	**B (2)**	0.118						**91000**
32.51TN	0.016	0.004	15°	**B (2)**	0.118						**91100**
32.51SN	0.016	0.004	15°	**B (2)**	0.138					**244**	
P											
M											
K											
N											
S											
H						•	•	•	•	•	•
O											

1) Machining to 60 HRC

4

DCGW / DCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners



						NEW					NEW
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									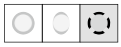		
						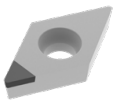	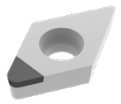	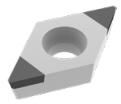	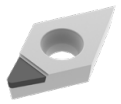	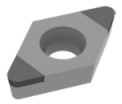	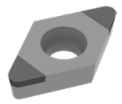
						F	F	F	F	F	F
						CBN DCGW	CBN DCGW	CBN DCGW	CBN DCGT	CBN DCGW	CBN DCGW
						71 423 ...	71 130 ...	71 131 ...	71 134 ...	71 163 ...	71 424 ...
ANSI	RE inch	BN inch	GB	**TCE (NOI)**	LE inch						
32.51SN	0.016	0.004	20°	**B (2)**	0.138					254	
32.51FN	0.016			**B (2)**	0.138			402 [1]		214	
32.51EN	0.016			**B (2)**	0.138					224	
32.51FN	0.016			**A (1)**	0.138		408 [1]		808		
32.51TN	0.016	0.004	20°	**B (2)**	0.118						91200
32.51TN	0.016	0.005	20°	**B (2)**	0.138			502			
32.51TN	0.016	0.005	20°	**A (1)**	0.138		508				
32.51TN	0.016	0.006	25°	**B (2)**	0.138					264	
32.51SN	0.016	0.006	25°	**B (2)**	0.118						91300
32.51SN	0.016	0.006	25°	**B (2)**	0.138					274	
32.51TN	0.016	0.006	30°	**B (2)**	0.118						91400
32.51SN	0.016	0.007	30°	**B (2)**	0.138					284	
32.52SN	0.031	0.004	15°	**B (2)**	0.118					245	
32.52SN	0.031	0.004	20°	**B (2)**	0.118					255	
32.52EN	0.031			**B (2)**	0.102						91500
32.52FN	0.031			**B (2)**	0.118			404 [1]		215	
32.52EN	0.031			**B (2)**	0.118					225	
32.52FN	0.031			**A (1)**	0.118		410 [1]		810		
32.52TN	0.031	0.004	20°	**B (2)**	0.102						91600
32.52TN	0.031	0.005	20°	**B (2)**	0.118			504			
32.52TN	0.031	0.005	20°	**A (1)**	0.118		510				
32.52TN	0.031	0.006	25°	**B (2)**	0.118					265	
32.52TN	0.031	0.006	30°	**B (2)**	0.102						91700
32.52SN	0.031	0.007	30°	**B (2)**	0.118					285	
P											
M											
K											
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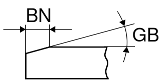
H						●	●	●	●	●	●
O											

1) Machining to 60 HRC

DCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners



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	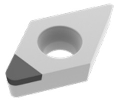	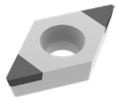	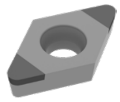	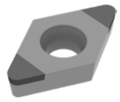
	F	F	F	F
	CBN DCGW	CBN DCGW	CBN DCGW	CBN DCGW

ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch	71 130 ...	71 131 ...	71 163 ...	71 424 ...
21.5.5TN	0.008	0.004	10°	B (2)	0.134				00201
21.5.5TN	0.008	0.004	20°	B (2)	0.154			320	
21.5.5SN	0.008	0.004	25°	B (2)	0.154			350	
21.5.5FN	0.008			B (2)	0.134				00101
21.5.5EN	0.008			B (2)	0.154			310	
21.5.5FN	0.008			A (1)	0.154	800			
21.5.5TN	0.008	0.004	25°	B (2)	0.154			340	
21.5.5TN	0.008	0.005	25°	B (2)	0.118		93000		
21.5.5TN	0.008	0.005	25°	A (1)	0.154	900			
21.5.5TN	0.008	0.006	30°	B (2)	0.154			360	
21.5.5SN	0.008	0.006	30°	B (2)	0.154			370	
21.5.5SN	0.008	0.007	35°	B (2)	0.154			380	
21.51TN	0.016	0.004	10°	B (2)	0.118				00401
21.51SN	0.016	0.004	20°	B (2)	0.138			331	
21.51SN	0.016	0.004	25°	B (2)	0.138			351	
21.51FN	0.016			B (2)	0.118				00301
21.51FN	0.016			A (1)	0.138	802			
21.51TN	0.016	0.004	25°	B (2)	0.138			341	
21.51TN	0.016	0.005	25°	B (2)	0.118		93200		
21.51TN	0.016	0.005	25°	A (1)	0.138	902			
21.51SN	0.016	0.006	25°	B (2)	0.118				00501
21.51TN	0.016	0.006	30°	B (2)	0.138			361	
21.51SN	0.016	0.006	30°	B (2)	0.138			371	
21.51SN	0.016	0.006	35°	B (2)	0.118				00601
21.51SN	0.016	0.007	35°	B (2)	0.138			381	
21.52SN	0.031	0.004	20°	B (2)	0.118			332	
21.52SN	0.031	0.005	20°	B (2)	0.102				00701
21.52SN	0.031	0.004	25°	B (2)	0.118			352	
21.52EN	0.031			B (2)	0.118			312	
21.52FN	0.031			A (1)	0.118	804			
21.52TN	0.031	0.004	25°	B (2)	0.118			342	
21.52TN	0.031	0.005	25°	B (2)	0.118		93400		
21.52TN	0.031	0.005	25°	A (1)	0.118	904			
21.52TN	0.031	0.006	30°	B (2)	0.118			362	
21.52SN	0.031	0.006	30°	B (2)	0.118			372	
21.52SN	0.031	0.006	35°	B (2)	0.102				00801
21.52SN	0.031	0.007	35°	B (2)	0.118			382	
32.5.5TN	0.008	0.004	20°	B (2)	0.154			323	
32.5.5SN	0.008	0.005	20°	B (2)	0.134				01001
32.5.5SN	0.008	0.004	25°	B (2)	0.154			353	
32.5.5FN	0.008			B (2)	0.134				00901
32.5.5EN	0.008			B (2)	0.154			313	
32.5.5FN	0.008			B (2)	0.154		800 1)		
32.5.5FN	0.008			A (1)	0.154	806			
32.5.5TN	0.008	0.004	25°	B (2)	0.154			343	
32.5.5TN	0.008	0.005	25°	A (1)	0.154	906			
32.5.5TN	0.008	0.005	25°	B (2)	0.118		900		
32.5.5TN	0.008	0.006	30°	B (2)	0.154			363	
32.5.5SN	0.008	0.007	35°	B (2)	0.154			383	

	71 130 ...	71 131 ...	71 163 ...	71 424 ...
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1) Machining to 60 HRC

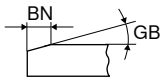
→ v_c Page 164–171

Continued on next page

4

DCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners



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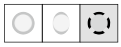
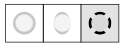
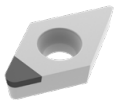
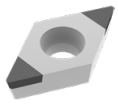
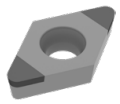
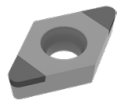
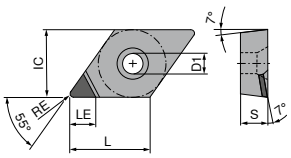
																			
																			
						F				F				F			F		
						CBN DCGW				CBN DCGW				CBN DCGW			CBN DCGW		
						71 130 ...				71 131 ...				71 163 ...			71 424 ...		
ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch														
32.51SN	0.016	0.004	15°	B (2)	0.118													01201	
32.51TN	0.016	0.004	20°	B (2)	0.138										324				
32.51SN	0.016	0.004	20°	B (2)	0.138										334				
32.51SN	0.016	0.005	20°	B (2)	0.118													01301	
32.51SN	0.016	0.004	25°	B (2)	0.138										354				
32.51TN	0.016	0.004	25°	B (2)	0.138										344				
32.51FN	0.016			B (2)	0.118													01101	
32.51EN	0.016			B (2)	0.138										314				
32.51FN	0.016			B (2)	0.138							802 [1]							
32.51FN	0.016			A (1)	0.138	808													
32.51TN	0.016	0.005	25°	B (2)	0.118							902							
32.51TN	0.016	0.005	25°	A (1)	0.138	908													
32.51SN	0.016	0.006	25°	B (2)	0.118													01401	
32.51TN	0.016	0.006	30°	B (2)	0.138										364				
32.51SN	0.016	0.006	30°	B (2)	0.118													01501	
32.51SN	0.016	0.006	30°	B (2)	0.138										374				
32.51SN	0.016	0.007	35°	B (2)	0.138										384				
32.52TN	0.031	0.004	10°	B (2)	0.102													01701	
32.52SN	0.031	0.004	20°	B (2)	0.118										335				
32.52TN	0.031	0.004	20°	B (2)	0.118										325				
32.52SN	0.031	0.004	25°	B (2)	0.118										355				
32.52FN	0.031			B (2)	0.102													01601	
32.52FN	0.031			B (2)	0.118							804 [1]							
32.52TN	0.031	0.004	25°	B (2)	0.118										345				
32.52TN	0.031	0.005	25°	B (2)	0.118							904							
32.52TN	0.031	0.005	25°	A (1)	0.118	910													
32.52SN	0.031	0.006	25°	B (2)	0.102													01801	
32.52TN	0.031	0.006	30°	B (2)	0.118										365				
32.52SN	0.031	0.006	30°	B (2)	0.102													01901	
32.52SN	0.031	0.006	30°	B (2)	0.118										375				
32.52SN	0.031	0.007	35°	B (2)	0.118										385				
P																			
M																			
K																			
N																			
S																			
H						●				●				●			●		
O																			

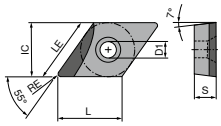
1) Machining to 60 HRC

DCGW / DCGT

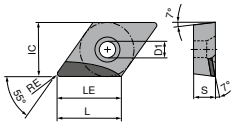
Designation	L inch	S inch	D1 inch	IC inch
DCG. 21..	0.305	0.094	0.110	0.250
DCG. 32..	0.457	0.156	0.173	0.375



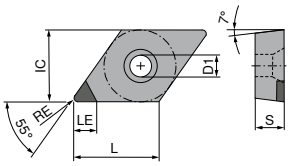
DCGT A



DCGT A L



DCGT A R

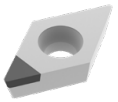
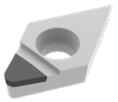
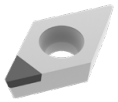
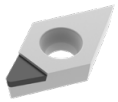
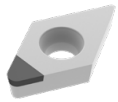
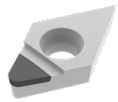


DCGW A

DCGW / DCGT

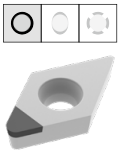
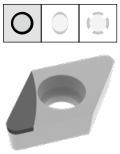
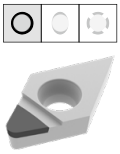
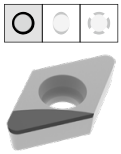
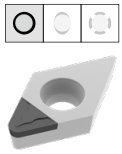
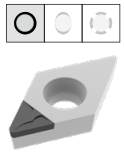
▲ TCE(NOI) = Design and number of equipped cutting edge corners

4

					NEW		NEW					
				CTDMD05		CTDMD05	-Q CTDMD05		-Q CTDMD05		CTDPD20		CTDPD20
													
													
				F		F	F		F		F		F
				DIAMOND DCGW		DIAMOND DCGT	DIAMOND DCGW		DIAMOND DCGT		DIAMOND DCGW		DIAMOND DCGT
				71 130 ...		71 134 ...	71 178 ...		71 176 ...		71 130 ...		71 134 ...
ANSI	RE inch	TCE (NOI)	LE inch										
21.5.5FN	0.008	A (1)	0.098		00200		050						
21.5.5FN	0.008	A (1)	0.146								100		100
21.51FN	0.016	A (1)	0.098		00400		052						
21.51FR	0.016	A (1)	0.098							50001			
21.51FN	0.016	A (1)	0.134								102		102
21.52FN	0.031	A (1)	0.098		00600		054						
21.52FN	0.031	A (1)	0.118								104		104
32.5.5FN	0.008	A (1)	0.098				056						
32.5.5FN	0.008	A (1)	0.118		056								
32.5.5FN	0.008	A (1)	0.185								106		106
32.51FN	0.016	A (1)	0.098				058						
32.51FL	0.016	A (1)	0.118						50001				
32.51FN	0.016	A (1)	0.118		058								
32.51FN	0.016	A (1)	0.169								108		108
32.52FN	0.031	A (1)	0.098				060						
32.52FN	0.031	A (1)	0.157								110		110
32.53FN	0.047	A (1)	0.138										11200
32.53FN	0.047	A (1)	0.142								11200		
P													
M													
K													
N					●		●		●		●		●
S													
H													
O					●		●		●		●		●

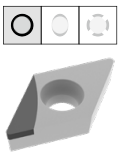
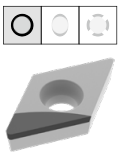
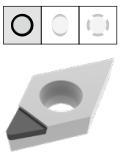
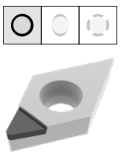
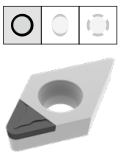
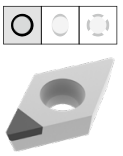
DCGW / DCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners

				NEW	NEW	NEW	NEW	NEW	NEW
				CTDPS30	CTDPS30	CTDPS30	CTDPS30	-CB1 CTDPU20	-CB2 CTDPU20
									
				F	F	F	F	F	M
				DIAMOND DCGW	DIAMOND DCGT	DIAMOND DCGT	DIAMOND DCGT	DIAMOND DCGT	DIAMOND DCGT
				71 177 ...	71 173 ...	71 173 ...	71 173 ...	71 174 ...	71 175 ...
ANSI	RE inch	**TCE (NOI)**	LE inch						
21.50FN	0.004	**A (1)**	0.150	**20001**		**20001**			
21.5.5FN	0.008	**A (1)**	0.146	**20101**		**20101**		**30001**	
21.51FN	0.016	**A (1)**	0.134	**20201**				**30101**	**30001**
21.51FL	0.016	**A (1)**	0.217		**20201**				
21.52FN	0.031	**A (1)**	0.118	**20301**					
32.50FN	0.004	**A (1)**	0.189	**20401**		**20301**			
32.5.5FN	0.008	**A (1)**	0.185	**20501**		**20401**			
32.51FN	0.016	**A (1)**	0.169	**20601**				**30201**	**30101**
32.51FL	0.016	**A (1)**	0.295		**20501**				
32.52FN	0.031	**A (1)**	0.157	**20701**				**30301**	
32.52FL	0.031	**A (1)**	0.276		**20601**				
32.52FR	0.031	**A (1)**	0.276				**20701**		
32.53FN	0.047	**A (1)**	0.142	**20801**					
32.53FL	0.047	**A (1)**	0.256		**20801**				
32.53FR	0.047	**A (1)**	0.256				**20901**		
P									
M									
K									
N				●	●	●	●	●	●
S									
H									
O				●	●	●	●	●	●

DCGT / DCGW

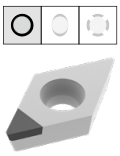
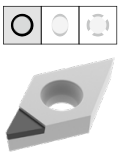
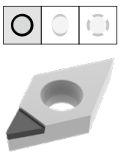
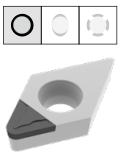
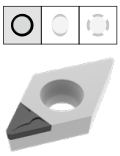
▲ TCE(NOI) = Design and number of equipped cutting edge corners

				CTDPD20	CTDPD20	-Q CTDPD20	-Q CTDPD20	-CB1 CTDPD20	-Q CTDPS30
									
				F	F	F	F	F	F
				DIAMOND DCGT	DIAMOND DCGT	DIAMOND DCGT	DIAMOND DCGT	DIAMOND DCGT	DIAMOND DCGW
				71 136 ...	71 135 ...	71 144 ...	71 145 ...	71 310 ...	71 138 ...
ANSI	RE inch	**TCE (NOI)**	LE inch						
21.50FN	0.004	**A (1)**	0.150					10100	
21.5.5FN	0.008	**A (1)**	0.146					102	
21.51FL	0.016	**A (1)**	0.118				104		
21.51FR	0.016	**A (1)**	0.118			104			
21.51FN	0.016	**A (1)**	0.134					104	
21.51FR	0.016	**A (1)**	0.217		102				
21.51FL	0.016	**A (1)**	0.217	102					
21.52FN	0.031	**A (1)**	0.118					108	
21.52FR	0.031	**A (1)**	0.197		104				
21.52FL	0.031	**A (1)**	0.197	104					
32.50FN	0.004	**A (1)**	0.189					11100	
32.5.5FR	0.008	**A (1)**	0.157						162
32.5.5FN	0.008	**A (1)**	0.185					112	
32.51FL	0.016	**A (1)**	0.157				114		
32.51FR	0.016	**A (1)**	0.157			114			164
32.51FN	0.016	**A (1)**	0.169					114	
32.51FR	0.016	**A (1)**	0.295		108				
32.51FL	0.016	**A (1)**	0.295	108					
32.52FN	0.031	**A (1)**	0.157					118	
32.52FR	0.031	**A (1)**	0.276		110				
32.52FL	0.031	**A (1)**	0.276	110					
P									
M									
K									
N				●	●	●	●	●	●
S									
H									
O				●	●	●	●	●	●

4

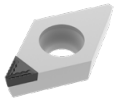
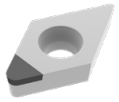
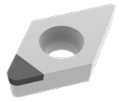
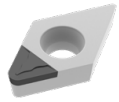
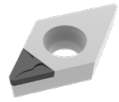
DCGW / DCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners

				-Q CTDPS30	-Q CTDPS30	-Q CTDPS30	-CB1 CTDPS30	-CB2 CTDPS30	-CB3 CTDPU20
									
				F	F	F	F	M	R
				DIAMOND DCGW	DIAMOND DCGT	DIAMOND DCGT	DIAMOND DCGT	DIAMOND DCGT	DIAMOND DCGT
				71 139 ...	71 144 ...	71 145 ...	71 310 ...	71 311 ...	71 312 ...
ANSI	RE inch	**TCE (NOI)**	LE inch						
21.50FL	0.004	**A (1)**	0.118			**151**			
21.50FR	0.004	**A (1)**	0.118		**15000**				
21.50FN	0.004	**A (1)**	0.150				**20100**		
21.5.5FL	0.008	**A (1)**	0.118			**152**			
21.5.5FR	0.008	**A (1)**	0.118		**152**				
21.5.5FN	0.008	**A (1)**	0.146				**202**	**202**	
21.51FN	0.016	**A (1)**	0.134				**204**	**204**	**204**
21.52FN	0.031	**A (1)**	0.118					**208**	
32.50FR	0.004	**A (1)**	0.157		**161**				
32.50FL	0.004	**A (1)**	0.157			**161**			
32.50FN	0.004	**A (1)**	0.189				**21100**	**21100**	
32.5.5FL	0.008	**A (1)**	0.157			**162**			
32.5.5FR	0.008	**A (1)**	0.157		**162**				
32.5.5FN	0.008	**A (1)**	0.185				**212**	**212**	
32.51FL	0.016	**A (1)**	0.157	**164**					
32.51FN	0.016	**A (1)**	0.169				**214**	**214**	**214**
32.52FN	0.031	**A (1)**	0.157				**218**	**218**	**218**
P									
M									
K									
N				●	●	●	●	●	●
S									
H									
O				●	●	●	●	●	●

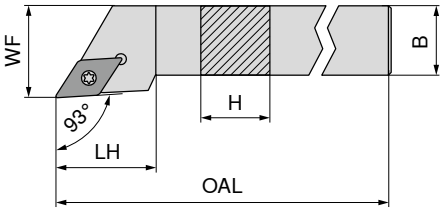
DCGT / DCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners

				NEW		NEW		
				-CB3 CTDPU20	CTDPU20	CTDCD10	-CB1 CTDCD10	-CB2 CTDCD10
								
				R	F	F	F	M
				DIAMOND DCGT	DIAMOND DCGW	DIAMOND DCGW	DIAMOND DCGT	DIAMOND DCGT
				71 312 ...	71 177 ...	71 177 ...	71 310 ...	71 311 ...
ANSI	RE inch	TCE (NOI)	LE inch					
21.5.5FN	0.008	A (1)	0.102			40001	302	30200
21.51FN	0.016	A (1)	0.091			40101	304	304
21.51FN	0.016	A (1)	0.134	204	30001			
21.52FN	0.031	A (1)	0.079			40201		308
21.52FN	0.031	A (1)	0.118		30101			
32.5.5FN	0.008	A (1)	0.102			40301	31200	31200
32.51FN	0.016	A (1)	0.091			40401	314	314
32.51FN	0.016	A (1)	0.169	214	30201			
32.52FN	0.031	A (1)	0.079			40501	318	318
32.52FN	0.031	A (1)	0.157	218	30301			
P								
M								
K								
N				●	●	●	●	●
S								
H								
O				●	●	●	●	●

4

MaxiLock-S – SDJC 93° – Toolholder with screw clamping



Illustrations show right-hand versions

Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 555 ...	Right-hand 78 554 ...
SDJC R/L 06-2	0.375	0.375	2.500	0.590	0.500	DC..21.5..	00602	00602
SDJC R/L 08-2	0.500	0.500	3.500	0.670	0.625	DC..21.5..	00802	00802
SDJC R/L 10-2	0.625	0.625	4.000	0.670	0.750	DC..21.5..	01002	01002
SDJC R/L 12-2B	0.750	0.750	4.500	0.708	1.000	DC..21.5..	01222	01222
SDJC R/L 12-3B	0.750	0.750	4.500	1.000	1.000	DC..32.5..	01223	01223
SDJC R/L 16-3D	1.000	1.000	6.000	1.100	1.250	DC..32.5..	01643	01643


Key I

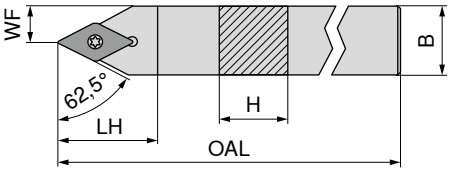

Clamping screw

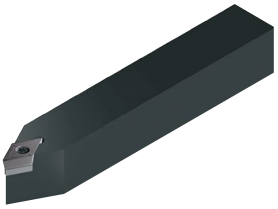

Solid Carbide Seat D


Threaded sleeve

Spare parts for Article no.	Key I 78 950 ...	Clamping screw 78 950 ...	Solid Carbide Seat D 78 950 ...	Threaded sleeve 78 950 ...
78 554 00602 / 78 555 00602	06400	06200		
78 554 00802 / 78 555 00802	06400	06200		
78 554 01002 / 78 555 01002	06400	06200		
78 554 01222 / 78 555 01222	06400	06200		
78 554 01223 / 78 555 01223	05400	05100	06000	05300
78 554 01643 / 78 555 01643	05400	05100	06000	05300

MaxiLock-S – SDPC 62.5° – Toolholder with screw clamping





Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Neutral 78 582 ...
SDPC N 06-2	0.375	0.375	2.500	0.370	0.197	DC..21.5..	00602
SDPC N 08-2	0.500	0.500	3.500	0.492	0.260	DC..21.5..	00802
SDPC N 10-3	0.625	0.625	4.000	0.630	0.232	DC..32.5..	01003
SDPC N 12-3B	0.750	0.750	4.500	0.744	0.382	DC..32.5..	01223
SDPC N 16-3D	1.000	1.000	6.000	0.984	0.520	DC..32.5..	01643


Key I

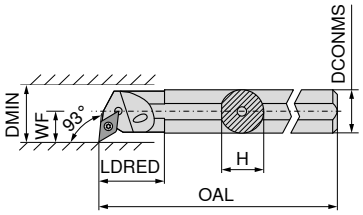

Clamping screw


Solid Carbide Seat D


Threaded sleeve

Spare parts for Article no.	Key I 78 950 ...	Clamping screw 78 950 ...	Solid Carbide Seat D 78 950 ...	Threaded sleeve 78 950 ...
78 582 00602	06400	06200		
78 582 00802	06400	06200		
78 582 01003	05400	05100	06000	05300
78 582 01223	05400	05100	06000	05300
78 582 01643	05400	05100	06000	05300

MaxiLock-S – SDUC 93° – Boring bar with screw clamping



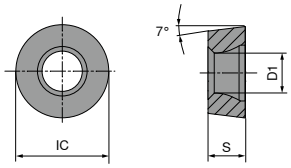
Illustrations show right-hand versions

Designation	DCONMS inch	H inch	OAL inch	LDRED inch	WF inch	DMIN inch	Insert	Left-hand 78 721 ...	Right-hand 78 720 ...
S06M SDUC R/L 2	0.375	0.340	6.000	0.830	0.375	0.750	DC..21.5..	**20617**	**20617**
A06M SDUC R/L 2	0.375	0.340	6.000	0.830	0.375	0.750	DC..21.5..	**20606**	**20606**
S08M SDUC R/L 2	0.500	0.460	6.000	0.910	0.438	0.875	DC..21.5..	**20818**	**20818**
A08M SDUC R/L 2	0.500	0.460	6.000	0.910	0.438	0.875	DC..21.5..	**20808**	**20808**
S10R SDUC R/L 2	0.625	0.580	8.000	1.060	0.500	1.000	DC..21.5..	**21021**	**21021**
A10R SDUC R/L 2	0.625	0.580	8.000	1.060	0.500	1.000	DC..21.5..	**21010**	**21010**
S12S SDUC R/L 2EX	0.750	0.710	10.000	0.760	0.625	1.250	DC..21.5..	**21222**	**21222**
S16T SDUC R/L 2DX	1.000	0.900	12.000	1.000	0.750	1.500	DC..21.5..	**21626**	**21626**
S12S SDUC R/L 3M	0.750	0.710	10.000	1.580	0.625	1.250	DC..32.5..	**91222**	**91222**
A12S SDUC R/L 3M	0.750	0.710	10.000	1.580	0.625	1.250	DC..32.5..	**91212**	**91212**
S16T SDUC R/L 3M	1.000	0.910	12.000	1.810	0.750	1.500	DC..32.5..	**91626**	**91626**
S20U SDUC R/L 3M	1.250	1.180	14.000	1.890	0.875	1.750	DC..32.5..	**92030**	**92030**
S20U SDUC R/L 3X	1.250	1.180	14.000	1.270	0.765	1.750	DC..32.5..	**32030**	**32030**

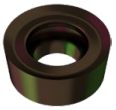
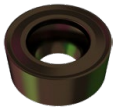
Spare parts for Article no.	 Key I 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat D 78 950 ...	 Threaded sleeve 78 950 ...
78 720 20617 / 78 721 20617	**06400**	**05200**		
78 720 20606 / 78 721 20606	**06400**	**05200**		
78 720 20818 / 78 721 20818	**06400**	**05200**		
78 720 20808 / 78 721 20808	**06400**	**06200**		
78 720 21021 / 78 721 21021	**06400**	**05200**		
78 720 21010 / 78 721 21010	**06400**	**06200**		
78 720 21222 / 78 721 21222	**06400**	**06200**		
78 720 21626 / 78 721 21626	**06400**	**06200**		
78 720 91222 / 78 721 91222	**05700**	**05600**		
78 720 91212 / 78 721 91212	**05700**	**05600**		
78 720 91626 / 78 721 91626	**05700**	**05600**		
78 720 92030 / 78 721 92030	**05400**	**05100**	**06000**	**05300**
78 720 32030 / 78 721 32030	**05400**	**05100**	**06000**	**05300**

RCMT / RCGT

Designation	S inch	D1 inch	IC inch
RCGT 06..	0.094	0.110	0.236
RCGT 08..	0.125	0.134	0.315
RC.T 10..	0.125	0.157	0.394
RCMT 12..	0.187	0.193	0.472
RCMT 16..	0.250	0.209	0.630
RCMT 20..	0.250	0.256	0.787
RCMT 25..	0.313	0.283	0.984



RCMT / RCGT

	-SMF CTCK110	-SM CTCP115	-SM CTCP125	-SM CTCP125	-SM CTCP135	-SM CTCP135
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
	F	M	M	M	M	M
	RCMT	RCMT	RCGT	RCMT	RCGT	RCMT
	70 188 ...	76 264 ...	76 262 ...	76 264 ...	76 262 ...	76 264 ...
ANSI / RE inch						
0602MOEN 0.118			502		702	
0803MOEN 0.157			512		712	
1003MOSN 0.197				514		714
1204MOSN 0.236		328		526		726
1606MOEN 0.315	038					
1606MOSN 0.315		340		538		738
2006MOSN 0.394				550		750
2507MOSN 0.492		36200		562		762
P	○	●	●	●	●	●
M					○	○
K	●	○	○	○		
N						
S						
H						
O						

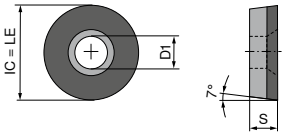
RCGT

		NEW		
		-27 H10T	-27 CWN15	-27 CTPX715
				DRAGONSKIN
				
		M	M	M
		RCGT	RCGT	RCGT
		70 266 ...	70 266 ...	70 266 ...
ANSI	RE inch			
0602MOFN	0.118	600	300	
0803MOFN	0.157	602	302	
082MOFN	0.157			80200
1003MOFN	0.197	604		
102MOFN	0.197			80400
P				●
M			○	●
K		○		○
N		●	●	●
S				●
H				
O		○		○

4

RCGW

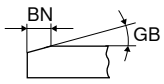
Designation	S inch	D1 inch	IC inch
RCGW 12..	0.187	0.173	0.472



RCGW F

RCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners



NEW

CTBS10U

F

CBN

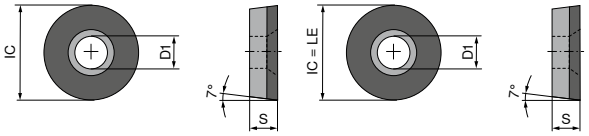
RCGW

71 425 ...

ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch	
1204M0TN	0.236	0.005	20°	**F**	0.472	**10000**
P						
M						
K						●
N						
S						●
H						
O						

RCGW / RCGT

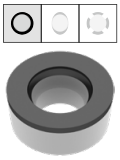
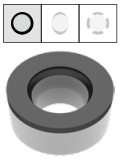
Designation	S inch	D1 inch	IC inch
RCG. 06..	0.094	0.110	0.236
RCGW 08..	0.125	0.134	0.315
RCG. 10..	0.156	0.173	0.394
RCGW 12..	0.187	0.173	0.472



RCGT F RCGW F

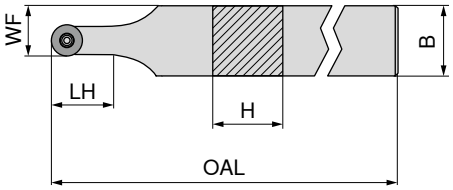
RCGW / RCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners

				NEW		NEW		
				CTDPD20	-CB1 CTDPD20	CTDPS30	-CB1 CTDPS30	-CB2 CTDPS30
								
				F	F	F	F	M
				DIAMOND RCGW	DIAMOND RCGT	DIAMOND RCGW	DIAMOND RCGT	DIAMOND RCGT
				71 179 ...	71 315 ...	71 179 ...	71 315 ...	71 316 ...
ANSI	RE inch	**TCE (NOI)**	LE inch					
0803M0FN	0.157	**F**	0.315	**10101**		**20101**		
0602M0FN	0.118	**F**	0.236	**10001**	**102**	**20001**	**202**	**202**
10T3M0FN	0.197	**F**	0.394		**104**		**204**	**204**
1003M0FN	0.236	**F**	0.394	**10201**				
1204M0FN	0.236	**F**	0.472	**10301**				
P								
M								
K								
N				●	●	●	●	●
S								
H								
O				●	●	●	●	●

4

MaxiLock-S – SRDC 0° – Toolholder with screw clamping



Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Neutral 78 583 ...
SRDC N 08-2	0.500	0.500	3.500	0.500	0.407	RC..0803M0	00802
SRDC N 10-3	0.625	0.625	4.000	0.630	0.510	RC..10T3M0	01003
SRDC N 12-3B	0.750	0.750	4.500	1.000	0.570	RC..10T3M0	01223
SRDC N 16-4D	1.000	1.000	6.000	1.000	0.756	RC..1204M0	01644
SRDC N 20-4D	1.250	1.250	6.000	1.000	0.861	RC..1204M0	02044


Key I
78 950 ...

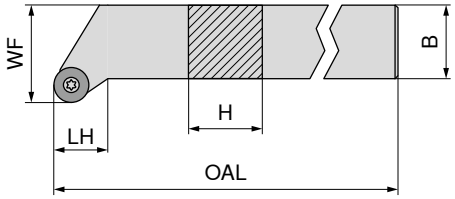

Clamping screw
78 950 ...


Solid carbide support R
78 950 ...


Threaded sleeve
78 950 ...

Spare parts for Article no.				
78 583 00802	00100	00200		
78 583 01003	05400	05100	05900	05300
78 583 01223	05400	05100	05900	05300
78 583 01644	05400	05100	06300	05300
78 583 02044	05400	05100	06300	05300

MaxiLock-S – SRGC – Toolholder with screw clamping



Illustrations show right-hand versions

Designation	H inch	B inch	OAL inch	WF inch	Insert	Left-hand 78 557 ...	Right-hand 78 556 ...
SRGC R/L 12-3B	0.750	0.750	4.500	1.000	RC..10T3M0	01223	01223
SRGC R/L 16-3D	1.000	1.000	6.000	1.250	RC..10T3M0	01643	01643
SRGC R/L 16-4D	1.000	1.000	6.000	1.250	RC..1204M0	01644	01644
SRGC R/L 20-4D	1.250	1.250	6.000	1.500	RC..1204M0	02044	02044
SRGC R/L 85-4D	1.250	1.000	6.000	1.250	RC..1204M0	08544	08544


Key I
78 950 ...

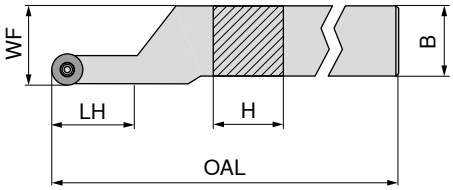

Clamping screw
78 950 ...


Solid carbide support R
78 950 ...

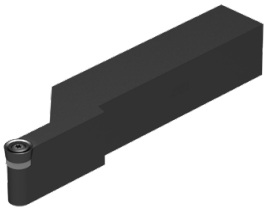

Threaded sleeve
78 950 ...

Spare parts for Article no.				
78 556 01223 / 78 557 01223	05400	05100	05900	05300
78 556 01643 / 78 557 01643	05400	05100	05900	05300
78 556 01644 / 78 557 01644	05400	05100	06300	05300
78 556 02044 / 78 557 02044	05400	05100	06300	05300
78 556 08544 / 78 557 08544	05400	05100	06300	05300

MaxiLock-S – SRSC 45° – Toolholder with screw clamping



Illustrations show right-hand versions



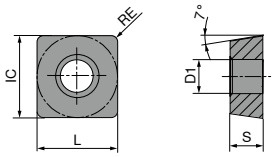
Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 559 ...	Right-hand 78 558 ...
SRSC R/L 16-3D	1.000	1.000	6.000	0.750	1.250	RC..10T3M0	**01643**	**01643**
SRSC R/L 20-3D	1.250	1.250	6.000	0.750	1.500	RC..10T3M0	**02043**	**02043**
SRSC R/L 12-4B	0.750	0.750	4.500	0.750	1.000	RC..1204M0	**01224**	**01224**
SRSC R/L 16-4D	1.000	1.000	6.000	1.000	1.250	RC..1204M0	**01644**	**01644**
SRSC R/L 20-4D	1.250	1.250	6.000	1.000	1.500	RC..1204M0	**02044**	**02044**

Spare parts for Article no.	 Key I 78 950 ...	 Clamping screw 78 950 ...	 Solid carbide support R 78 950 ...	 Threaded sleeve 78 950 ...
78 558 01643 / 78 559 01643	**05400**	**05100**	**05900**	**05300**
78 558 02043 / 78 559 02043	**05400**	**05100**	**05900**	**05300**
78 558 01224 / 78 559 01224	**05400**	**05100**	**06300**	**05300**
78 558 01644 / 78 559 01644	**05400**	**05100**	**06300**	**05300**
78 558 02044 / 78 559 02044	**05400**	**05100**	**06300**	**05300**

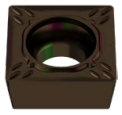
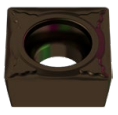
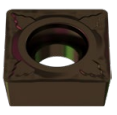
4

SCGT / SCMT / SCMX

Designation	L inch	S inch	D1 inch	IC inch
SC.T 32..	0.375	0.156	0.173	0.375
SC.. 43..	0.500	0.187	0.217	0.500



SCGT / SCMT

	-CF05 CTEP110	-CF55 CTEP110	-SF TCM10	-SF TCM407	-SF CTCP125	-SMF CTCP115	-SMF CTCP135
	DRAGONSKIN	DRAGONSKIN			DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
	F	F	F	F	F	F	F
	CERMET SCGT	CERMET SCMT	CERMET SCGT	CERMET SCGT	SCMT	SCMT	SCMT
	76 261 ...	76 260 ...	70 271 ...	70 271 ...	76 269 ...	76 267 ...	76 267 ...
ANSI / RE inch							
32.51EN 0.016	004	004	902		504	304	
32.52EN 0.031	006	006	904	852	506	306	
432EN 0.031					518		718
P	●	●	●	●	●	●	●
M	o	o	o	o			o
K	o	o	o	o	o	o	
N							
S							
H							
O							

SCMT / SCMX

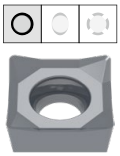
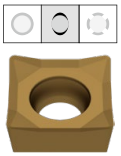
	-SM CTCK110	-SM CTCK120	-SM CTCP115	-SM CTCP125	-SM CTCP135	CTCP135
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
	M	M	M	M	M	M
	SCMT	SCMT	SCMT	SCMT	SCMT	SCMX
	70 268 ...	70 268 ...	76 268 ...	76 268 ...	76 268 ...	76 182 ...
ANSI / RE inch						
32.51EN 0.016	004	504	304	504	704	
32.52EN 0.031	006	506	306	506	706	
432EN 0.031	018	518	318	518	718	718
433EN 0.047	020	520		520		
P	o	o	●	●	●	●
M					o	o
K	●	●	o	o		
N						
S						
H						
O						

SCMT

		NEW		NEW
		-M55 CTCM120	-M55 CTPM125	-M55 CTCM130
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
				
		M	M	M
		SCMT	SCMT	SCMT
		75 216 ...	75 216 ...	75 216 ...
ANSI	RE inch			
32.52EN	0.031	10600	206	30600
432EN	0.031	11800	218	31800
P		○	○	○
M		●	●	●
K				
N				
S				○
H				
O				

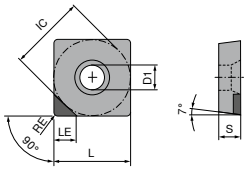
4

SCGT

			NEW	NEW		
		-25P H210T	-25P CTPX710	-27 CTPX715	-27 H10T	-27 CWN15
			DRAGONSKIN	DRAGONSKIN		
						
		F	M	M	M	M
		SCGT	SCGT	SCGT	SCGT	SCGT
		70 283 ...	70 283 ...	70 270 ...	70 270 ...	70 270 ...
ANSI	RE inch					
32.51FN	0.016			80400	600	300
32.52FN	0.031			80600	602	302
432FN	0.031	634	71600		604	304
P			●	●		
M			●	●		○
K		○		○	○	
N		●	●	●	●	●
S		○	●	●		
H						
O		○		○	○	

SCGW

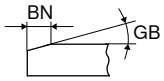
Designation	L inch	S inch	D1 inch	IC inch
SCGW 32..	0.375	0.156	0.173	0.375
SCGW 43..	0.500	0.187	0.217	0.500



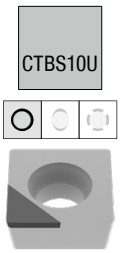
SCGW A

SCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners



NEW



F
CBN
SCGW

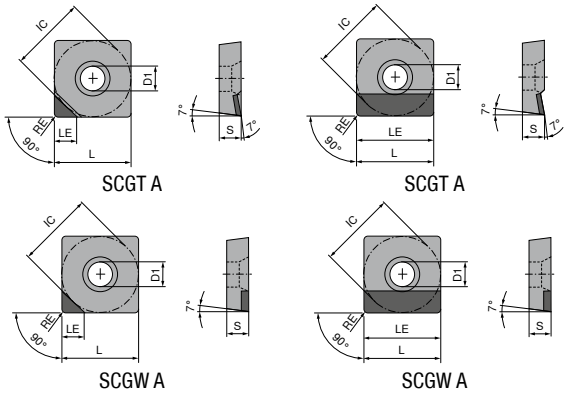
71 426 ...

ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch	
32.51TN	0.016	0.005	20°	**A (1)**	0.138	**10100**
32.51FN	0.016			**A (1)**	0.138	**10000**
32.52FN	0.031			**A (1)**	0.134	**10200**
32.52TN	0.031	0.005	20°	**A (1)**	0.134	**10300**
431FN	0.016			**A (1)**	0.138	**10400**
431TN	0.016	0.005	20°	**A (1)**	0.138	**10500**
432TN	0.031	0.005	20°	**A (1)**	0.134	**10700**
432FN	0.031			**A (1)**	0.134	**10600**

P	
M	
K	●
N	
S	●
H	
O	

SCGW / SCGT

Designation	L inch	S inch	D1 inch	IC inch
SCG. 32..	0.375	0.156	0.173	0.375
SCG. 43..	0.500	0.187	0.217	0.500



SCGT A SCGT A SCGW A SCGW A

SCGW / SCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners

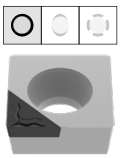
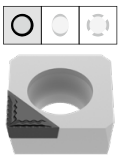
4

	NEW	NEW		NEW	NEW
	CTDPD20	CTDPD20	-CB1 CTDPD20	CTDPS30	CTDPS30
	F	F	F	F	F
	DIAMOND SCGW	DIAMOND SCGW	DIAMOND SCGT	DIAMOND SCGW	DIAMOND SCGT
	71 182 ...	71 183 ...	71 320 ...	71 182 ...	71 180 ...

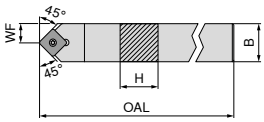
ANSI	RE inch	TCE (NOI)	LE inch									
32.51FN	0.016	A (1)	0.173	10001			114		20601		20001	
32.51FNN	0.016	A (1)	0.375		10001							
32.52FN	0.031	A (1)	0.169	10101			118				20101	
32.52FNN	0.031	A (1)	0.375		10101							
32.53FN	0.047	A (1)	0.165	10201							20201	
431FN	0.016	A (1)	0.173	10301								
431FNN	0.016	A (1)	0.500		10201							
432FN	0.031	A (1)	0.169	10401								
432FNN	0.031	A (1)	0.500		10301							
433FN	0.047	A (1)	0.165	10501								
433FNN	0.047	A (1)	0.500		10401							
P												
M												
K												
N				●	●		●		●		●	
S												
H												
O				●	●		●		●		●	

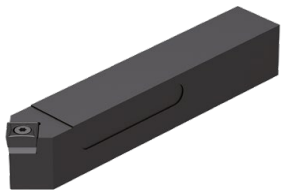
SCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners

				NEW	NEW	
				CTDPS30	-CB2 CTDPS30	-CB3 CTDPU20
						
				F	M	R
				DIAMOND SCGT	DIAMOND SCGT	DIAMOND SCGT
				71 181 ...	71 321 ...	71 322 ...
ANSI	RE inch	**TCE (NOI)**	LE inch			
32.51FN	0.016	**A (1)**	0.173		214	214
32.52FN	0.031	**A (1)**	0.169		218	218
32.52FNN	0.031	**A (1)**	0.374	20001		
432FNN	0.031	**A (1)**	0.500	20101		
433FNN	0.047	**A (1)**	0.472	20201		
P						
M						
K						
N				●	●	●
S						
H						
O				●	●	●

MaxiLock-S – SSDC 45° – Toolholder with screw clamping



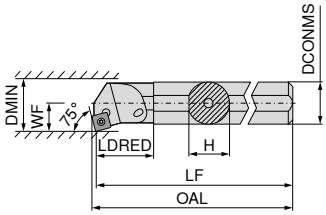


Designation	H inch	B inch	OAL inch	WF inch	Insert	Neutral 78 584 ...
SSDC N 08-3	0.500	0.500	3.500	0.263	SC..32.5..	**00803**
SSDC N 10-3	0.625	0.625	4.000	0.325	SC..32.5..	**01003**
SSDC N 12-4B	0.750	0.750	4.500	0.388	SC..43..	**01224**

Spare parts for Article no.	 Key I 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide support S 78 950 ...	 Threaded sleeve 78 950 ...
78 584 00803	**05700**	**05600**		
78 584 01003	**05700**	**05600**		
78 584 01224	**04700**	**04600**	**04400**	**04800**

4

MaxiLock-S – SSKC 75° – Boring bar with screw clamping



Illustrations show right-hand versions

Designation	DCONMS inch	H inch	OAL inch	LDRED inch	WF inch	DMIN inch	Insert	Left-hand 78 723 ...	Right-hand 78 722 ...
S10R SSKC R/L 3	0.625	0.580	8.000	1.060	0.406	0.812	SC..32.5..	**31021**	**31021**
S12S SSKC R/L 3	0.750	0.710	10.000	1.580	0.500	1.000	SC..32.5..	**31222**	**31222**
S16T SSKC R/L 3	1.000	0.900	12.000	1.810	0.640	1.280	SC..32.5..	**31626**	**31626**

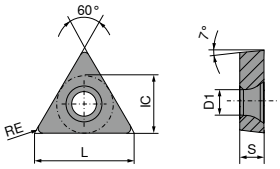
Key I

Clamping screw

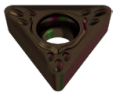
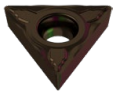
Spare parts for Article no.	Key I 78 950 ...	Clamping screw 78 950 ...
78 722 31021 / 78 723 31021	**05700**	**05800**
78 722 31222 / 78 723 31222	**05700**	**05600**
78 722 31626 / 78 723 31626	**05700**	**05600**

TCGT / TCMT

Designation	L inch	S inch	D1 inch	IC inch
TCMT 1...	0.378	0.094	0.098	0.219
TC.T 21..	0.433	0.094	0.110	0.250
TC.T 32..	0.650	0.156	0.173	0.375
TCMT 43..	0.866	0.187	0.203	0.500



TCGT / TCMT

	-CF05 CTEP110	-CF55 CTEP110	-SF TCM10	-SMF TCM10	-SF CTCP125	-SMF CTCP115
	DRAGONSKIN	DRAGONSKIN			DRAGONSKIN	DRAGONSKIN
						
	F	F	F	F	F	F
	CERMET TCGT	CERMET TCMT	CERMET TCGT	CERMET TCMT	TCMT	TCMT
	76 272 ...	76 266 ...	70 273 ...	70 284 ...	76 275 ...	76 284 ...
ANSI / RE inch						
21.5.5EN 0.008	014		900			
21.51EN 0.016	016	016	902	902	516	
21.52EN 0.031	018				518	318
32.51EN 0.016	028		906		528	328
32.52EN 0.031		030			530	330
P	●	●	●	●	●	●
M	○	○	○	○		
K	○	○	○	○	○	○
N						
S						
H						
O						

4

TCMT / TCGT

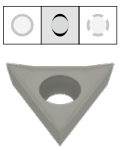
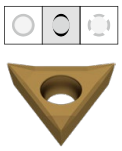
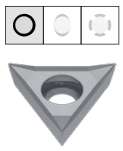
	-SMF CTCP135 DRAGONSKIN	-SM CTCP135 DRAGONSKIN	-SM CTCK110 DRAGONSKIN	-SM CTCK120 DRAGONSKIN	-SM CTCP115 DRAGONSKIN	-SM CTCP125 DRAGONSKIN	-SM CTCP135 DRAGONSKIN
							
	F TCMT	M TCGT	M TCMT	M TCMT	M TCMT	M TCMT	M TCMT
	76 284 ...	76 270 ...	70 274 ...	70 274 ...	76 274 ...	76 274 ...	76 274 ...
ANSI / RE inch							
1.81.51EN 0.016						504	704
21.5.5EN 0.008		714					
21.51EN 0.016			016	516	316	516	716
21.52EN 0.031	718		018	518	318		718
32.51EN 0.016			028	528	328	528	728
32.52EN 0.031			030	530	330	530	730
32.53EN 0.047			032	532			
432EN 0.031						542	742
P	●	●	○	○	●	●	●
M	○	○					○
K			●	●	○	○	
N							
S							
H							
O							

TCMT

	NEW -M25 CTCM120 DRAGONSKIN	-M25 CTPM125 DRAGONSKIN	NEW -M25 CTCM130 DRAGONSKIN	NEW -M55 CTCM120 DRAGONSKIN	-M55 CTPM125 DRAGONSKIN	NEW -M55 CTCM130 DRAGONSKIN
						
	F TCMT	F TCMT	F TCMT	M TCMT	M TCMT	M TCMT
	75 217 ...	75 217 ...	75 217 ...	75 218 ...	75 218 ...	75 218 ...
ANSI / RE inch						
1.81.51EN 0.016				10400	204	30400
21.51EN 0.016	11600	216	31600	11600	216	31600
32.51EN 0.016	12800	228	32800			
32.52EN 0.031	13000	230	33000	13000	230	33000
P	○	○	○	○	○	○
M	●	●	●	●	●	●
K						
N						
S			○			○
H						
O						

TCGT

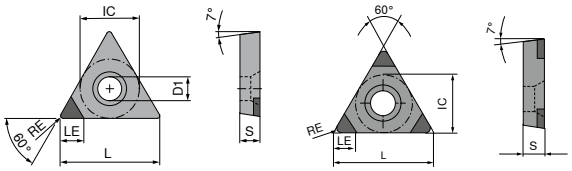
NEW

	-27 H10T	-27 CWN15	-27 CTPX715 DRAGONSKIN
			
	M	**M**	**M**
	TCGT	TCGT	TCGT
	70 276 ...	**70 276 ...**	**70 276 ...**
ANSI / RE inch			
21.5.5FN 0.008	**600**		
21.51FN 0.016	**602**	**302**	**81600**
21.5FN 0.008		**300**	
32.5.5FN 0.008	**604**	**304**	
32.51FN 0.016	**606**	**306**	
32.52FN 0.031	**608**	**308**	**83000**
P			●
M		○	●
K	○		○
N	●	●	●
S			●
H			
O	○		○

4

TCGW

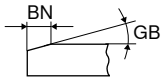
Designation	L inch	S inch	D1 inch	IC inch
TCGW 1...	0.378	0.094	0.098	0.219
TCGW 21..	0.433	0.094	0.110	0.250
TCGW 32..	0.650	0.156	0.173	0.375



TCGW A TCGW C

TCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners

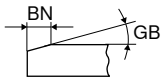


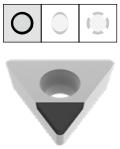
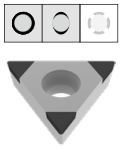
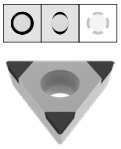
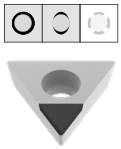
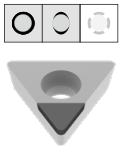
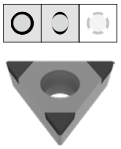
				NEW		NEW		NEW	
				CTBS10U	CTBH15U	CTBH15U	CTBH20U	CTBS20U	CTBS20C
				F	F	F	F	F	F
				CBN TCGW	CBN TCGW	CBN TCGW	CBN TCGW	CBN TCGW	CBN TCGW
				71 140 ...	71 028 ...	71 029 ...	71 140 ...	71 427 ...	71 164 ...
ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch										
1.81.5.5SN	0.008	0.004	10°	C (3)	0.102										120
1.81.5.5FN	0.008			A (1)	0.150						400				
1.81.5.5EN	0.008			C (3)	0.102				00200						
1.81.5.5SN	0.008	0.004	15°	C (3)	0.102				30214						130
1.81.5.5TN	0.008	0.005	20°	A (1)	0.150	300					500				
1.81.5.5TN	0.008	0.006	20°	C (3)	0.102										140
1.81.5.5SN	0.008	0.006	20°	C (3)	0.102										150
1.81.5.1SN	0.016	0.004	10°	C (3)	0.087										121
1.81.5.1SN	0.016	0.004	15°	C (3)	0.087		30414								131
1.81.5.1TN	0.016	0.005	15°	A (1)	0.138								20000		
1.81.5.1TN	0.016	0.005	20°	A (1)	0.138	302					502				
1.81.5.1SN	0.016	0.006	20°	C (3)	0.087										151
1.81.5.1EN	0.016			C (3)	0.087		00400								111
1.81.5.1FN	0.016			A (1)	0.138	202					402				
1.81.5.1TN	0.016	0.007	25°	C (3)	0.087										161
1.81.5.2SN	0.031	0.004	10°	C (3)	0.071										122
1.81.5.2SN	0.031	0.004	15°	C (3)	0.071		30614								132
1.81.5.2TN	0.031	0.005	20°	A (1)	0.118						504				
1.81.5.2TN	0.031	0.006	20°	C (3)	0.071										142
1.81.5.2EN	0.031			C (3)	0.071		00600								
1.81.5.2TN	0.031	0.007	25°	C (3)	0.071										162
21.5.5SN	0.008	0.004	10°	C (3)	0.114										123
21.5.5FN	0.008			A (1)	0.150	206					406				
21.5.5SN	0.008	0.004	15°	C (3)	0.114										133
21.5.5TN	0.008	0.005	20°	A (1)	0.150	306					506				
21.5.5TN	0.008	0.006	20°	C (3)	0.114										143
21.5.5SN	0.008	0.006	20°	C (3)	0.114										153
21.51SN	0.016	0.004	10°	C (3)	0.098										124
21.51SN	0.016	0.004	15°	C (3)	0.098										134
21.51TN	0.016	0.005	20°	A (1)	0.138	308					508				
21.51TN	0.016	0.006	20°	C (3)	0.098										144
21.51SN	0.016	0.006	20°	C (3)	0.098										154
21.51TN	0.016	0.007	25°	C (3)	0.098										164
21.51EN	0.016			C (3)	0.098										114
21.51FN	0.016			A (1)	0.138	208					40700				
P															
M															
K						●							●	●	
N															
S						●							●	●	
H							●	●		●					
O															

Continued on next page

TCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners

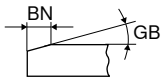


						CTBS10U	NEW CTBH15U	NEW CTBH15U	CTBH20U	NEW CTBS20U	CTBS20C
											
						F	F	F	F	F	F
						CBN TCGW	CBN TCGW	CBN TCGW	CBN TCGW	CBN TCGW	CBN TCGW
						71 140 ...	71 028 ...	71 029 ...	71 140 ...	71 427 ...	71 164 ...
ANSI	RE inch	BN inch	GB	**TCE (NOI)**	LE inch						
21.52SN	0.031	0.004	10°	**C (3)**	0.083						**125**
21.52SN	0.031	0.004	15°	**C (3)**	0.083						**135**
21.52TN	0.031	0.005	20°	**A (1)**	0.118	**310**			**510**		
21.52TN	0.031	0.006	20°	**C (3)**	0.083						**145**
21.52TN	0.031	0.007	25°	**C (3)**	0.083						**165**
21.52FN	0.031			**A (1)**	0.118	**210**			**410**		
32.51SN	0.016	0.004	10°	**C (3)**	0.126						**126**
32.51SN	0.016	0.004	15°	**C (3)**	0.126						**136**
32.52SN	0.031	0.004	10°	**C (3)**	0.106						**127**
32.52SN	0.031	0.004	15°	**C (3)**	0.106						**137**
32.52SN	0.031	0.006	20°	**C (3)**	0.106						**157**
32.52EN	0.031			**C (3)**	0.106						**117**
32.52TN	0.031	0.007	25°	**C (3)**	0.106						**167**
P											
M											
K						●				●	●
N											
S						●				●	●
H							●	●	●		
O											

4

TCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners

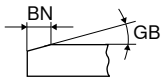


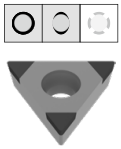
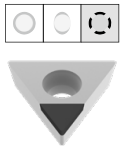
						NEW		NEW								
						CTBH15C		CTBH15C		CTBH20C		CTBH40U		CTBH40C		
						F		F		F		F		F		
						CBN TCGW		CBN TCGW		CBN TCGW		CBN TCGW		CBN TCGW		
						71 027 ...		71 034 ...		71 164 ...		71 140 ...		71 164 ...		
ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch											
1.81.5.5SN	0.008	0.004	15°	C (3)	0.102				30214							
1.81.5.5SN	0.008	0.004	20°	C (3)	0.102						250					330
1.81.5.5TN	0.008	0.004	20°	C (3)	0.102											320
1.81.5.5TN	0.008	0.004	25°	C (3)	0.102											340
1.81.5.5TN	0.008	0.005	25°	A (1)	0.150								900			
1.81.5.5FN	0.008			A (1)	0.150								80100			
1.81.5.5FN	0.008			C (3)	0.102						210					
1.81.5.5EN	0.008			C (3)	0.102				00200		220					
1.81.5.1FN	0.016			A (1)	0.138								802			
1.81.5.1TN	0.016	0.004	20°	C (3)	0.087											321
1.81.5.1TN	0.016	0.004	25°	C (3)	0.087											341
1.81.5.1SN	0.016	0.004	25°	C (3)	0.087											351
1.81.5.1TN	0.016	0.006	30°	C (3)	0.087											361
1.81.5.1SN	0.016	0.006	30°	C (3)	0.087											371
1.81.5.1TN	0.016	0.005	25°	A (1)	0.138								902			
1.81.5.1EN	0.016			C (3)	0.087	00400					221					
1.81.5.1SN	0.016	0.004	15°	C (3)	0.087	30414					241					
1.81.5.1TN	0.016	0.006	25°	C (3)	0.087						261					
1.81.5.1SN	0.016	0.006	25°	C (3)	0.087						271					
1.81.5.2SN	0.031	0.004	10°	C (3)	0.071						232					
1.81.5.2SN	0.031	0.004	15°	C (3)	0.071	30614					242					
1.81.5.2SN	0.031	0.004	20°	C (3)	0.071						252					
1.81.5.2TN	0.031	0.006	20°	C (3)	0.071											362
1.81.5.2SN	0.031	0.004	25°	C (3)	0.071											352
1.81.5.2TN	0.031	0.004	25°	C (3)	0.071											342
1.81.5.2TN	0.031	0.005	25°	A (1)	0.118								904			
1.81.5.2EN	0.031			C (3)	0.071	00600										312
21.5.5FN	0.008			A (1)	0.150								806			
21.5.5TN	0.008	0.004	20°	C (3)	0.114											323
21.5.5SN	0.008	0.004	20°	C (3)	0.114						253					333
21.5.5TN	0.008	0.004	25°	C (3)	0.114											343
21.5.5TN	0.008	0.006	30°	C (3)	0.114											363
21.5.5TN	0.008	0.005	25°	A (1)	0.150								906			
21.5.5FN	0.008			C (3)	0.114						213					
21.5.5EN	0.008			C (3)	0.114						223					
21.5.5SN	0.008	0.004	15°	C (3)	0.114				31414							
21.5.5SN	0.008	0.006	25°	C (3)	0.114				31429							
21.51FN	0.016			A (1)	0.138								808			
21.51TN	0.016	0.004	20°	C (3)	0.098											324
21.51TN	0.016	0.004	25°	C (3)	0.098											344
21.51SN	0.016	0.004	25°	C (3)	0.098											354
21.51TN	0.016	0.006	30°	C (3)	0.098											364
21.51SN	0.016	0.006	30°	C (3)	0.098											374
21.51TN	0.016	0.005	25°	A (1)	0.138								908			
21.51FN	0.016			C (3)	0.098						214					
21.51EN	0.016			C (3)	0.098						224					
21.51SN	0.016	0.004	10°	C (3)	0.098						234					
P																
M																
K																
N																
S																
H						●		●		●		●		●		
O																

Continued on next page

TCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners



						NEW	NEW			
						CTBH15C	CTBH15C	CTBH20C	CTBH40U	CTBH40C
										
						F	F	F	F	F
						CBN TCGW	CBN TCGW	CBN TCGW	CBN TCGW	CBN TCGW
						71 027 ...	71 034 ...	71 164 ...	71 140 ...	71 164 ...
ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch					
21.51SN	0.016	0.004	15°	C (3)	0.098		31614	244		
21.51TN	0.016	0.006	25°	C (3)	0.098			264		
21.51SN	0.016	0.006	25°	C (3)	0.098			274		
21.51SN	0.016	0.006	25°	C (3)	0.098		31629			
21.52EN	0.031			C (3)	0.083					315
21.52TN	0.031	0.004	20°	C (3)	0.083					325
21.52SN	0.031	0.004	25°	C (3)	0.083					355
21.52TN	0.031	0.006	30°	C (3)	0.083					365
21.52SN	0.031	0.006	30°	C (3)	0.083					375
21.52TN	0.031	0.005	25°	A (1)	0.118				910	
21.52SN	0.031	0.004	10°	C (3)	0.083			235		
21.52SN	0.031	0.004	15°	C (3)	0.083	31814		245		
21.52SN	0.031	0.004	20°	C (3)	0.083			255		
21.52TN	0.031	0.006	25°	C (3)	0.083			265		
21.52SN	0.031	0.006	25°	C (3)	0.083	31829				
32.51SN	0.016	0.004	20°	C (3)	0.126			256		336
32.51SN	0.016	0.004	25°	C (3)	0.126					356
32.51TN	0.016	0.004	25°	C (3)	0.126					346
32.51SN	0.016	0.006	25°	C (3)	0.126			276		
32.51TN	0.016	0.006	30°	C (3)	0.126					366
32.51SN	0.016	0.007	35°	C (3)	0.126					386
32.51FN	0.016			C (3)	0.126			216		
32.51EN	0.016			C (3)	0.126			226		
32.52SN	0.031	0.004	15°	C (3)	0.106			247		
32.52SN	0.031	0.004	20°	C (3)	0.106					337
32.52SN	0.031	0.004	25°	C (3)	0.106					357
32.52TN	0.031	0.004	25°	C (3)	0.106					347
32.52TN	0.031	0.006	25°	C (3)	0.106			267		
32.52SN	0.031	0.006	25°	C (3)	0.106			277		
32.52TN	0.031	0.006	30°	C (3)	0.106					367
32.52SN	0.031	0.006	30°	C (3)	0.106					377
32.52EN	0.031			C (3)	0.106			227		317
32.52SN	0.031	0.007	30°	C (3)	0.106			287		
P										
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S										
H						●	●	●	●	●
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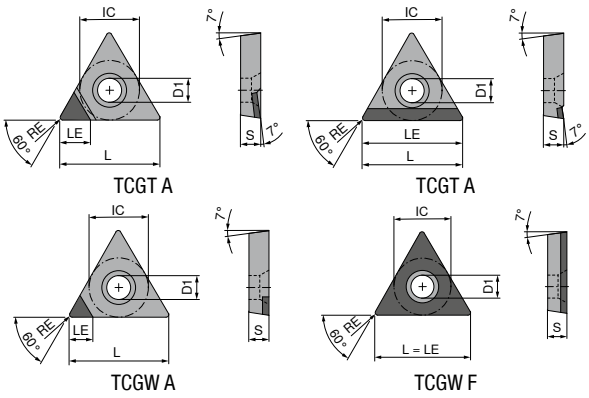
4

TCGW / TCGT

Designation	L inch	S inch	D1 inch	IC inch
TCGT 18..	0.378	0.094	0.098	0.219
TCGW 1...	0.378	0.094	0.098	0.219
TCG. 21..	0.433	0.094	0.110	0.250
TCG. 32..	0.650	0.156	0.173	0.375



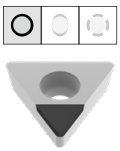
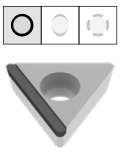
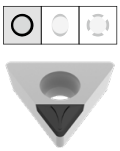
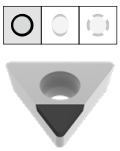
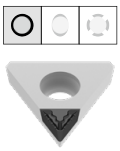
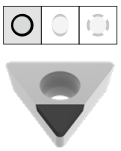
TCGW / TCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners

				NEW	NEW		NEW		NEW
				CTDPD20	CTDPD20	CTDPD20	CTDPD20	-CB1 CTDPD20	CTDPS30
				F	F	F	F	F	F
				DIAMOND TCGW	DIAMOND TCGW	DIAMOND TCGW	DIAMOND TCGT	DIAMOND TCGT	DIAMOND TCGT
				71 188 ...	71 187 ...	71 140 ...	71 184 ...	71 325 ...	71 184 ...
ANSI	RE inch	TCE (NOI)	LE inch						
1.81.5.5FN	0.008	A (1)	0.146			100			
181.5.5FN	0.008	A (1)	0.146					112	20001
1.81.5.1FN	0.016	A (1)	0.134			102			
181.5.1FN	0.016	A (1)	0.134					114	20101
1.81.5.2FN	0.031	A (1)	0.118			104			
181.5.2FN	0.031	A (1)	0.118				10001		
1.81.5.2FNN	0.031	A (1)	0.378	10001					
21.5.5FN	0.008	A (1)	0.146			106	10101	122	
21.5.5FN	0.008	F	0.433		10001				
21.51FN	0.016	A (1)	0.134			108	10201	124	20201
21.51FN	0.016	F	0.433		10101				
21.51FNN	0.016	A (1)	0.433	10101					
21.52FN	0.031	A (1)	0.118			110	10301		
21.52FNN	0.031	A (1)	0.433	10201					
32.51FN	0.016	A (1)	0.181			112	10401	134	20301
32.51FNN	0.016	A (1)	0.650	10301					
32.52FN	0.031	A (1)	0.165			114	10501	13600	
32.52FNN	0.031	A (1)	0.650	10401					
32.53FN	0.047	A (1)	0.150			11600			
P									
M									
K									
N				●	●	●	●	●	●
S									
H									
O				●	●	●	●	●	●

TCGW / TCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners

				NEW	NEW		NEW		NEW
				CTDPS30	CTDPS30	-CB2 CTDPS30	CTDPU20	-CB3 CTDPU20	CTDCD10
									
				F	F	M	F	R	F
				DIAMOND TCGW	DIAMOND TCGT	DIAMOND TCGT	DIAMOND TCGW	DIAMOND TCGT	DIAMOND TCGW
				71 186 ...	71 185 ...	71 326 ...	71 188 ...	71 327 ...	71 186 ...
ANSI	RE inch	**TCE (NOI)**	LE inch						
181.5.5FN	0.008	**A (1)**	0.146			212			
1.81.5.5FN	0.008	**A (1)**	0.146	20001					
181.5.1FN	0.016	**A (1)**	0.134			214			
181.5.1FNN	0.016	**A (1)**	0.378		20001				
21.5.5FN	0.008	**A (1)**	0.102						40001
21.5.5FN	0.008	**A (1)**	0.146	20101		222			
21.51FN	0.016	**A (1)**	0.091						40101
21.51FN	0.016	**A (1)**	0.134	20201		224		224	
21.51FNN	0.016	**A (1)**	0.433		20101		30001		
21.52FN	0.031	**A (1)**	0.079						40201
21.52FNN	0.031	**A (1)**	0.433		20201				
32.51FN	0.016	**A (1)**	0.091						40301
32.51FN	0.016	**A (1)**	0.181			234			
32.51FNN	0.016	**A (1)**	0.650		20301				
32.52FN	0.031	**A (1)**	0.079						40401
32.52FN	0.031	**A (1)**	0.165					238	
32.52FNN	0.031	**A (1)**	0.650		20401				
P									
M									
K									
N				●	●	●	●	●	●
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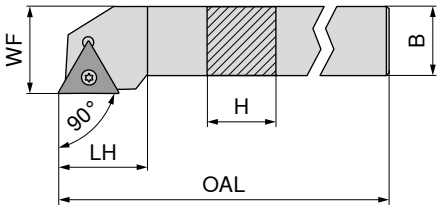
H									
O				●	●	●	●	●	●

4

MaxiLock-S – STGC 90° – Toolholder with screw clamping



Illustrations show right-hand versions

Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 565 ...	Right-hand 78 564 ...
STGC R/L 06-2	0.375	0.375	2.500	0.500	0.500	TC..21.5..	**00602**	**00602**
STGC R/L 08-2	0.500	0.500	3.500	0.560	0.625	TC..21.5..	**00802**	**00802**
STGC R/L 10-3	0.625	0.625	4.000	1.000	0.750	TC..32.5..	**01003**	**01003**
STGC R/L 12-3B	0.750	0.750	4.500	1.000	1.000	TC..32.5..	**01223**	**01223**
STGC R/L 16-3D	1.000	1.000	6.000	1.000	1.250	TC..32.5..	**01643**	**01643**


Key I

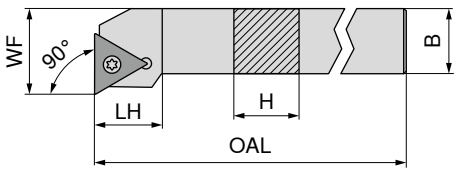

Clamping screw


Solid Carbide Seat T


Threaded sleeve

Spare parts for Article no.	Key I 78 950 ...	Clamping screw 78 950 ...	Solid Carbide Seat T 78 950 ...	Threaded sleeve 78 950 ...
78 564 00602 / 78 565 00602	**06400**	**06200**		
78 564 00802 / 78 565 00802	**06400**	**06200**		
78 564 01003 / 78 565 01003	**05400**	**05100**	**06100**	**05300**
78 564 01223 / 78 565 01223	**05400**	**05100**	**06100**	**05300**
78 564 01643 / 78 565 01643	**05400**	**05100**	**06100**	**05300**

MaxiLock-S – STFC 90° – Toolholder with screw clamping



Illustrations show right-hand versions

Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 563 ...	Right-hand 78 562 ...
STFC R/L 06-2	0.375	0.375	2.500	0.400	0.500	TC..21.5..	**00602**	**00602**
STFC R/L 08-2	0.500	0.500	3.500	0.689	0.625	TC..21.5..	**00802**	**00802**
STFC R/L 10-3	0.625	0.625	4.000	1.000	0.750	TC..32.5..	**01003**	**01003**
STFC R/L 12-3B	0.750	0.750	4.500	1.000	1.000	TC..32.5..	**01223**	**01223**
STFC R/L 16-3D	1.000	1.000	6.000	1.000	1.250	TC..32.5..	**01643**	**01643**


Key I

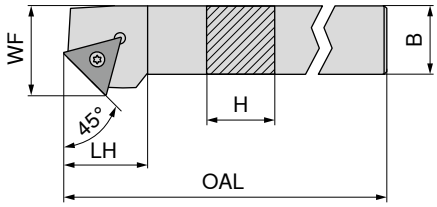

Clamping screw


Solid Carbide Seat T


Threaded sleeve

Spare parts for Article no.	Key I 78 950 ...	Clamping screw 78 950 ...	Solid Carbide Seat T 78 950 ...	Threaded sleeve 78 950 ...
78 562 00602 / 78 563 00602	**06400**	**06200**		
78 562 00802 / 78 563 00802	**06400**	**06200**		
78 562 01003 / 78 563 01003	**05400**	**05100**	**06100**	**05300**
78 562 01223 / 78 563 01223	**05400**	**05100**	**06100**	**05300**
78 562 01643 / 78 563 01643	**05400**	**05100**	**06100**	**05300**

MaxiLock-S – STDC 45° – Toolholder with screw clamping



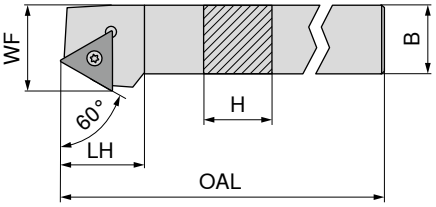
Illustrations show right-hand versions

Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 561 ...	Right-hand 78 560 ...
STDC R/L 06-2	0.375	0.375	2.500	0.410	0.433	TC..21.5..	**00602**	**00602**
STDC R/L 08-2	0.500	0.500	3.500	0.570	0.512	TC..21.5..	**00802**	**00802**
STDC R/L 10-3	0.625	0.625	4.000	1.000	0.669	TC..32.5..	**01003**	**01003**
STDC R/L 12-3B	0.750	0.750	4.500	1.000	0.866	TC..32.5..	**01223**	**01223**
STDC R/L 16-3D	1.000	1.000	6.000	1.000	1.063	TC..32.5..	**01643**	**01643**

Spare parts for Article no.	 Key I 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat T 78 950 ...	 Threaded sleeve 78 950 ...
78 560 00602 / 78 561 00602	**06400**	**06200**		
78 560 00802 / 78 561 00802	**06400**	**06200**		
78 560 01003 / 78 561 01003	**05400**	**05100**	**06100**	**05300**
78 560 01223 / 78 561 01223	**05400**	**05100**	**06100**	**05300**
78 560 01643 / 78 561 01643	**05400**	**05100**	**06100**	**05300**

4

MaxiLock-S – STTC 60° – Toolholder with screw clamping

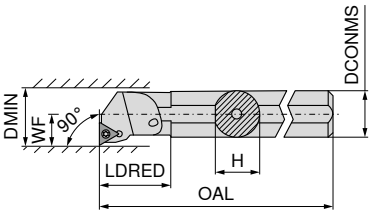


Illustrations show right-hand versions

Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 567 ...	Right-hand 78 566 ...
STTC R/L 12-3B	0.750	0.750	4.500	1.000	0.718	TC..32.5..	**01223**	**01223**
STTC R/L 16-3D	1.000	1.000	6.000	1.000	0.860	TC..32.5..	**01643**	**01643**

Spare parts for Article no.	 Key I 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat T 78 950 ...	 Threaded sleeve 78 950 ...
78 566 01223 / 78 567 01223	**05400**	**05100**	**06100**	**05300**
78 566 01643 / 78 567 01643	**05400**	**05100**	**06100**	**05300**

MaxiLock-S – STFC 90° – Boring bar with screw clamping



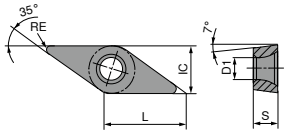
Illustrations show right-hand versions

Designation	DCONMS inch	H inch	OAL inch	LDRED inch	WF inch	DMIN inch	Insert	Left-hand 78 725 ...	Right-hand 78 724 ...
S06M STFC R/L 2	0.375	0.340	6.000	0.850	0.250	0.500	TC..21.5..	**20617**	**20617**
A06M STFC R/L	0.375	0.340	6.000	0.850	0.250	0.500	TC..21.5..	**20606**	**20606**
S08M STFC R/L 2	0.500	0.460	6.000	0.800	0.312	0.625	TC..21.5..	**20818**	**20818**
A08M STFC R/L	0.500	0.460	6.000	0.800	0.312	0.625	TC..21.5..	**20808**	**20808**
S10R STFC R/L 2	0.625	0.580	8.000	0.960	0.406	0.812	TC..21.5..	**21021**	**21021**
A10R STFC R/L	0.625	0.580	8.000	0.960	0.406	0.812	TC..21.5..	**21010**	**21010**
S12S STFC R/L 2	0.750	0.710	10.000	1.420	0.500	1.000	TC..21.5..	**21222**	**21222**
A12S STFC R/L	0.750	0.710	10.000	1.420	0.500	1.000	TC..21.5..	**21212**	**21212**
S16T STFC R/L 3	1.000	0.900	12.000	1.930	0.640	1.280	TC..32.5..	**31626**	**31626**
S20U STFC R/L 3	1.250	1.180	14.000	1.970	0.765	1.530	TC..32.5..	**32030**	**32030**
S24V STFC R/L 3	1.500	1.370	16.000	2.360	0.890	1.780	TC..32.5..	**32435**	**32435**

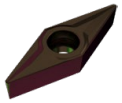
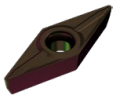
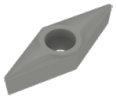
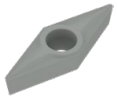
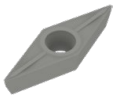
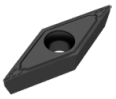
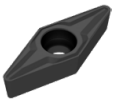
Spare parts for Article no.	 Key I 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat T 78 950 ...	 Threaded sleeve 78 950 ...
78 724 20617 / 78 725 20617	**06400**	**05200**		
78 724 20606 / 78 725 20606	**06400**	**05200**		
78 724 20818 / 78 725 20818	**06400**	**05200**		
78 724 20808 / 78 725 20808	**06400**	**06200**		
78 724 21021 / 78 725 21021	**06400**	**06200**		
78 724 21010 / 78 725 21010	**06400**	**06200**		
78 724 21222 / 78 725 21222	**06400**	**06200**		
78 724 21212 / 78 725 21212	**06400**	**06200**		
78 724 31626 / 78 725 31626	**05700**	**05600**		
78 724 32030 / 78 725 32030	**05400**	**05100**	**06100**	**05300**
78 724 32435 / 78 725 32435	**05400**	**05100**	**06100**	**05300**

VCGT / VCMT / VCET

Designation	L inch	S inch	D1 inch	IC inch
VC.T 22..	0.437	0.125	0.114	0.250
VC.T 33..	0.654	0.187	0.173	0.375
VCGT 43..	0.870	0.219	0.217	0.500

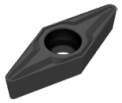
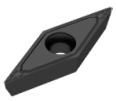
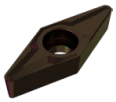
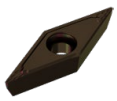
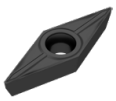
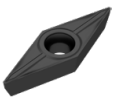
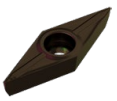


VCGT / VCMT

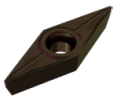
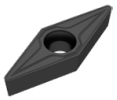
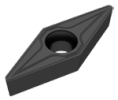
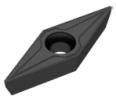
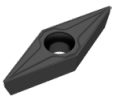
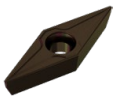
	-CF05 CTEP110	-CF55 CTEP110	-SF TCM10	-SF TCM407	-SMF TCM10	-SF CTCP115	-SF CTCP115
	DRAGONSKIN	DRAGONSKIN				DRAGONSKIN	DRAGONSKIN
							
	F	F	F	F	F	F	F
	CERMET VCGT	CERMET VCMT	CERMET VCGT	CERMET VCGT	CERMET VCMT	VCMT	VCGT
	76 276 ...	76 292 ...	70 277 ...	70 277 ...	70 288 ...	76 279 ...	76 277 ...
ANSI / RE inch							
22.5EN 0.008	014		894	844			314
220EN 0.004			892				
221EN 0.016	016	016	896	846	896		316
222EN 0.031							318
331EN 0.016	028	028	900	850	900	328	
332EN 0.031	030	030	902		902	330	
P	●	●	●	●	●	●	●
M	○	○	○	○	○		
K	○	○	○	○	○	○	○
N							
S							
H							
O							

4

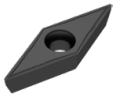
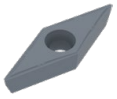
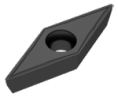
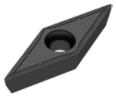
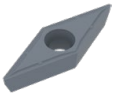
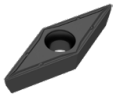
VCGT / VCMT

	-SF CTCP125	-SF CTCP125	-SF CTCP135	-SF CTCP135	-SMF CTCP115	-SMF CTCP125	-SMF CTCP135
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
	F	F	F	F	F	F	F
	VCGT	VCMT	VCGT	VCMT	VCMT	VCMT	VCGT
	76 277 ...	76 279 ...	76 277 ...	76 279 ...	76 288 ...	76 288 ...	76 285 ...
ANSI / RE inch							
22.5EN 0.008	514		714				714
221EN 0.016	516		716		316	516	
222EN 0.031	518		718				
331EN 0.016		528		728	328	528	
332EN 0.031		530			330	530	
P	●	●	●	●	●	●	●
M			○	○			○
K	○	○			○	○	
N							
S							
H							
O							

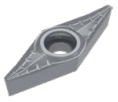
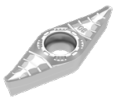
VCMT

		-SMF CTCP135	-SM CTCK110	-SM CTCK120	-SM CTCP115	-SM CTCP125	-SM CTCP135
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
		F	M	M	M	M	M
		VCMT	VCMT	VCMT	VCMT	VCMT	VCMT
		76 288 ...	70 278 ...	70 278 ...	76 278 ...	76 278 ...	76 278 ...
ANSI	RE inch						
221EN	0.016	716					
331.5EN	0.024				329		
331EN	0.016	728	028	528	328	528	728
332EN	0.031	730	030	530	330	530	730
333EN	0.047		032	532	33200	53200	732
P		●	○	○	●	●	●
M		○					○
K			●	●	○	○	
N							
S							
H							
O							

VCMT

		NEW -M25 CTCM120	-M25 CTPM125	NEW -M25 CTCM130	NEW -M55 CTCM120	-M55 CTPM125	NEW -M55 CTCM130
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
		F	F	F	M	M	M
		VCMT	VCMT	VCMT	VCMT	VCMT	VCMT
		75 219 ...	75 219 ...	75 219 ...	75 220 ...	75 220 ...	75 220 ...
ANSI	RE inch						
331EN	0.016	12800	228	32800	12800	228	32800
332EN	0.031	13000	23000	33000	13000	230	33000
P		○	○	○	○	○	○
M		●	●	●	●	●	●
K							
N							
S				○			○
H							
O							

VCGT / VCMT

			NEW					NEW	NEW
		-25P H210T	-25P CTPX710	-25Q H210T	-27 H10T	-27 CWN15	-27 CTPX715	-29 H216T
			DRAGONSKIN				DRAGONSKIN	
								
		F	M	M	M	M	M	M
		VCGT	VCGT	VCGT	VCGT	VCGT	VCGT	VCMT
		70 282 ...	70 282 ...	70 282 ...	70 280 ...	70 280 ...	70 280 ...	70 247 ...
ANSI	RE inch							
22.5FN	0.008	638	71400		606	306	81400	
221FL	0.016			670				
221FN	0.016	640	71600		608	308	81600	
221FR	0.016			680				
222FN	0.031				610	310		
331EN	0.016							62800
331FN	0.016	642	72800		612	312	82800	
332EN	0.031							63000
332FN	0.031	644	73000		614	314	83000	
333EN	0.047							63200
333FN	0.047	646	73200		616	316		
43.57.5FN	0.118	648	75000		618			
P			●				●	
M			●			○	●	
K		○		○	○		○	○
N		●	●	●	●	●	●	●
S		○	●	○			●	
H								
O		○		○	○		○	○

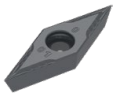
4

VCET

NEW

-F05
CTPX710

DRAGONSKIN

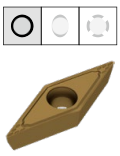
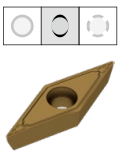
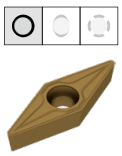
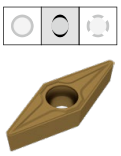


F
VCET
76 255 ...

ANSI	RE inch	
22.5FN	0.008	**12000**
2205FN	0.006	**11800**
220FN	0.004	**11600**
221FN	0.016	**12200**
22X0FN	0.002	**11400**

P	●
M	●
K	
N	●
S	●
H	
O	

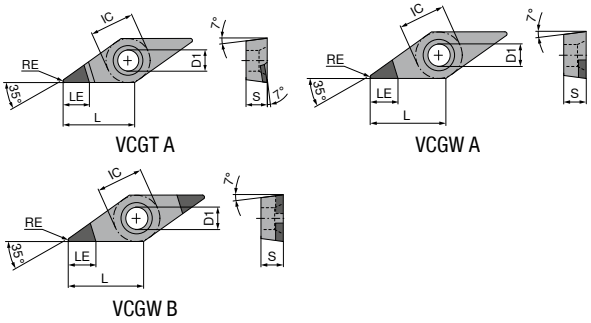
VCMT

		NEW -FMS CT-P15	NEW -FMS CT-P25	NEW -MRS CT-P15	NEW -MRS CT-P25
					
		F VCMT	F VCMT	M VCMT	M VCMT
		75 308 ...	75 308 ...	75 309 ...	75 309 ...
ANSI	RE inch				
221EN	0.016	**01609**	**11609**		
331EN	0.016	**02809**	**12809**	**02809**	**12809**
332EN	0.031	**03009**	**13009**	**03009**	**13009**
P		●	●	●	●
M		○	○	○	○
K					
N					
S					
H					
O					

4

VCGW / VCGT

Designation	L inch	S inch	D1 inch	IC inch
VCG. 22..	0.437	0.125	0.114	0.250
VCG. 33..	0.654	0.187	0.173	0.375
VCGW 1...	0.272	0.094	0.087	0.156



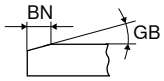
VCGT A

VCGW A

VCGW B

VCGW

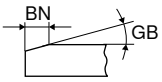
▲ TCE(NOI) = Design and number of equipped cutting edge corners

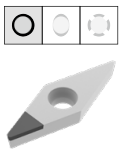
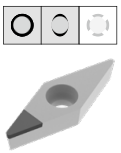
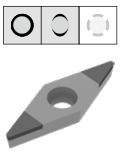
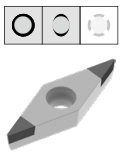
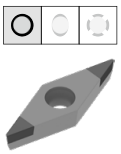


						NEW			NEW	NEW
						CTBS10U	CTBS20U	CTBS20C	CTBH15U	CTBH15C
						F	F	F	F	F
						CBN VCGW	CBN VCGW	CBN VCGW	CBN VCGW	CBN VCGW
						71 160 ...	71 429 ...	71 165 ...	71 036 ...	71 035 ...
ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch					
22.5SN	0.008	0.004	15°	B (2)	0.134				32014	32014
22.5TN	0.008	0.005	15°	A (1)	0.185		20000			
22.5EN	0.008			B (2)	0.134				02000	02000
22.5FN	0.008			A (1)	0.185	200				
22.5TN	0.008	0.005	20°	A (1)	0.185	300				
22.5SN	0.008	0.006	25°	B (2)	0.134				32029	32029
221SN	0.016	0.004	10°	B (2)	0.122			121		
221SN	0.016	0.004	15°	B (2)	0.122			131	32214	32214
221TN	0.016	0.005	20°	A (1)	0.177	302				
221TN	0.016	0.006	20°	B (2)	0.122			141		
221EN	0.016			B (2)	0.122				02200	02200
221FN	0.016			A (1)	0.177	202				
221SN	0.016	0.006	20°	B (2)	0.122			151		
221SN	0.016	0.006	25°	B (2)	0.122					32229
221SN	0.016	0.007	25°	B (2)	0.122			171		
222SN	0.031	0.004	10°	B (2)	0.098			122		
222EN	0.031			B (2)	0.098			112	02400	02400
222FN	0.031			A (1)	0.165	204				
222SN	0.031	0.004	15°	B (2)	0.098			132	32414	32414
222TN	0.031	0.005	20°	A (1)	0.165	304				
222SN	0.031	0.006	20°	B (2)	0.098			152		
221SN	0.031	0.006	25°	B (2)	0.122				32229	
222SN	0.031	0.006	25°	B (2)	0.098				32429	32429
222TN	0.031	0.007	25°	B (2)	0.098			162		
222SN	0.031	0.007	25°	B (2)	0.098			172		
33.5RN	0.008			B (2)	0.134					23600
33.5SN	0.008	0.004	15°	B (2)	0.134				33614	33614
33.5SN	0.008	0.006	25°	B (2)	0.134				33629	33629
33.5FN	0.008			A (1)	0.209	205				
33.5TN	0.008	0.005	20°	A (1)	0.209	305				
331SN	0.016	0.004	10°	B (2)	0.122			125		
331SN	0.016	0.004	15°	B (2)	0.122			135	33814	33814
331TN	0.016	0.005	15°	A (1)	0.197		20100			
P										
M										
K						●	●	●		
N										
S						●	●	●		
H									●	●
O										

VCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners



								NEW				NEW		NEW						
						CTBS10U		CTBS20U		CTBS20C		CTBH15U		CTBH15C						
																				
						F		F		F		F		F						
						CBN VCGW		CBN VCGW		CBN VCGW		CBN VCGW		CBN VCGW						
						71 160 ...		71 429 ...		71 165 ...		71 036 ...		71 035 ...						
ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch															
331TN	0.016	0.005	20°	A (1)	0.197		306													
331TN	0.016	0.006	20°	B (2)	0.122						145									
331RN	0.016			B (2)	0.122								23800		23800					
33.5RN	0.016			B (2)	0.134								23600							
331FN	0.016			A (1)	0.197		206													
331SN	0.016	0.006	20°	B (2)	0.122						155									
331SN	0.016	0.006	25°	B (2)	0.122								33829		33829					
331SN	0.016	0.007	25°	B (2)	0.122						175									
332SN	0.031	0.004	10°	B (2)	0.098						126									
332SN	0.031	0.004	15°	B (2)	0.098						136		34014		34014					
332SN	0.031	0.005	15°	A (1)	0.173				20200											
332TN	0.031	0.005	20°	A (1)	0.173		308													
332SN	0.031	0.006	20°	B (2)	0.098						156									
332RN	0.031			B (2)	0.098								24000		24000					
332EN	0.031			B (2)	0.098						116									
332FN	0.031			A (1)	0.173		208													
332SN	0.031	0.006	25°	B (2)	0.098								34029		34029					
332TN	0.031	0.007	25°	B (2)	0.098						166									
332SN	0.031	0.007	25°	B (2)	0.098						176									
P																				
M																				
K							●		●		●									
N																				
S							●		●		●									
H													●		●					
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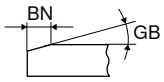
4

VCGW / VCGT

▲ TCE(NOI) = Design and number of equipped cutting edge corners



						CTBH20U		CTBH21U		NEW CTBH21U		NEW CTBH21U		CTBH20C		
						F		F		F		F		F		
						CBN VCGW		CBN VCGW		CBN VCGW		CBN VCGT		CBN VCGW		
						71 160 ...		71 160 ...		71 430 ...		71 428 ...		71 165 ...		
ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch											
1.21.5.5TN	0.008	0.005	25°	A (1)	0.138				55000							
1.21.51FN	0.016			A (1)	0.126				45000							
22.5TN	0.008	0.005	20°	A (1)	0.185		500									
22.5TN	0.008	0.005	25°	B (2)	0.138						40100					
22.5FN	0.008			B (2)	0.138						40000					
22.5FN	0.008			A (1)	0.185		400 1)									
221FN	0.016			A (1)	0.126								40000			
221FN	0.016			B (2)	0.122											211
221EN	0.016			B (2)	0.122											221
221SN	0.016	0.004	20°	B (2)	0.122											251
221TN	0.016	0.006	25°	B (2)	0.122											261
221SN	0.016	0.006	25°	B (2)	0.122											271
221FN	0.016			B (2)	0.126						40200					
221TN	0.016	0.005	25°	B (2)	0.126						40300					
221FN	0.016			A (1)	0.177		402 1)									
221TN	0.016	0.005	20°	A (1)	0.177		502									
222SN	0.031	0.004	15°	B (2)	0.098											242
222SN	0.031	0.004	20°	B (2)	0.098											252
222TN	0.031	0.005	20°	A (1)	0.165		504									
222TN	0.031	0.006	25°	B (2)	0.098											262
222SN	0.031	0.006	25°	B (2)	0.098											272
222EN	0.031			B (2)	0.098											222
222FN	0.031			A (1)	0.165		404 1)									
222SN	0.031	0.007	30°	B (2)	0.098											282
33.5FN	0.008			A (1)	0.138				43000				40100			
33.5TN	0.008	0.005	25°	B (2)	0.138						40400					
33.5TN	0.008	0.005	25°	A (1)	0.138				52000							
33.5FN	0.008			A (1)	0.209		405 1)									
33.5TN	0.008	0.005	20°	A (1)	0.209		505									
331FN	0.016			B (2)	0.126						40500					
331FN	0.016			B (2)	0.122											215
331EN	0.016			B (2)	0.122											225
331SN	0.016	0.004	20°	B (2)	0.122											255
331TN	0.016	0.006	25°	B (2)	0.122											265
331SN	0.016	0.004	15°	B (2)	0.122											24400
331TN	0.016	0.005	25°	B (2)	0.126						40600					
331FN	0.016			A (1)	0.126				41200							
331TN	0.016	0.005	25°	A (1)	0.126				52200							
331FN	0.016			A (1)	0.197		406 1)									
331TN	0.016	0.005	20°	A (1)	0.197		506									
332SN	0.031	0.004	15°	B (2)	0.098											246
332SN	0.031	0.004	20°	B (2)	0.098											256
332TN	0.031	0.005	20°	A (1)	0.173		508									
332TN	0.031	0.005	25°	B (2)	0.110						40800					
332TN	0.031	0.006	25°	B (2)	0.098											266
332SN	0.031	0.006	25°	B (2)	0.098											276
332SN	0.031	0.007	30°	B (2)	0.098											286
332EN	0.031			B (2)	0.098											226
332FN	0.031			B (2)	0.110						40700					
332FN	0.031			A (1)	0.173		408 1)									
333TN	0.047	0.005	20°	A (1)	0.154		510									
P																
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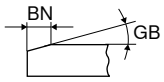
1) Machining to 60 HRC

VCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners



						CTBH40U	CTBH40C	NEW CTBH41U	NEW CTBH41U
						F	F	F	F
						CBN VCGW	CBN VCGW	CBN VCGW	CBN VCGW
						71 160 ...	71 165 ...	71 429 ...	71 430 ...
ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch				
1.21.5.5FN	0.008			A (1)	0.138			70000	
1.21.51FN	0.016			A (1)	0.126			70100	
22.5FN	0.008			A (1)	0.185	800			
22.5FN	0.008			B (2)	0.138				70000
22.5TN	0.008	0.005	25°	A (1)	0.185	900			
221SN	0.016	0.004	20°	B (2)	0.122		331		
221SN	0.016	0.004	25°	B (2)	0.122		351		
221FN	0.016			B (2)	0.126				70100
221FN	0.016			A (1)	0.177	802			
221TN	0.016	0.004	25°	B (2)	0.122		341		
221TN	0.016	0.005	25°	A (1)	0.177	902			
221TN	0.016	0.006	30°	B (2)	0.122		361		
221SN	0.016	0.007	35°	B (2)	0.122		381		
222SN	0.031	0.004	20°	B (2)	0.098		332		
222SN	0.031	0.004	25°	B (2)	0.098		352		
222EN	0.031			B (2)	0.098		312		
222FN	0.031			A (1)	0.165	804			
222TN	0.031	0.004	25°	B (2)	0.098		342		
222TN	0.031	0.006	30°	B (2)	0.098		362		
222SN	0.031	0.006	30°	B (2)	0.098		372		
222SN	0.031	0.007	35°	B (2)	0.098		382		
33.5FN	0.008			A (1)	0.209	805			
33.5FN	0.008			B (2)	0.138				70200
33.5FN	0.008			A (1)	0.138			70200	
33.5TN	0.008	0.005	25°	A (1)	0.209	905			
331SN	0.016	0.004	20°	B (2)	0.122		335		
331SN	0.016	0.004	25°	B (2)	0.122		355		
331FN	0.016			B (2)	0.126				70300
331FN	0.016			A (1)	0.126			70300	
331FN	0.016			A (1)	0.197	806			
331TN	0.016	0.004	25°	B (2)	0.122		345		
331TN	0.016	0.005	25°	A (1)	0.197	906			
331TN	0.016	0.003	30°	A (1)	0.126			70400	
331TN	0.016	0.006	30°	B (2)	0.122		365		
331SN	0.016	0.007	35°	B (2)	0.122		385		
332SN	0.031	0.004	20°	B (2)	0.098		336		
332SN	0.031	0.004	25°	B (2)	0.098		356		
332TN	0.031	0.004	25°	B (2)	0.098		346		
332TN	0.031	0.005	25°	A (1)	0.173	908			
332TN	0.031	0.006	30°	B (2)	0.098		366		
332FN	0.031			B (2)	0.110				70400
332FN	0.031			A (1)	0.110			70500	
332EN	0.031			B (2)	0.098		316		
332FN	0.031			A (1)	0.173	808			
332SN	0.031	0.006	30°	B (2)	0.098		376		
332SN	0.031	0.007	35°	B (2)	0.098		386		
333TN	0.047	0.005	25°	A (1)	0.154	90900			
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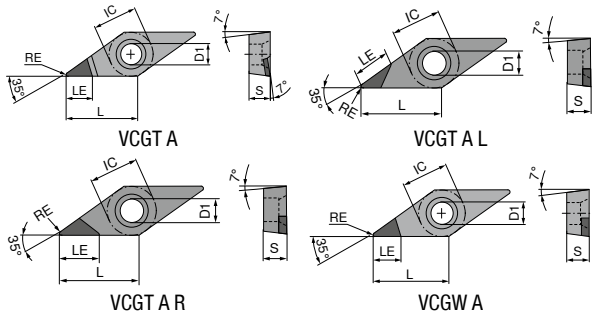
4

VCGT / VCGW

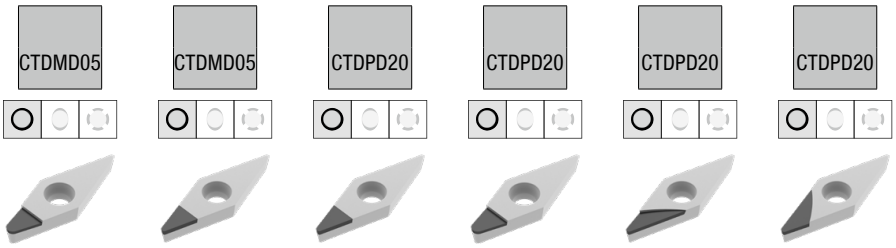
Designation	L inch	S inch	D1 inch	IC inch
VCG. 1...	0.272	0.094	0.087	0.156
VCG. 22..	0.437	0.125	0.114	0.250
VCG. 2...	0.524	0.125	0.134	0.313
VCG. 33..	0.654	0.187	0.173	0.375



VCGT / VCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners

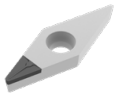
NEW



				F	F	F	F	F	F			
				DIAMOND VCGT	DIAMOND VCGW	DIAMOND VCGW	DIAMOND VCGT	DIAMOND VCGT	DIAMOND VCGT			
				71 189 ...	71 160 ...	71 160 ...	71 062 ...	71 063 ...	71 064 ...			
ANSI	RE inch	TCE (NOI)	LE inch									
1.21.5.5FN	0.008	A (1)		50001								
1.21.51FN	0.016	A (1)		50101								
220FN	0.004	A (1)	0.213				10100					
22.5FN	0.008	A (1)	0.118		050							
22.5FN	0.008	A (1)	0.181	50201		100	100					
221FN	0.016	A (1)	0.118		052							
221FN	0.016	A (1)	0.154	50301		102	102					
221FR	0.016	A (1)	0.256					102				
221FL	0.016	A (1)	0.256						102			
222FN	0.031	A (1)	0.130			104	104					
222FR	0.031	A (1)	0.236					104				
222FL	0.031	A (1)	0.236						104			
330FN	0.004	A (1)	0.236				10700					
33.5FN	0.008	A (1)	0.232			105	105					
33.5FN	0.008	A (1)		50401								
331FN	0.016	A (1)	0.217			106	106					
331FN	0.016	A (1)		50501								
331FR	0.016	A (1)	0.295					106				
331FL	0.016	A (1)	0.295						106			
332FN	0.031	A (1)	0.197		07800	108	108					
332FR	0.031	A (1)	0.276					108				
332FL	0.031	A (1)	0.276						108			
332FN	0.031	A (1)		50601								
333FN	0.047	A (1)	0.177			110	110					
333FR	0.047	A (1)	0.276					110				
333FL	0.047	A (1)	0.276						110			
P												
M												
K												
N				●	●	●	●	●	●			
S												
H												
O				●	●	●	●	●	●			

VCGT / VCGW

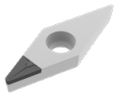
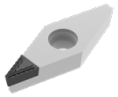
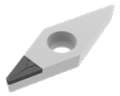
▲ TCE(NOI) = Design and number of equipped cutting edge corners

					NEW	NEW			NEW
				-CB1 CTDPD20	CTDPS30	CTDPS30	-CB1 CTDPS30	-CB2 CTDPS30	CTDPU20
									
				F	F	F	F	M	F
				DIAMOND VCGT	DIAMOND VCGW	DIAMOND VCGT	DIAMOND VCGT	DIAMOND VCGT	DIAMOND VCGW
				71 330 ...	71 191 ...	71 189 ...	71 330 ...	71 331 ...	71 191 ...
ANSI	RE inch	TCE (NOI)	LE inch						
1.21.50FN	0.004	A (1)	0.150			20001			
1.21.5.5FN	0.008	A (1)	0.142		20001				
1.21.51FN	0.016	A (1)	0.126		20101				
220FN	0.004	A (1)	0.213	11000	20201	20101			
22.5FN	0.008	A (1)	0.181	112	20301	20201	21200	212	
221FN	0.016	A (1)	0.154	114	20401	20301	214	214	
222FN	0.031	A (1)	0.130					21800	
2.52.5FN	0.008	A (1)	0.232		20501	20401			
330FN	0.004	A (1)	0.236		20601	20501			
33.5FN	0.008	A (1)	0.232	13200		20601		23200	
331FN	0.016	A (1)	0.217	134	20701	20701	234	234	30001
332FN	0.031	A (1)	0.197	138	20801		238	238	
333FN	0.047	A (1)	0.177	14000	20901		24000	242	
P									
M									
K									
N				●	●	●	●	●	●
S									
H									
O				●	●	●	●	●	●

4

VCGT / VCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners

				NEW			NEW		
				-CB2 CTDPU20	-CB3 CTDPU20	CTDCD10	-CB1 CTDCD10	-CB2 CTDCD10
								
				M	R	F	F	M
				DIAMOND VCGT	DIAMOND VCGT	DIAMOND VCGW	DIAMOND VCGT	DIAMOND VCGT
				71 190 ...	71 332 ...	71 191 ...	71 330 ...	71 331 ...
ANSI	RE inch	TCE (NOI)	LE inch					
220FN	0.004	A (1)	0.118				31000	
22.5FN	0.008	A (1)	0.118			40001	312	312
221FN	0.016	A (1)	0.118			40101	314	314
221FN	0.016	A (1)	0.154		214			
222FN	0.031	A (1)	0.118			40201		
33.5FN	0.008	A (1)	0.118			40301	32200	33200
331FN	0.016	A (1)	0.118			40401	32400	334
331FN	0.016	A (1)	0.217	30001	234			
332FN	0.031	A (1)	0.118			40501	32600	338
333FN	0.047	A (1)	0.118				32800	34000
P								
M								
K								
N				●	●	●	●	●
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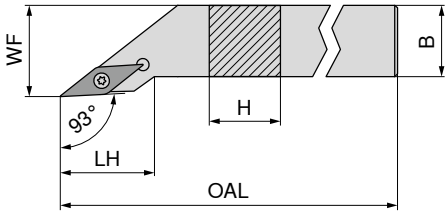
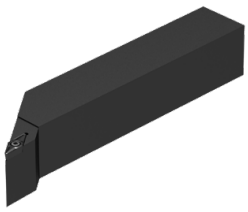
H								
O				●	●	●	●	●

MaxiLock-S – SVJC 93° – Toolholder with screw clamping



Illustrations show right-hand versions

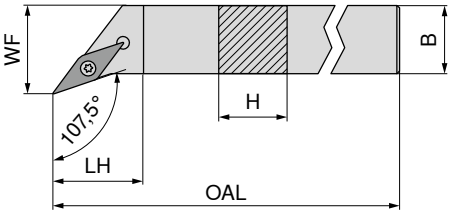


Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 571 ...	Right-hand 78 570 ...
SVJC R/L 12-3B	0.750	0.750	4.500	1.610	1.000	VC..33..	**01223**	**01223**
SVJC R/L 16-3D	1.000	1.000	6.000	1.610	1.250	VC..33..	**01643**	**01643**
SVJC R/L 20-3D	1.250	1.250	6.000	1.610	1.500	VC..33..	**02043**	**02043**

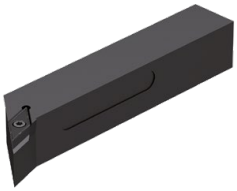
Spare parts for Article no.	 Key I 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat V 78 950 ...	 Threaded sleeve 78 950 ...
78 570 01223 / 78 571 01223	**05400**	**05100**	**05500**	**05300**
78 570 01643 / 78 571 01643	**05400**	**05100**	**05500**	**05300**
78 570 02043 / 78 571 02043	**05400**	**05100**	**05500**	**05300**

4

MaxiLock-S – SVHC 107.5° – Toolholder with screw clamping



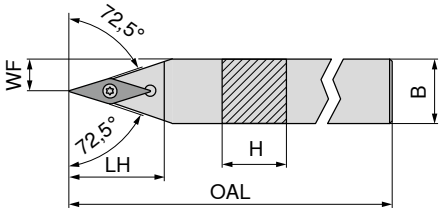
Illustrations show right-hand versions

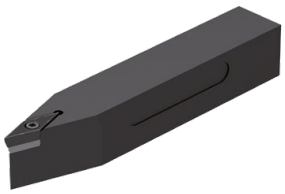


Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Left-hand 78 569 ...	Right-hand 78 568 ...
SVHC R/L 12-3B	0.750	0.750	4.500	0.744	1.000	VC..33..	**01223**	**01223**
SVHC R/L 16-3D	1.000	1.000	6.000	0.756	1.250	VC..33..	**01643**	**01643**

Spare parts for Article no.	Key I 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat V 78 950 ...	 Threaded sleeve 78 950 ...
78 568 01223 / 78 569 01223	**05400**	**05100**	**05500**	**05300**
78 568 01643 / 78 569 01643	**05400**	**05100**	**05500**	**05300**

MaxiLock-S – SVVC 72.5° – Toolholder with screw clamping

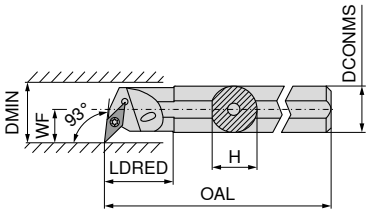




Designation	H inch	B inch	OAL inch	LH inch	WF inch	Insert	Neutral 78 585 ...
SVVC N 12-3B	0.750	0.750	4.500	1.212	0.398	VC..33..	**01223**
SVVC N 16-3D	1.000	1.000	6.000	1.610	0.523	VC..33..	**01643**
SVVC N 20-3D	1.250	1.250	6.000	2.008	0.648	VC..33..	**02043**

Spare parts for Article no.	 Key I 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat V 78 950 ...	 Threaded sleeve 78 950 ...
78 585 01223	**05400**	**05100**	**05500**	**05300**
78 585 01643	**05400**	**05100**	**05500**	**05300**
78 585 02043	**05400**	**05100**	**05500**	**05300**

MaxiLock-S – SVUC 93° – Boring bar with screw clamping



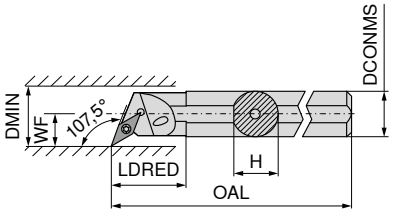
Illustrations show right-hand versions

Designation	DCONMS inch	H inch	OAL inch	LDRED inch	WF inch	DMIN inch	Insert	Left-hand 78 729 ...	Right-hand 78 728 ...
S10R SVUC R/L 2E	0.625	0.580	8.000	1.060	0.500	0.867	VC..22..	**21021**	**21021**
S12S SVUC R/L 2E	0.750	0.710	10.000	1.580	0.625	1.060	VC..22..	**21222**	**21222**
S16T SVUC R/L 2D	1.000	0.900	12.000	1.810	0.750	1.300	VC..22..	**21626**	**21626**
S20U SVUC R/L 3	1.250	1.180	14.000	3.000	1.000	2.000	VC..33..	**32030**	**32030**
S24V SVUC R/L 3	1.500	1.370	16.000	3.000	1.250	2.250	VC..33..	**32435**	**32435**
S32W SVUC R/L 3	2.000	1.870	18.000	4.000	1.375	2.750	VC..33..	**33243**	**33243**

Spare parts for Article no.	 Key I 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat V 78 950 ...	 Threaded sleeve 78 950 ...
78 728 21021 / 78 729 21021	**06400**	**06200**		
78 728 21222 / 78 729 21222	**06400**	**06200**		
78 728 21626 / 78 729 21626	**06400**	**06200**		
78 728 32030 / 78 729 32030	**05400**	**05100**	**05500**	**05300**
78 728 32435 / 78 729 32435	**05400**	**05100**	**05500**	**05300**
78 728 33243 / 78 729 33243	**05400**	**05100**	**05500**	**05300**

4

MaxiLock-S – SVQC 107.5° – Boring bar with screw clamping



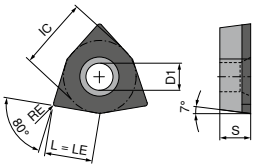
Illustrations show right-hand versions

Designation	DCONMS inch	H inch	OAL inch	LDRED inch	WF inch	DMIN inch	Insert	Left-hand 78 727 ...	Right-hand 78 726 ...
S16T SVQC R/L 3	1.000	0.900	12.000	0.910	0.750	1.375	VC..33..	**31626**	**31626**
S20U SVQC R/L 3	1.250	1.180	14.000	1.060	0.875	1.625	VC..33..	**32030**	**32030**
S24V SVQC R/L 3	1.500	1.370	16.000	1.370	1.063	2.000	VC..33..	**32435**	**32435**

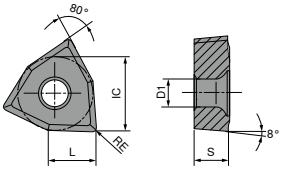
Spare parts for Article no.	Key I 78 950 ...	 Clamping screw 78 950 ...	 Solid Carbide Seat V 78 950 ...	 Threaded sleeve 78 950 ...
78 726 31626 / 78 727 31626	**05700**	**05600**		
78 726 32030 / 78 727 32030	**05400**	**05100**	**05500**	**05300**
78 726 32435 / 78 727 32435	**05400**	**05100**	**05500**	**05300**

WCGT / WCGW

Designation	L inch	S inch	D1 inch	IC inch
WCGW 1..	0.106	0.062	0.091	0.156
WCGW 1..	0.106	0.063	0.091	0.156
WCGT 1..	0.107	0.063	0.083	0.156



CBN/PKD WCGW F



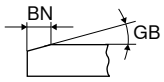
WCGT

WCGT

	-SF TCM10	-SF CTPP430	-SF H216T
		DRAGONSKIN	
			
	F	F	F
	CERMET WCGT	WCGT	WCGT
	70 287 ...	70 287 ...	70 287 ...
ANSI RE inch			
1.21.5EN 0.008		450	
1.21.5FN 0.008	900		600
1.211EN 0.016		452	
1.211FN 0.016	902		602
P	●	●	
M	○	●	
K	○	○	○
N		○	●
S		○	
H			
O			○

WCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners



NEW

	CTBS10U	CTBH15U	CTBH20U	CTBH40U
				
	F	F	F	F
	CBN WCGW	CBN WCGW	CBN WCGW	CBN WCGW
	71 154 ...	71 037 ...	71 154 ...	71 154 ...

ANSI	RE inch	BN inch	GB	TCE (NOI)	LE inch							
1.21.5SN	0.008	0.004	15°	**F**	0.106			**30214**				
1.21.5TN	0.008	0.005	20°	**F**	0.106					**500**		
1.21.5FN	0.008			**F**	0.106	**200**		**00200**		**400** [1]		**800**
1.21.5TN	0.008	0.005	25°	**F**	0.106							**900**
1.211SN	0.016	0.004	15°	**F**	0.106			**30414**				
1.211TN	0.016	0.005	20°	**F**	0.106					**502**		
1.211FN	0.016			**F**	0.106					**402** [1]		**80100**
1.211EN	0.016			**F**	0.106			**00400**				
1.211TN	0.016	0.005	25°	**F**	0.106							**902**
P												
M												
K						●						
N												
S						●						
H								●		●		●
O												

1) Machining to 60 HRC

WCGW

▲ TCE(NOI) = Design and number of equipped cutting edge corners

	CTDPD20
	
	F
	DIAMOND WCGW
	71 154 ...

ANSI	RE inch	TCE (NOI)	LE inch		
1.21.5FN	0.008	**F**	0.106		**100**
1.211FN	0.016	**F**	0.106		**102**
P					
M					
K					
N					●
S					
H					
O					●

Material examples for cutting data tables

	Material sub-group	Index	Composition / Structure / Heat treatment		Tensile strength lbf/in²* / HB / HRC	Material number	Material designation	Material number	Material designation
P	Unalloyed steel	P.1.1	< 0.15 % C	Annealed	60900 lbf/in² / 125 HB	1.0401	1015	1.0301	1010
		P.1.2	< 0.45 % C	Annealed	92800 lbf/in² / 190 HB	1.1191	1045	1.0737	12L14
		P.1.3		Tempered	121800 lbf/in² / 250 HB	1.1191	1045	1.0503	1043
		P.1.4	< 0.75 % C	Annealed	132000 lbf/in² / 270 HB	1.1223	1060	1.0535	1055
		P.1.5		Tempered	146500 lbf/in² / 300 HB	1.1223	1060	1.1274	1095
	Low-alloy steel	P.2.1		Annealed	88500 lbf/in² / 180 HB	1.7131	5115	1.6523	8620
		P.2.2		Tempered	134900 lbf/in² / 275 HB	1.7131	5115	1.6582	4340
		P.2.3		Tempered	146500 lbf/in² / 300 HB	1.7225	4142	1.7131	5115
		P.2.4		Tempered	174000 lbf/in² / 375 HB	1.7225	4142	17223	4140
	High-alloy steel and high-alloy tool steel	P.3.1		Annealed	98600 lbf/in² / 200 HB	1.4021	420	1.2379	D2
		P.3.2		Hardened and tempered	159500 lbf/in² / 300 HB	1.2343	H11	1.3343	M2
		P.3.3		Hardened and tempered	188500 lbf/in² / 400 HB	1.2343	H11	1.2363	A2
	Stainless steel	P.4.1	Ferritic / martensitic	Annealed	98600 lbf/in² / 200 HB	1.4016	430	1.4125	440C
		P.4.2	Martensitic	Tempered	117500 lbf/in² / 250 HB	1.4112	S44003	1.4021	420
M	Stainless steel	M.1.1	Austenitic / austenitic-ferritic	Quenched	88500 lbf/in² / 200 HB	1.4301	304	1.4401	316
		M.2.1	Austenitic	Tempered	300 HB	1.4841	314	1.4568	17-7 PH
		M.3.1	Austenitic / ferritic (Duplex)		113100 lbf/in² / 230 HB	1.4462	S32205	1.4410	S32750
K	Grey cast iron	K.1.1	Pearlitic / ferritic		88500 lbf/in² / 180 HB	0.6010	A48-20B	0.6025	A48-40 B
		K.1.2	Pearlitic (martensitic)		127600 lbf/in² / 260 HB	0.6030	A48-45B	0.6040	A48-60 B
	Spherulitic graphite cast iron	K.2.1	Ferritic		78300 lbf/in² / 160 HB	0.7040	60-40-18	0.7050	65-45-12
		K.2.2	Pearlitic		122600 lbf/in² / 250 HB	0.7070	100-70-03	0.7660	A439 Type D2
	Malleable iron	K.3.1	Ferritic		63800 lbf/in² / 130 HB	0.8035	GTW-35-04		
		K.3.2	Pearlitic		113100 lbf/in² / 230 HB	0.8170	70003		
N	Aluminium wrought alloy	N.1.1	Non-hardenable		60 HB	3.0255	A91060	3.0255	A91060
		N.1.2	Hardenable		49300 lbf/in² / 100 HB	3.1355	2024	3.1355	2024
	Cast aluminium alloy	N.2.1	≤ 12 % Si, non-hardenable		36300 lbf/in² / 75 HB	3.2581	A04130 / A413-0	3.2581	A04130 / A413-0
		N.2.2	≤ 12 % Si, hardenable		43500 lbf/in² / 90 HB	3.2134	G-AlSi5Cu1Mg		
		N.2.3	> 12 % Si, non-hardenable		63800 lbf/in² / 130 HB		G-AlSi17Cu4Mg		
	Copper and copper alloys (bronze/brass)	N.3.1	Free-machining alloys, PB > 1 %		54400 lbf/in² / 110 HB	2.0380	CuZn39Pb2 (Ms58)	2.0380	C37700
		N.3.2	CuZn, CuSnZn		43500 lbf/in² / 90 HB	2.0331	CuZn15	2.0331	C34000
		N.3.3	CuSn, lead-free copper and electrolytic copper		49300 lbf/in² / 100 HB	2.0060	E-Cu57		
	Magnesium alloys	N.4.1	Magnesium and magnesium alloys		70 HB	3.5612	MgAl6Zn		
S	Heat-resistant alloys	S.1.1	Fe - basis	Annealed	98600 lbf/in² / 200 HB	1.4864	X12NiCrSi 36-16	1.4864	330
		S.1.2			137800 lbf/in² / 280 HB	1.4980	X6NiCrTiMoVB25-15-2	1.4980	S66286
		S.2.1	Ni or Co basis	Annealed	121800 lbf/in² / 250 HB	2.4856	Inconel 625	2.4812	Hastelloy C
		S.2.2			171100 lbf/in² / 350 HB	2.4952	Nimonic 80A	2.4668	Inconel 718
		S.2.3		Cast	156600 lbf/in² / 320 HB	2.4674	Nimocast PK24	2.4670	Nimocast 713
	Titanium alloys	S.3.1	Pure titanium		5800 lbf/in²	3.7025	Ti99,8		
		S.3.2	Alpha + beta alloys		152300 lbf/in²	3.7165	TiAl6V4		
		S.3.3	Beta alloys		203100 lbf/in² / 410 HB	Ti555.3	Ti-5Al-5V-5Mo-3Cr		
H	Hardened steel	H.1.1		Hardened and tempered	46-55 HRC				
		H.1.2		Hardened and tempered	56-60 HRC				
		H.1.3		Hardened and tempered	61-65 HRC				
		H.1.4		Hardened and tempered	66-70 HRC				
	Chilled iron	H.2.1		Cast	400 HB				
	Hardened cast iron	H.3.1		Hardened and tempered	55 HRC				
O	Non-metal materials	O.1.1	Plastics, duroplastic		≤ 21800 lbf/in²				
		O.1.2	Plastics, thermoplastic		≤ 14500 lbf/in²				
		O.2.1	Aramid fibre-reinforced		≤ 145000 lbf/in²				
		O.2.2	Glass/carbon-fibre reinforced		≤ 145000 lbf/in²				
		O.3.1	Graphite						

*** Tensile Strength at Rupture (Rm)**

Cutting data standard values

			DRAGONSKIN														
	TCM407	TCM10	CTEP110	CTCP115	CTCP125	CTCP135	CTCK110	CTCK120	CTPM125	CTCM120	CTCM130	CTPX710 -M34	CTPX710 -25P/-25Q	CTPX715 -27	H210T	H10T/ H216T	CWN15
Index	v_c in ft/min																
P.1.1	**1250**	**1020**	**1530**	**1220**	**970**	**690**	1300	1080	670	750	610	**1070**	**1120**	**910**			
P.1.2	**1080**	**880**	**1330**	**1040**	**830**	**580**	1140	930	560	660	500	**940**	**990**	**780**			
P.1.3	**930**	**750**	**1150**	**890**	**690**	**480**	980	780	470	570	400	**830**	**860**	**660**			
P.1.4	**870**	**700**	**1090**	**830**	**660**	**450**	930	740	440	540	370	**790**	**830**	**620**			
P.1.5	**790**	**640**	**1000**	**760**	**590**	**400**	850	670	390	500	320	**730**	**780**	**560**			
P.2.1	**1110**	**900**	**1360**	**1070**	**860**	**590**	1160	950	580	670	520	**960**	**990**	**800**			
P.2.2	**860**	**690**	**1070**	**830**	**640**	**430**	920	730	430	530	360	**780**	**830**	**610**			
P.2.3	**790**	**640**	**1000**	**760**	**590**	**400**	850	670	390	500	320	**730**	**780**	**560**			
P.2.4	**600**	**480**	**770**	**560**	**430**	**280**	660	490	270	380	200	**580**	**630**	**410**			
P.3.1	**930**	**720**	**1140**	**660**	**560**	**500**	900	730	470	520	410	**460**	**500**	**450**			
P.3.2	**740**	**550**	**920**	**460**	**350**	**310**	740	580	320	380	270	**280**	**310**	**270**			
P.3.3	**550**	**380**	**700**	**280**	**130**	**120**	590	430	170	240	130	**100**	**120**	**80**			
P.4.1	**930**	**720**	**1140**	**660**	**560**	**510**			470	520	410	**460**	**510**	**450**			
P.4.2	**830**	**640**	**1030**	**560**	**450**	**410**			390	450	340	**370**	**430**	**360**			
M.1.1	930	720	1140			510			**470**	**520**	**410**	**460**	**500**	**450**			330
M.2.1						310			**320**	**380**	**270**	**280**	**300**	**270**			180
M.3.1						450			**420**	**480**	**370**	**410**	**430**	**400**			280
K.1.1			1350	840	560		**1320**	**910**						660	560	460	
K.1.2			1020	780	530		**1020**	**870**						530	430	380	
K.2.1	1170	860	1450	890	590		**1060**	**960**						630	590	500	
K.2.2	1040	710	1160	680	530		**910**	**760**						500	430	360	
K.3.1	1070	990	1370	830	660		**1020**	**910**						690	630	560	
K.3.2	830	680	830	690	530		**870**	**760**						590	530	460	
N.1.1												6070	**6070**	**5780**	**5450**	**4620**	**5450**
N.1.2												5280	**5280**	**4950**	**4460**	**3630**	**4620**
N.2.1												4130	**4130**	**3960**	**3960**	**3140**	**4130**
N.2.2												4130	**4130**	**3960**	**3630**	**3140**	**3960**
N.2.3												2480	**2480**	**2310**	**1980**	**1650**	**2480**
N.3.1												2150	**2150**	**2060**	**1730**	**1400**	**1980**
N.3.2												2080	**2080**	**1980**	**1650**	**1320**	**1880**
N.3.3												1650	**1650**	**1570**	**1240**	**910**	**1520**
N.4.1												1120	**1120**	**1070**	**910**	**740**	**920**
S.1.1											115	**330**	**365**	**130**	140		
S.1.2											85	**265**	**280**	**100**	110		
S.2.1											65	**210**	**250**	**100**	110		
S.2.2											65	**130**	**150**	**80**	80		
S.2.3											60	**125**	**140**	**65**	65		
S.3.1											365	**315**	**330**	**365**	365		
S.3.2											210	**180**	**200**	**230**	230		
S.3.3											150	**130**	**150**	**165**	165		
H.1.1																	
H.1.2																	
H.1.3																	
H.1.4																	
H.2.1																	
H.3.1																	
O.1.1														460	530	430	
O.1.2																	
O.2.1														495	460	350	
O.2.2																	
O.3.1																	

The cutting data is strongly influenced by external conditions, such as the stability of the tool and workpiece clamping, material and type of machine. The specified values represent guideline cutting data that can be adjusted by approx. **±20%** according to the usage conditions.

4

Cutting data standard values

	CT-P15	CT-P25	CT-P35
Index	v_c in ft/min		
P.1.1	**960**	**780**	**540**
P.1.2	**830**	**660**	**460**
P.1.3	**710**	**560**	**380**
P.1.4	**660**	**530**	**360**
P.1.5	**610**	**480**	**330**
P.2.1	**860**	**690**	**480**
P.2.2	**660**	**510**	**350**
P.2.3	**610**	**480**	**310**
P.2.4	**450**	**350**	**210**
P.3.1	**530**	**450**	**400**
P.3.2	**380**	**280**	**250**
P.3.3	**210**	**110**	**90**
P.4.1	**530**	**450**	**400**
P.4.2	**460**	**360**	**330**
M.1.1	500	430	400
M.2.1	410	350	250
M.3.1	460	400	360
K.1.1			
K.1.2			
K.2.1			
K.2.2			
K.3.1			
K.3.2			
N.1.1			
N.1.2			
N.2.1			
N.2.2			
N.2.3			
N.3.1			
N.3.2			
N.3.3			
N.4.1			
S.1.1			
S.1.2			
S.2.1			
S.2.2			
S.2.3			
S.3.1			
S.3.2			
S.3.3			
H.1.1			
H.1.2			
H.1.3			
H.1.4			
H.2.1			
H.3.1			
O.1.1			
O.1.2			
O.2.1			
O.2.2			
O.3.1			

The cutting data is strongly influenced by external conditions, such as the stability of the tool and workpiece clamping, material and type of machine. The specified values represent guideline cutting data that can be adjusted by approx. **±20%** according to the usage conditions.

Machinability of non-ferrous metals with carbide indexable inserts

	Material group	Material examples			Machinability of aluminium alloys *	Comments
N	Pure aluminium	non hardenable	Al 99,5	W7	5	▲ Snarl chips ▲ Possibly bad surface ▲ Excessive built-up edge ▲ Long tool life ▲ Use coolant emulsion
			Al 99,5	F13	4	
			Al 99	W8	5	
			Al 99	F14	4	
	Aluminium wrought alloys	non hardenable	Al Mn	W10	5	▲ Snarl, continuous or fragmented chip ▲ Large feed rates necessary for good chip control ▲ Built-up edge ▲ Long tool life ▲ Emulsion coolant is advantageous
			Al Mn	F16	4	
			Al Mg 1	W10	5	
			Al Mg 1	F19	4	
			Al Mg 3	W18	4	
			Al Mg 3	F25	3	
			Al Mg 5	W25	4	
			AL Mg 5	F28	2	
			Al Mg 4,5 Mn	W27	4	
			Al Mg 4,5 Mn	G35	3	
		hardenable	Al Mg Si 0,5	W	4	▲ Good chip control with higher feed rates
			Al Mg Si 0,5	F13-25	3	
			Al Mg Si 1	W	4	
			Al Mg Si 1	F21-30	3	
			Al Mg Si Pb	F20-28	2	▲ Very good chip control ▲ No built up edge ▲ Very good surface quality
			Al Cu Si Pb	F28-37	1	
			Al Cu Mg Pb	F34-37	1	
			Al Cu Mg 1	W	3	▲ Good chip control ▲ Good surface quality ▲ Little built-up edge
			Al Cu Mg 1	F33-40	2	
			Al Cu Mg 2	W	3	
			Al Cu Mg 2	F40-47	2	
			Al Cu Si Mn	W	3	
			Al Cu Si Mn	F43-46	2	
			Al Zn Mg Cu 1,5	F50-52	2	
			Al Sn 6 Cu		1	
	Cast Aluminium Alloys	non hardenable	G-Al Si 12		3	▲ Good chip control ▲ Built-up edge ▲ Higher Si content results in lower tool life
			G-Al Si 10 Mg		3	
			G-Al Si 5 Mg		2	
			G-Al Si 7 Mg (9 Mg)		2	
			G-Al Si Cu 3		2	▲ High wear of the carbide
			G-Al Si 6 Cu 4		2	
			G-Al Mg 3 (Mg 5)		2	▲ Good chip control ▲ Good surface quality ▲ Long tool life
			G-Al Mg 9		2	
			G-Al Mg 10		2	
			G-Al Mg 3 Si (5 Si)		2	
			G-Al Cu 4 Ti (Mg)		2	
			G-Al Si 12 Cu Mg Ni		2	
	Copper wrought alloys		Cu Ag			
			Cu As			
			Cu Cd			
			Cu Cd Sn			
			Cu Mg			
			Cu Mn			
		brass	Cu Zn Al			
		bronze	Cu Sn			
			Cu Sn Zn			
			Cu Ni			
			Cu Ni Fe			
			Cu Al			
O	Non metal materials	Duroplastics				
		Fibre-reinforced plastics				
		hard rubber				

* 1 = good machinability, 5 = bad machinability

4

Cutting data values for CBN inserts

			CTB S05U					
	Cutting edges code negative insert*		EN			F / TN-F		
	Cutting edges code positive insert*		EN			TN-D		
Index	Material	Strength N/mm²* / HB / HRC	v_c	f	a_p	v_c	f	a_p
	Sintered steels (< HV300)							
	general sintered steel (> HV300)							
	high density sintered steel (> HV600)							
K.1.1	Grey cast iron	350 N/mm² / 180 HB	3000–5300	0.0008–0.010	0.0060–0.400	3000–5300	0.0008–0.010	0.0060–0.400
K.1.2		500 N/mm² / 260 HB	3000–5300	0.0008–0.010	0.0060–0.400	3000–5300	0.0008–0.010	0.0060–0.400
K.2.1	Spherulitic graphite cast iron	540 N/mm² / 160 HB	3300–5800	0.0008–0.010	0.0060–0.400	3300–5800	0.0008–0.010	0.0060–0.400
K.2.2		845 N/mm² / 250 HB	3300–5800	0.0008–0.010	0.0060–0.400	3300–5800	0.0008–0.010	0.0060–0.400
K.3.1	Malleable iron	440 N/mm² / 130 HB	3300–5800	0.0008–0.010	0.0060–0.400	3300–5800	0.0008–0.010	0.0060–0.400
K.3.2		780 N/mm² / 220 HB	3300–5800	0.0008–0.010	0.0060–0.400	3300–5800	0.0008–0.010	0.0060–0.400
S.1.1	Heat-resistant alloys	680 N/mm² / 200 HB						
S.1.2		950 N/mm² / 280 HB						
S.2.1		840 N/mm² / 250 HB						
S.2.2		1180 N/mm² / 350 HB						
S.2.3		1080 N/mm² / 320 HB						
S.3.1	Titanium alloys	400 N/mm²						
S.3.2		1050 N/mm² / 320 HB						
S.3.3		1400 N/mm² / 410 HB						

* Tensile strength

			CTB S10U / CTB S10C					
	Cutting edges code negative insert*		EN			F / FN		
	Cutting edges code positive insert*		EN / FN			TN-D		
Index	Material	Strength N/mm²* / HB / HRC	v_c	f	a_p	v_c	f	a_p
	Sintered steels (< HV300)		800–2500	0.0008–0.010	0.0008–0.016	700–1800	0.0032–0.014	0.0040–0.016
	general sintered steel (> HV300)		660–2300	0.0008–0.010	0.0008–0.016	500–1300	0.0032–0.014	0.0040–0.016
	high density sintered steel (> HV600)		150–1150	0.0008–0.010	0.0008–0.016	330–700	0.0032–0.014	0.0040–0.016
K.1.1	Grey cast iron	350 N/mm² / 180 HB	3000–5300	0.0008–0.010	0.0008–0.010	2300–4000	0.0032–0.014	0.0032–0.016
K.1.2		500 N/mm² / 260 HB	3000–5300	0.0008–0.010	0.0008–0.010	2300–4000	0.0032–0.014	0.0032–0.016
K.2.1	Spherulitic graphite cast iron	540 N/mm² / 160 HB	3300–5800	0.0008–0.010	0.0008–0.010	2600–4100	0.0032–0.014	0.0032–0.016
K.2.2		845 N/mm² / 250 HB	3300–5800	0.0008–0.010	0.0008–0.010	2600–4100	0.0032–0.014	0.0032–0.016
K.3.1	Malleable iron	440 N/mm² / 130 HB	3300–5800	0.0008–0.010	0.0008–0.010	2600–4100	0.0032–0.014	0.0032–0.016
K.3.2		780 N/mm² / 220 HB	3300–5800	0.0008–0.010	0.0008–0.010	2600–4100	0.0032–0.014	0.0032–0.016
S.1.1	Heat-resistant alloys	680 N/mm² / 200 HB	300–700	0.0008–0.010	0.0008–0.016	250–400	0.0032–0.014	0.0032–0.016
S.1.2		950 N/mm² / 280 HB	300–700	0.0008–0.010	0.0008–0.016	250–400	0.0032–0.014	0.0032–0.016
S.2.1		840 N/mm² / 250 HB	300–700	0.0008–0.010	0.0008–0.016	250–400	0.0032–0.014	0.0032–0.016
S.2.2		1180 N/mm² / 350 HB	300–700	0.0008–0.010	0.0008–0.016	250–400	0.0032–0.014	0.0032–0.016
S.2.3		1080 N/mm² / 320 HB	300–700	0.0008–0.010	0.0008–0.016	250–400	0.0032–0.014	0.0032–0.016
S.3.1	Titanium alloys	400 N/mm²						
S.3.2		1050 N/mm² / 320 HB						
S.3.3		1400 N/mm² / 410 HB						

* Tensile strength

* Note chamfer width: The wider the chamfer, the more stable the cutting edge.

The cutting data is strongly influenced by external conditions, such as the stability of the tool and workpiece clamping, material and type of machine. The specified values represent guideline cutting data that can be adjusted by approx. **±20%** according to the usage conditions.

	CTB S10C								
	TN-B			TN-C			TN-D / TN-E		
	SN-B			SN-C / TN-C			TN-D / SN-D		
	v_c	f	a_p	v_c	f	a_p	v_c	f	a_p
	660–1300	0.0020–0.016	0.0024–0.016	500–1150	0.0024–0.020	0.0032–0.020	500–1000	0.0040–0.014	0.0040–0.016
	1150–1800	0.0020–0.016	0.0024–0.016	1000–1650	0.0024–0.020	0.0032–0.020	800–1500	0.0040–0.014	0.0040–0.016
	1000–1650	0.0020–0.016	0.0024–0.016	650–1300	0.0024–0.020	0.0032–0.020	650–1300	0.0040–0.014	0.0040–0.016
	2500–4000	0.0020–0.016	0.0024–0.016	2650–4300	0.0024–0.020	0.0032–0.020	2000–3600	0.0040–0.014	0.0040–0.016
	2500–4000	0.0020–0.016	0.0024–0.016	2650–4300	0.0024–0.020	0.0032–0.020	2000–3600	0.0040–0.014	0.0040–0.016
	2500–4000	0.0020–0.016	0.0024–0.016	2650–4300	0.0024–0.020	0.0032–0.020	2000–3600	0.0040–0.014	0.0040–0.016
	2500–4000	0.0020–0.016	0.0024–0.016	2650–4300	0.0024–0.020	0.0032–0.020	2000–3600	0.0040–0.014	0.0040–0.016
	2500–4000	0.0020–0.016	0.0024–0.016	2650–4300	0.0024–0.020	0.0032–0.020	2000–3600	0.0040–0.014	0.0040–0.016
	2500–4000	0.0020–0.016	0.0024–0.016	2650–4300	0.0024–0.020	0.0032–0.020	2000–3600	0.0040–0.014	0.0040–0.016
	400–600	0.0020–0.016	0.0024–0.016	300–500	0.0024–0.020	0.0032–0.020	250–450	0.0040–0.014	0.0040–0.016
	400–600	0.0020–0.016	0.0024–0.016	300–500	0.0024–0.020	0.0032–0.020	250–450	0.0040–0.014	0.0040–0.016
	400–600	0.0020–0.016	0.0024–0.016	300–500	0.0024–0.020	0.0032–0.020	250–450	0.0040–0.014	0.0040–0.016
	400–600	0.0020–0.016	0.0024–0.016	300–500	0.0024–0.020	0.0032–0.020	250–450	0.0040–0.014	0.0040–0.016
	400–600	0.0020–0.016	0.0024–0.016	300–500	0.0024–0.020	0.0032–0.020	250–450	0.0040–0.014	0.0040–0.016

CCGW 120404 FN –...

Cutting data values for CBN inserts

			CTB S20C / CTB S20U					
	Cutting edges code negative insert*		EN / FN			SN-B		
	Cutting edges code positive insert*		EN / FN			SN-B		
Index	Material	Strength N/mm²* / HB / HRC	v_c	f	a_p	v_c	f	a_p
	Sintered steels (< HV300)		800–2300	0.0008–0.010	0.0008–0.016	800–2300	0.0032–0.010	0.0012–0.016
	general sintered steel (> HV300)		650–2300	0.0008–0.010	0.0008–0.016	650–2300	0.0032–0.010	0.0012–0.016
	high density sintered steel (> HV600)		500–1150	0.0008–0.010	0.0008–0.016	500–1150	0.0032–0.010	0.0012–0.016
K.1.1	Grey cast iron	350 N/mm² / 180 HB	2650–4800	0.0008–0.010	0.0020–0.010	2300–4600	0.0016–0.010	0.0020–0.010
K.1.2		500 N/mm² / 260 HB	2650–4800	0.0008–0.010	0.0020–0.010	2300–4600	0.0016–0.010	0.0020–0.010
K.2.1	Spherulitic graphite cast iron	540 N/mm² / 160 HB	3000–5300	0.0008–0.010	0.0020–0.010	2600–5300	0.0016–0.010	0.0020–0.010
K.2.2		845 N/mm² / 250 HB	3000–5300	0.0008–0.010	0.0020–0.010	2600–5300	0.0016–0.010	0.0020–0.010
K.3.1	Malleable iron	440 N/mm² / 130 HB	3000–5300	0.0008–0.010	0.0020–0.010	2600–5300	0.0016–0.010	0.0020–0.010
K.3.2		780 N/mm² / 220 HB	3000–5300	0.0008–0.010	0.0020–0.010	2600–5300	0.0016–0.010	0.0020–0.010
S.1.1	Heat-resistant alloys	680 N/mm² / 200 HB	200–600	0.0008–0.010	0.0008–0.016	200–550	0.0016–0.010	0.0012–0.016
S.1.2		950 N/mm² / 280 HB	200–600	0.0008–0.010	0.0008–0.016	200–550	0.0016–0.010	0.0012–0.016
S.2.1		840 N/mm² / 250 HB	200–600	0.0008–0.010	0.0008–0.016	200–550	0.0016–0.010	0.0012–0.016
S.2.2		1180 N/mm² / 350 HB	200–600	0.0008–0.010	0.0008–0.016	200–550	0.0016–0.010	0.0012–0.016
S.2.3		1080 N/mm² / 320 HB	200–600	0.0008–0.010	0.0008–0.016	200–550	0.0016–0.010	0.0012–0.016
S.3.1	Titanium alloys	400 N/mm²						
S.3.2		1050 N/mm² / 320 HB						
S.3.3		1400 N/mm² / 410 HB						

* Tensile strength

			CTB S20C / CTB S20U					
	Cutting edges code negative insert*					SN-E		
	Cutting edges code positive insert*		TN-E			SN-E		
Index	Material	Strength N/mm²* / HB / HRC	v_c	f	a_p	v_c	f	a_p
	Sintered steels (< HV300)		700–1800	0.0032–0.014	0.0040–0.016	650–1700	0.0040–0.014	0.0040–0.016
	general sintered steel (> HV300)		500–1300	0.0032–0.014	0.0040–0.016	450–1150	0.0040–0.014	0.0040–0.016
	high density sintered steel (> HV600)		350–750	0.0032–0.014	0.0040–0.016	350–650	0.0040–0.014	0.0040–0.016
K.1.1	Grey cast iron	350 N/mm² / 180 HB	1800–3300	0.0032–0.014	0.0032–0.016	1800–3150	0.0040–0.014	0.0040–0.016
K.1.2		500 N/mm² / 260 HB	1800–3300	0.0032–0.014	0.0032–0.016	1800–3150	0.0040–0.014	0.0040–0.016
K.2.1	Spherulitic graphite cast iron	540 N/mm² / 160 HB	2300–4000	0.0032–0.014	0.0032–0.016	2300–3600	0.0040–0.014	0.0040–0.016
K.2.2		845 N/mm² / 250 HB	2300–4000	0.0032–0.014	0.0032–0.016	2300–3600	0.0040–0.014	0.0040–0.016
K.3.1	Malleable iron	440 N/mm² / 130 HB	2300–4000	0.0032–0.014	0.0032–0.016	2300–3600	0.0040–0.014	0.0040–0.016
K.3.2		780 N/mm² / 220 HB	2300–4000	0.0032–0.014	0.0032–0.016	2300–3600	0.0040–0.014	0.0040–0.016
S.1.1	Heat-resistant alloys	680 N/mm² / 200 HB	150–350	0.0032–0.014	0.0032–0.016	150–320	0.0040–0.014	0.0040–0.016
S.1.2		950 N/mm² / 280 HB	150–350	0.0032–0.014	0.0032–0.016	150–320	0.0040–0.014	0.0040–0.016
S.2.1		840 N/mm² / 250 HB	150–350	0.0032–0.014	0.0032–0.016	150–320	0.0040–0.014	0.0040–0.016
S.2.2		1180 N/mm² / 350 HB	150–350	0.0032–0.014	0.0032–0.016	150–320	0.0040–0.014	0.0040–0.016
S.2.3		1080 N/mm² / 320 HB	150–350	0.0032–0.014	0.0032–0.016	150–320	0.0040–0.014	0.0040–0.016
S.3.1	Titanium alloys	400 N/mm²						
S.3.2		1050 N/mm² / 320 HB						
S.3.3		1400 N/mm² / 410 HB						

* Tensile strength

* Note chamfer width: The wider the chamfer, the more stable the cutting edge.

The cutting data is strongly influenced by external conditions, such as the stability of the tool and workpiece clamping, material and type of machine. The specified values represent guideline cutting data that can be adjusted by approx. **±20%** according to the usage conditions.

CTB S20C / CTB S20U								
			SN-C / TN-C			SN-D		
SN-C / TN-C			TN-D			SN-D		
v_c	f	a_p	v_c	f	a_p	v_c	f	a_p
800–2000	0.0020–0.010	0.0024–0.016	800–2000	0.0020–0.014	0.0024–0.016	750–1900	0.0024–0.014	0.0032–0.016
660–2000	0.0020–0.010	0.0024–0.016	600–1800	0.0020–0.014	0.0024–0.016	550–1700	0.0024–0.014	0.0032–0.016
500–1650	0.0020–0.010	0.0024–0.016	450–1000	0.0020–0.014	0.0024–0.016	400–850	0.0024–0.014	0.0032–0.016
2150–4300	0.0020–0.010	0.0024–0.016	2150–3650	0.0020–0.014	0.0024–0.016	2000–3300	0.0024–0.014	0.0032–0.020
2150–4300	0.0020–0.010	0.0024–0.016	2150–3650	0.0020–0.014	0.0024–0.016	2000–3300	0.0024–0.014	0.0032–0.020
2600–4600	0.0020–0.010	0.0024–0.016	2500–4300	0.0020–0.014	0.0024–0.016	2300–4100	0.0024–0.014	0.0032–0.020
2600–4600	0.0020–0.010	0.0024–0.016	2500–4300	0.0020–0.014	0.0024–0.016	2300–4100	0.0024–0.014	0.0032–0.020
2600–4600	0.0020–0.010	0.0024–0.016	2500–4300	0.0020–0.014	0.0024–0.016	2300–4100	0.0024–0.014	0.0032–0.020
2600–4600	0.0020–0.010	0.0024–0.016	2500–4300	0.0020–0.014	0.0024–0.016	2300–4100	0.0024–0.014	0.0032–0.020
200–550	0.0020–0.010	0.0024–0.016	180–500	0.0020–0.016	0.0024–0.016	180–450	0.0024–0.020	0.0032–0.020
200–550	0.0020–0.010	0.0024–0.016	180–500	0.0020–0.016	0.0024–0.016	180–450	0.0024–0.020	0.0032–0.020
200–550	0.0020–0.010	0.0024–0.016	180–500	0.0020–0.016	0.0024–0.016	180–450	0.0024–0.020	0.0032–0.020
200–550	0.0020–0.010	0.0024–0.016	180–500	0.0020–0.016	0.0024–0.016	180–450	0.0024–0.020	0.0032–0.020
200–550	0.0020–0.010	0.0024–0.016	180–500	0.0020–0.016	0.0024–0.016	180–450	0.0024–0.020	0.0032–0.020

CTB S20C / CTB S20U		
SN-F		
SN-F		
v_c	f	a_p
600–1600	0.0048–0.014	0.0048–0.016
250–850	0.0048–0.014	0.0048–0.016
250–500	0.0048–0.014	0.0048–0.016
1600–2800	0.0048–0.014	0.0048–0.016
1600–2800	0.0048–0.014	0.0048–0.016
2150–3300	0.0048–0.014	0.0048–0.016
2150–3300	0.0048–0.014	0.0048–0.016
2150–3300	0.0048–0.014	0.0048–0.016
2150–3300	0.0048–0.014	0.0048–0.016
130–300	0.0048–0.014	0.0048–0.016
130–300	0.0048–0.014	0.0048–0.016
130–300	0.0048–0.014	0.0048–0.016
130–300	0.0048–0.014	0.0048–0.016
130–300	0.0048–0.014	0.0048–0.016

Cutting data values for CBN inserts

					CTB H15U / CTB H15C					
	Cutting edges code negative insert*				FN			EN		
	Cutting edges code positive insert*				FN			EN		
		Ra (theo.)			1,6–6,4			1,0–3,2		
Index	Material	Strength			v_c	f	a_p	v_c	f	a_p
H.1.1	Hardened steel	46–55 HRC	x		525–800	0.0012–0.006	0.0024–0.012	525–800	0.0012–0.006	0.0024–0.012
H.1.2		56–60 HRC	x		525–800	0.0012–0.006	0.0024–0.012	525–800	0.0012–0.006	0.0024–0.012
H.1.3		61–65 HRC	x		525–800	0.0012–0.006	0.0024–0.012	525–800	0.0012–0.006	0.0024–0.012
H.1.4		66–70 HRC	x		525–800	0.0012–0.006	0.0024–0.012	525–800	0.0012–0.006	0.0024–0.012
H.2.1	Chilled iron	400 HB	x		525–800	0.0012–0.006	0.0024–0.012	525–800	0.0012–0.006	0.0024–0.012
H.3.1	Hardened cast iron	55 HRC								

					CTB H21U / CTB H20C / CTB H21C					
	Cutting edges code negative insert*				FN			TN-C		
	Cutting edges code positive insert*				EN / FN			TN-C		
		Ra (theo.)			1,6–6,4			1,0–4,5		
Index	Material	Strength			v_c	f	a_p	v_c	f	a_p
H.1.1	Hardened steel	46–55 HRC	x		1000–1250	0.0016–0.020	0.0020–0.020	925–1150	0.0020–0.006	0.0020–0.020
H.1.2		56–60 HRC	x		1000–1250	0.0016–0.020	0.0020–0.020	925–1150	0.0020–0.006	0.0020–0.020
H.1.3		61–65 HRC	x		1000–1250	0.0016–0.020	0.0020–0.020	925–1150	0.0020–0.006	0.0020–0.020
H.1.4		66–70 HRC	x		1000–1250	0.0016–0.020	0.0020–0.020	925–1150	0.0020–0.006	0.0020–0.020
H.2.1	Chilled iron	400 HB	x		1000–1250	0.0016–0.020	0.0020–0.020	925–1150	0.0020–0.006	0.0020–0.020
H.3.1	Hardened cast iron	55 HRC								

					CTB H21U / CTB H20C / CTB H21C					
	Cutting edges code negative insert*				TN-E / SN-E			SN-F		
	Cutting edges code positive insert*				TN-E			TN-F / SN-E		
		Ra (theo.)			0,35–1,6			0,2–0,8		
Index	Material	Strength			v_c	f	a_p	v_c	f	a_p
H.1.1	Hardened steel	46–55 HRC	x		700–850	0.0020–0.006	0.0040–0.020	600–750	0.0024–0.008	0.0040–0.020
H.1.2		56–60 HRC	x		700–850	0.0020–0.006	0.0040–0.020	600–750	0.0024–0.008	0.0040–0.020
H.1.3		61–65 HRC	x		700–850	0.0020–0.006	0.0040–0.020	600–750	0.0024–0.008	0.0040–0.020
H.1.4		66–70 HRC	x		700–850	0.0020–0.006	0.0040–0.020	600–750	0.0024–0.008	0.0040–0.020
H.2.1	Chilled iron	400 HB	x		700–850	0.0020–0.006	0.0040–0.020	600–750	0.0024–0.008	0.0040–0.020
H.3.1	Hardened cast iron	55 HRC								

					CTB H40U / CTB H40C / CTB H41U / CTB H41C					
	Cutting edges code negative insert*				FN / EN					
	Cutting edges code positive insert*				FN / EN			SN-B / TN-B		
		Ra (theo.)			1,0–3,2			1,6–3,2		
Index	Material	Strength			v_c	f	a_p	v_c	f	a_p
H.1.1	Hardened steel	46–55 HRC	x		625–825	0.0012–0.006	0.0012–0.020	600–825	0.0012–0.008	0.0020–0.003
H.1.2		56–60 HRC	x		625–825	0.0012–0.006	0.0012–0.020	600–825	0.0012–0.008	0.0020–0.003
H.1.3		61–65 HRC	x		625–825	0.0012–0.006	0.0012–0.020	600–825	0.0012–0.008	0.0020–0.003
H.1.4		66–70 HRC	x		625–825	0.0012–0.006	0.0012–0.020	600–825	0.0012–0.008	0.0020–0.003
H.2.1	Chilled iron	400 HB	x		625–825	0.0012–0.006	0.0012–0.020	600–825	0.0012–0.008	0.0020–0.003
H.3.1	Hardened cast iron	55 HRC								

					CTB H40U / CTB H40C / CTB H41U / CTB H41C					
	Cutting edges code negative insert*				EN-T / SN-E			TN-E / SN-E		
	Cutting edges code positive insert*				EN-T / TN-E / SN-E			TN-F		
		Ra (theo.)			0,5–1,6			0,4–1,0		
Index	Material	Strength			v_c	f	a_p	v_c	f	a_p
H.1.1	Hardened steel	46–55 HRC	x		450–650	0.0020–0.006	0.0032–0.020	600–750	0.0020–0.010	0.0040–0.020
H.1.2		56–60 HRC	x		450–650	0.0020–0.006	0.0032–0.020	600–750	0.0020–0.010	0.0040–0.020
H.1.3		61–65 HRC	x		450–650	0.0020–0.006	0.0032–0.020	600–750	0.0020–0.010	0.0040–0.020
H.1.4		66–70 HRC	x		450–650	0.0020–0.006	0.0032–0.020	600–750	0.0020–0.010	0.0040–0.020
H.2.1	Chilled iron	400 HB	x		450–650	0.0020–0.006	0.0032–0.020	600–750	0.0020–0.010	0.0040–0.020
H.3.1	Hardened cast iron	55 HRC								

* Note chamfer width: The wider the chamfer, the more stable the cutting edge.

The cutting data is strongly influenced by external conditions, such as the stability of the tool and workpiece clamping, material and type of machine. The specified values represent guideline cutting data that can be adjusted by approx. **±20%** according to the usage conditions.

CTB H15U / CTB H15C								
SN-C			**SN-E**			**RN** (Rounded chamfer)		
SN-C			**SN-E**			**RN** (Rounded chamfer)		
0,5–1,6			0,1–0,8			0,1–0,8		
v_c	f	a_p	v_c	f	a_p	v_c	f	a_p
450–650	0.0024–0.008	0.0032–0.012	400–600	0.0024–0.010	0.0040–0.016	425–700	0.0024–0.008	0.0032–0.012
450–650	0.0024–0.008	0.0032–0.012	400–600	0.0024–0.010	0.0040–0.016	425–700	0.0024–0.008	0.0032–0.012
450–650	0.0024–0.008	0.0032–0.012	400–600	0.0024–0.010	0.0040–0.016	425–700	0.0024–0.008	0.0032–0.012
450–650	0.0024–0.008	0.0032–0.012	400–600	0.0024–0.010	0.0040–0.016	425–700	0.0024–0.008	0.0032–0.012
450–650	0.0024–0.008	0.0032–0.012	400–600	0.0024–0.010	0.0040–0.016	425–700	0.0024–0.008	0.0032–0.012

CTB H21U / CTB H20C / CTB H21C								
TN-D			**TN-D / SN-D**			**TN-E**		
SN-B			**TN-D / SN-C**			**SN-D**		
0,8–3,0			0,5–2,0			0,35–2,5		
v_c	f	a_p	v_c	f	a_p	v_c	f	a_p
900–1100	0.0024–0.010	0.0020–0.020	825–1050	0.0024–0.010	0.0032–0.004	725–950	0.0020–0.006	0.0032–0.020
900–1100	0.0024–0.010	0.0020–0.020	825–1050	0.0024–0.010	0.0032–0.004	725–950	0.0020–0.006	0.0032–0.020
900–1100	0.0024–0.010	0.0020–0.020	825–1050	0.0024–0.010	0.0032–0.004	725–950	0.0020–0.006	0.0032–0.020
900–1100	0.0024–0.010	0.0020–0.020	825–1050	0.0024–0.010	0.0032–0.004	725–950	0.0020–0.006	0.0032–0.020
900–1100	0.0024–0.010	0.0020–0.020	825–1050	0.0024–0.010	0.0032–0.004	725–950	0.0020–0.006	0.0032–0.020

CTB H21U / CTB H20C / CTB H21C		
SN-G		
TN-G / SN-F		
0,1–0,5		
v_c	f	a_p
525–650	0.0020–0.005	0.0040–0.020
525–650	0.0020–0.005	0.0040–0.020
525–650	0.0020–0.005	0.0040–0.020
525–650	0.0020–0.005	0.0040–0.020
525–650	0.0020–0.005	0.0040–0.020

CTB H40U / CTB H40C / CTB H41U / CTB H41C								
SN-C			**SN-D**					
SN-C / TN-D			**SN-D**			**TN-D**		
0,8–3,0			0,8–2,0			0,5–1,6		
v_c	f	a_p	v_c	f	a_p	v_c	f	a_p
600–800	0.0016–0.006	0.0012–0.020	525–725	0.0016–0.006	0.0012–0.020	500–700	0.0016–0.010	0.0032–0.020
600–800	0.0016–0.006	0.0012–0.020	525–725	0.0016–0.006	0.0012–0.020	500–700	0.0016–0.010	0.0032–0.020
600–800	0.0016–0.006	0.0012–0.020	525–725	0.0016–0.006	0.0012–0.020	500–700	0.0016–0.010	0.0032–0.020
600–800	0.0016–0.006	0.0012–0.020	525–725	0.0016–0.006	0.0012–0.020	500–700	0.0016–0.010	0.0032–0.020
600–800	0.0016–0.006	0.0012–0.020	525–725	0.0016–0.006	0.0012–0.020	500–700	0.0016–0.010	0.0032–0.020

CTB H40U / CTB H40C / CTB H41U / CTB H41C					
TN-F / SN-F			**SN-G**		
SN-F			**SN-G**		
0,2–0,8			0,1–0,5		
v_c	f	a_p	v_c	f	a_p
425–650	0.0016–0.006	0.0040–0.020	400–625	0.0016–0.005	0.0040–0.020
425–650	0.0016–0.006	0.0040–0.020	400–625	0.0016–0.005	0.0040–0.020
425–650	0.0016–0.006	0.0040–0.020	400–625	0.0016–0.005	0.0040–0.020
425–650	0.0016–0.006	0.0040–0.020	400–625	0.0016–0.005	0.0040–0.020
425–650	0.0016–0.006	0.0040–0.020	400–625	0.0016–0.005	0.0040–0.020

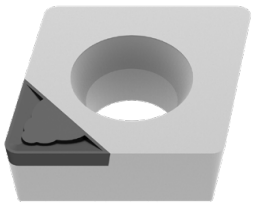
Cutting data standard values for diamond cutting materials CTD PD20 / PS30 / PU20 / CD10 / MD05

Index	Material group			a_p = 0.0015"–0.016" Surface roughness R_z in µm 2,5–5,0	a_p = 0.0015"–0.016" Surface roughness R_z in µm 5,0–10	a_p = 0.0016"–0.040" Surface roughness R_z in µm 2,5–5,0	a_p = 0.0016"–0.040" Surface roughness R_z in µm 5,0–10	a_p = 0.0016"–0.100" Surface roughness R_z in µm 2,5–5,0	a_p = 0.0016"–0.100" Surface roughness R_z in µm 5,0–10
				CTD ...	CTD ...	CTD ...	CTD ...	CTD ...	CTD ...
N.1.1 N.1.2	Aluminium wrought alloys without Si f=0.002–0.020 inch/rev.	○	Tool Material	PD20 / PU20 / CD10 / MD05	PD20 / PU20 / CD10 / MD05	PD20 / PU20 / CD10 / MD05	PD20 / PU20 / CD10 / MD05	PD20 / PU20 / CD10 / MD05	PD20 / PU20 / CD10 / MD05
			v_c in ft/min	**1300–8250**	**1300–8250**	**1300–6600**	**1300–6600**	**1300–5300**	**1300–5300**
		◐	Tool Material		PD20 / CD10		PD20 / CD10		PD20 / CD10
			v_c in ft/min		**1300–8250**		**1300–6600**		**1300–5300**
		◌	Tool Material	PD20 / PU20	PD20 / PU20	PD20 / PU20	PD20 / PU20	PD20 / PU20	PD20 / PU20
			v_c in ft/min	**1300–8250**	**1300–8250**	**1300–6600**	**1300–6600**	**1300–5300**	**1300–5300**
N.2.1	Cast Aluminium Alloys Si≤12 % – hardened or Si=12–20% – non hardened f=0.002–0.020 inch/rev.	○	Tool Material	PS30 / PU20 / CD10 / MD05	PS30 / PU20 / CD10 / MD05	PS30 / PU20 / CD10 / MD05	PS30 / PU20 / CD10 / MD05	PS30 / PU20 / CD10 / MD05	PS30 / PU20 / CD10 / MD05
			v_c in ft/min	**2000–6600**	**2000–7000**	**2000–6000**	**2000–6600**	**2000–5000**	**2000–6000**
		◐	Tool Material	PD20 / PU20 / CD10	PD20 / PU20 / CD10	PD20 / PU20 / CD10	PS30 / PU20 / CD10	PS30 / PU20 / CD10	PS30 / PU20 / CD10
			v_c in ft/min	**1300–6600**	**1300–7000**	**1300–6000**	**2000–6600**	**1000–5000**	**1300–6000**
		◌	Tool Material	PS30	PS30	PS30	PS30	PS30	
			v_c in ft/min	**2000–6600**	**2000–7000**	**2000–6000**	**2000–6600**	**2000–5000**	
N.2.2 N.2.3	Aluminium cast alloys Si=12–20 % f=0.002–0.020 inch/rev.	○	Tool Material	PU20 / CD10 / MD05	PU20 / CD10 / MD05	PU20 / CD10 / MD05	PU20 / CD10 / MD05	PU20 / CD10 / MD05	PU20 / CD10 / MD05
			v_c in ft/min	**2600–4000**	**1300–6000**	**2300–3300**	**1000–5000**	**2000–3000**	**1200–4000**
		◐	Tool Material		PU20 / CD10		PU20 / CD10		PU20 / CD10
			v_c in ft/min		**2000–6000**		**2000–5000**		**2000–4000**
		◌	Tool Material		PU20		PU20		
			v_c in ft/min		**2000–6000**		**2000–5000**		
N.3.1 N.3.2 N.3.3	Copper and copper wrought alloys f=0.002–0.020 inch/rev.	○	Tool Material	PD20 / PU20 / CD10 / MD05	PD20 / PU20 / CD10 / MD05	PD20 / PU20 / CD10 / MD05	PS30 / PU20 / CD10 / MD05	PD20 / PU20 / CD10 / MD05	PD20 / PU20 / CD10 / MD05
			v_c in ft/min	**1300–6000**	**1000–5200**	**1300–5300**	**1000–5000**	**1300–4600**	**1300–5300**
		◐	Tool Material	PU20 / CD10	PD20 / PU20 / CD10	PD20 / PU20 / CD10	PS30 / PU20 / CD10	PD20 / PU20 / CD10	PD20 / PU20 / CD10
			v_c in ft/min	**1000–5000**	**1000–5000**	**1300–5300**	**1000–5000**	**1300–5300**	**1000–5000**
		◌	Tool Material		PD20 / PU20		PS30 / PU20	PD20 / PU20	PS30 / PU20
			v_c in ft/min		**1000–6000**		**1000–5700**	**1000–5000**	**650–4300**
O.1.1 O.1.2	Plastic materials without reinforcement (acrylic glass) f=0.002–0.028 inch/rev.	○	Tool Material		PD20 / CD10 / MD05		PD20 / CD10 / MD05		PS30 / CD10 / MD05
			v_c in ft/min		**1200–4000**		**1000–3300**		**650–3300**
		◐	Tool Material		PD20 / CD10		PD20 / CD10		PS30 / CD10
			v_c in ft/min		**1000–4000**		**650–3300**		**650–3000**
		◌	Tool Material		PD20 / CD10		PD20 / CD10		PD20 / CD10
			v_c in ft/min		**1200–4000**		**1000–3300**		**650–3300**
O.2.1 O.2.2	Plastic materials with reinforcement (glass-fibre, carbon-fibre reinforced) f=0.002–0.028 inch/rev.	○	Tool Material	PS30 / PU20 / CD10 / MD05		PS30 / PU20 / CD10 / MD05	PS30 / PU20 / CD10 / MD05	PS30 / PU20 / CD10 / MD05	PS30 / PU20 / CD10 / MD05
			v_c in ft/min	**1650–3300**		**1200–3000**	**1000–3000**	**1300–5300**	**650–4000**
		◐	Tool Material	PS30 / PU20 / CD10		PS30 / PU20 / CD10	PS30 / PU20 / CD10	PS30 / PU20 / CD10	PS30 / PU20 / CD10
			v_c in ft/min	**1300–3000**		**1300–5300**	**650–3000**	**650–3000**	**650–4600**
		◌	Tool Material	PU20		PU20	PU20	PU20	
			v_c in ft/min	**1650–3300**		**1300–2600**	**1000–3300**	**1300–5300**	
O.3.1	Graphite		Tool Material	PD20 / PS30 / PU20 / CD10		PD20 / PS30 / PU20 / CD10		PD20 / PS30 / PU20 / CD10	
			v_c in ft/min	**330–11000**		**330–10000**		**330–10000**	

○ Smooth cut | ◐ Irregular cutting depth | ◌ Interrupted cut

Cutting data standard values for the CB chip breaker geometries

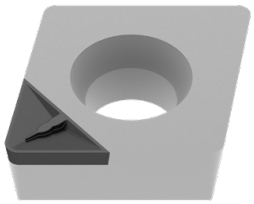
-CB1



3D-Chip Breaker -CB1				
Corner Radius	a_p inch		f_z inch/rev.	
	min.	max.	min.	max.
0.004	0.002	0.012	0.001	0.002
0.008	0.002	0.016	0.001	0.003
0.016	0.004	0.031	0.002	0.006
0.032	0.006	0.039	0.003	0.008
0.064	0.012	0.059	0.005	0.010

- Finish and Superfinish
- Extremely sharp cutting edge geometry
- Depth of Cut a_p: 0.002–0.06 inch
- Smallest cutting pressure for highest accuracies
- For machining of thin-walled and unstable workpieces

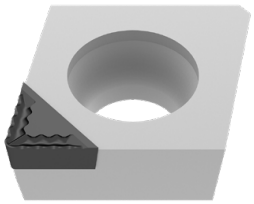
-CB2



3D-Chip Breaker -CB2				
Corner Radius	a_p inch		f_z inch/rev.	
	min.	max.	min.	max.
0.008	0.020	0.031	0.003	0.005
0.016	0.024	0.059	0.003	0.008
0.032	0.028	0.059	0.006	0.012
0.064	0.031	0.079	0.008	0.016

- Semi-finish and Finish machining
- Negative edge preperation
- Cutting Depth a_p: 0.020–0.078 inch
- High surface quality and tight tolerances
- Machining of solid workpieces under stable conditions

-CB3



3D-Chip Breaker -CB3				
Corner Radius	a_p inch		f_z inch/rev.	
	min.	max.	min.	max.
0.016	0.039	0.118	0.004	0.008
0.032	0.039	0.118	0.006	0.014

- Medium and rough machining
- Highly aggressive chip breaker
- Cutting depth a_p: 0.04–0.12 inch
- Stable component conditions necessary
- Cooling must be ensured

Cutting data standard values for negative inserts

	Designation	-CF20 (Cermet)						-F50					
		f			a_p			f			a_p		
		min.	Recommended	max.	min.	Recommended	max.	min.	Recommended	max.	min.	Recommended	max.
		inch/rev.			inch			inch/rev.			inch		
	CN.. 321							0.002	**0.006**	0.010	0.008	**0.020**	0.059
	CN.. 322							0.004	**0.008**	0.012	0.016	**0.039**	0.079
	CN.. 431	0.002	**0.006**	0.010	0.012	**0.020**	0.059	0.002	**0.006**	0.010	0.008	**0.024**	0.059
	CN.. 432	0.003	**0.006**	0.010	0.012	**0.020**	0.059	0.004	**0.008**	0.012	0.016	**0.039**	0.079
	CN.. 433							0.006	**0.010**	0.014	0.024	**0.055**	0.102
	CN.. 434												
	CN.. 542												
	CN.. 543												
	CN.. 544												
	CN.. 546												
	CN.. 642												
	CN.. 643												
	CN.. 644												
	CN.. 646												
	CN.. 866												
	DN.. 330.5							0.002	**0.004**	0.008	0.004	**0.016**	0.091
	DN.. 331	0.002	**0.006**	0.010	0.012	**0.020**	0.059	0.002	**0.006**	0.010	0.008	**0.024**	0.059
	DN.. 332	0.003	**0.006**	0.010	0.012	**0.020**	0.059	0.004	**0.008**	0.012	0.016	**0.039**	0.079
	DN.. 333							0.006	**0.010**	0.014	0.024	**0.055**	0.102
	DN.. 431							0.002	**0.006**	0.010	0.008	**0.024**	0.059
	DN.. 432							0.004	**0.008**	0.012	0.016	**0.039**	0.079
	DN.. 433							0.006	**0.010**	0.014	0.024	**0.055**	0.102
	DN.. 434												
	DN.. 441	0.002	**0.006**	0.010	0.012	**0.020**	0.059	0.002	**0.006**	0.010	0.008	**0.024**	0.059
	DN.. 442	0.003	**0.006**	0.010	0.012	**0.020**	0.059	0.004	**0.008**	0.012	0.016	**0.039**	0.079
	DN.. 443	0.004	**0.008**	0.012	0.020	**0.028**	0.059	0.006	**0.010**	0.014	0.024	**0.055**	0.102
	DN.. 444												
	SN.. 332							0.004	**0.008**	0.012	0.016	**0.039**	0.079
	SN.. 431							0.002	**0.006**	0.010	0.008	**0.024**	0.059
	SN.. 432							0.004	**0.008**	0.012	0.016	**0.039**	0.079
	SN.. 433							0.006	**0.010**	0.014	0.024	**0.055**	0.102
	SN.. 434												
	SN.. 442												
	SN.. 443												
	SN.. 444												
	SN.. 543												
	SN.. 544												
	SN.. 546												
	SN.. 856												
	SN.. 866												
	TN.. 221							0.002	**0.006**	0.010	0.008	**0.024**	0.059
	TN.. 222							0.004	**0.008**	0.012	0.016	**0.039**	0.079
	TN.. 331	0.002	**0.006**	0.010	0.012	**0.020**	0.059	0.002	**0.006**	0.010	0.008	**0.024**	0.059
	TN.. 332	0.003	**0.006**	0.010	0.012	**0.020**	0.059	0.004	**0.008**	0.012	0.016	**0.039**	0.079
	TN.. 333	0.004	**0.008**	0.012	0.020	**0.028**	0.059	0.006	**0.010**	0.014	0.024	**0.055**	0.102
	TN.. 431												
	TN.. 432												
	TN.. 433												
	TN.. 434												
	VN.. 331							0.002	**0.006**	0.010	0.008	**0.024**	0.059
	VN.. 332							0.004	**0.008**	0.012	0.016	**0.039**	0.079
	VN.. 333												
	WN.. 331	0.002	**0.006**	0.010	0.012	**0.020**	0.059	0.002	**0.006**	0.010	0.008	**0.024**	0.059
	WN.. 332	0.003	**0.006**	0.010	0.012	**0.020**	0.059	0.004	**0.008**	0.012	0.016	**0.039**	0.079
	WN.. 333												
	WN.. 431							0.002	**0.006**	0.010	0.008	**0.024**	0.059
	WN.. 432	0.003	**0.006**	0.010	0.012	**0.020**	0.059	0.004	**0.008**	0.012	0.016	**0.039**	0.079
	WN.. 433							0.006	**0.010**	0.014	0.024	**0.055**	0.102
	WN.. 434												

Sharp ◄——————————————————————► stable

The data shows reference values. An adjustment to the actual conditions may be required.

Designation	-TFQ						-XU						-M50					
	f			a_p			f			a_p			f			a_p		
	min.	Recommended	max.	min.	Recommended	max.	min.	Recommended	max.	min.	Recommended	max.	min.	Recommended	max.	min.	Recommended	max.
	inch/rev.			inch			inch/rev.			inch			inch/rev.			inch		
CN.. 321																		
CN.. 322																		
CN.. 431	0.004	**0.006**	0.014	0.016	**0.039**	0.118	0.003	**0.006**	0.010	0.012	**0.059**	0.098	0.004	**0.008**	0.012	0.016	**0.079**	0.197
CN.. 432	0.004	**0.010**	0.020	0.020	**0.059**	0.157	0.005	**0.010**	0.014	0.024	**0.079**	0.118	0.006	**0.010**	0.016	0.024	**0.079**	0.197
CN.. 433	0.006	**0.012**	0.028	0.031	**0.079**	0.197	0.006	**0.012**	0.018	0.035	**0.079**	0.138	0.008	**0.012**	0.020	0.039	**0.079**	0.197
CN.. 434													0.010	**0.016**	0.024	0.055	**0.079**	0.197
CN.. 542													0.006	**0.010**	0.016	0.024	**0.118**	0.315
CN.. 543													0.008	**0.012**	0.020	0.039	**0.118**	0.315
CN.. 544													0.010	**0.016**	0.024	0.055	**0.118**	0.315
CN.. 546																		
CN.. 642																		
CN.. 643																		
CN.. 644																		
CN.. 646																		
CN.. 866																		
DN.. 330.5																		
DN.. 331													0.004	**0.008**	0.012	0.016	**0.059**	0.157
DN.. 332													0.006	**0.010**	0.016	0.024	**0.059**	0.157
DN.. 333													0.008	**0.012**	0.020	0.039	**0.059**	0.157
DN.. 431													0.004	**0.008**	0.012	0.016	**0.079**	0.197
DN.. 432													0.006	**0.010**	0.016	0.024	**0.079**	0.197
DN.. 433													0.008	**0.012**	0.020	0.039	**0.079**	0.197
DN.. 434													0.010	**0.016**	0.024	0.055	**0.079**	0.197
DN.. 441	0.004	**0.006**	0.012	0.016	**0.039**	0.118	0.003	**0.006**	0.010	0.012	**0.059**	0.098	0.004	**0.008**	0.012	0.016	**0.079**	0.197
DN.. 442	0.004	**0.010**	0.016	0.020	**0.059**	0.157	0.005	**0.010**	0.014	0.024	**0.079**	0.118	0.006	**0.010**	0.016	0.024	**0.079**	0.197
DN.. 443							0.006	**0.010**	0.016	0.035	**0.079**	0.138	0.008	**0.012**	0.020	0.039	**0.079**	0.197
DN.. 444													0.010	**0.016**	0.024	0.055	**0.079**	0.197
SN.. 332																		
SN.. 431																		
SN.. 432													0.006	**0.010**	0.016	0.024	**0.079**	0.197
SN.. 433													0.008	**0.012**	0.020	0.039	**0.079**	0.197
SN.. 434													0.010	**0.016**	0.024	0.055	**0.079**	0.197
SN.. 442													0.006	**0.010**	0.016	0.024	**0.118**	0.315
SN.. 443													0.008	**0.012**	0.020	0.039	**0.118**	0.315
SN.. 444													0.010	**0.016**	0.024	0.055	**0.118**	0.315
SN.. 543																		
SN.. 544																		
SN.. 546																		
SN.. 856																		
SN.. 866																		
TN.. 221																		
TN.. 222																		
TN.. 331													0.004	**0.008**	0.012	0.016	**0.079**	0.197
TN.. 332													0.006	**0.010**	0.016	0.024	**0.079**	0.197
TN.. 333													0.008	**0.012**	0.020	0.039	**0.079**	0.197
TN.. 431																		
TN.. 432													0.006	**0.010**	0.016	0.024	**0.118**	0.315
TN.. 433													0.008	**0.012**	0.020	0.039	**0.118**	0.315
TN.. 434																		
VN.. 331								**0.006**	0.008	0.012	**0.039**	0.071	0.004	**0.008**	0.012	0.016	**0.039**	0.157
VN.. 332							0.005	**0.008**	0.012	0.024	**0.059**	0.098	0.006	**0.010**	0.016	0.024	**0.039**	0.157
VN.. 333													0.008	**0.012**	0.020	0.039	**0.039**	0.157
WN.. 331	0.004	**0.007**	0.014	0.016	**0.031**	0.118							0.004	**0.008**	0.012	0.016	**0.039**	0.118
WN.. 332	0.004	**0.008**	0.020	0.020	**0.059**	0.118							0.006	**0.010**	0.016	0.024	**0.039**	0.118
WN.. 333													0.008	**0.012**	0.020	0.039	**0.039**	0.118
WN.. 431								**0.006**	0.010	0.012	**0.059**	0.098	0.004	**0.008**	0.012	0.016	**0.059**	0.157
WN.. 432	0.004	**0.010**	0.020	0.020	**0.059**	0.157	0.005	**0.009**	0.014	0.024	**0.079**	0.118	0.006	**0.010**	0.016	0.024	**0.059**	0.157
WN.. 433	0.006	**0.012**	0.028	0.031	**0.079**	0.197	0.006	**0.010**	0.018	0.035	**0.079**	0.138	0.008	**0.012**	0.020	0.039	**0.059**	0.157
WN.. 434													0.010	**0.016**	0.024	0.055	**0.059**	0.157

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Information on the cutting data of chip breakers not included in this overview, can be found on → **Page 184–191**.

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Cutting data standard values for negative inserts

	Designation	-TMQ f inch/rev. min.	-TMQ f inch/rev. Recommended	-TMQ f inch/rev. max.	-TMQ a_p inch min.	-TMQ a_p inch Recommended	-TMQ a_p inch max.	-M70 f inch/rev. min.	-M70 f inch/rev. Recommended	-M70 f inch/rev. max.	-M70 a_p inch min.	-M70 a_p inch Recommended	-M70 a_p inch max.
	CN.. 321												
	CN.. 322												
	CN.. 431												
	CN.. 432	0.008	**0.016**	0.026	0.031	**0.118**	0.197	0.008	**0.012**	0.018	0.031	**0.118**	0.236
	CN.. 433	0.010	**0.020**	0.033	0.039	**0.118**	0.236	0.010	**0.016**	0.024	0.047	**0.118**	0.236
	CN.. 434							0.012	**0.018**	0.028	0.063	**0.118**	0.236
	CN.. 542							0.008	**0.012**	0.018	0.031	**0.157**	0.315
	CN.. 543							0.010	**0.016**	0.024	0.047	**0.157**	0.315
	CN.. 544							0.012	**0.018**	0.028	0.063	**0.157**	0.315
	CN.. 546							0.016	**0.028**	0.047	0.094	**0.157**	0.315
	CN.. 642							0.008	**0.012**	0.018	0.031	**0.177**	0.354
	CN.. 643							0.010	**0.016**	0.024	0.047	**0.177**	0.354
	CN.. 644							0.012	**0.018**	0.028	0.063	**0.177**	0.354
	CN.. 646							0.016	**0.028**	0.047	0.094	**0.177**	0.354
	CN.. 866							0.016	**0.028**	0.047	0.094	**0.236**	0.512
	DN.. 330.5												
	DN.. 331												
	DN.. 332							0.008	**0.010**	0.018	0.031	**0.079**	0.197
	DN.. 333							0.010	**0.014**	0.024	0.047	**0.079**	0.197
	DN.. 431												
	DN.. 432							0.008	**0.010**	0.018	0.031	**0.098**	0.236
	DN.. 433							0.010	**0.014**	0.024	0.047	**0.098**	0.236
	DN.. 434							0.012	**0.016**	0.028	0.063	**0.098**	0.236
	DN.. 441												
	DN.. 442	0.006	**0.012**	0.020	0.031	**0.098**	0.197	0.008	**0.010**	0.018	0.031	**0.098**	0.236
	DN.. 443	0.008	**0.016**	0.024	0.039	**0.118**	0.197	0.010	**0.014**	0.024	0.047	**0.098**	0.236
	DN.. 444							0.012	**0.016**	0.028	0.063	**0.098**	0.236
	SN.. 332												
	SN.. 431												
	SN.. 432							0.008	**0.012**	0.020	0.031	**0.118**	0.236
	SN.. 433							0.010	**0.016**	0.026	0.047	**0.118**	0.236
	SN.. 434							0.012	**0.018**	0.028	0.063	**0.118**	0.236
	SN.. 442												
	SN.. 443							0.010	**0.016**	0.026	0.047	**0.157**	0.315
	SN.. 444							0.012	**0.018**	0.030	0.063	**0.157**	0.315
	SN.. 543							0.010	**0.016**	0.026	0.047	**0.177**	0.354
	SN.. 544							0.012	**0.018**	0.030	0.063	**0.177**	0.354
	SN.. 546							0.016	**0.028**	0.047	0.094	**0.177**	0.354
	SN.. 856												
	SN.. 866							0.016	**0.028**	0.047	0.094	**0.236**	0.512
	TN.. 221												
	TN.. 222												
	TN.. 331												
	TN.. 332							0.008	**0.010**	0.018	0.031	**0.098**	0.236
	TN.. 333							0.010	**0.014**	0.024	0.047	**0.098**	0.236
	TN.. 431							0.006	**0.008**	0.012	0.016	**0.118**	0.276
	TN.. 432							0.008	**0.010**	0.018	0.031	**0.118**	0.276
	TN.. 433							0.010	**0.014**	0.024	0.047	**0.118**	0.276
	TN.. 434							0.012	**0.016**	0.028	0.063	**0.118**	0.276
	VN.. 331												
	VN.. 332												
	VN.. 333												
	WN.. 331												
	WN.. 332							0.008	**0.012**	0.018	0.031	**0.079**	0.157
	WN.. 333							0.010	**0.016**	0.024	0.047	**0.079**	0.157
	WN.. 431												
	WN.. 432	0.008	**0.012**	0.026	0.031	**0.118**	0.197	0.008	**0.012**	0.018	0.031	**0.098**	0.197
	WN.. 433	0.010	**0.016**	0.033	0.039	**0.118**	0.236	0.010	**0.016**	0.024	0.047	**0.098**	0.197
	WN.. 434							0.012	**0.018**	0.028	0.063	**0.098**	0.197

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The data shows reference values. An adjustment to the actual conditions may be required.

Designation	-R28						-R58						-R88					
	f			a_p			f			a_p			f			a_p		
	min.	Recommended	max.	min.	Recommended	max.	min.	Recommended	max.	min.	Recommended	max.	min.	Recommended	max.	min.	Recommended	max.
	inch/rev.			inch			inch/rev.			inch			inch/rev.			inch		
CN.. 321																		
CN.. 322																		
CN.. 431																		
CN.. 432	0.010	**0.014**	0.022	0.031	**0.118**	0.276	0.010	**0.018**	0.028	0.039	**0.118**	0.276						
CN.. 433	0.012	**0.018**	0.028	0.039	**0.118**	0.276	0.012	**0.022**	0.033	0.059	**0.118**	0.276						
CN.. 434	0.012	**0.024**	0.035	0.059	**0.118**	0.276	0.014	**0.026**	0.039	0.079	**0.118**	0.276						
CN.. 542																		
CN.. 543	0.012	**0.018**	0.028	0.039	**0.157**	0.354	0.012	**0.022**	0.033	0.059	**0.157**	0.354						
CN.. 544	0.014	**0.024**	0.035	0.059	**0.157**	0.354	0.014	**0.026**	0.039	0.079	**0.157**	0.354						
CN.. 546							0.016	**0.030**	0.047	0.098	**0.157**	0.354	0.016	**0.028**	0.047	0.079	**0.197**	0.354
CN.. 642																		
CN.. 643	0.012	**0.018**	0.028	0.039	**0.217**	0.472	0.014	**0.022**	0.033	0.059	**0.217**	0.472						
CN.. 644	0.014	**0.024**	0.035	0.059	**0.217**	0.472	0.016	**0.026**	0.039	0.079	**0.217**	0.472	0.016	**0.028**	0.039	0.079	**0.197**	0.472
CN.. 646	0.014	**0.026**	0.039	0.079	**0.217**	0.472	0.016	**0.030**	0.047	0.098	**0.217**	0.472	0.016	**0.028**	0.047	0.079	**0.197**	0.472
CN.. 866							0.018	**0.031**	0.051	0.098	**0.315**	0.630	0.024	**0.039**	0.059	0.138	**0.394**	0.709
DN.. 330.5																		
DN.. 331																		
DN.. 332																		
DN.. 333																		
DN.. 431																		
DN.. 432																		
DN.. 433																		
DN.. 434																		
DN.. 441																		
DN.. 442																		
DN.. 443	0.010	**0.018**	0.028	0.039	**0.098**	0.236	0.012	**0.020**	0.031	0.059	**0.098**	0.236						
DN.. 444	0.012	**0.024**	0.033	0.059	**0.098**	0.236	0.014	**0.024**	0.035	0.079	**0.098**	0.236						
SN.. 332																		
SN.. 431																		
SN.. 432							0.010	**0.018**	0.028	0.039	**0.118**	0.276						
SN.. 433							0.012	**0.022**	0.033	0.059	**0.118**	0.276						
SN.. 434																		
SN.. 442																		
SN.. 443	0.012	**0.014**	0.028	0.039	**0.157**	0.354	0.012	**0.022**	0.033	0.059	**0.157**	0.354						
SN.. 444	0.014	**0.024**	0.035	0.059	**0.157**	0.354	0.014	**0.026**	0.039	0.079	**0.157**	0.354						
SN.. 543							0.014	**0.022**	0.033	0.059	**0.217**	0.472						
SN.. 544	0.014	**0.024**	0.035	0.059	**0.217**	0.472	0.016	**0.026**	0.039	0.079	**0.217**	0.472	0.016	**0.028**	0.039	0.079	**0.197**	0.472
SN.. 546							0.016	**0.030**	0.047	0.079	**0.217**	0.472	0.016	**0.028**	0.047	0.079	**0.197**	0.472
SN.. 856	0.014	**0.026**	0.039	0.079	**0.276**	0.630	0.018	**0.031**	0.051	0.098	**0.315**	0.630	0.024	**0.039**	0.059	0.138	**0.394**	0.709
SN.. 866	0.014	**0.026**	0.039	0.079	**0.276**	0.630	0.018	**0.031**	0.051	0.098	**0.315**	0.630	0.024	**0.039**	0.059	0.138	**0.394**	0.709
TN.. 221																		
TN.. 222																		
TN.. 331																		
TN.. 332																		
TN.. 333																		
TN.. 431																		
TN.. 432																		
TN.. 433							0.012	**0.020**	0.031	0.059	**0.118**	0.276						
TN.. 434	0.012	**0.022**	0.033	0.059	**0.118**	0.276												
VN.. 331																		
VN.. 332																		
VN.. 333																		
WN.. 331																		
WN.. 332																		
WN.. 333																		
WN.. 431																		
WN.. 432																		
WN.. 433																		
WN.. 434																		

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Information on the cutting data of chip breakers not included in this overview, can be found on → **Page 184–191**.

Cutting data standard values for negative inserts

	Designation	-F30 f min.	-F30 f Recommended	-F30 f max.	-F30 a_p min.	-F30 a_p Recommended	-F30 a_p max.	-M30 f min.	-M30 f Recommended	-M30 f max.	-M30 a_p min.	-M30 a_p Recommended	-M30 a_p max.
		inch/rev.			inch			inch/rev.			inch		
	CN.. 321												
	CN.. 322												
	CN.. 431	0.002	**0.006**	0.010	0.016	**0.039**	0.079						
	CN.. 432	0.004	**0.009**	0.014	0.031	**0.059**	0.098	0.006	**0.010**	0.016	0.039	**0.079**	0.177
	CN.. 433							0.008	**0.012**	0.020	0.047	**0.098**	0.197
	CN.. 434							0.010	**0.014**	0.022	0.063	**0.098**	0.197
	CN.. 542												
	CN.. 543												
	CN.. 544												
	CN.. 546												
	CN.. 642												
	CN.. 643												
	CN.. 644												
	CN.. 646												
	CN.. 866												
	DN.. 330.5												
	DN.. 331	0.002	**0.006**	0.010	0.016	**0.039**	0.079						
	DN.. 332	0.004	**0.008**	0.014	0.031	**0.059**	0.098	0.006	**0.010**	0.016	0.039	**0.079**	0.177
	DN.. 333							0.008	**0.012**	0.020	0.047	**0.079**	0.177
	DN.. 431												
	DN.. 432												
	DN.. 433												
	DN.. 434												
	DN.. 441	0.002	**0.006**	0.010	0.016	**0.039**	0.079						
	DN.. 442	0.004	**0.008**	0.014	0.031	**0.059**	0.098	0.006	**0.010**	0.016	0.039	**0.079**	0.217
	DN.. 443							0.008	**0.012**	0.020	0.047	**0.079**	0.217
	DN.. 444												
	SN.. 332												
	SN.. 431	0.004	**0.006**	0.012	0.016	**0.039**	0.079						
	SN.. 432	0.006	**0.008**	0.016	0.031	**0.059**	0.098	0.008	**0.010**	0.018	0.039	**0.079**	0.177
	SN.. 433	0.006	**0.008**	0.016	0.047	**0.071**	0.098	0.010	**0.012**	0.020	0.047	**0.079**	0.197
	SN.. 434												
	SN.. 442												
	SN.. 443												
	SN.. 444												
	SN.. 543												
	SN.. 544												
	SN.. 546												
	SN.. 856												
	SN.. 866												
	TN.. 221												
	TN.. 222												
	TN.. 331	0.002	**0.006**	0.010	0.016	**0.039**	0.079						
	TN.. 332	0.004	**0.006**	0.014	0.031	**0.059**	0.098	0.006	**0.010**	0.016	0.039	**0.079**	0.177
	TN.. 333							0.008	**0.012**	0.020	0.047	**0.079**	0.177
	TN.. 431												
	TN.. 432												
	TN.. 433												
	TN.. 434												
	VN.. 331	0.003	**0.004**	0.008	0.016	**0.039**	0.079						
	VN.. 332	0.004	**0.006**	0.012	0.031	**0.059**	0.098	0.006	**0.010**	0.016	0.039	**0.059**	0.157
	VN.. 333												
	WN.. 331	0.002	**0.006**	0.010	0.016	**0.039**	0.079						
	WN.. 332	0.004	**0.008**	0.012	0.031	**0.059**	0.098	0.006	**0.010**	0.016	0.039	**0.059**	0.138
	WN.. 333							0.008	**0.012**	0.018	0.047	**0.059**	0.157
	WN.. 431	0.002	**0.006**	0.010	0.016	**0.039**	0.079						
	WN.. 432	0.004	**0.008**	0.014	0.031	**0.059**	0.098	0.006	**0.010**	0.016	0.039	**0.079**	0.177
	WN.. 433							0.008	**0.012**	0.020	0.047	**0.079**	0.197
	WN.. 434												

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The data shows reference values. An adjustment to the actual conditions may be required.

Designation	-M60						-M34					
	f			a_p			f			a_p		
	min.	Recommended	max.	min.	Recommended	max.	min.	Recommended	max.	min.	Recommended	max.
	inch/rev.			inch			inch/rev.			inch		
CN.. 321												
CN.. 322												
CN.. 431							0.003	**0.005**	0.007	0.039	**0.059**	0.118
CN.. 432	0.010	**0.012**	0.020	0.059	**0.098**	0.236	0.004	**0.006**	0.014	0.039	**0.071**	0.138
CN.. 433	0.012	**0.014**	0.022	0.079	**0.118**	0.236	0.005	**0.008**	0.016	0.059	**0.079**	0.157
CN.. 434	0.012	**0.016**	0.024	0.079	**0.118**	0.236	0.006	**0.010**	0.018	0.079	**0.118**	0.177
CN.. 542												
CN.. 543	0.012	**0.014**	0.022	0.079	**0.118**	0.315						
CN.. 544												
CN.. 546												
CN.. 642												
CN.. 643												
CN.. 644												
CN.. 646												
CN.. 866												
DN.. 330.5												
DN.. 331												
DN.. 332												
DN.. 333												
DN.. 431							0.003	**0.005**	0.007	0.031	**0.047**	0.098
DN.. 432							0.004	**0.006**	0.012	0.039	**0.071**	0.138
DN.. 433							0.005	**0.008**	0.015	0.059	**0.079**	0.157
DN.. 434												
DN.. 441												
DN.. 442	0.010	**0.012**	0.018	0.059	**0.098**	0.236	0.004	**0.006**	0.012	0.039	**0.071**	0.138
DN.. 443	0.012	**0.016**	0.022	0.059	**0.098**	0.236	0.005	**0.008**	0.015	0.059	**0.079**	0.157
DN.. 444												
SN.. 332												
SN.. 431												
SN.. 432	0.012	**0.014**	0.020	0.059	**0.079**	0.236	0.006	**0.010**	0.016	0.039	**0.079**	0.157
SN.. 433	0.012	**0.016**	0.022	0.079	**0.098**	0.236	0.006	**0.010**	0.018	0.059	**0.098**	0.177
SN.. 434	0.012	**0.016**	0.024	0.079	**0.098**	0.236						
SN.. 442												
SN.. 443												
SN.. 444												
SN.. 543												
SN.. 544												
SN.. 546												
SN.. 856												
SN.. 866												
TN.. 221												
TN.. 222												
TN.. 331												
TN.. 332	0.010	**0.010**	0.018	0.059	**0.098**	0.197	0.004	**0.006**	0.014	0.039	**0.079**	0.157
TN.. 333	0.012	**0.012**	0.022	0.079	**0.098**	0.217						
TN.. 431							0.004	**0.006**	0.014	0.039	**0.079**	0.157
TN.. 432							0.005	**0.008**	0.016	0.059	**0.098**	0.157
TN.. 433												
TN.. 434							0.006	**0.010**	0.018	0.079	**0.098**	0.177
VN.. 331							0.003	**0.004**	0.007	0.031	**0.047**	0.079
VN.. 332							0.004	**0.006**	0.008	0.039	**0.059**	0.098
VN.. 333							0.005	**0.007**	0.010	0.059	**0.071**	0.118
WN.. 331												
WN.. 332	0.010	**0.012**	0.018	0.059	**0.079**	0.157						
WN.. 333	0.012	**0.014**	0.020	0.079	**0.098**	0.177						
WN.. 431												
WN.. 432	0.010	**0.012**	0.020	0.059	**0.079**	0.197	0.004	**0.006**	0.014	0.039	**0.079**	0.157
WN.. 433	0.012	**0.014**	0.022	0.079	**0.098**	0.217	0.005	**0.008**	0.016	0.059	**0.079**	0.157
WN.. 434												

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Information on the cutting data of chip breakers not included in this overview, can be found on → **Page 184–191**.

Cutting data values for positive inserts

	Designation	-CF05 f min.	-CF05 f Recommended	-CF05 f max.	-CF05 a_p min.	-CF05 a_p Recommended	-CF05 a_p max.	-SF f min.	-SF f Recommended	-SF f max.	-SF a_p min.	-SF a_p Recommended	-SF a_p max.
		inch/rev.			inch			inch/rev.			inch		
	CC.. 21.5X5							0.001	**0.001**	0.002	0.004	**0.016**	0.059
	CC.. 21.50							0.001	**0.001**	0.002	0.008	**0.016**	0.059
	CC.. 21.5.5	0.001	**0.003**	0.005	0.004	**0.012**	0.051	0.001	**0.004**	0.006	0.008	**0.016**	0.059
	CC.. 21.51	0.002	**0.004**	0.005	0.004	**0.012**	0.051	0.002	**0.004**	0.008	0.008	**0.024**	0.059
	CC.. 21.52							0.002	**0.005**	0.008	0.008	**0.039**	0.059
	CC..32.5X5							0.001	**0.001**	0.002	0.008	**0.030**	0.079
	CC.. 32.50							0.001	**0.001**	0.002	0.008	**0.030**	0.079
	CC.. 32.5.5	0.001	**0.003**	0.005	0.004	**0.012**	0.051	0.002	**0.003**	0.004	0.008	**0.030**	0.079
	CC.. 32.51	0.002	**0.004**	0.009	0.008	**0.016**	0.051	0.002	**0.005**	0.008	0.008	**0.030**	0.079
	CC.. 32.52	0.002	**0.005**	0.010	0.008	**0.016**	0.051	0.002	**0.005**	0.010	0.016	**0.039**	0.079
	CC.. 32.53												
	CC.. 430.5							0.002	**0.003**	0.004	0.008	**0.031**	0.098
	CC.. 431							0.002	**0.005**	0.008	0.008	**0.039**	0.098
	CC.. 432							0.003	**0.006**	0.010	0.016	**0.039**	0.098
	CC.. 433							0.003	**0.006**	0.010	0.016	**0.059**	0.098
	DC.. 21.5X5												
	DC.. 21.50												
	DC.. 21.50.3												
	DC.. 21.5.5	0.001	**0.003**	0.005	0.004	**0.012**	0.051	0.001	**0.004**	0.006	0.004	**0.016**	0.059
	DC.. 21.51	0.002	**0.004**	0.009	0.008	**0.016**	0.051	0.002	**0.005**	0.008	0.008	**0.024**	0.059
	DC.. 21.52												
	DC.. 32.5X5												
	DC.. 32.50												
	DC.. 32.50.3												
	DC.. 32.5.5	0.001	**0.003**	0.005	0.004	**0.012**	0.051						
	DC.. 32.51	0.002	**0.004**	0.009	0.008	**0.016**	0.051	0.002	**0.005**	0.008	0.008	**0.028**	0.079
	DC.. 32.52	0.002	**0.005**	0.010	0.008	**0.016**	0.051	0.003	**0.006**	0.010	0.016	**0.039**	0.079
	DC.. 32.53												
	RC.. 0602M0												
	RC.. 0803M0												
	RC.. 1003M0												
	RC.. 1204M0												
	RC.. 1606M0												
	RC.. 2006M0												
	RC.. 2507M0												
	SC.. 32.51	0.002	**0.004**	0.009	0.008	**0.016**	0.051	0.002	**0.005**	0.008	0.008	**0.028**	0.079
	SC.. 32.52	0.002	**0.005**	0.010	0.008	**0.016**	0.051	0.003	**0.006**	0.010	0.016	**0.039**	0.079
	SC.. 432							0.003	**0.006**	0.010	0.016	**0.039**	0.098
	SC.. 433												
	TC.. 1.81.51												
	TC.. 21.5.5	0.001	**0.003**	0.005	0.004	**0.012**	0.051						
	TC.. 21.51	0.002	**0.004**	0.009	0.008	**0.016**	0.051	0.002	**0.005**	0.008	0.008	**0.028**	0.079
	TC.. 21.52	0.002	**0.005**	0.010	0.008	**0.016**	0.051	0.003	**0.006**	0.010	0.016	**0.039**	0.079
	TC.. 32.5.5												
	TC.. 32.51	0.002	**0.004**	0.009	0.008	**0.016**	0.051	0.002	**0.005**	0.008	0.008	**0.031**	0.098
	TC.. 32.52							0.003	**0.006**	0.010	0.016	**0.039**	0.098
	TC.. 32.53												
	TC.. 432												
	VC.. 220.X12												
	VC.. 220.X25												
	VC.. 220.X37												
	VC.. 220.5	0.001	**0.002**	0.005	0.004	**0.012**	0.051	0.001	**0.003**	0.006	0.004	**0.016**	0.059
	VC.. 221	0.002	**0.003**	0.009	0.008	**0.016**	0.051	0.002	**0.004**	0.008	0.008	**0.024**	0.059
	VC.. 222							0.003	**0.005**	0.009	0.016	**0.039**	0.059
	VC.. 330.5												
	VC.. 331	0.002	**0.003**	0.009	0.008	**0.016**	0.051	0.002	**0.004**	0.008	0.008	**0.028**	0.079
	VC.. 332	0.002	**0.004**	0.009	0.008	**0.016**	0.051	0.003	**0.005**	0.009	0.016	**0.039**	0.079
	VC.. 333												
	VC.. 220530												
	WC.. 1.21.50							0.001	**0.003**	0.004	0.004	**0.016**	0.039
	WC.. 1.21.51							0.001	**0.004**	0.008	0.004	**0.024**	0.059

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The data shows reference values. An adjustment to the actual conditions may be required.

Designation	-CF55						-SMF						-SM					
	f			a_p			f			a_p			f			a_p		
	min.	Recommended	max.	min.	Recommended	max.	min.	Recommended	max.	min.	Recommended	max.	min.	Recommended	max.	min.	Recommended	max.
	inch/rev.			inch			inch/rev.			inch			inch/rev.			inch		
CC.. 21.5X5																		
CC.. 21.50																		
CC.. 21.5.5													0.002	**0.005**	0.008	0.008	**0.024**	0.098
CC.. 21.51	0.002	**0.005**	0.009	0.008	**0.020**	0.051	0.003	**0.006**	0.010	0.012	**0.028**	0.079	0.003	**0.007**	0.012	0.016	**0.031**	0.098
CC.. 21.52							0.004	**0.007**	0.011	0.024	**0.039**	0.079	0.005	**0.008**	0.014	0.031	**0.039**	0.098
CC..32.5X5																		
CC.. 32.50																		
CC.. 32.5.5																		
CC.. 32.51	0.002	**0.005**	0.009	0.008	**0.020**	0.051	0.003	**0.006**	0.010	0.012	**0.031**	0.098	0.003	**0.007**	0.012	0.016	**0.039**	0.118
CC.. 32.52	0.002	**0.006**	0.010	0.008	**0.020**	0.051	0.004	**0.007**	0.011	0.024	**0.039**	0.098	0.005	**0.008**	0.014	0.031	**0.047**	0.118
CC.. 32.53													0.006	**0.009**	0.016	0.047	**0.059**	0.118
CC.. 430.5																		
CC.. 431	0.002	**0.005**	0.009	0.008	**0.020**	0.051	0.003	**0.006**	0.010	0.012	**0.039**	0.118	0.003	**0.007**	0.012	0.016	**0.047**	0.138
CC.. 432							0.004	**0.007**	0.011	0.024	**0.047**	0.118	0.005	**0.008**	0.014	0.031	**0.059**	0.138
CC.. 433													0.006	**0.009**	0.016	0.047	**0.079**	0.138
DC.. 21.5X5																		
DC.. 21.50																		
DC.. 21.50.3																		
DC.. 21.5.5	0.001	**0.004**	0.005	0.004	**0.016**	0.051							0.002	**0.005**	0.008	0.008	**0.024**	0.098
DC.. 21.51	0.002	**0.005**	0.009	0.008	**0.020**	0.051	0.003	**0.006**	0.010	0.012	**0.028**	0.079	0.003	**0.007**	0.012	0.016	**0.031**	0.098
DC.. 21.52							0.004	**0.007**	0.011	0.024	**0.039**	0.079	0.005	**0.008**	0.012	0.031	**0.039**	0.098
DC.. 32.5X5																		
DC.. 32.50																		
DC.. 32.50.3																		
DC.. 32.5.5																		
DC.. 32.51	0.002	**0.005**	0.009	0.008	**0.020**	0.051	0.003	**0.006**	0.010	0.012	**0.031**	0.098	0.031	**0.007**	0.012	0.016	**0.039**	0.118
DC.. 32.52	0.002	**0.006**	0.010	0.008	**0.020**	0.051	0.004	**0.007**	0.011	0.024	**0.047**	0.098	0.005	**0.008**	0.014	0.031	**0.047**	0.118
DC.. 32.53													0.006	**0.009**	0.016	0.047	**0.067**	0.118
RC.. 0602M0													0.008	**0.012**	0.020	0.008	**0.020**	0.059
RC.. 0803M0													0.008	**0.012**	0.024	0.008	**0.024**	0.079
RC.. 1003M0													0.010	**0.016**	0.028	0.008	**0.028**	0.098
RC.. 1204M0													0.012	**0.020**	0.031	0.008	**0.031**	0.118
RC.. 1606M0							0.006	**0.012**	0.024	0.010	**0.079**	0.138	0.016	**0.024**	0.039	0.012	**0.039**	0.138
RC.. 2006M0													0.020	**0.031**	0.047	0.016	**0.047**	0.157
RC.. 2507M0													0.024	**0.035**	0.055	0.024	**0.079**	0.197
SC.. 32.51	0.002	**0.005**	0.009	0.008	**0.020**	0.051	0.003	**0.006**	0.010	0.012	**0.031**	0.098	0.003	**0.007**	0.012	0.016	**0.039**	0.118
SC.. 32.52	0.002	**0.006**	0.010	0.008	**0.020**	0.051	0.004	**0.007**	0.011	0.024	**0.039**	0.098	0.005	**0.008**	0.014	0.031	**0.047**	0.118
SC.. 432							0.004	**0.007**	0.011	0.024	**0.047**	0.118	0.005	**0.008**	0.014	0.031	**0.059**	0.138
SC.. 433													0.006	**0.009**	0.016	0.047	**0.079**	0.138
TC.. 1.81.51													0.003	**0.005**	0.008	0.016	**0.031**	0.079
TC.. 21.5.5													0.003	**0.004**	0.008	0.016	**0.024**	0.118
TC.. 21.51	0.002	**0.005**	0.009	0.008	**0.020**	0.051							0.005	**0.008**	0.014	0.031	**0.047**	0.118
TC.. 21.52							0.004	**0.007**	0.011	0.024	**0.039**	0.098	0.005	**0.008**	0.014	0.031	**0.047**	0.118
TC.. 32.5.5																		
TC.. 32.51							0.003	**0.006**	0.010	0.012	**0.039**	0.118	0.003	**0.007**	0.012	0.016	**0.047**	0.138
TC.. 32.52	0.002	**0.006**	0.010	0.008	**0.020**	0.051	0.004	**0.007**	0.011	0.024	**0.047**	0.118	0.005	**0.008**	0.014	0.031	**0.059**	0.138
TC.. 32.53													0.006	**0.009**	0.016	0.047	**0.067**	0.138
TC.. 432													0.005	**0.008**	0.014	0.031	**0.098**	0.236
VC.. 220.X12																		
VC.. 220.X25																		
VC.. 220.X37																		
VC.. 220.5							0.002	**0.004**	0.007	0.008	**0.020**	0.079						
VC.. 221	0.002	**0.004**	0.009	0.008	**0.020**	0.051	0.003	**0.006**	0.009	0.012	**0.028**	0.079						
VC.. 222																		
VC.. 330.5																		
VC.. 331	0.002	**0.004**	0.009	0.008	**0.020**	0.051	0.003	**0.006**	0.009	0.012	**0.031**	0.098	0.003	**0.007**	0.010	0.016	**0.039**	0.118
VC.. 332	0.002	**0.005**	0.009	0.008	**0.020**	0.051	0.004	**0.007**	0.011	0.024	**0.039**	0.098	0.005	**0.008**	0.012	0.031	**0.047**	0.118
VC.. 333													0.006	**0.009**	0.013	0.047	**0.059**	0.118
VC.. 220530																		
WC.. 1.21.50																		
WC.. 1.21.51																		

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Information on the cutting data of chip breakers not included in this overview, can be found on → **Page 184–191**.

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Cutting data values for positive inserts

	Designation	-SMQ f min.	-SMQ f Recommended	-SMQ f max.	-SMQ a_p min.	-SMQ a_p Recommended	-SMQ a_p max.	-M25 f min.	-M25 f Recommended	-M25 f max.	-M25 a_p min.	-M25 a_p Recommended	-M25 a_p max.
		inch/rev.			inch			inch/rev.			inch		
	CC.. 21.5X5												
	CC.. 21.50												
	CC.. 21.5.5												
	CC.. 21.51							0.002	**0.005**	0.008	0.008	**0.043**	0.079
	CC.. 21.52												
	CC..32.5X5												
	CC.. 32.50												
	CC.. 32.5.5												
	CC.. 32.51	0.004	**0.010**	0.016	0.016	**0.079**	0.157	0.002	**0.006**	0.009	0.008	**0.047**	0.087
	CC.. 32.52	0.006	**0.012**	0.020	0.031	**0.079**	0.157	0.004	**0.008**	0.012	0.016	**0.071**	0.126
	CC.. 32.53												
	CC.. 430.5												
	CC.. 431	0.004	**0.010**	0.016	0.016	**0.079**	0.157						
	CC.. 432	0.006	**0.012**	0.020	0.031	**0.079**	0.157						
	CC.. 433												
	DC.. 21.5X5												
	DC.. 21.50												
	DC.. 21.50.3												
	DC.. 21.5.5							0.002	**0.004**	0.005	0.004	**0.035**	0.063
	DC.. 21.51	0.004	**0.007**	0.010	0.016	**0.059**	0.118	0.002	**0.005**	0.007	0.008	**0.043**	0.079
	DC.. 21.52												
	DC.. 32.5X5												
	DC.. 32.50												
	DC.. 32.50.3												
	DC.. 32.5.5							0.002	**0.004**	0.006	0.004	**0.043**	0.079
	DC.. 32.51	0.004	**0.010**	0.016	0.016	**0.079**	0.157	0.002	**0.006**	0.009	0.008	**0.047**	0.087
	DC.. 32.52	0.006	**0.012**	0.020	0.031	**0.079**	0.157	0.004	**0.008**	0.012	0.016	**0.071**	0.126
	DC.. 32.53												
	RC.. 0602M0												
	RC.. 0803M0												
	RC.. 1003M0												
	RC.. 1204M0												
	RC.. 1606M0												
	RC.. 2006M0												
	RC.. 2507M0												
	SC.. 32.51												
	SC.. 32.52												
	SC.. 432												
	SC.. 433												
	TC.. 1.81.51												
	TC.. 21.5.5												
	TC.. 21.51							0.002	**0.005**	0.008	0.008	**0.047**	0.087
	TC.. 21.52												
	TC.. 32.5.5												
	TC.. 32.51							0.002	**0.006**	0.009	0.008	**0.063**	0.118
	TC.. 32.52							0.004	**0.008**	0.012	0.016	**0.075**	0.134
	TC.. 32.53												
	TC.. 432												
	VC.. 220.X12												
	VC.. 220.X25												
	VC.. 220.X37												
	VC.. 220.5												
	VC.. 221												
	VC.. 222												
	VC.. 330.5												
	VC.. 331												
	VC.. 332												
	VC.. 333							0.002	**0.005**	0.008	0.008	**0.047**	0.087
	VC.. 220530							0.004	**0.006**	0.010	0.016	**0.055**	0.118
	WC.. 1.21.50												
	WC.. 1.21.51												

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The data shows reference values. An adjustment to the actual conditions may be required.

Designation	-M55						-F05					
	f			a_p			f			a_p		
	min.	Recommended	max.	min.	Recommended	max.	min.	Recommended	max.	min.	Recommended	max.
	inch/rev.			inch			inch/rev.			inch		
CC.. 21.5X5												
CC.. 21.50												
CC.. 21.5.5												
CC.. 21.51	0.002	**0.005**	0.008	0.016	**0.059**	0.102						
CC.. 21.52												
CC..32.5X5												
CC.. 32.50												
CC.. 32.5.5												
CC.. 32.51	0.003	**0.006**	0.009	0.016	**0.067**	0.118						
CC.. 32.52	0.005	**0.009**	0.014	0.031	**0.094**	0.157						
CC.. 32.53												
CC.. 430.5												
CC.. 431	0.003	**0.007**	0.011	0.016	**0.087**	0.157						
CC.. 432	0.005	**0.010**	0.016	0.031	**0.110**	0.189						
CC.. 433												
DC.. 21.5X5							0.001	**0.001**	0.002	0.004	**0.039**	0.079
DC.. 21.50							0.001	**0.001**	0.002	0.004	**0.039**	0.079
DC.. 21.50.3							0.001	**0.002**	0.003	0.004	**0.039**	0.079
DC.. 21.5.5							0.001	**0.002**	0.004	0.004	**0.039**	0.079
DC.. 21.51	0.002	**0.006**	0.009	0.016	**0.051**	0.087						
DC.. 21.52	0.003	**0.006**	0.009	0.031	**0.063**	0.094						
DC.. 32.5X5							0.001	**0.001**	0.002	0.004	**0.049**	0.098
DC.. 32.50							0.001	**0.001**	0.002	0.004	**0.049**	0.098
DC.. 32.50.3							0.001	**0.002**	0.003	0.004	**0.049**	0.098
DC.. 32.5.5							0.001	**0.003**	0.004	0.004	**0.049**	0.098
DC.. 32.51	0.003	**0.006**	0.009	0.016	**0.067**	0.118	0.001	**0.004**	0.010	0.004	**0.049**	0.098
DC.. 32.52	0.005	**0.009**	0.014	0.031	**0.094**	0.157						
DC.. 32.53												
RC.. 0602M0												
RC.. 0803M0												
RC.. 1003M0												
RC.. 1204M0												
RC.. 1606M0												
RC.. 2006M0												
RC.. 2507M0												
SC.. 32.51	0.005	**0.009**	0.014	0.031	**0.094**	0.157						
SC.. 32.52	0.005	**0.010**	0.016	0.031	**0.110**	0.189						
SC.. 432												
SC.. 433												
TC.. 1.81.51	0.002	**0.005**	0.007	0.016	**0.051**	0.087						
TC.. 21.5.5												
TC.. 21.51	0.002	**0.006**	0.009	0.016	**0.055**	0.094						
TC.. 21.52												
TC.. 32.5.5												
TC.. 32.51												
TC.. 32.52	0.005	**0.009**	0.014	0.031	**0.102**	0.173						
TC.. 32.53												
TC.. 432												
VC.. 220.X12							0.001	**0.001**	0.002	0.004	**0.049**	0.098
VC.. 220.X25							0.001	**0.001**	0.002	0.004	**0.049**	0.098
VC.. 220.X37							0.001	**0.002**	0.003	0.004	**0.049**	0.098
VC.. 220.5							0.001	**0.003**	0.004	0.004	**0.049**	0.098
VC.. 221							0.001	**0.006**	0.010	0.004	**0.049**	0.098
VC.. 222												
VC.. 330.5												
VC.. 331	0.003	**0.006**	0.008	0.016	**0.067**	0.118						
VC.. 332	0.005	**0.008**	0.012	0.031	**0.083**	0.134						
VC.. 333												
VC.. 220530												
WC.. 1.21.50												
WC.. 1.21.51												

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Information on the cutting data of chip breakers not included in this overview, can be found on → **Page 184–191**.

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Application range of CBN grades

Cutting material grade	Cutting material designation	Properties		Application range	Interrupted cut	Material suitability/ ISO hardness			
						Cast iron	Sintered steels	Heat-resistant	hardened
		PCBN content	Main binder			K	P	S	H
High PCBN content	**CTB S05U**	90 %		Chilled iron (NiHard), grey cast iron	Smooth to strongly interrupted cut	05		05	
	CTB S10C	95 %		Grey cast iron (GG252), sintered steels, super alloys	Smooth to medium interrupted cut	10	10	10	
	CTB S10U	95 %		Grey cast iron, sintered steels, super alloys		10	10	10	
	CTB S20C	90 %		Spheroidal graphite cast iron, sintered steels, super alloys		20	20	20	
Low PCBN content	**CTB H15C**	40 %	TiN	Tempered steels from 32 HRC	Smooth cut				15
	CTB H15U	40 %	TiN		Smooth to slightly interrupted cut				15
	CTB H20C	65 %	TiCN	48–62 HRC					20
	CTB H21C	65 %	TiCN	52–65 HRC					20
	CTB H21U	65 %	TiCN	52–65 HRC					20
	CTB H40C	55 %	TiN	48–65 HRC	Interrupted cut				40
	CTB H40U	65 %	TiN	54–65 HRC					40
	CTB H41C	65 %	TiN	48–65 HRC	Strongly interrupted cut				40
	CTB H41U	65 %	TiN	54–65 HRC					40

CBN – The Next Generation

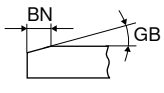
The “sandwich” Technology

The singular system (patent), to apply CBN segments on a tungsten carbide base in a single process reduces the edge price significantly and opens up the possibility for the development of different CBN grades.

Specialized edge preperations! To achieve the highest efficiency for each application, the new CBN sandwich inserts are available with up to 8 edge preperations.

CBN Test Insert

The type CNGA test insert was specifically used, in order to identify the **quickest and most effective** type. The insert is manufactured with four edge preperations for trial. The cutting edge with highest performance gives the correct chamfer style.



Article no.	Designation	Chamfers (BN x GB)			
71 499 ...		**Cutting edge 1**	**Cutting edge 2**	**Cutting edge 3**	**Cutting edge 4**
290	CNGA 120408XN_L2 **CTBS20C**	009B (0.004 inch x 10°)	011C (0.004 inch x 15°)	014D (0.006 inch x 20°)	018F (0.007 inch x 30°)
292	CNGA 120408XN_L2 **CTBH20C**	009D (0.004 inch x 20°)	011E (0.004 inch x 25°)	014F 0.006 inch x 30°)	018F (0.007 inch x 30°)
294	CNGA 120408XN_L2 **CTBH40C**	009D (0.004 inch x 20°)	011E (0.004 inch x 25°)	013E (0.005 inch x 25°)	014F (0.006 inch x 30°)

Diamond as a cutting material

Ensures

- Optimal surface quality
- burr-free workpieces
- high service lives
- lowest cutting forces
- High Process Security

Complete programme of roughing, finishing and wiper inserts for machining aluminium, non ferrous metals, plastics, ...

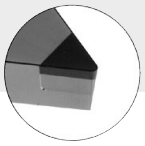
The cutting materials

	CTD CD10 (CVD)	CTD PD20 (PKD)	CTD PU20 (PKD)	CTD PS30 (PKD)
	Fine grain Size (N10)	Fine grain grade (N20)	Coarse grain grade (N20)	Coarse grain Size (N30)
Properties	▲ perfect sharp edges ▲ no cutting pressure ▲ very close tolerances ▲ highest abrasion resistance with highest toughness ▲ very high heat conductivity	▲ high sharpness ▲ lower cutting pressure than PDC-S ▲ close tolerance ▲ lower abrasion resistance with increased toughness	▲ Very sharp cutting edge ▲ Reduced cutting pressure ▲ Tight tolerances ▲ Very high level of wear resistance and toughness	▲ high sharpness ▲ lower cutting pressure ▲ close tolerance ▲ lower abrasion resistance than with the PDC, with increased toughness
Material	suitable for superfinishing and semi-finishing of all non ferrous metals and NE-composite materials with small to high levels of abrasiveness	suitable for fine machining of all NE-materials with low abrasiveness	suitable for finishing to roughing non-ferrous metals and non-ferrous materials with highly abrasive alloying element. High chip removal on fibre-reinforced plastics such as CFRP and GFRP.	suitable for fine machining of all NE-materials and non-ferrous metals with low to very high levels of abrasiveness

Cutting Geometries

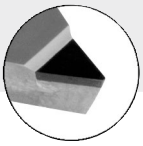
Neutral rake angle:

- higher cuting force
- higher temperature
- improved surface quality
- for stable workpieces



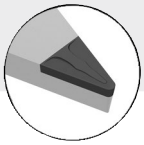
Positive rake angle:

- Lower cutting force
- Lower temperature
- reduction in surface quality
- for unstable workpieces
- improved accuracy



CB chip breaker geometries:

- Reliable chip control
- Ideal for low-alloy aluminium
- For F | M | R applications



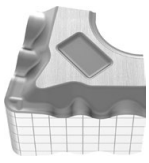
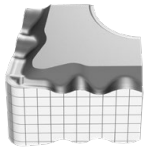
Notes on diamond usage

- Coolant is not generally needed, however it facilitates chip removal
- Note the chemical reaction to carbide-forming elements (PCD)
- Note the thermal interaction and critical temperature:
  PCD: 600 °C, CVD: 700 °C
  Depending on the material, use cooling.

Standard chip breakers / application notes

Negative

Main application steel and cast iron, secondary application stainless steels

Model	Smooth cut	Irregular cutting depth	Interrupted cut	Sectional illustration a_p inch	Sectional illustration f inch	Geometry
-CF / -CF20 ▲ Fine finishing ▲ Sharp cutting edge for low cutting forces ▲ Good chip control even at small depths of cut	**CTEP110 / TCM10** CTEP110 / TCM10 CTEP110 / TCM10			12°	0.012–0.059	0.003–0.010	CN.. DN.. TN.. WN..
 **F**							
-F40 ▲ Fine turning chip breaker for machining steels ▲ Good chip control ▲ Ideal for copy turning work	**CTCP125** CTCP125	**CTCP125** CTCP125		24° 0.003	0.020–0.079	0.004–0.012	VN..
 **F**							
-F50 ▲ Fine turning chip breaker for fine machining ▲ Steel and stainless steels ▲ Excellent chip control ▲ High surface quality	**CTCP115 / CTCP125**	**CTCP115 / CTCP125 / CTCP135** CTCP135	**CTCP135** CTCP135	15°	0.004–0.102	0.002–0.014	CN.. DN.. SN.. TN.. VN.. WN..
 **F**							
-TFQ ▲ Wiper geometry ▲ Finishing to medium machining ▲ Very high feedrate ▲ High surface quality	**CTEP110 / CTCP115** CTEP110 CTEP110 / CTCP115	**CTCP115 / CTCP125** CTCP115 / CTCP125		17° 0.006	0.020–0.197	0.004–0.024	CN.. DN.. WN..
 **F**							
-XU ▲ Finishing to light roughing ▲ Universal chip breaker ▲ Copy turning ▲ Excellent chip formation ▲ Low cutting forces	**CTCP115 / CTCP125** CTCP115	CTCP115 / **CTCP125** CTCP115 / CTCP125	CTCP125	10° 0.006	0.016–0.177	0.005–0.016	CN.. DN.. VN.. WN..
 **M**							
-FMS ▲ Finishing to medium machining ▲ very good chip control ▲ universal chip breaker ▲ low cutting forces	**CT-P15 / CT-P25** CT-P15 / CT-P25 CT-P15 / CT-P25	CT-P15 / **CT-P25** CT-P25 CT-P15 / CT-P25	CT-P25	10° 0.006	0.016–0.018	0.004–0.012	CN.. DN.. VN.. WN..
 **F** **M**							

Standard chip breakers / application notes

Main application steel and cast iron, secondary application stainless steels

Negative

Model	Smooth cut	Irregular cutting depth	Interrupted cut	Sectional illustration a_p inch	Sectional illustration f inch	Geometry
-M40 ▲ Stable geometry ▲ Medium feed rates ▲ Can be used for any application ▲ Good chip control	**CTCP125** CTCP125	**CTCP125** CTCP125		8,60° 0.004		VN..
M				0.020–0.118	0.020–0.118	
-M50 ▲ Medium machining ▲ First choice for steel machining ▲ Universal application ▲ Wide range of applications	**CTCP115 / CTCP125 / CTCK110 / CTCK120** CTCP115 CTCP115 / CTCP125 / **CTCK110 / CTCK120**	CTCP115 / **CTCP125** CTCP125 CTCP115 / CTCP125 / **CTCK110 / CTCK120**	CTCP125 / **CTCP135** CTCP135 CTCP125 / **CTCK120**	20° 0.010		CN.. DN.. SN.. TN.. VN.. WN..
M				0.020–0.197	0.005–0.016	
-TMQ ▲ Wiper geometry ▲ Light to medium rough machining ▲ Very high feedrate ▲ High surface quality	**CTCP115** CTCP125 CTCP125	**CTCP125** CTCP125 CTCP125		20° 0.011		CN.. DN.. WN..
M				0.031–0.236	0.008–0.033	
-MRS ▲ medium to rough machining ▲ well suited for components with cast crust or forged skin ▲ works well with interrupted cuts	**CT-P15 / CT-P25** / CT-P35 CT-P15 / CT-P25	**CT-P15 / CT-P25 / CT-P35** CT-P25 / CT-P35	**CT-P25 / CT-P35** CT-P35	20° 0.008		CN.. DN.. WN..
M **R**				0.020–0.177	0.008–0.024	
-M70 ▲ Light to medium rough machining ▲ Cast crust and forging skin ▲ Stable cutting edge ▲ Interrupted cut ▲ Raw materials and forgings	**CTCK110 / CTCK120 / CTCP115** CTCP115 **CTCK110 / CTCK120 /** CTCP115 / CTCP125	CTCP115 / **CTCP125** CTCP125 **CTCK120 /** CTCP125	**CTCP125 / CTCP135** CTCP135 CTCP125 / **CTCK120**	15,7° 0.012		CN.. DN.. SN.. TN.. WN..
M **R**				0.059–0.177	0.008–0.031	
.NMA ▲ Rough machining ▲ Stable cutting edge ▲ For short-chipping materials ▲ First choice for grey cast iron	**CTCK110**	**CTCK110 / CTCK120**	**CTCK120**	0°		CN.. DN.. SN.. TN.. WN..
R				0.059–0.177	0.008–0.031	
-R28 ▲ Single sided roughing geometry ▲ Longitudinal, face and copy turning ▲ Varying depths of cut ▲ Steels with low tensile strength (800 N / mm²) ▲ Good chip control	**CTCP115** / CTCP125 CTCP115 / CTCP125 CTCP115	**CTCP115 / CTCP135 / CTCP125** CTCP125 / CTCP135 CTCP125	**CTCP135** CTCP135 CTCP135	20° 0.014		CN.. DN.. SN..
R				0.039–0.472	0.010–0.031	

4

Standard chip breakers / application notes

Negative

Main application steel and cast iron, secondary application stainless steels

Model	Smooth cut	Irregular cutting depth	Interrupted cut	Sectional illustration a_p inch	Sectional illustration f inch	Geometry
-R58 ▲ Single sided roughing geometry ▲ Longitudinal and face turning ▲ Light interrupted cut ▲ Low cutting forces ▲ Unstable machines	**CTCP115 / CTCP125** CTCP115 / CTCP125 CTCP115	**CTCP115 / CTCP125 / CTCP135** CTCP125 / CTCP135 CTCP115 / CTCP125	**CTCP135** CTCP135 CTCP125	0.059-0.472	0.012-0.047	CN.. DN.. SN.. TN..
-R88 ▲ Single sided roughing geometry ▲ Longitudinal and face turning ▲ High feedrate ▲ Large depths of cut ▲ Heavily interrupted cut	**CTCP115 / CTCP125** CTCP115 / CTCP125 CTCP115	**CTCP115 / CTCP125 / CTCP135** CTCP115 / CTCP125 CTCP115 / CTCP125	**CTCP135** CTCP135 CTCP125	0.138-0.630	0.020-0.059	SN..

Negative

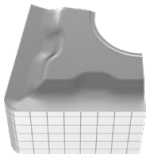
Main application stainless steels, secondary application steel and super alloys

Model	Smooth cut	Irregular cutting depth	Interrupted cut	Sectional illustration a_p inch	Sectional illustration f inch	Geometry
-F30 ▲ Finishing of stainless steels ▲ Continous cut ▲ High surface quality ▲ Good swarf control	CTCM120 / CTPM125 **CTCM120 / CTPM125**	CTCM120 / CTPM125 / CTCM130 **CTCM120 / CTPM125 / CTCM130**	CTCM130 **CTCM130**	0.003-0.098	0.004-0.014	CN.. DN.. SN.. TN.. VN.. WN..
-M30 ▲ Option for stainless steel machining ▲ Good swarf control ▲ Little edg build up ▲ Low cutting forces ▲ Little built-up edge ▲ Applicable on unstable machines	CTCM120 / CTPM125 **CTCM120 / CTPM125**	CTCM120 / CTPM125 / CTCM130 **CTCM120 / CTPM125 / CTCM130**	CTCM130 **CTCM130**	0.039-0.177	0.006-0.016	CN.. DN.. SN.. TN.. VN.. WN..
-M60 ▲ Light to medium roughing ▲ Stable cutting edge ▲ Interrupted cut ▲ Forged skin and cast crust	CTCM120 / CTPM125 **CTCM120 / CTPM125**	CTCM120 / CTPM125 / CTCM130 **CTCM120 / CTPM125 / CTCM130**	CTCM130 **CTCM130**	0.059-0.236	0.010-0.020	CN.. DN.. SN.. TN.. WN..

Standard chip breakers / application notes

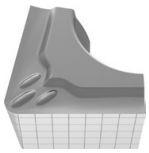
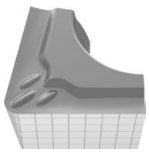
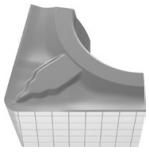
Negative

Main application super alloys, secondary application stainless steels

Model	Smooth cut	Irregular cutting depth	Interrupted cut	Sectional illustration a_p inch	Sectional illustration f inch	Geometry
-M34 ▲ First choice for superalloys ▲ Light cutting geometry ▲ Little built-up edge ▲ Low cutting forces  **M**	**CTPX710** **CTPX710** CTPX710 **CTPX710**	**CTPX710** **CTPX710** CTPX710 **CTPX710**		0.031–0.118	0.004–0.012	CN.. DN.. SN.. VN.. WN..

Positive

Main application steel and cast iron, secondary application stainless steels and super alloys

Model	Smooth cut	Irregular cutting depth	Interrupted cut	Sectional illustration a_p inch	Sectional illustration f inch	Geometry
-CF05 ▲ Fine finishing ▲ For all common steel materials, stainless steels and GGG ▲ Good swarf control ▲ High surface quality  **F**	**CTEP110 / TCM407** CTEP110 CTEP110	TCM10 / TCM407 TCM10 / TCM407		0.008–0.051	0.002–0.010	CC.. DC.. SC.. TC.. VC..
-SF ▲ Finishing / contour turning ▲ Good swarf control ▲ High surface quality ▲ Low cutting forces  **F**	**CTCP115**	**CTCP125**	**CTCP125 / CTCP135** CTCP125	0.002–0.098	0.002–0.010	CC.. DC.. SC.. TC.. VC.. WC..
-CF55 ▲ Finishing to medium machining ▲ Suitable for general and stainless steels ▲ Low cutting forces ▲ Good swarf control ▲ High surface quality  **F** **M**	**CTEP110** CTEP110 CTEP110	**TCM10 /** CTEP110 CTEP110 CTEP110		0.008–0.051	0.002–0.010	CC.. DC.. SC.. TC.. VC..

4

Standard chip breakers / application notes

Positive

Main application steel and cast iron, secondary application stainless steels and super alloys

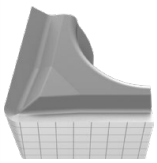
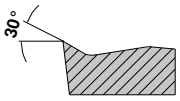
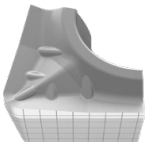
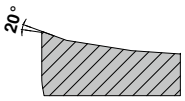
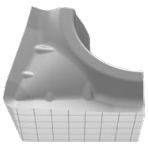
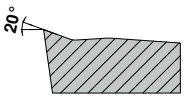
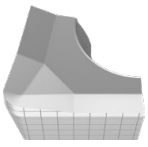
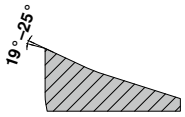
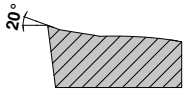
Model	Smooth cut	Irregular cutting depth	Interrupted cut	Sectional illustration a_p inch	Sectional illustration f inch	Geometry
-SMF ▲ Finishing to medium machining ▲ Low cutting forces ▲ Good swarf control ▲ High surface quality	**CTEP110 / CTCP115** CTEP110 CTEP110	**TCM10 / CTCP125 / CTCP115** CTCP135	**CTCP135** CTCP135	13°	0.008–0.051	0.002–0.010	CC.. DC.. SC.. TC.. VC..
F M							
-FMS ▲ Finishing to medium machining ▲ very good chip control ▲ universal chip breaker ▲ low cutting forces	**CT-P15 / CT-P25** CT-P15 / CT-P25	**CT-P15 / CT-P25** CT-P15 / CT-P25	CT-P25	15°	0.004–0.079	0.002–0.008	CC.. DC.. VC..
F M							
-SM ▲ Medium machining ▲ Universal application ▲ Stable cutting edge ▲ Varying depths of cut ▲ Wide range of applications	**CTCP115 / CTCP125** CTCP115 / **CTCK110 / CTCK120**	**CTCP125 / CTCP135 / CTCP115** CTCP135 CTCP125 / **CTCK110 / CTCK120**	**CTCP125 / CTCP135** CTCP135 CTCK120	15° 0.004	0.002–0.197	0.006–0.018	CC.. DC.. RC.. SC.. TC.. VC..
M							
-SMQ ▲ Positive wiper geometry ▲ Finishing to medium machining ▲ Very high feedrate ▲ High surface quality	**CTCP115** CTCP125 / CTCP115	**CTCP125** CTCP125	**CTCP125** CTCP125	15° 0.008	0.039–0.157	0.006–0.018	CC.. DC..
M							
-MRS ▲ light to medium roughing ▲ universal chip breaker ▲ stable cutting edge	**CT-P15 / CT-P25** CT-P15 / CT-P25	**CT-P15 / CT-P25** CT-P15 / CT-P25	**CT-P25**	15° 0.004	0.006–0.138	0.006–0.014	CC.. DC.. VC..
M R							

Positive

Model	Smooth cut	Irregular cutting depth	Interrupted cut	Sectional illustration a_p inch	Sectional illustration f inch	Geometry
-M25 ▲ First choice for medium machining of stainless steels ▲ High surface quality ▲ Little built-up edge	CTCM120 / CTPM125 **CTCM120 / CTPM125**	CTCM120 / CTPM125 / CTCM130 **CTCM120 / CTPM125 / CTCM130**	CTCM130 **CTCM130**	10° 0.004–0.006	0.016–0.126	0.004–0.012	CC.. DC.. TC.. VC..
F M							
-M55 ▲ First choice for medium machining to roughing of stainless steels ▲ Smooth to lightly interrupted cut ▲ Good swarf control ▲ Stable cutting edge	CTCM120 / CTPM125 **CTCM120 / CTPM125**	CTCM120 / CTPM125 / CTCM130 **CTCM120 / CTPM125 / CTCM130**	CTCM130 **CTCM130**	16° 0.006-0.008	0.016–0.189	0.002–0.014	CC.. DC.. SC.. TC.. VC..
M							

Standard chip breakers / application notes

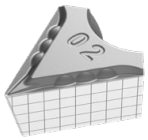
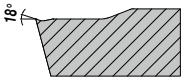
Main application non-ferrous metals, secondary application stainless steels, steels, super alloys, cast iron

Positive	Model	Smooth cut	Irregular cutting depth	Interrupted cut	Sectional illustration a_p inch	Sectional illustration f inch	Geometry
-23P ▲ Low adhesion ▲ Good chip control with soft aluminium alloys	 **F**	H216T **H216T** H216T	H216T **H216T** H216T	**H216T** H216T	 0.008–0.157	0.002–0.012	CC.. DC..
-25P ▲ Sharp cutting edge ▲ Good swarf control on soft aluminium alloys ▲ Low adhesion	 **F** **M**	**CTPX710** **CTPX710** **CTPX710 / H216T** **CTPX710** CTPX710	CTPX710 CTPX710 **CTPX710 / H216T** CTPX710 CTPX710	**CTPX710 / H216T**	 0.020–0.177	0.002–0.024	CC.. DC.. SC.. VC..
-25Q ▲ Wiper geometry ▲ High feed rates ▲ High surface quality ▲ Good swarf control on soft aluminium alloys ▲ Low adhesion	 **M**	**CTPX710** **CTPX710** H210T **H210T / CTPX710** H210T / **CTPX710** H210T	CTPX710 CTPX710 H210T **H210T / CTPX710** H210T / CTPX710 H210T	**H210T / CTPX710** H210T	 0.002–0.256	0.002–0.024	CC.. DC.. VC..
-27 ▲ The universal Alu geometry ▲ Sharp cutting edge ▲ Extremely positive rake angle ▲ Low adhesion ▲ High feed rates	 **M** **R**	**CTPX715** **CTPX715** CTPX715 / H216T **CTPX715 / H216T** **CTPX715** CTPX715 / H216T	CTPX715 CTPX715 CTPX715 / H216T **CTPX715 / H216T** CTPX715 CTPX715 / H216T	**CTPX715 / H216T** CTPX715 / H216T	 0.039–0.394	0.004–0.030	CC.. DC.. RC.. SC.. TC.. VC..
-29 ▲ Direct sintered aluminium geometry ▲ Positive rake angle ▲ Good chip control ▲ For medium to rough machining	 **F** **R**	**H216** **H216**	**H216** **H216**	**H216T** **H216T**	 0.039–0.236	0.010–0.024	CC.. DC.. VC..

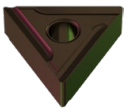
4

Standard chip breakers / application notes

Main application super alloys and stainless steels, secondary application steels and non-ferrous metals

Positive	Model	Smooth cut	Irregular cutting depth	Interrupted cut	Sectional illustration a_p inch	Sectional illustration f inch	Geometry
-F05 ▲ Maximum tolerance class ▲ Outstanding chip control, even with the smallest cutting depths ▲ Very low cutting forces	 F	**CTPX710**	CTPX710				DC.. VC..
		CTPX710	CTPX710				
		CTPX710	CTPX710				
		CTPX710	**CTPX710**				
		CTPX710	**CTPX710**				
		CTPX710	CTPX710		0.004–0.098	0.001–0.010	

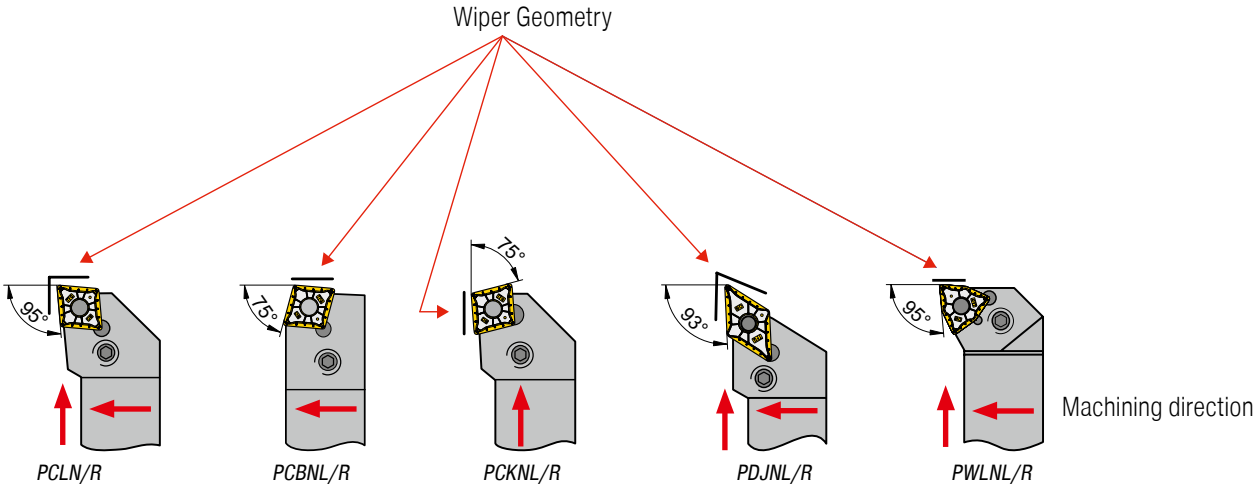
Supplementary chip breakers / application notes

	Model	Smooth cut	Irregular cutting depth	Interrupted cut
-EN ▲ Universal chip breaker for general steels	 M	**CTCP115** CTCP125 **CTCK110**	**CTCP125** CTCP135 **CTCK120**	**CTCP135** CTCP135 CTCP125
-ER|EL ▲ A problem solver for unstable conditions ▲ Can be used on less powerful machines ▲ Can be used for general steels and on stainless materials as a secondary application	 M		**CTCP125**	**CTCP135**

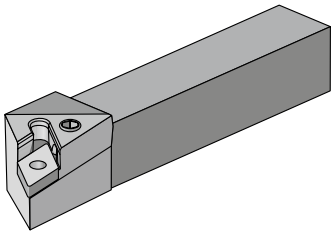
4

Masterfinish – wiper geometry – notes

Through the use of indexable inserts with wiper edge (-TFQ; -TMQ; -SMQ; -25Q) high quality surfaces can be produced economically.

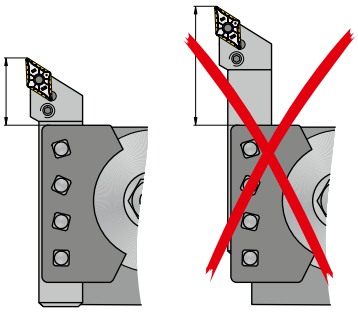


All turning inserts with wiper cutting edge are clamped in standard ISO tool holders.

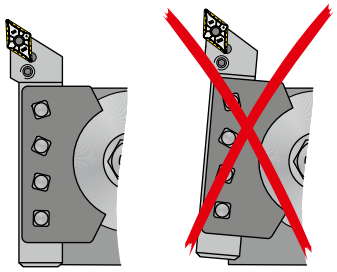


Check toolholder:

- Insert seat
- Shim
- Clamping Lever



Short tool overhang



Ensure correct tool alignment

Feed rate guide values for surface finish quality

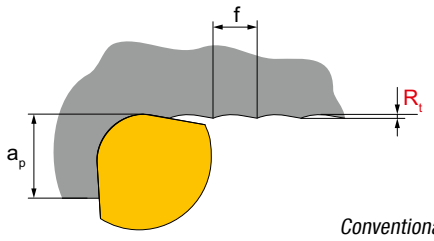
Roughness range R_z in µm	$R_{t\,max.}$	Corresponds to R_a	Roughness index	ISO 1302	Corner radius r_ε in inch and feed rate f in inch/rev.			
					r_ε = 0.016	r_ε = 0.032	r_ε = 0.048	r_ε = 0.064
63–100	R_t100	12.5–25	N11	25		0.020	0.027	0.035
40–63	R_t63	6.3–25	N10	12,5	0.011	0.017	0.022	0.027
31.5–40	R_t40	4.9–6.3	N9	6,3	0.010	0.015	0.019	0.022
25–31.5	R_t31,5	4.0–4.9			0.009	0.013	0.016	0.019
16–25	R_t25	2.5–4.0	N8	3,2	0.008	0.011	0.014	0.015
10–16	R_t16	1.6–2.5			0.006	0.009	0.011	0.012
6.3–10	R_t10	1.0–1.6	N7	1,6	0.004	0.005	0.007	0.008

Masterfinish – wiper geometry – functional principle

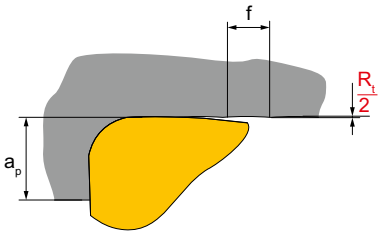
Relationship of feed rate to surface roughness

Improved Surface Quality

With the same feed rate an insert with wiper cutting edge reaches a roughness value R_t which is many times better than a conventional insert.



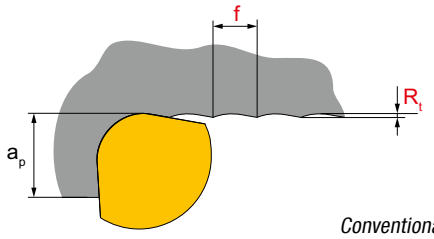
Conventional



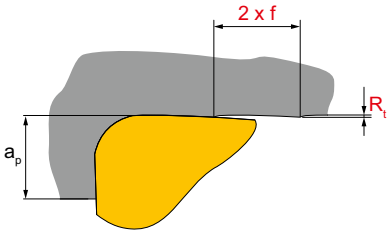
-TFQ

Shorter machining time

To achieve the same R_t-value as with a standard insert, double the feed rate can be applied for the insert with wiper cutting edge **(= shorter production time per component!)**



Conventional



-TFQ

4

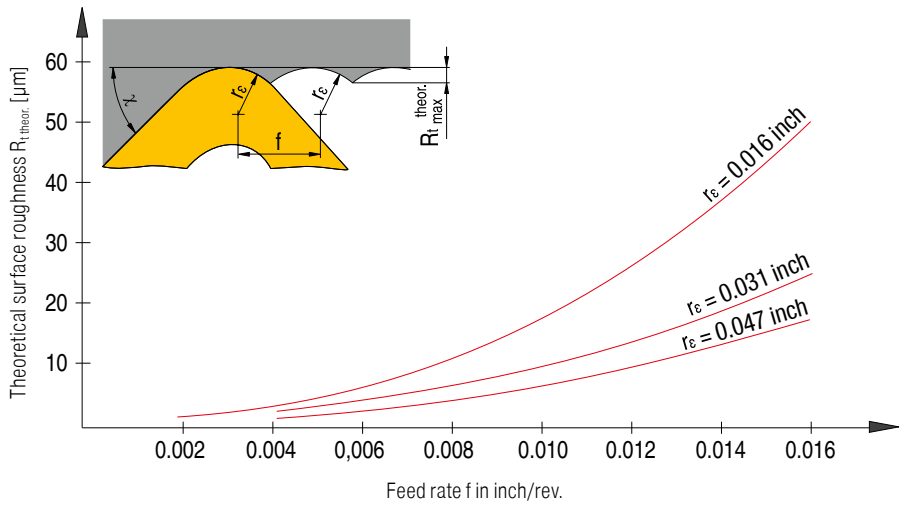
Theoretical Surface Quality

The maximum theoretical surface roughness with turning $Rt_{theor.}$ is the combination of feed rate and corner radius:

$$Rt_{theor.} = \left(r_\varepsilon - \sqrt{r_\varepsilon^2 - \frac{f^2}{4}} \right) \cdot 1000$$

or approximately:

$$Rt_{theor.} = \frac{125 \cdot f^2}{r\varepsilon} \quad [\mu m]$$



ISO designation system for inserts

Indexable inserts – inch

C	N	M	G	4	3	2	E	N	-	M50
1	2	3	4	5	6	7	8	9		13

Indexable inserts – metric

C	N	M	G	12	04	08	E	N	-	M50
1	2	3	4	5	6	7	8	9		13

Indexable inserts, CBN, ceramic – inch

C	N	G	A	4	3	2	S	N	-	020D	_	B	3	-	Q
1	2	3	4	5	6	7	8	9		10		11	12		13

Indexable inserts, CBN, ceramic – metric

C	N	G	A	12	04	08	S	N	-	020D	_	B	3	-	Q
1	2	3	4	5	6	7	8	9		10		11	12		13

1 Insert shape

V	35°	Included angle
D	55°	
E	75°	
C	80°	
M	86°	
K	55°	Included angle
B	82°	
A	85°	
L	90°	Other shapes
P	108°	
H	120°	
O	135°	
R	-	
S	90°	
T	60°	
W	80°	

2 Clearance angle

	α		α
A	3°	F	25°
B	5°	G	30°
C	7°	N	0°
D	15°	P	11°
E	20°		

O – Clearance angles not included within the standard for which particular information is necessary.

3 Tolerances

	IC±		BS		S	
	mm	inch	mm	inch	mm	inch
A	0,025	0.0010	0,005	0.0002	0,025	0.001
F	0,013	0.0005	0,005	0.0002	0,025	0.001
C	0,025	0.0010	0,013	0.0005	0,025	0.001
H	0,013	0.0005	0,013	0.0005	0,025	0.001
E	0,025	0.0010	0,025	0.0010	0,025	0.001
G	0,025	0.0010	0,025	0.0010	0,13	0.005
J	0,05-0,15*	0.002-0.006*	0,005	0.0002	0,025	0.001
K	0,05-0,15*	0.002-0.006*	0,013	0.0005	0,025	0.001
L	0,05-0,15*	0.002-0.006*	0,025	0.0010	0,025	0.001
M	0,05-0,15*	0.002-0.006*	0,05-0,20*	0.003-0.008*	0,13	0.005
N	0,05-0,15*	0.002-0.006*	0,05-0,20*	0.003-0.008*	0,025	0.001
U	0,08-0,25*	0.003-0.010*	0,13-0,38*	0.005-0.015*	0,13	0.005

* Depends on insert size

6 Insert thickness

Code			
mm	inch	mm	inch
1,59	1/16	01	1
2,38	3/32	02	
3,18	1/8	03	2
3,97	5/32	T3	
4,76	3/16	04	3
5,56	7/32	05	
6,35	1/4	06	4
7,94	5/16	07	5
9,52	3/8	09	6

7 Corner radius

Code				RN **00** RC **MO**
mm	inch	mm	inch	
≤ 0,05	0.0015	00	X0	
0,1	0.004	01	0	
0,2	0.008	02	.5	
0,4	1/64	04	1	
0,8	1/32	08	2	
1,2	3/64	12	3	
1,6	1/16	16	4	
2,0	5/64	20	5	
2,4	3/32	24	6	
2,8	7/64	28	7	
3,2	1/8	32	8	

8 Cutting edge

F	Sharp
E	rounded
T	chamfered
S	Chamfered and honed
K	Double-chamfered
P	Double-chamfered and honed
R	Round chamfer

9 Direction of cut

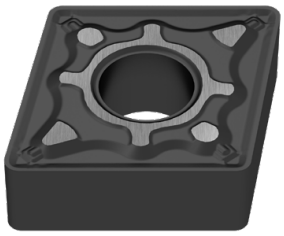
R

L

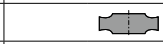
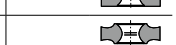
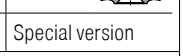
N

CBN and PCD segment orientation

-L -R



4 Characteristics

N	
R	
F	
A	
M, P	
G, P	
W	
T	
Q	
U	
B	
H	
C	
J	
X	Special version

inch
Change at inscribed circle
IK < 1/4"

IK > 1/4“	IK < 1/4“
N / R / F	E
A / M / G	D
X	X

5 Cutting length

Type	ISO	ANSI	L mm	L inch	d mm	d inch
C	06	2	6,4	0.250	6,35	0.250
	09	3	9,7	0.382	9,525	0.375
	12	4	12,9	0.508	12,70	0.500
	16	5	16,1	0.634	15,875	0.625
	19	6	19,3	0.760	19,05	0.750
	25	8	25,8	1.016	25,4	1.000
	32	12	35,24	1.269	31,75	1.250
S	06	2	6,35	0.250	6,35	0.250
	09	3	9,525	0.375	9,525	0.375
	12	4	12,7	0.500	12,7	0.500
	15	5	15,875	0.625	15,875	0.625
	19	6	19,05	0.750	19,05	0.750
	25	8	25,4	1.000	25,4	1.000
	31	10	31,75	1.250	31,75	1.250
D	07	2	7,7	0.303	6,35	0.250
	11	3	11,6	0.457	9,525	0.375
	15	4	15,5	0.610	12,70	0.500
V	11	2	11,1	0.437	6,35	0.250
	16	3	16,6	0.653	9,525	0.375
	22	4	22,10	0.870	12,70	0.500

Type	ISO	ANSI	L mm	L inch	d mm	d inch
T	06	1.2	6,9	0.272	3,97	0.156
	09	1.8	9,6	0.378	5,56	0.219
	11	2	11,0	0.433	6,35	0.250
	16	3	16,5	0.650	9,525	0.375
	22	4	22,	0.079	12,70	0.039
	27	5	27,5	1.083	15,875	0.625
	33	6	33,0	1.299	19,05	0.750
W	06	3	6,5	0.256	9,525	0.375
	08	4	8,7	0.331	12,70	0.039
	10	5	10,9	0.429	15,875	0.625
R	06	2	6,35	0.250	6,35	0.250
	08	-	8,0	0.315	8,0	0.315
	09	3	9,52	0.375	9,52	0.375
	10	-	10,0	0.394	10,0	0.394
	12*	-	12,0	0.472	12,0	0.472
	12	4	12,7	0.488	12,70	0.488
	15	5	15,875	0.625	15,875	0.625
	16	-	16,0	0.630	16,0	0.630
	19	6	19,05	0.750	19,05	0.750
	25	8	25,0	0.984	25,0	0.984
	25*	-	25,4	1.000	25,4	1.000
	31	10	31,75	1.250	31,75	1.250
	32	-	32,0	1.260	32,0	1.260

* inch version

10 Chamfer type

T / S

K / P [1)]

	mm	inch		
015	0,15	0.006	A	05°
020	0,20	0.008	B	10°
025	0,25	0.010	C	15°
050	0,50	0.020	D	20°
075	0,75	0.030	E	25°
100	1,00	0.040	F	30°
			G	35°

1) Two letters are assigned for double-chamfered cutting edges
e.g. BE =
chamfer angle 1 (γ_1) = 10°
chamfer angle 2 (γ_2) = 25°

11 Number of cutting edges

Single sided

A	
B	
C	
D	
G	
H	

Complete insert thickness

T	
U	
V	
W	
X	
Y	

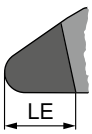
Double sided

K	
L	
M	
N	
P	
Q	

Entire clamping flat

S	
F	
E	

12 Segment length



Approx. specification in mm

13 Grade description

ISO designation system for tool holders

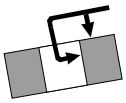
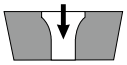
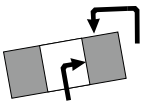
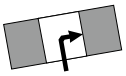
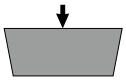
M	C	L	N	R	20	20	K	12	-	T
1	2	3	4	5	6	7	8	9		10

HSK-T63	-	D	C	L	N	R				-12	
0		1	2	3	4	5	6	7	8	9	10

0 System/size

HSK-T
according to ISO 12164
HSK-T63 = 63 mm
HSK-T100 = 100 mm

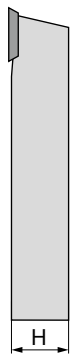
1 Tool holder

D  Retained from above and via bore	**S**  Retained via centre screw
M  Retained from above and via bore	**P**  Retained via the bore
C  Retained from above	**X** Special version

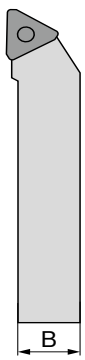
2 Insert shape

V	35°	Included angle
D	55°	
E	75°	
C	80°	
M	86°	
K	55°	Included angle
B	82°	
A	85°	
L	90°	Other shapes
P	108°	
H	120°	
O	135°	
R	-	
S	90°	
T	60°	
W	80°	

6 Shank height

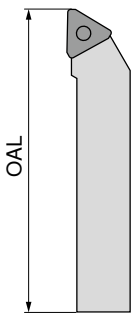


7 Shank width



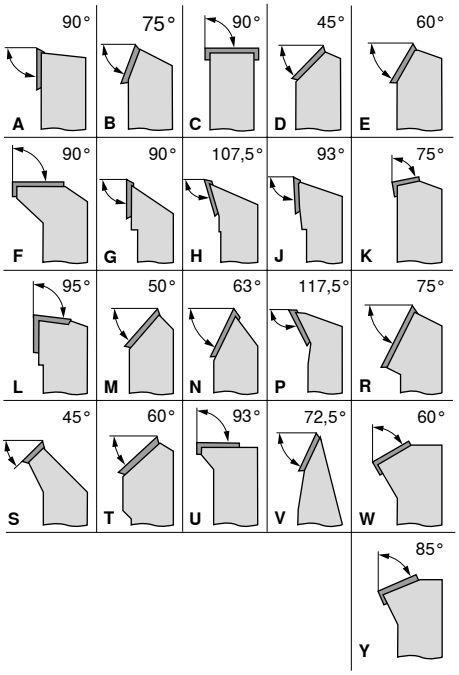
8 Tool length

OAL mm	OAL inch		OAL mm	OAL inch	
32	4.000	**A**	160	4.500	**N**
40	4.500	**B**	170	5.500	**P**
50	5.000	**C**	180	–	**Q**
60	6.000	**D**	200	6.000	**R**
70	7.000	**E**	250	7.000	**S**
80	8.000	**F**	300	8.000	**T**
90	5.500	**G**	350	5.500	**U**
100	5.625	**H**	400	3.500	**V**
110	5.300	**J**	450	3.500	**W**
125	14.000	**K**	500	3.750	**Y**
140	6.800	**L**	Special version		**X**
150	4.400	**M**			



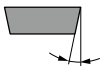
3

Style



4

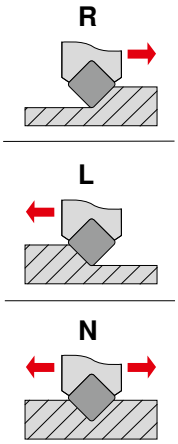
Clearance angle



	α		α
A	3°	**F**	25°
B	5°	**G**	30°
C	7°	**N**	0°
D	15°	**P**	11°
E	20°		
O	Clearance angles not included within the standard for which particular information is necessary.		

5

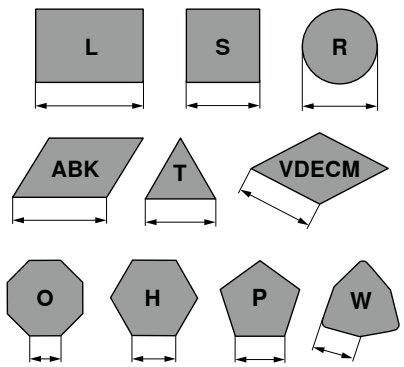
Direction of cut



4

9

Cutting length



10

Manufacturer specification

T = Toggle
Special length (mm)
Insert thickness (deviating from standard)
Special version (X..)
Machine manufacturer (specific)

ISO designation system for boring bars

A	25	R		P	C	L	N	R		12	
1	2	3		4	5	6	7	8		9	10

HSK-T63	-		50	Q	-	D	C	L	N	R	-	12	
0		1	2	3		4	5	6	7	8		9	10

0 System/size

HSK-T
according to ISO 12164
HSK-T63 = 63 mm
HSK-T100 = 100 mm

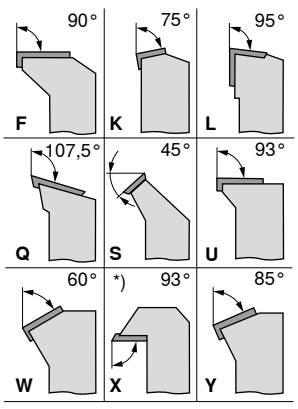
1 Shank type

S	Steel shank	**E**	As C with coolant hole
A	Steel shank with coolant hole	**F**	As C with antivibration system
B	Steel shank with antivibration system	**G**	As C with coolant hole and antivibration system
D	Steel shank with coolant hole and antivibration system	**H**	Heavy metal
C	Carbide shank with steel head	**J**	Heavy metal with coolant hole

5 Insert shape

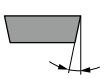
V	35°	Included angle	
D	55°		
E	75°		
C	80°		
M	86°		
K	55°	Included angle	
B	82°		
A	85°		
L	90°		Other shapes
P	108°		
H	120°		
O	135°		
R	-		
S	90°		
T	60°		
W	80°		

6 Style



*) CERATIZIT factory standard

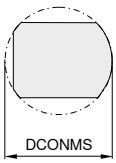
7 Clearance angle



	α		α
A	3°	**F**	25°
B	5°	**G**	30°
C	7°	**N**	0°
D	15°	**P**	11°
E	20°		
O	Clearance angles not included within the standard for which particular information is necessary.		

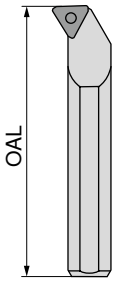
2 Shank type & size

DCONMS mm	DCONMS inch
08	A two-digit figure indicating the boring bar diameter in 1/16 of an inch.
10	
12	
16	
20	
25	
32	
40	
50	
60	

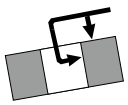
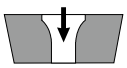
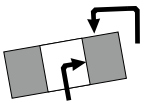
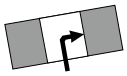
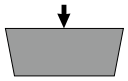


3 Tool length

OAL mm	OAL inch	
80	3	F
100	3.5	H
110	4	J
125	4.5	K
140	5	L
150	5.5	M
160	6	N
170	6.5	P
180	6.75	Q
200	7	R
250	8	S
300	10	T
350	12	U
400	14	V
450	16	W
500	18	Y
	20	
Special version		X

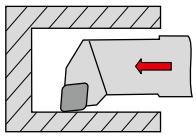


4 Clamping method

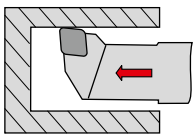
D  Retained from above and via bore	**S**  Retained via centre screw
M  Retained from above and via bore	**P**  Retained via the bore
C  Retained from above	**X** Special version

8 Direction of cut

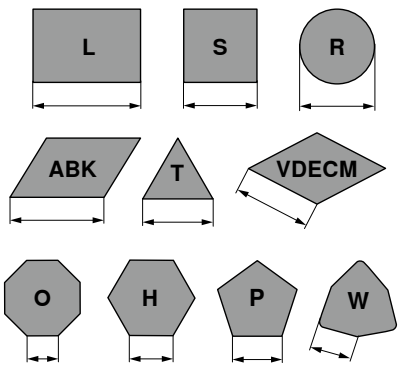
R



L



9 Cutting length



10 Manufacturer specification

T = Toggle
Special length (mm)
Insert thickness (deviating from standard)
Special version (X..)
Machine manufacturer (specific)

Types of wear

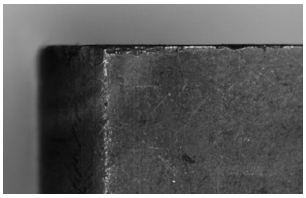
Wear on clearance face

Abrasion on flank: normal wear after a certain machining time

Cause
- Too high cutting speed
- Carbide grade with too low wear resistance
- Feed rate not adapted

Remedy
- Reduce cutting speed
- Use grade with higher wear resistance
- Adapt feed rate to cutting speed and cutting depth

Edge chipping

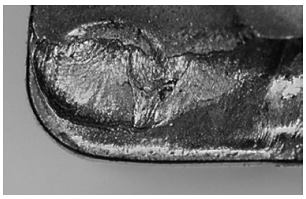


Through excessive mechanical stress at the cutting edge fracture and chipping can occur.

Cause
- Grade with too high wear resistance
- Vibration
- Too high cutting speed and / or feed rate
- Interrupted cut
- Swarf damage

Remedy
- Use tougher grade
- Use negative cutting edge geometry with chip groove
- Improve stability (tool, work piece)

Cratering

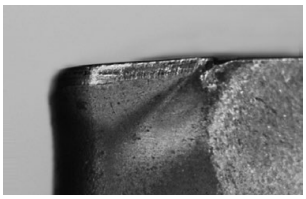


The hot chip which is being evacuated causes cratering at the rake face of the cutting edge.

Cause
- Too high cutting speed and / or feed rate
- Rake angle too shallow
- Grade with insufficient wear resistance
- Insufficient coolant supply

Remedy
- Reduce cutting speed and / or feed rate
- Use grade with higher wear resistance
- Increase coolant quantity and / or pressure, optimise coolant supply
- Use grade which is more resistant to cratering

Plastic deformation

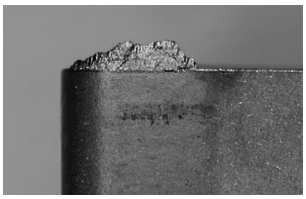


High machining temperature and simultaneous mechanical stress can lead to plastic deformation.

Cause
- Too high machining temperature resulting in softening of substrate
- Damage of coating
- Grade with insufficient wear resistance
- Insufficient coolant supply

Remedy
- Reduce cutting speed
- Use grade with higher wear resistance
- Provide cooling

Built-up edge

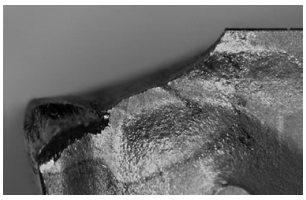


Built-up material / edges occur when the chip is not evacuated properly due to insufficient cutting temperature.

Cause
- Insufficient cutting speed
- Rake angle too shallow
- Wrong cutting material
- Lack of cooling / lubrication

Remedy
- Increase cutting speed
- Increase rake angle
- Apply TiN coating
- Use emulsion with higher concentration

Insert breakage

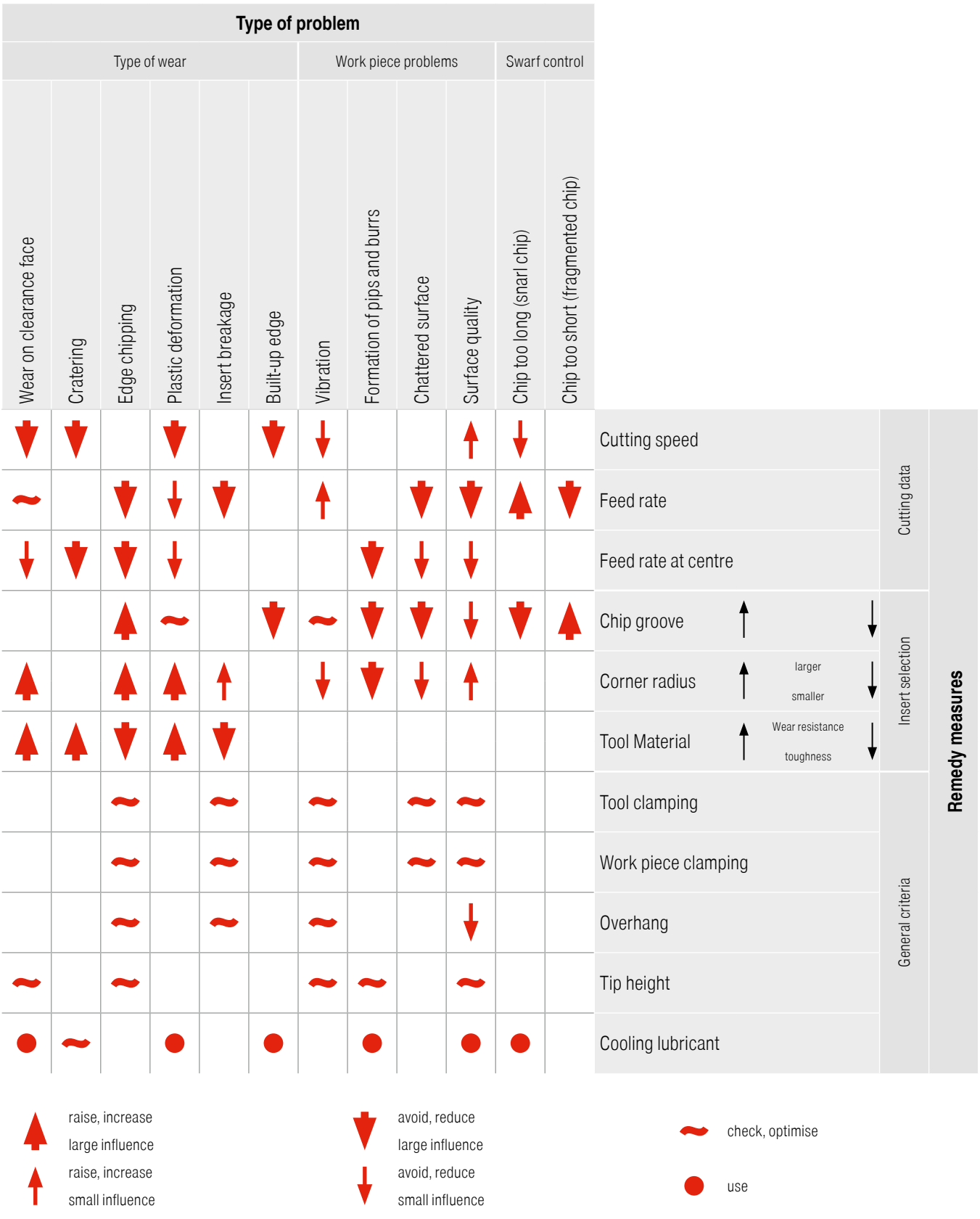


Excessive stress of the insert causes breakage.

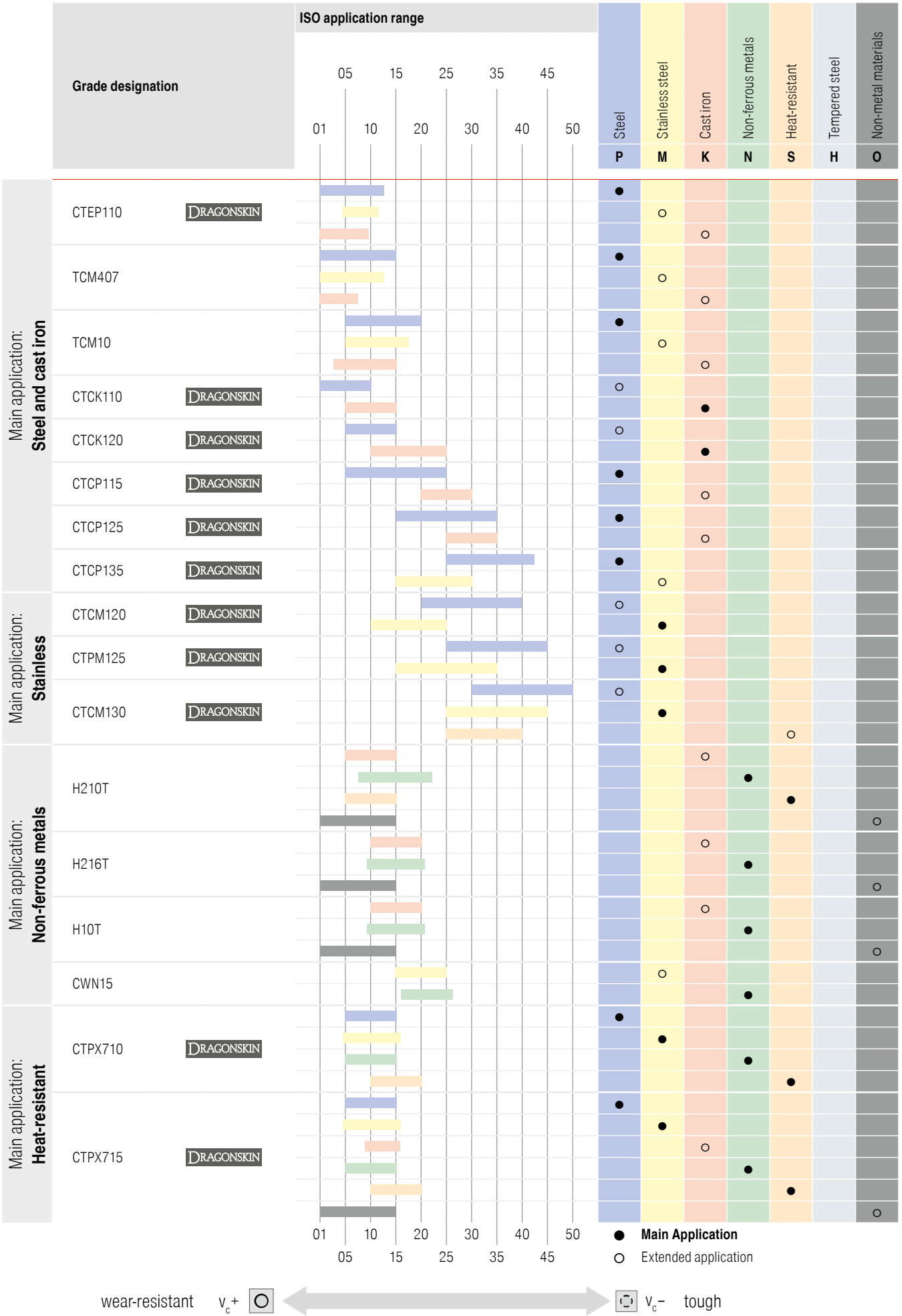
Cause
- Excessive stress of cutting material
- Lack of stability
- Clearance angle too small

Remedy
- Use tougher grade
- Use protective edge chamfer
- Increase edge hone
- Use geometry with higher stability

Recommendation for Optimum Results



Grades Overview



Grade description

TCM407
- Cermet, uncoated
- ISO | **P10** | M05 | K05
- The uncoated cermet grade for super-fine finishing steel materials

CTEP110
- Cermet, TiCN-Al_2O_3-coated
- ISO | **P10** | M10 | K05
- The cermet grade with reserves of toughness for finish machining at high cutting speeds

TCM10
- Cermet, uncoated
- ISO | **P15** | M10 | K10
- The uncoated cermet grade for finish machining stainless and hardened steel
- Particularly wear resistant thanks to high heat resistance

CTCP115
- Carbide, TiCN-Al_2O_3-coated
- ISO | **P15** | K25
- The wear-resistant high-performance grade for stable conditions and a continuous cut

CTCP125
- Carbide, TiCN-Al_2O_3-coated
- ISO | **P25** | K30
- The first choice for universal machining of steels

CTCP135
- Carbide, TiCN-Al_2O_3-coated
- ISO | **P35** | M25
- The tough alternative for heavily interrupted cut and unstable conditions

CT-P15
- Carbide, coated
- ISO | **P15** | M10
- Wear-resistant standard steel grade for smooth cut

CT-P25
- Carbide, coated
- ISO | **P25** | M20
- Standard steel grade for universal steel machining

CT-P35
- Carbide, coated
- ISO | **P35** | M25
- Tough standard steel grade for interrupted cutting

CTCM120
- Carbide, TiCN-Al_2O_3-coated
- ISO | P15 | **M20**
- Wear-resistant turning grade for austenitic stainless steel; top performance for smooth cuts

CTCM130
- Carbide, TiCN-Al_2O_3-coated
- ISO | P25 | **M30**
- Robust turning grade for austenitic stainless steel with interrupted cuts

CTPM125
- ISO | P35 | **M25**
- The universal carbide grade with maximum toughness, without affecting the necessary hot hardness and wear resistance for stainless machining

CTCK110
- Carbide, TiCN-Al_2O_3-coated
- ISO | P05 | **K10**
- The wear-resistant grade for machining cast iron materials at high cutting speeds in a continuous cut

CTCK120
- Carbide, TiCN-Al_2O_3-coated
- ISO | P10 | **K20**
- The grade for cast iron machining, with high toughness reserves for difficult conditions and interrupted cuts

H10T
- Carbide, uncoated
- ISO | K15 | **N15** | O10
- The uncoated carbide grade for machining aluminium and other non-ferrous metals

H210T
- Carbide, uncoated
- ISO | **N10** | **S10** | K10 | O10
- The wear-resistant carbide grade for machining aluminium and other non-ferrous metals

H216T
- Carbide, uncoated
- ISO | K15 | **N15** | O10
- The uncoated carbide grade for machining aluminium and other non-ferrous metals
- Also highly suitable for HSC machining

CWN15
- Carbide, TiN-coated
- ISO | M15 | **K15**
- Special carbide grade for abrasive aluminium alloys

CTPX710
- Carbide, AlTiN-coated
- ISO | **P10** | **M10** | K10 | **N10** | **S15**
- Universal multi-material grade from the X7 line for highest machining requirements

CTPX715
- Carbide, AlTiN-coated
- ISO | **P10** | **M10** | K10 | **N10** | **S15** | O10
- Universal multi-material grade from the X7 line for highest machining requirements

4

Grade description

C T C P 1 2 5 (Example)

Main application – material

1|P	Steel
2|M	Stainless steel
3|K	Cast iron
4|N	Light and non ferrous metals
5|S	Super alloys, titanium
6|H	Hard materials
7|X	Universal application

Application

1	Turning
2	Milling
3	Grooving
4	Drilling
5	Thread turning
6	Others
7	Several processes

Degree of hardness

05	ISO 05
10	ISO 10
15	ISO 15
	...