



**CANADA INC.
ESTABLISHED 1973**

**113 Cushman Rd. Unit 41
St. Catharines, Ontario, Canada L2M 6S9
www.colbidecanada.com**

Toll Free: 1-800-263-9860

Email: colbide@colbidecanada.com

Phone: 905-682-7265


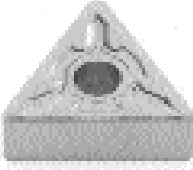



Fax: 905-682-4440

COAST TO COAST

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COLBIDE CHIPBREAKER GEOMETRIES TURNING TECHNICAL INFORMATION

		CHIPBREAKERS	CHARACTERISTICS	CUTTING DATA
LIGHT CUTTING	AC		For semi-finishing to finishing <ul style="list-style-type: none"> - Single and double sided chipbreaker - First choice for small depth of cut and low feed rate - Excellent surface finish 	Application Area: Depth of cut ap (inch) .031 - .094 F: .005 - .008 inch/rev.
	KC		First choice for stainless steel <ul style="list-style-type: none"> - Double sided chipbreaker - Low cutting force - Excellent chip control 	Application Area: Depth of cut ap (inch) .039 - .160 F: .008 - .017 inch/rev.
MEDIUM CUTTING	KM		First choice for medium cutting steel <ul style="list-style-type: none"> - Double sided chipbreaker - Low cutting force - Excellent surface finish 	Application Area: Depth of cut ap (inch) .039 - .160 F: .008 - .017 inch/rev.
	KH		Single sided chipbreaker for roughing <ul style="list-style-type: none"> - Low cutting force - Excellent chip control 	Application Area: Depth of cut ap (inch) .100 - .236 F: .020 - .027 inch/rev.
ROUGHING	MH		First choice for roughing <ul style="list-style-type: none"> - Double sided chipbreaker - Excellent toughness when combined with grade C45+ making it well suited for interrupted cuts and machining casting scale 	Application Area: Depth of Cut ap (inch) .080 - .275 F: .010 - .028 inch/rev.

Note: Cutting data is based on a size 432 insert

Positive Inserts

		CHIPBREAKERS	CHARACTERISTICS	CUTTING DATA
SCREW ON TYPE	CCMT DCMT ECMT EPMT RCMT SCMT TCMT VBMT		<ul style="list-style-type: none"> - Suitable for light to medium cutting - Low cutting force 	Application Area: Depth of Cut ap (inch) .039 - .118 F: .004 - .012 inch/rev.
	SPGR SPMR TPGR TPMR		<ul style="list-style-type: none"> - Suitable for boring - Well suited for medium cutting to finishing - Good chip control 	Application Area: Depth of Cut ap (inch) .039 - .157 F: .004 - .016 inch/rev.

COLBIDE GRADE COMPARISON CHART FOR TURNING INSERTS

COATED GRADES

ANSI	COLBIDE	ISCAR	KENNA-METAL	SOWA	SANDVIK	SECO	WIDIA
C8	C15+ C150+	IC9150	KCP05	PT10C	GC4015 GC4215	TP1000 TP1500	TN1000 TN7105
C7	C15+ C150+	IC9150	KCP10	PT10C	GC4015 GC4215	TP1000 TP1500	TN1000 TN7110 TN7115
	C70+ C700+	IC8048	KCP25 KCU25 KC5025	PT20C	GC4025 GC4325	TP200 TP2000	TN6010 TN6025 TN6030
	C25+ C250+	IC9025 IC9250	KCP25	PT20C	GC4025 GC4225 GC4325	TP200 TP2000 TP2500	TN2000 TN7125 TN7525
C6	C25+ C250+	IC9025 IC9250	KCP25	PT20C	GC4025 GC4225 GC4325	TP200 TP2000 TP2500	TN7125 TN7525
	C6+	IC9015	KC425 KC5025	PM30P PT30C	GC2135 GC4125	526 CP300	-
	C5+	IC9054	-	-	GC2135	CP500	-
C5	C35+ C350+	IC635 IC9350	KCP30 KCP40	PT30C	GC4035 GC4235	538 TP3000 TP3500	TN4000 TN7135 TN7535
	C45+ C450+	IC9350	KCP30 KCP40	PT40C	GC235 GC4035 GC4235	TP40 TP400 TP3500	TN4000 TN7135
	C75+, C750+ SS30+	IC3028 IC328 IC635	KCM15 KCM35	MT20C MT30P	GC2015 GC2025 GC2035	TM2000 TM4000 TP3500	TN8025
C4	C15+ C150+	IC9150	KCK05	-	GC4015	-	-
C3	C15+ C150+	IC9150	KCK15	-	GC4015	-	-
	C20+ C200+	IC418 IC428 IC8048	KCK15 KCK20	KT05C	GC3205 GC3210 GC3215	TX1000 TK100	HK1500 TN5105
	C3+	-	KC410	-	-	-	HCK10
C2	C15+ C150+	IC9015	KCK20	-	GC4015	-	-
	C20+ C200+	IC418 IC428 IC8048	KCK20	KT10C	GC3205 GC3210 GC3215	TK2000 TX150	HK1500 TN5120

This chart is for guidance only. No quality or performance equivalency is implied. It is based on published data and not authorized by each manufacturer.

COLBIDE GRADE SYSTEM FOR TURNING INSERTS

COATED GRADES

GRADE	GRADE COMPOSITION	APPLICATION
C15+ C150+	TiN+TiCN+TiC+Al ₂ O ₃ +TiN TiN+TiCN+TiC+Al ₂ O ₃ +TiN	Excellent wear and heat resistance in semi-roughing to finishing operations when machining steel and cast iron at high cutting speeds.
C70+ C700+	TiN+TiCN+Al ₂ O ₃ TiC+TiN+TiCN+Al ₂ O ₃	Good wear and thermal shock resistance for light roughing to finishing steel and stainless steel.
C25+ C250+	TiN+TiCN+Al ₂ O ₃ +TiN Ti(C,N)+Ti(C,N)+Ti(N,B)+Al ₂ O ₃ +Ti(C,N)	Excellent combination of wear resistance and good toughness for machining steels.
C6+	TiC+TiCN+TiN	Good toughness and wear resistance for light to medium roughing of steels. Usually used for threading and grooving applications.
C5+	TiC+TiCN+TiN	Good toughness for medium roughing of steels usually used for threading and grooving applications.
C35+ C350+	TiN+TiCN+Al ₂ O ₃ +TiN Ti(C,N)+Ti(C,N)+TiN+Ti(N,B)+Ti(C,N)	Good toughness for medium roughing of steels. Tough enough to handle interrupted cuts at high cutting speeds.
C45+ C450+	TiN+TiCN+TiC+TiCN+TiN	Excellent toughness for medium to heavy roughing of steels. Tough enough to handle interrupted cuts at high cutting speeds.
C75+ C750+ SS30+	TiN+TiCN+Al ₂ O ₃ +TiN Ti(C,N)+Ti(C,N)+TiN+Ti(N,B)+Ti(C,N)+TiN	Excellent performance when general turning to heavy roughing of steels and stainless steel in unstable conditions requiring high toughness.
C20+ C200+	TiN+TiCN+Al ₂ O ₃ TiALN Nano	General purpose turning grade covering a wide range of cast iron and non-ferrous applications.
C3+	TiC+TiCN+TiN	An excellent coated grade for turning aluminum, non-ferrous and difficult to cut materials when combined with precision ground sharp-edged inserts.

COLBIDE GRADE SYSTEM FOR TURNING INSERTS

UNCOATED GRADES

GRADE	GRADE COMPOSITION	APPLICATION
C7	TUNGSTEN CARBIDE	An uncoated grade designed for added wear resistance when turning tool steels, heat treated and pre-hardened steels. May also be used for stainless steels.
C6	TUNGSTEN CARBIDE	Semi-finishing to light roughing of steels under favourable conditions.
C5	TUNGSTEN CARBIDE	Heavy roughing of steels under difficult conditions. Tough enough to handle interrupted cuts at low to medium cutting speeds.
C3	TUNGSTEN CARBIDE	An excellent uncoated grade for turning aluminum, non-ferrous and difficult to cut materials when combined with precision ground sharp-edged inserts.
C2	TUNGSTEN CARBIDE	Good all-round grade for machining cast iron and non-ferrous materials.

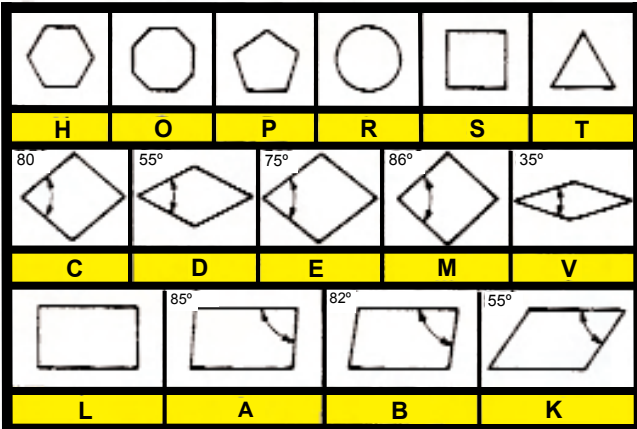
COLBIDE GRADE COMPARISON CHART FOR TURNING INSERTS

UNCOATED GRADES

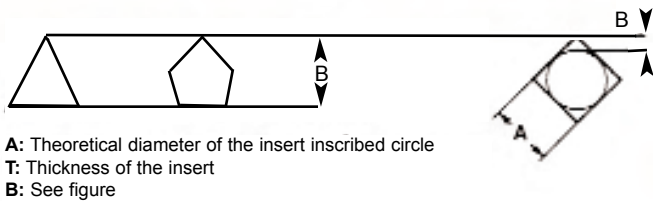
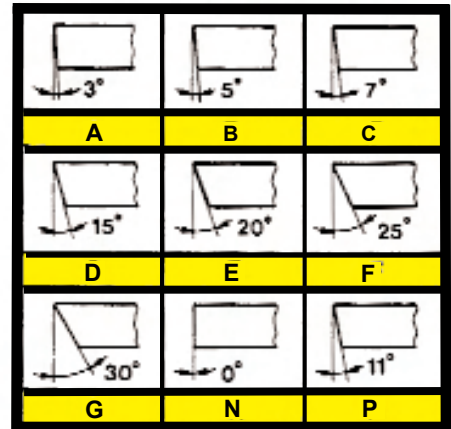
ANSI	COLBIDE	ISCAR	KENNA-METAL	SOWA	SANDVIK	SECO	WIDIA
C7	C7	IC28	K313	-	S1P	S10M	TTX
C6	C6	IC50M	-	PT20U PM20U	S30	S25M 370	TTM
C5	C5	-	-	PTM30U	S6	S25M 370	TTR
C3	C3	IC20	K68 K313	KT10U KTM10U	H1P H10	HX KX 890	HWK10
C2	C2	IC20	K68	KT10U	H13A	HX 883	THM

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1 INSERT SHAPE



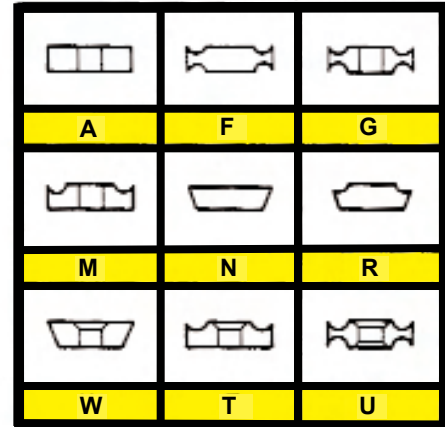
2 INSERT CLEARANCE ANGLE



3 TOLERANCES

Letter Symbol	Tolerances in inches		
	B	A	T
A	±0.0002 ²⁾	±0.001	±0.001
B	0.0002	0.001	0.005
C	0.0005	0.001	0.001
D	0.0005	0.001	0.005
E	0.001	0.001	0.001
F	0.0002 ²⁾	0.0005	0.001
G	0.001	0.001	0.005
H	0.0005	0.0005	0.001
J	0.0002 ²⁾	0.002-0.005	0.001
K	0.0005	0.002-0.005	0.001
L	0.001	0.002-0.005	0.001
M	0.002-0.010 ³⁾	0.002-0.004 ³⁾	0.005
U	0.005-0.012 ³⁾	0.005-0.010 ³⁾	0.005
N	0.002-0.010 ³⁾	0.002-0.004 ³⁾	0.001

4 TYPE OF INSERT



- 1) Dimension A is the nominal inscribed circle of the insert and dimension T is the thickness. For triangles and pentagons, dimension B is the insert height, i.e., the distance between one side and the opposite corner. For all other polygons, dimension B is the distance, measured along the bisector of the corner angle being measured, between the corner rounded off and a gauge roll of nominal I.C. size tangent to the two sides opposite the corner. In the case where the edge corner includes a facet (secondary edge), it is the perpendicular distance between the facet and a line parallel to it, tangent to a gauge roll of nominal I.C. size.
- 2) These tolerances normally apply to indexable inserts with facets (secondary cutting edges).
- 3) The tolerance depends on the size and shape of the insert and should be as shown in the standards for the corresponding shape and sizes.

TURNING INSERTS – ANSI CODE KEY



5 INSERT CIRCLE

INCHES

Inscribed circle is indicated in 1/8"

CUTTING EDGE LENGTH

For rectangular and rhomboidal inserts cutting edge length is indicated in 1/4"

6 THICKNESS

INCHES

Thickness is indicated in 1/16"

For rectangular and rhomboidal inserts, width is used as reference instead of I.C.

6 RADIUS

INCHES

RADIUS

0 Sharp Point	4 1/16"
1 1/64"	5 3/32"
2 1/32"	6 1/8"
3 3/64"	

A Square Insert 45° Chamfer
 D Square Insert 30° Chamfer
 E Square Insert 15° Chamfer
 F Square Insert 3° Chamfer
 K Square Insert 30° Double Chamfer
 L Square Insert 15° Double Chamfer
 M Square Insert 3° Double Chamfer
 N Truncated Triangle Insert
 P Flatted Corner Insert

4	3	2	1
5	6	7	8

8 CHIPBREAKER SHAPE

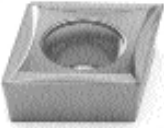
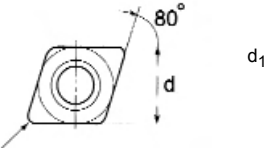

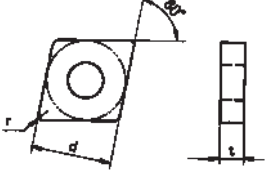
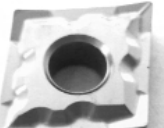
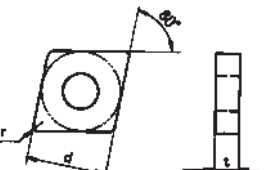
CODE	APPLICATION
AC	FINISHING TO SEMI-FINISHING
KC	MEDIUM CUTTING FOR STAINLESS STEEL
KM	MEDIUM CUTTING
KH	HEAVY CUTTING
MH	HEAVY CUTTING INTERRUPTED

Note: Insert is supplied in a standard straight chipbreaker geometry when above codes are not stated.

Comparison cutting edge length (pos.5) inches (calculated to a sharp corner)

I.C. = Diameter	5/32"	7/32"	1/4"	3/8"	1/2"	5/8"	3/4"	1"	1-1/4"
	.270	.370	.433	.650	.866	1.080	1.300		
				.375	.500	.625	.750	1.000	1.250
55°			.275	.400	.540	.670			
80°			.250	.370	.500	.625	.750	1.000	
Insert Size	5	7	2	3	4	5	6	8	10

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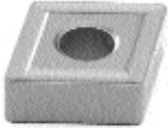
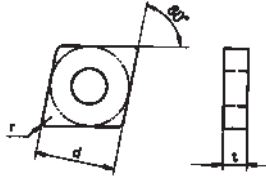
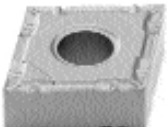
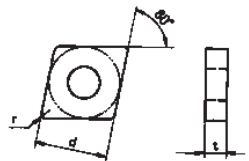
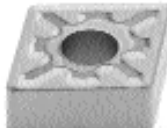
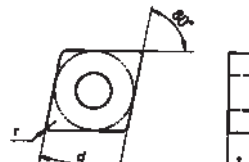
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			d	t	d ₁	r	COATED				UNCOATED									
							C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2			
CCMT  	CCMT 2 (1.5)0.5	060202				1/128														
	2 (1.5)1	060204	1/4	3/32	.114	1/64		•	•								•	•	•	
	2 (1.5)2	060208				1/32														
	3 (2.5)0.5	09T302				1/128														
	3 (2.5)1	09T304	3/8	5/32	.177	1/64	•	•	•	•	•						•	•	•	
	3 (2.5)2	09T308				1/32	•	•	•	•	•						•	•	•	
	431	120404				1/64		•	•											
	432	120408	1/2	3/16	.217	1/32		•	•											
	CNGP  	CNGP 431E	120404	1/2	3/16	.203	1/64													
		432E	120408				1/32													
431F		120404	1/2	3/16	.203	1/64														
432F		120408				1/32														
		CNGP 431 & 432 Available in grade C70+ or C700+																		
		E: Honed F: Unhoned																		
CNMP  	CNMP 431	120404	1/2	3/16	.203	1/64														
	432	120408				1/32														
			d	t	d ₁	r	C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2			

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TURNING INSERTS

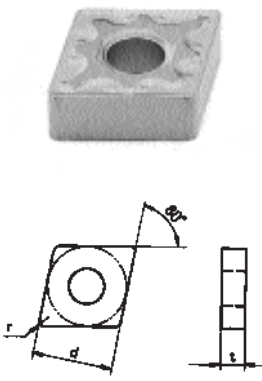
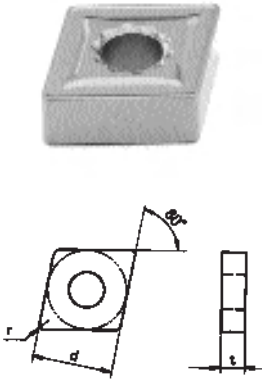
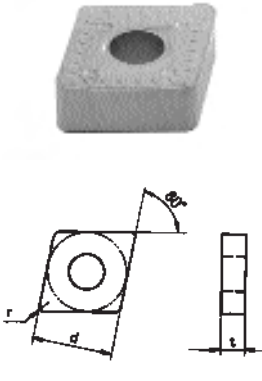


STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE													
			d	t	d ₁	r	COATED						UNCOATED							
							C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2			
CNMG  	CNMG 322	090308	3/8	1/8	.150	1/32	•													
	431	120404				1/64	•	•							•	•	•			
	432	120408	1/2	3/16	.203	1/32	•	•				•			•	•	•			
	433	120412				3/64		•												
	542	160608				1/32	•	•												
	543	160612	5/8	1/4	.253	3/64														
	544	160616				1/16														
	641	190604				1/64		•												
	642	190608				1/32		•												
	643	190612	3/4	1/4	.313	3/64		•	•	•					•	•	•			
	644	190616				1/16			•											
	CNMG...AC  	CNMG 431AC 432AC	120404 120408	1/2	3/16	.203	1/64 1/32	•												
		CNMG...KC  	CNMG 431KC 432KC	120404 120408	1/2	3/16	.203	1/64 1/32						•						

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d	t	d ₁	r	C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2
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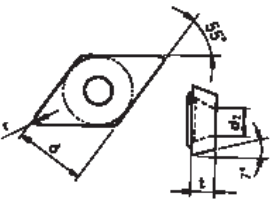

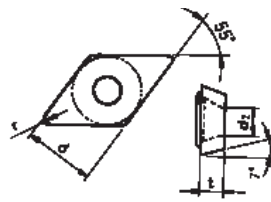
STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE												
			d	t	d ₁	r	COATED						UNCOATED						
							C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2		
CNMG...KM 	CNMG 431KM	120404				1/64	•	•											
	432KM	120408	1/2	3/16	.203	1/32	•	•	•										
	433KM	120412				3/64													
	542KM	160608				1/32													
	543KM	160612	5/8	1/4	.253	3/64	•												
	544KM	160616				1/16													
CNMG...MH 	CNMG 432MH	120408				1/32				•									
	433MH	120412	1/2	3/16	.203	3/64				•									
	543MH	160612	5/8	1/4	.253	3/64				•									
	643MH	190612				3/64				•	•								
	644MH	190616	3/4	1/4	.313	1/16													
CNMM...KH 	CNMM 432KH	120408				1/32				•									
	433KH	120412	1/2	3/16	.203	3/64				•									
	434KH	120416				1/16				•									
	543KH	160612				3/64													
	544KH	160616	5/8	1/4	.253	1/16													
	643KH	190612				3/64				•									
	644KH	190616	3/4	1/4	.313	1/16				•									
	646KH	190624				3/32													

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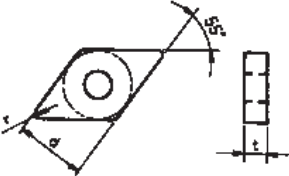

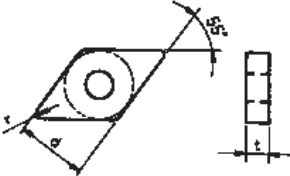

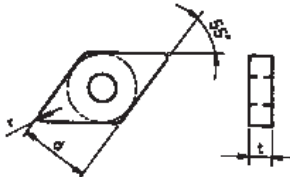
TURNING INSERTS



STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE												
			d	t	d ₁	r	COATED						UNCOATED						
							C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2		
DCMT  	DCMT 2 (1.5) 0.5	070202	1/4	3/32	.114	1/128													
	2 (1.5) 1	070204				1/64	•	•		•									
	2 (1.5) 2	070208				1/32													
DCMT  	DCMT 3 (2.5) 0.5	11T302	3/8	5/32	.177	1/128													
	3 (2.5) 1	11T304				1/64	•	•	•		•	•	•			•	•	•	
	3 (2.5) 2	11T308				1/32	•	•	•		•	•	•			•	•	•	
	3 (2.5) 3	11T312				3/64				•									
	431	150404	150408	1/2	3/16	.203	1/64		•	•									
	432	150408					1/32		•										

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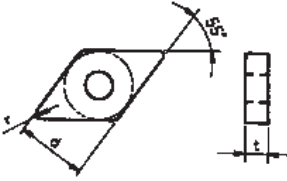
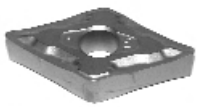
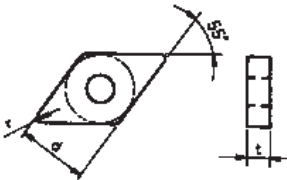
STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE												
			d	t	d ₁	r	COATED				UNCOATED								
							C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2		
DNMG  	DNMG 431	150404				1/64		•	•							•	•	•	
	432	150408	1/2	3/16	.203	1/32			•							•	•	•	
	433	150412				3/64													
	441	150604				1/64													
	442	150608	1/2	1/4	.203	1/32										•	•		
	443	150612				3/64			•							•	•		
	542	190608	5/8	1/4	.253	1/32			•							•	•		
	543	190612				3/64			•							•	•		
	DNMG...KC  	DNMG 431KC	150404	1/2	3/16	.203	1/64												
		432KC	150408				1/32					•							
DNMG...KM  	DNMG 331 KM	110404	3/8	3/16	.150	1/64		•	•										
	332 KM	110408				1/32		•											
	431KM	150404				1/64		•	•	•									
	432KM	150408	1/2	3/16	.203	1/32		•	•	•									
	433KM	150412				3/64													
	441KM	150604				1/64													
	442KM	150608	1/2	1/4	.203	1/32			•										
	443KM	150612				3/64													
			d	t	d ₁	r	C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2		

• In Stock

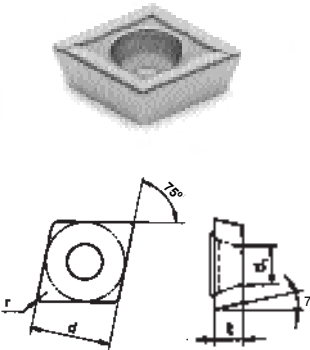
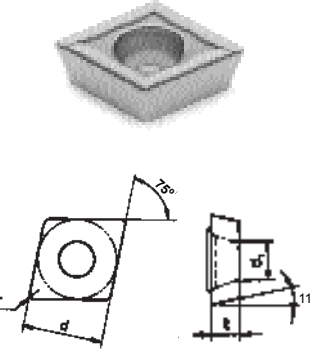
**To Order Call:
1-800-263-9860**

TURNING INSERTS



STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE											
			d	t	d ₁	r	COATED						UNCOATED					
							C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2	
DNMG...MH  	DNMG 432MH 433MH	150408	1/2	3/16	.203	1/32												
		150412				3/64												
DNMP  	DNMP 431 432	150404	1/2	3/16	.203	1/64												
		150408				1/32												
• In Stock			d	t	d ₁	r	C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2	

To Order Call:
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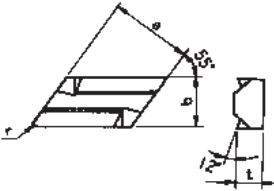
STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE											
			d	t	d ₁	r	COATED				UNCOATED							
							C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2	
ECMT 	ECMT 12T308		0.472	5/32	0.213	1/32			•									
EPMT 	EPMT 2(1.5)1	060204	1/4	3/32	.114	1/64			•									
			d	t	d ₁	r	C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2	

• In Stock

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TURNING INSERTS

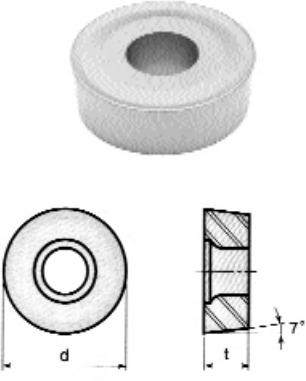
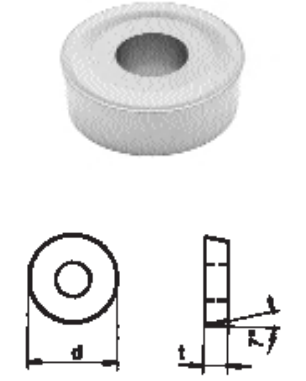
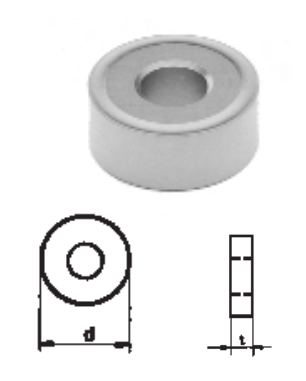


STYLE	ORDER NO.	ANSI	(inch) DIMENSIONS				GRADE											
							COATED						UNCOATED					
			a	b	t	r	C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2	
KNUX  	KNUX 160405R11	3331R11	41/64	3/8	3/16	0.020	•	•	•	•	•	•	•	•	•	•		
	160405L11	3331L11				0.020	•	•	•	•	•	•	•	•	•	•	•	•
	160410R11	3332R11				0.040	•	•	•	•	•	•	•	•	•	•	•	•
	160410L11	3332L11				0.040	•	•	•	•	•	•	•	•	•	•	•	•
	160405R12	3331R12				0.020	•	•	•	•	•	•	•	•	•	•	•	•
	160405L12	3331L12				0.020	•	•	•	•	•	•	•	•	•	•	•	•
	160410R12	3332R12	0.040	•	•	•	•	•	•	•	•	•	•	•	•			
	160410L12	3332L12	0.040	•	•	•	•	•	•	•	•	•	•	•	•			
				a	b	t	r	C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2

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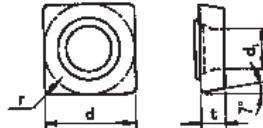

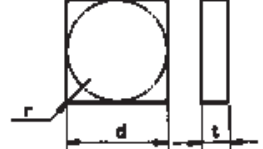
STYLE	ORDER NO.	ISO	(inch) DIMENSIONS			GRADE												
			d	t	0	COATED						UNCOATED						
						C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2		
RCMT 	RCMT 0803MO	080300	8.0	3.18	7°			•										
	10T3MO	10T300	10.0	3.97	7°			•										
	1204MO	120400	12.0	4.76	7°			•										
	1606MO	160600	16.0	6.35	7°			•										
	2006MO	200600	20.0	6.35	7°			•										
	(RCMT Dimensions mm)																	
RCMX 	RCMX 100300		10.0	3.18	7°			•										
	120400		12.0	4.76	7°			•	•									
	160600		16.0	6.35	7°			•										
	200600		20.0	6.35	7°			•	•	•								
	250700		25.0	7.94	7°				•									
	320900		32.0	9.525	7°				•									
(RCMX Dimensions mm)																		
RNMG 	RNMG 32	090300	3/8	1/8	0°			•										
	43	120400	1/2	3/16	0°			•										
	53	150400	5/8	3/16	0°													
	54	150600	5/8	1/4	0°			•										
	64	190600	3/4	1/4	0°			•										
	86	250900		1	3/8	0°												
			d	t	0	C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2		

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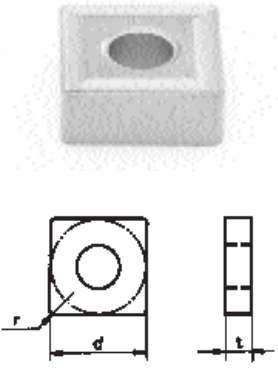
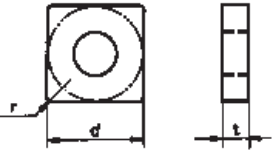
TURNING INSERTS



STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE											
			d	t	d ₁	r	COATED						UNCOATED					
							C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2	
SCMT  	SCMT 3 (2.5) 1	09T304	3/8	5/32	.177	1/64												
	3 (2.5) 2	09T308				1/32												
	431	120404	1/2	3/16	.217	1/64												
	432	120408				1/32												
	433	120412				3/64												
	SNG  	SNG 321	090304	3/8	1/8	-	1/64											
322		090308	1/32															
421		120304	1/2	1/8	-	1/64												
422		120308				1/32												
423		120312				3/64												
431		120404	1/2	3/16	-	1/64												
432		120408				1/32												
433		120412				3/64												
631		190404	3/4	3/16	-	1/64												
632		190408				1/32												
633		190412				3/64												
634		190416				1/16												

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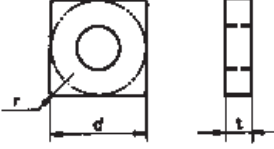
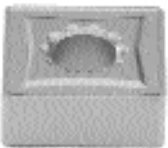
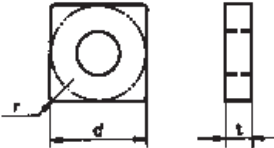

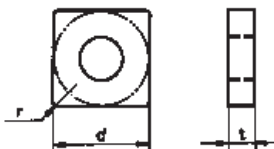
STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE														
			d	t	d ₁	r	COATED						UNCOATED								
							C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2				
SNMG 	SNMG 321	090304	3/8	1/8	.150	1/64			•												
	322	090308						•	•								•				
	431	120404	1/2	3/16	.203	1/64											•	•			
	432	120408				1/32	•	•								•	•	•			
	433	120412				3/64		•													
	434	120416				1/16															
	542	150608	5/8	1/4	.253	1/32											•	•			
	543	150612				3/64	•	•								•	•				
	544	150616				1/16															
	642	190608	3/4	1/4	.313	1/32															
	643	190612				3/64		•	•								•	•			
	644	190616				1/16		•	•									•	•		
	854	250716	1	5/16	.363	1/16															
	866	250924	1	3/8	.363	3/32			•												
SNMG...KC 	SNMG 431KC	120404	1/2	3/16	.203	1/64															
	432KC	120408				1/32															
	433KC	120412				3/64															

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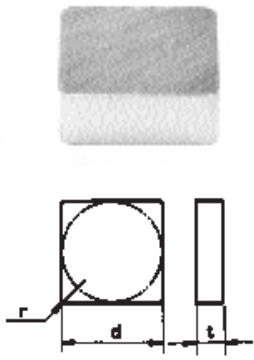
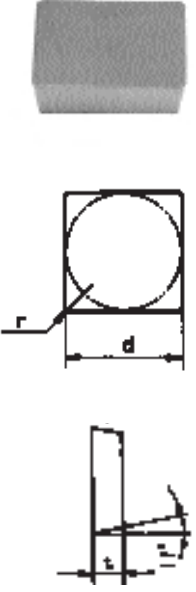
TURNING INSERTS



STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE										
							COATED						UNCOATED				
			d	t	d ₁	r	C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2
SNMG...KM  	SNMG 431KM	120404				1/64		•									
	432KM	120408	1/2	3/16	.203	1/32	•	•									
	433KM	120412				3/64											
	543KM	150612	5/8	1/4	.253	3/64											
	544KM	150616				1/16											
SNMG...MH  	SNMG 432MH	120408	1/2	3/16	.203	1/32				•							
	433MH	120412				3/64				•							
	543MH	150612	5/8	1/4	.253	3/64				•							
	643MH	190612	3/4	1/4	.313	3/64				•							
SNMM..KH  	SNMM 432KH	120408	1/2	3/16	.203	1/32											
	433KH	120412				3/64											
	543KH	150612	5/8	1/4	.253	3/64											
	544KH	150616				1/16											
	643KH	190612	3/4	1/4	.313	3/64				•	•						
	644KH	190616				1/16											

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STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE														
			d	t	d ₁	r	COATED				UNCOATED										
							C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2				
SNU 	SNU 422	120308	1/2	1/8	-	1/32															
	423	120312				3/64															
	432	120408	1/2	3/16	-	1/32															
	433	120412				3/64															
	632	190408	3/4	3/16	-	1/32															
	633	190412				3/64															
	634	190416				1/16															
	SPG 	SPG 321	090304	3/8	1/8	-	1/64														
		322	090308				1/32														
421		120304	1/2	1/8	-	1/64															
422		120308				1/32	•	•													
423		120312				3/64															
424		120316				1/16															
431		120404				1/64															
432		120408	1/2	3/16	-	1/32															
433		120412				3/64															
531		150404	5/8	3/16	-	1/64															
532		150408				1/32															
533		150412				3/64															
631		190404	190404	3/4	3/16	-	1/64														
632		190408					1/32														
633		190412					3/64														
634	190416	1/16																			

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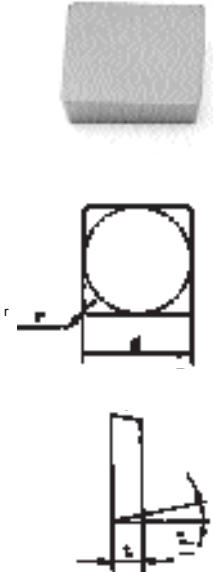
TURNING INSERTS



STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE														
			d	t	d ₁	r	COATED						UNCOATED								
							C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2				
SPGR  	SPGR 321	090304	3/8	1/8	-	1/64															
	322	090308				1/32															
	421	120304	1/2	1/8	-	1/64	•		•					•							
	422	120308				1/32		•	•												
	423	120312				3/64															
	SPMR  	SPMR 321	090304	3/8	1/8	-	1/64														
		322	090308				1/32														
		421	120304	1/2	1/8	-	1/64	•							•						
		422	120308				1/32		•	•											
423		120312	3/64																		
				d	t	d ₁	r	C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2			

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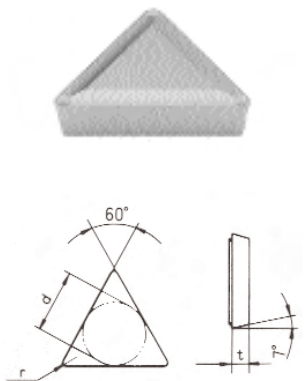
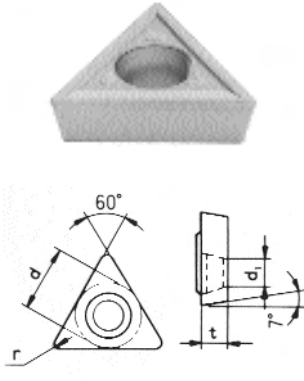
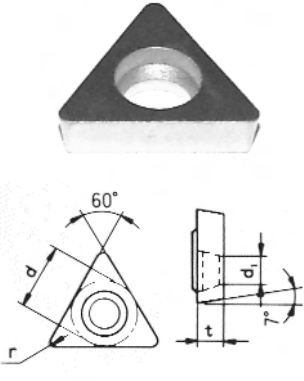
STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE												
			d	t	d ₁	r	COATED				UNCOATED								
							C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2		
SPU 	SPU 321	090304				1/64													
	322	090308	3/8	1/8	-	1/32											•	•	
	421	120304				1/64											•	•	
	422	120308				1/32			•	•				•			•	•	
	423	120312	1/2	1/8	-	3/64											•	•	
	424	120316				1/16													
	433	120412	1/2	3/16	-	3/64													
	531	150404	5/8	3/16	-	1/64													
	632	190408				1/32												•	•
	633	190412	3/4	3/16	-	3/64												•	•
	634	190416				1/16												•	•

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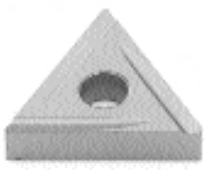
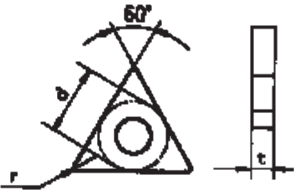




STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE													
			d	t	d ₁	r	COATED						UNCOATED							
							C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2			
TCGR 	TCGR 520 521	060102	5/32	1/16	-	1/128	•	•												
		060104				1/64	•	•												
TCMT 	TCMT 1.8 (1.5) 1 2 (1.5) 1 2 (1.5) 2 3 (2.5) 1 3 (2.5) 2 3 (2.5) 3 431 432	090204	7/32	3/32	.098	1/64	•													
		110204	1/4	3/32	.114	1/64	•	•	•					•	•	•				
		110208				1/32	•													
		16T304	3/8	5/32	.177	1/64	•	•	•						•	•	•			
		16T308				1/32	•	•	•							•	•	•		
		16T312				3/64														
		220404	1/2	3/16	.217	1/64														
		220408				1/32	•													
TCMW 	TCMW 521	060104	5/32	1/16	.087	1/64	•													

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d	t	d ₁	r	C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2
---	---	----------------	---	-------	-------	-------	-------	-------	-------	-------	----	----	----	----

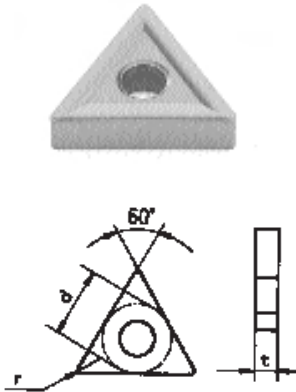
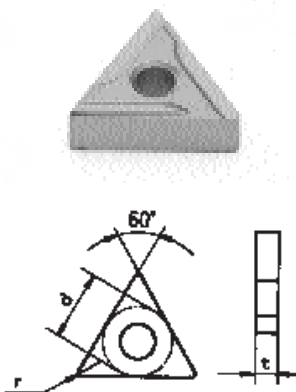
STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE														
			d	t	d ₁	r	COATED				UNCOATED										
							C700+	C25+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2				
TNGG...R  	TNGG 331R	160404	3/8	3/16	.150	1/64		•													
	332R	160408						•													
	431R	220404	1/2	3/16	.203	1/64		•													
	432R	220408						•													
TNGG...L  	TNGG 331L	160404	3/8	3/16	.150	1/64		•													
	332L	160408						•													
	431L	220404	3/16		.203	1/64		•													
	432L	1/2 220408						•													
							d	t	d ₁	r	C700+	C25+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2

• In Stock

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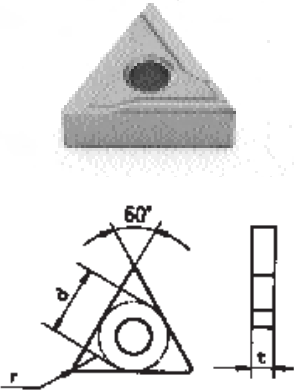
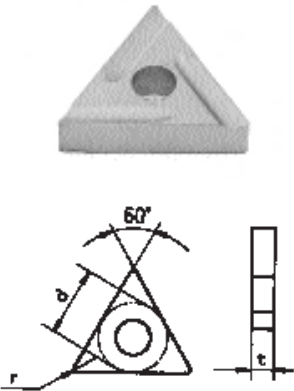
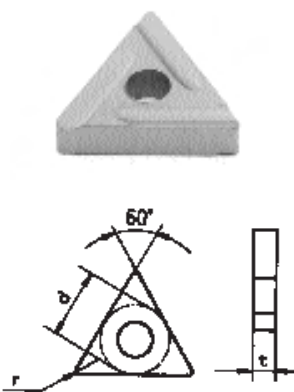
TURNING INSERTS



STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE															
			d	t	d ₁	r	COATED						UNCOATED									
							C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2					
TNMG 	TNMG 221	110304	1/4	1/8	.090	1/64	•	•								•	•					
	222	110308				1/32													•	•	•	
	321	160304	3/8	1/8	.150	1/64	•	•									•	•	•			
	322	160308				1/32	•	•											•	•	•	
	323	160312				3/64		•														
	324	160316				1/16			•													
	331	160404	3/8	3/16	.150	1/64	•	•									•	•	•			
	332	160408				1/32	•	•											•	•	•	
	333	160412				3/64																
	334	160416				1/16																
	431	220404	1/2	3/16	.203	1/64	•	•										•	•	•		
	432	220408				1/32	•	•												•	•	•
	433	220412				3/64	•	•												•	•	•
	434	220416				1/16	•	•														•
	438	220432				1/8																
	542	270608	5/8	1/4	.253	1/32		•									•	•	•			
	543	270612				3/64	•	•											•	•	•	
	544	270616				1/16		•	•											•	•	•
	666	330924	3/4	3/8	.313	3/32				•								•	•			
	TNMG...ER 	TNMG 331ER	160404	3/8	3/16	.150	1/64															
332ER		160408	1/32																			

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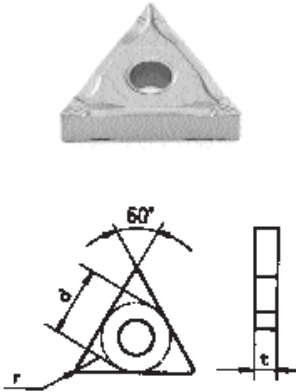
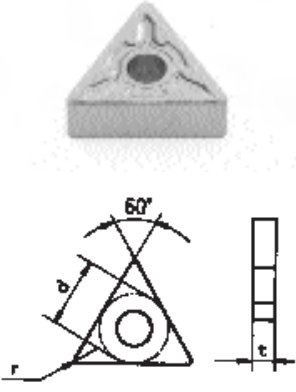
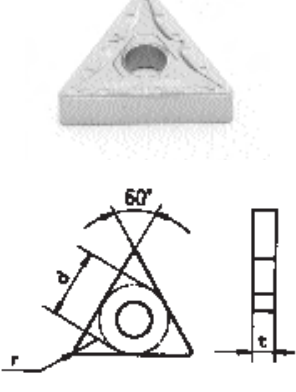
STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE											
			d	t	d ₁	r	COATED				UNCOATED							
							C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2	
TNMG...EL 	TNMG 331EL 332EL	160404 160408	3/8	3/16	.150	1/64 1/32					•							
TNMG...R 	TNMG 431R 432R	220404 220408	1/2	3/16	.203	1/64 1/32	•	•									•	•
TNMG...L 	TNMG 431L 432L	220404 220408	1/2	3/16	.203	1/64 1/32	•	•									•	•

• In Stock

**To Order Call:
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TURNING INSERTS



STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE													
			d	t	d ₁	r	COATED						UNCOATED							
							C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2			
TNMG...AC 	TNMG 331AC	160404	3/8	3/16	.150	1/64														
	332AC	160408				1/32														
	431AC	220404	1/2	3/16	.203	1/64	•													
	432AC	220408				1/32														
	TNMG...KC 	TNMG 331KC	160404	3/8	3/16	.150	1/64					•								
		332KC	160408				1/32					•	•							
432KC		220408	1/2	3/16	.203	1/32					•	•								
TNMG...KM 		TNMG 331KM	160404	3/8	3/16	.150	1/64	•	•	•										
		332KM	160408				1/32	•	•	•										
		333KM	160412				3/64													
431KM	220404	220408	1/2	3/16	.203	1/64	•	•	•											
432KM	220408					1/32	•	•	•											

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d	t	d ₁	r	C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2
---	---	----------------	---	-------	-------	-------	-------	-------	-------	-------	----	----	----	----

STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE										
			d	t	d ₁	r	COATED				UNCOATED						
							C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2
TNMG...MH 	TNMG 332MH	160408	3/8	3/16	.150	1/32											
	333MH	160412															
	432MH	220408	1/2	3/16	.203	1/32					•						
	433MH	220412									•						
	TNMM...KH 	TNMM 332KH	160408	3/8	3/16	.150	1/32										
333KH		160412															
432KH		220408	1/2	3/16	.203	3/64					•						
433KH		220412									•						
434KH		220416									•						
TNMP 	TNMP 331	160404	3/8	3/16	.150	1/64											
	332	160408									•						
	431	220404	1/2	3/16	.203	1/64					•						
	432	220408									•				•		

• In Stock

**To Order Call:
1-800-263-9860**

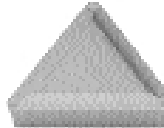
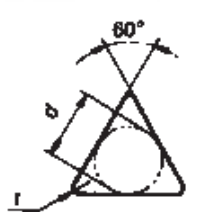
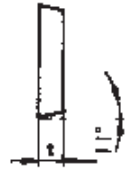

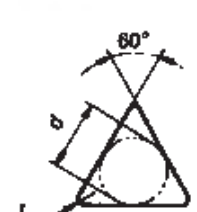

TURNING INSERTS



STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE														
			d	t	d ₁	r	COATED						UNCOATED								
							C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2				
TPG 	TPG 221	110304	1/4	1/8	-	1/64	•	•							•	•	•				
	222	110308				1/32	•	•									•	•	•		
	320	160302	3/8	1/8	-	1/128															
	321	160304				1/64	•	•									•	•	•		
	322	160308				1/32	•	•									•	•	•		
	323	160312				3/64											•	•	•		
	324	160316				1/16															
	331	160404				1/64												•	•		
	332	160408	1/32	3/8	3/16	-	1/32								•	•					
	333	160412	3/64																		
	431	220404	220400	1/2	3/16	-	1/64		•							•	•				
	432	220408					1/32													•	
	433	220412					3/64												•	•	•
	434	220416					1/16		•										•	•	•
	532	270408					5/8	3/16	-	1/32											
	541	270604	270600	5/8	1/4	-	1/64														
	542	270608					1/32														
	543	270612					3/64														
	544	270616					1/16														

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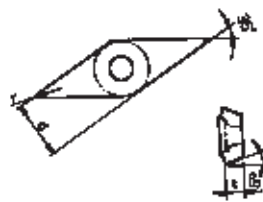
STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE														
			d	t	d ₁	r	COATED				UNCOATED										
							C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2				
TPGR   	TPGR 520	060102				1/128															
	521	060104	5/32	1/16	-	1/64															
	730	090202				1/128															
	731	090204	7/32	3/32	-	1/64			•									•	•		
	732	090208				1/32															
	221	110304				1/64			•	•									•	•	
	222	110308				1/32				•									•	•	
	321	160304				1/64			•	•									•	•	•
	322	160308	3/8	1/8	-	1/32			•	•										•	
	323	160312				3/64															
	432	220408		1/2	3/16	-	1/32														
	TPMR   	TPMR 730	090202				1/128														
		731	090204	7/32	3/32	-	1/64			•	•										
		732	090208				1/32														
		221	110304				1/64			•	•									•	•
222		110308				1/32				•	•										
321		160304				1/64			•	•	•			•					•	•	
322		160308	3/8	1/8	-	1/32			•	•	•			•					•	•	
323		160312				3/64					•										
431		220404		1/2	3/16	-	1/64			•											
432		220408				1/32			•					•							
				d	t	d ₁	r	C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2			

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TURNING INSERTS

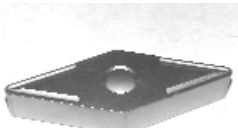
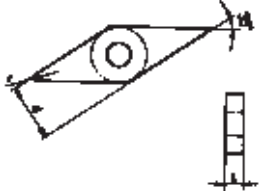

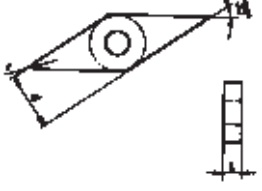

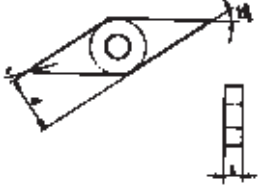


STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE													
			d	t	d ₁	r	COATED						UNCOATED							
							C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2			
TPU   	TPU 211	110204				1/64														
	212	110208	1/4	3/32	-	1/32														
	221	110304	1/4	1/8	-	1/64														
	222	110308				1/32														
	321	160304				1/64														
	322	160308	3/8	1/8	-	1/32														
	323	160312				3/64														
	324	160316				1/16														
	331	160404	3/8	3/16	-	1/64														
	332	160408				1/32														
	431	220404				1/64														
	432	220408	1/2	3/16	-	1/32														
	433	220412				3/64														
	434	220416				1/16														
	544	270616	5/8	1/4	-	1/16														
VBMT  	VBMT 331	160404				1/64														
	332	160408	3/8	3/16	.173	1/32														
	333	160412				3/64														

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d	t	d ₁	r	C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2
---	---	----------------	---	-------	-------	-------	-------	-------	-------	-------	----	----	----	----


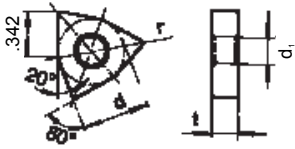

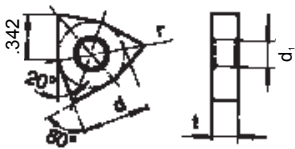

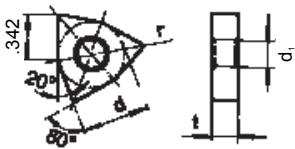

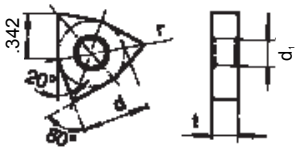

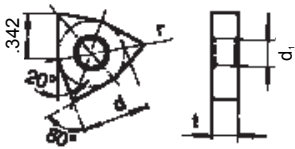
STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE										
							COATED						UNCOATED				
			d	t	d ₁	r	C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2
VNMG  	VNMG 331	160404				1/64		•									•
	332	160408	3/8	3/16	.150	1/32	•	•		•				•	•	•	•
	333	160412				3/64									•	•	
	431	220404				1/64								•	•	•	
	432	220408	1/2	3/16	.203	1/32											
	433	220412				3/64									•	•	
VNMG...KM  	VNMG 331KM	160404	3/8	3/16	.150	1/64		•	•								
	332KM	160408				1/32		•	•								
VNMP  	VNMP 331	160404	3/8	3/16	.150	1/64		•	•								
	332	160408				1/32		•	•								

• In Stock

To Order Call:
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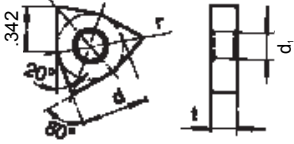
TURNING INSERTS



STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE									
							COATED						UNCOATED			
			d	t	d ₁	r	C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5
WNMG...AC  	WNMG 431AC	080404	1/2	3/16	.203	1/64	•									
	432AC	080408				1/32										
WNMG...KC  	WNMG 331KC	060404	3/8	3/16	.150	1/64										
	332KC	060408				1/32										
WNMG...KC  	431KC	080404	1/2	3/16	.203	1/64										
	432KC	080408				1/32										
WNMG...KM  	WNMG 331KM	060404	3/8	3/16	.150	1/64	•	•	•							
	332KM	060408				1/32										
WNMG...KM  	431KM	080404	1/2	3/16	.203	1/64	•	•	•		•					
	432KM	080408				1/32										
	433KM	080412				3/64										•

• In Stock

**To Order Call:
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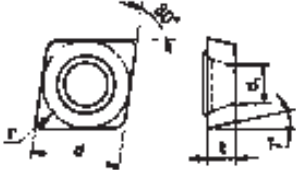

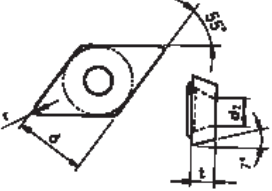

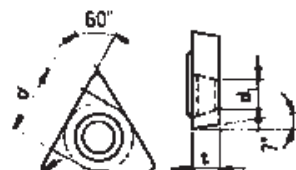
STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE												
			d	t	d ₁	r	COATED				UNCOATED								
							C700+	C250+	C350+	C450+	C750+	SS30+	C200+	C7	C6	C5	C2		
WNMG...MH  	WNMG 432MH 433MH	080408 080412	1/2 3/16	.203	1/32 3/64														

• In Stock

To Order Call:
1-800-263-9860

ALUMINUM TURNING INSERTS



STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE					
			d	t	r	d ₁	COATED		UNCOATED			
							C3+		C3			
CCGT  	CCGT 2(1.5)1-R	060204	1/4	3/32	1/64	.110		•			•	
	3(2.5)1-R	09T304	3/8	5/32	1/64	.173		•			•	
	3(2.5)2-R	09T308			1/32			•			•	
	431-R	120404	1/2	3/16	1/64	.217		•			•	
	432-R	120408			1/32			•			•	
	DCGT  	DCGT 2(1.5)1-R	070204	1/4	3/32	1/64	.110		•			•
3(2.5)1-R		11T304	3/8	5/32	1/64	.173		•			•	
3(2.5)2-R		11T308			1/32			•			•	
TCGT  	TCGT 2(1.5)1-R	110204	1/4	3/32	1/64	.110		•			•	
	3(2.5)1-R	16T304	3/8	5/32	1/64	.173		•			•	
	3(2.5)2-R	16T308			1/32			•			•	
			d	t	r	d ₁		C3+			C3	

• In Stock

To Order Call:
1-800-263-9860

STYLE	ORDER NO.	ISO	(inch) DIMENSIONS					GRADE			
			d	t	r	d ₁	COATED		UNCOATED		
							⊕	⊖	⊕	⊖	
VCGT 	VCGT 331-R	160404	3/8	3/16	1/64	.173	•		•		
	332-R	160408			1/32						•

In Stock

**PLEASE NOTE: RCGT 1204MO-R (12mm round) IS AVAILABLE
PLEASE ENQUIRE**

COLBIDE GRADE COMPARISON CHART FOR ALUMINUM TURNING INSERTS

ANSI	COLBIDE	KENAMETAL	SOWA	KYOCERA	CERATIZIT	SANDVIK	SECO	WIDIA
C3	C3	K68 K313	KT10U	KW10	H20X MG20, MG120	H10	KX	HWK10
C3	C3+	KC5010 KCU10	-	-	-	-	-	HCK10

This chart is for guidance only. No quality or performance equivalency is implied. It is based on published data and not authorized by each manufacturer.

TECHNICAL DATA

- First choice for turning aluminum but also good for other non-ferrous metals
- High Positive sharp cutting edge guarantees excellent chip flow and surface finish
- Standard hole size. Insert fits into your current screw-on-type toolholder and boring bar
- Precision ground all over for excellent indexing accuracy
- Competitive price. Available from stock

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DRILL INSERTS



STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE													
			ϕ	d ₁	t	r	COATED						UNCOATED							
							C150+	C250+	C350+	C45+	C750+	SS30+	C200+	C7	C6	C5	C2			
WCMT 	WCMT 2(1.5)1	040204	.200	.126	1/8	1/64														
	3(2.5)2	06T308	.242	.146	5/32	1/32														
	433	080412	.320	.169	3/16	3/64														

BRAKE DRUM INSERT


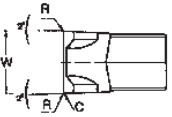
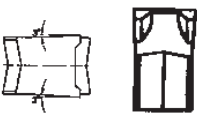
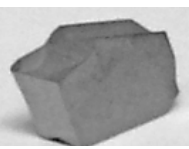
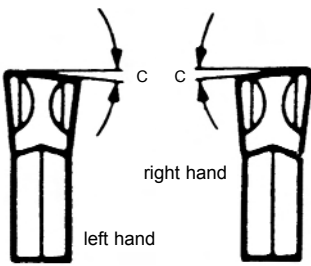

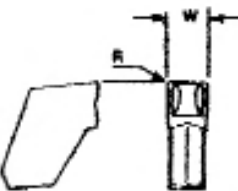
STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE														
			IC	d ₁	t	r	COATED						UNCOATED								
							C150+	C250+	C350+	C45+	C750+	SS30+	C200+	C7	C6	C5	C2				
FMC TRI TIP 	FMC TRI TIP	-	.312	.150	.125	.020															

CHIPBREAKERS

STYLE	ORDER NO.	ISO	(inch) DIMENSIONS			
			A	T	EW	
CBT 	CBT 3G	-	.474	.094	.080	
	4G	-	.550	.094	.190	

• In Stock

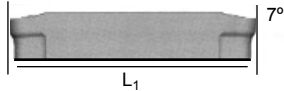
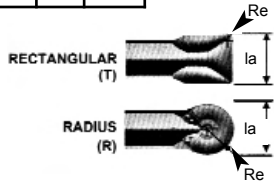
**To Order Call:
1-800-263-9860**

STYLE	ORDER NO.	ISO	(inch) DIMENSIONS			GRADE									
			W	R	C	COATED				UNCOATED					
						C6+	C5+	C750+	C7	C8	C5	C2			
GTN   	GTN 2		.087	.006	0°			•	•						
	3		.122	.008	0°			•	•		•				
	4		.161	.009	0°			•	•		•				
	5		.201	.011	0°			•	•						
	6		.252	.014	0°			•	•						
			W ± .004												
GTR/L  GTL GTR 	GTR/L 3		.122	.008	8°			•	•						
	4		.161	.009	8°			•	•						
		W ± .004													
KSON  	KSON 2		.087	.006	0°			•	•						
	3		.118	.008	0°			•	•		•				
	4		.161	.009	0°			•	•		•				
		W ± .004													

To Order Call:
1-800-263-9860

Starter kits available. Please enquire

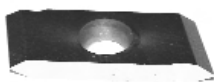
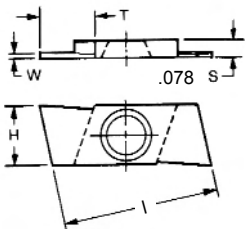
Colbide MULTI-GROOVING & TURNING INSERTS (Double-ended)

STYLE	ORDER NO.	ap max*	(inch) DIMENSIONS				GRADE																
							COATED				UNCOATED												
			L ₁	la	Re				C700+				C7	C6	C5	C2							
CT.. & CR..  <table border="1"> <tr><td colspan="2">Tolerances:mm</td></tr> <tr><td>L₁ =</td><td>±0.10</td></tr> <tr><td>la =</td><td>±0.10/0</td></tr> <tr><td>Re =</td><td>±0.10</td></tr> </table> 	Tolerances:mm		L ₁ =	±0.10	la =	±0.10/0	Re =	±0.10	RECTANGULAR														
	Tolerances:mm																						
	L ₁ =	±0.10																					
	la =	±0.10/0																					
	Re =	±0.10																					
	CTFD 03	0.670	.806	.118	.012				•														
	CTGD 04	0.866	.997	.157	.016				•														
	CTHD 05	0.866	.997	.197	.016				•														
	RADIUS																						
	CRFD 03	0.787	.806	.118	.059				•														
CRGD 04	0.984	.997	.157	.079				•															
CRHD 05	0.984	.997	.197	.098				•															
		*ap max = depth of cut																					

• In Stock

**STARTER KITS AVAILABLE
PLEASE ENQUIRE**


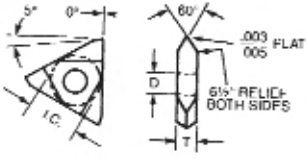
MINI-SYSTEM GROOVING INSERTS

STYLE	ORDER NO.	ISO	(inch) DIMENSIONS				GRADE									
							COATED				UNCOATED					
			W	T	H	I				C6+				C7	C6	C5
GIE  	GIE-7-SG-0.9-R	.035	.100	.275	.669				•							
	7-SG-1.1-R	.035	.043	.235	.275	.669				•						
	7-SG-1.3-R	.035	.051	.235	.275	.669				•						
	7-SG-1.6-R	.035	.063	.235	.275	.669				•						
	7-SG-1.85-R	.035	.073	.235	.275	.669				•						

• In Stock


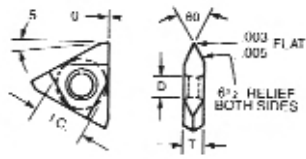
Starter kits available. Please enquire

**To Order Call:
1-800-263-9860**

STYLE	ORDER NO.	DIMENSIONS (inch)					GRADE				
		I.C.		T		D	COATED		UNCOATED		
		DIM.	TOL.	DIM.	TOL.		C6+	C5+	C6	C5	C2
TNMA  	TNMA 32NV	3/8		1/8		.150	•	•	•	•	
	43NV	1/2	±.001	3/16	±.001	.203	•	•	•	•	
	54NV	5/8		1/4		.250					

• On Edge Style • 0° Rake • Precision Ground

60° "V" THREADING INSERTS

STYLE	ORDER NO.	DIMENSIONS (inch)					GRADE				
		I.C.		T		D	COATED		UNCOATED		
		DIM.	TOL.	DIM.	TOL.		C6+	C5+	C6	C5	C2
TNMC  	TNMC 32NV	3/8		1/8		.150	•	•	•	•	•
	43NV	1/2	±.001	3/16	±.001	.203	•	•	•	•	•
	54NV	5/8		1/4		.250	•	•	•	•	

• On Edge Style • 0° Rake • Precision Ground • Double Countersink


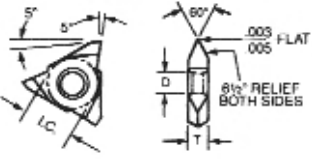
TNMC 'NG' Grooving Inserts subject to quotation

• In Stock

To Order Call:
1-800-263-9860


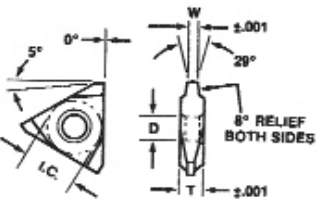
60° "V" THREADING INSERTS



STYLE	ORDER NO.	DIMENSIONS (inch)					GRADE				
		I.C.		T		D	COATED		UNCOATED		
		DIM.	TOL.	DIM.	TOL.		C6+	C5+	C6	C5	C2
TPMC  	TPMC 32NV	3/8		1/8		.150	•	•	•	•	
	43NV	1/2	±.001	3/16	±.001	.203	•	•	•	•	•
	54NV	5/8		1/4		.250	•	•	•	•	

• On Edge Style • 5° Positive Rake • Precision Ground • Double Countersink

29° ACME THREADING


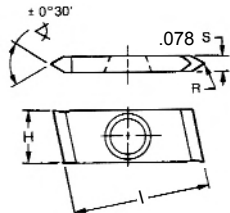
STYLE	ORDER NO.	DIMENSIONS (inch)					GRADE				
		I.C.		T		W/D	COATED		UNCOATED		
		DIM.	TOL.	DIM.	TOL.		C6+	C5+	C6	C5	C2
TNMC-NT  	TNMC 43NT-4P	1/2		3/16		.087 .203	•	•	•	•	
	43NT-5P	1/2		3/16		.068 .203	•	•	•	•	
	43NT-6P	1/2	±.001	3/16	±.001	.056 .203	•	•	•	•	
	43NT-8P	1/2		3/16		.041 .203	•	•	•	•	
	43NT-10P	1/2		3/16		.031 .203	•	•	•	•	

• On Edge 29° ACME • 0° Rake • Precision Ground • Double Countersink

• In Stock

To Order Call:
1-800-263-9860

MINI-SYSTEM 60° THREADING INSERTS

STYLE	ORDER NO.	ISO	(inch) DIMENSIONS			GRADE										
			R	H	I	COATED				UNCOATED						
						C6+	C7	C8	C5	C2						
GIE  	GIE-7-GW-60-R		.004/.005		.275	669										

• In Stock

COLBIDE THREADING & GROOVING (NOTCH) CROSS-REFERENCE CHART

Comparison sample between COLBIDE, Kennametal, Sandvik, Stellram & Walter Valenite Catalogue Numbers

COLBIDE	KENNAMETAL	SANDVIK	STELLRAM	WALTER VALENITE
CNT 3R Threading	NT-3R	TLT-3R	FNT-3R	VLT-3R
CNTP 3R-5° Positive	NTP-3R	TLTP-3R	FNTP-3R	VLTP-3R
CNA 3R-29° Acme	NTA-3R	TLA-3R	FNTA-3R	-
CNG 3R Grooving	NG-3R	TLG-3R	FNG-3R	VLG-3R
CNR 3R Radius	NR-3R	TLR-3R	FNR-3R	VLR-3R

COLBIDE GRADE COMPARISON CHART FOR GROOVING, PARTING & THREADING INSERTS

ANSI	COLBIDE	ISCAR	KENNAMETAL	SOWA	SANDVIK	SECO	TOOL-FLO
C6	C6+	IC250 IC9025	KCU25 KC5025	PM30P PT30C	GC4125	526 CP300	GP50C
C5	C5+	IC250	-	-	GC4125	CP500	GP50C
C5	C45+	-	KCU25 KC5025	-	GC2135	CP500	GP50C
C5	C75+	IC908 IC354 IC9054	-	MT20C MT30P	GC2135	CP500	GP3

This chart is for guidance only. No quality or performance equivalency is implied.

It is based on published data and not authorized by each manufacturer.

To Order Call:
1-800-263-9860

COLBIDE NOTCH THREADING INSERTS

Identification System

Colbide Notch Type

Style

CNT - 3R/L

2
3
4
Size

R - Right Hand
L - Left Hand

Style

A - 29° Acme

G - Grooving

T - Threading/American Standard

TP - Threading 5° Positive

R - Full Radius Grooving

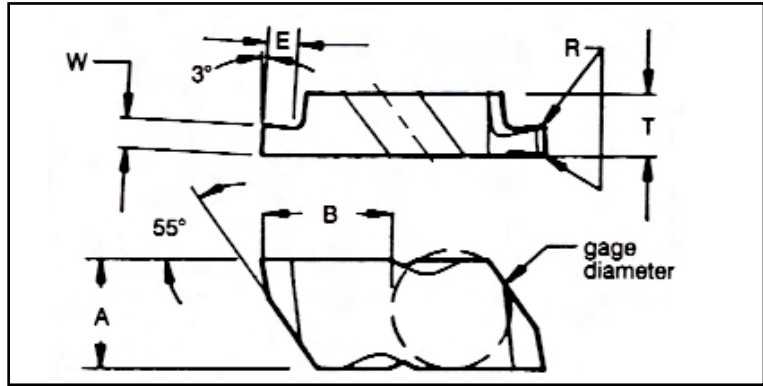
CNT T - Threading neutral precision 60° "v" threading	ORDER NO.	DIMENSIONS (inch)							GRADE			
									COATED			
		B	T	E	A	R rad	threads per inch	gage dia	C6+	C5+	C45+	C75+
	CNT 2R/L	.2661	.150	.075	.219	.003 .005	-	.1875	•	•	•	
	3R/L	.3999	.195	.098	.344	.005 .008	-	.3750	•	•	•	•
	4R/L	.6293	.255	.128	.453	.005 .008	-	.3750	•	•	•	

CNTP TP - Threading 5° positive precision	ORDER NO.	DIMENSIONS (inch)							GRADE			
									COATED			
		R	^{*B} over gage	T	E	A	gage dia		C6+	C5+	C45+	C75+
	CNTP 2L	.003 .005	.2661	.150	.075	.219	.1875				•	
	3R/L	.005 .008	.3999	.195	.098	.344	.3750				•	
	4R/L	.005 .008	.6293	.255	.128	.453	.3750				•	

CNA A - 29° Acme neutral precision	ORDER NO.	DIMENSIONS (inch)							GRADE			
									COATED			
		W	B	T	E	A	gage dia		C6+	C5+	C45+	C75+
	CNA 3R/L10	.0319	.4026	.195	.149	.344	.3750		•	•		
	3R/L8	.0411	.4026	.195	.149	.344	.3750		•	•		
	3R/L6	.0566	.4026	.195	.149	.344	.3750		•	•		
	3R/L5	.0689	.4026	.195	.149	.344	.3750		•	•		
	3R/L4	.0875	.4018	.195	.133	.344	.3750		•	•		
	4R/L4	.0875	.6332	.255	.202	.453	.3750		•	•		
	4R6	.0566	.6332	.255	.202	.453	.3750		•	•		

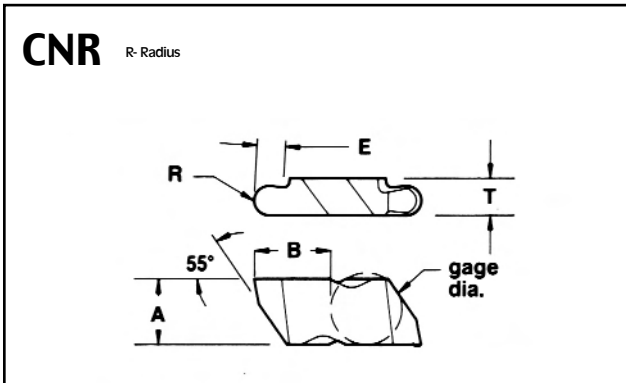
COLBIDE NOTCH GROOVING INSERTS

CNG G - Grooving



ORDER NO.	DIMENSIONS (inch)							GRADE									
	R	W	B	T	E	A	gage dia	COATED				UNCOATED					
								C6+	C45+	C75+		C7	C6	C5	C2		
CNG 2031R/L	.002	0.31	.2700	.150	.050	.219	.1875		•								
2062R/L	.005	0.62	.2700	.150	.110	.219	.1875		•								
3047R/L		.047	.4050	.195	.075	.344	.3750		•								
3062R/L	.005	.062	.4050	.195	.094	.344	.3750		•								
3094R/L	.010	.094	.4050	.195	.150	.344	.3750		•								
3125R/L		.125	.4050	.195	.150	.344	.3750		•								
3189R/L	.020	.189	.4050	.195	.150	.344	.3750		•								
	.025																
4125R	.005	.125	.6360	.255	.150	.453	.3750		•								
4189R/L	.010	.189	.6360	.255	.250	.453	.3750		•								
4250R/L	.020	.250	.6360	.255	.250	.453	.3750		•								
	.025																

COLBIDE NOTCH FULL-RADIUS GROOVING INSERTS



ORDER NO.	DIMENSIONS (inch)							GRADE			
	R	B	T	E	A	gage dia.	COATED				
							C6+	C5+	C45+	C75+	
CNR 3031R/L	0.031	.4033	.195	.125	.344	.3750			•		
CNR 3047R/L	0.047	.4017	.195	.180	.344	.3750			•		
CNR 3062R/L	0.062	.4017	.195	.180	.344	.3750			•		

• In Stock

To Order Call:
1-800-263-9860

COLBIDE LAYDOWN THREADING INSERTS CODE KEY

3 E R AG 60

Inscribed Circle (IC)
(cutting edge length)

2 = 1/4" IC (11 mm)
3 = 3/8" IC (16 mm)
4 = 1/2" IC (22 mm)
5 = 5/8" IC (27 mm)

External / Internal

E = External
I = Internal

Hand of Insert

R = Right Hand
L = Left Hand

Thread Pitch

Full Profile

mm	0.5	1.5
	0.7	1.75
	0.75	2.0
	0.8	2.5
	1.0	3.0
	1.25	3.5

TPI

	24	13
	20	12
	18	11
	16	10
	14	9
		8

Partial Profile

AG = 0.5 - 3.0 mm
48 - 8 tpi

A = 0.5 - 1.5 mm
48 - 16 tpi

N = 3.5 - 5.0 mm
7 - 5 tpi

Q = 5.5 - 6.0 mm
4.5 - 4 tpi

Thread Standard

ISO = ISO, Metric 60°

UN = UN American 60°

ACME = 29° Acme

60 = 60° Partial Profile

COLBIDE GRADE COMPARISON CHART FOR LAYDOWN THREADING INSERTS

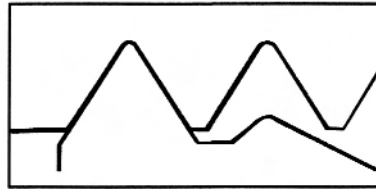
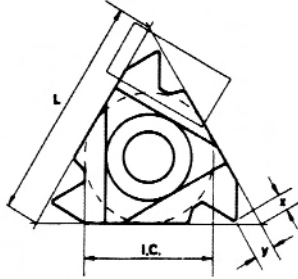
ANSI	COLBIDE	CARMEX	ISCAR	KENNA-METAL	SECO	STELLRAM	TAEQU-TEC	WIDIA	VARDEX
C6	PVD	BMA P25C	IC228 IC250	KC5025	CP300 CP500	SP4066	TT7010	TN6025	VKX
C2	C2	K20	IC20	K68	H15	-	K10	THM	VK2

This chart is for guidance only. No quality or performance equivalency is implied.

It is based on published data and not authorized by each manufacturer.

PVD	First choice multi-purpose grade for most materials. Sub-micron carbide with PVD coated TiN.
C2	Suitable for machining cast iron, brass, copper and aluminum. K-grade uncoated carbide plus polished finish.

PARTIAL PROFILE 60°



Type AG, A, N & Q

Designation	Pitch (mm)	Pitch (tpi)
Type AG	0.5 - 3.0	48 - 8
Type A	0.5 - 1.5	48 - 16
Type N	3.5 - 5.0	7 - 5
Type Q	5.5 - 6.0	4.5 - 4

Standard type ER shown

ORDER NO.	INSERT SIZE		DIMENSIONS (mm)		EXTERNAL		INTERNAL	
	L (mm)	IC (inch)	X	Y	ER		IR	
					PVD	C2	PVD	C2
2 IR A60	11	1/4 (2)	0.7	0.8			•	
3 ER/IR AG60	16	3/8 (3)	1.1	1.5	•	•	•	•
4 ER/IR N60	22	1/2 (4)	1.8	2.5	•	•	•	
5 ER/IR Q60	27	5/8 (5)	2.1	3.1	•		•	

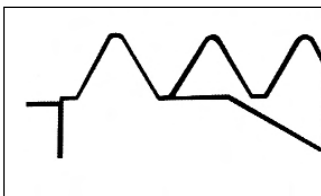
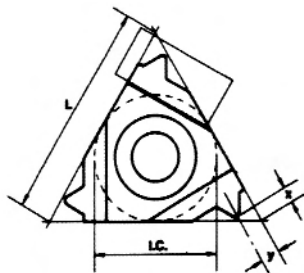
Partial Profile Inserts cut without “topping” the O.D. of the thread. The same insert can be used for a range of different thread pitches. They are stocked in 60° thread angles. They are made for right hand and left hand and internal and external threading. To avoid confusion the different pitch ranges have been defined by letters AG, N and Q.

• In Stock

Full Profile Inserts will form the complete thread profile including the crest. For every thread pitch and standard a separate insert is required. They are stocked in the following thread standards: ISO Metric, UN, and ACME. Inserts are made in right hand and left hand and internal and external threading.

ISO METRIC 60° FULL PROFILE

ORDER NO.	INSERT SIZE		DIMENSIONS (mm)		EXTERNAL		INTERNAL	
	L (mm)	IC (inch)	X	Y	ER		IR	
					PVD	C2	PVD	C2
3 ER/IR 0.50 ISO	16	3/8 (3)	1.3	0.5	•		•	
0.75 ISO								
1.00 ISO			0.7	0.8	•		•	
1.25 ISO					•		•	
1.50 ISO					•		•	
1.75 ISO					•		•	
2.00 ISO			1.3	1.5	•		•	
2.50 ISO								
3.00 ISO					•		•	

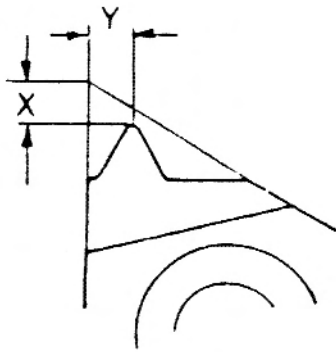


Standard type ER shown

UN AMERICAN 60° FULL PROFILE

Full Profile Inserts will form the complete thread profile including the crest. For every thread pitch and standard a separate insert is required. They are stocked in the following thread standards: ISO Metric, UN, and ACME. Inserts are made in right hand and left hand and internal and external threading.

Standard type ER shown

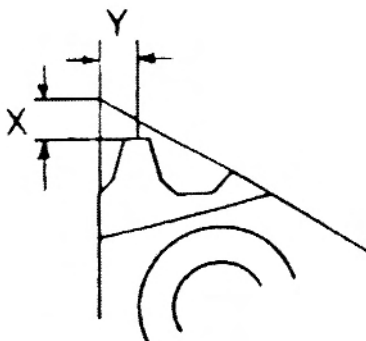


ORDER NO.	INSERT SIZE		DIMENSIONS (mm)		EXTERNAL		INTERNAL			
	L(mm)	IC (inch)	X	Y	ER		IR			
					PVD	C2	PVD	C2		
3 ER/IR 32UN	16	3/8 (3)	0.7	0.5						
28UN										
24UN										
20UN										
18UN										
16UN										
14UN					1.3	1.5				
13UN										
12UN										
11UN										
10UN										
9UN										
8UN										

- In Stock

ACME 29° FULL PROFILE

Standard type ER shown



ORDER NO.	INSERT SIZE		DIMENSIONS (mm)		EXTERNAL		INTERNAL			
	L (mm)	IC (inch)	X	Y	ER		IR			
					PVD	C2	PVD	C2		
3 ER/IR 16 ACME	16	3/8 (3)	0.8	0.8						
14 ACME										
12 ACME										
10 ACME										
8 ACME										
4 ER/IR 6 ACME			22	1/2 (4)	2.1	2.5				
5 ACME										

- In Stock



COLBIDE GRADE SYSTEM FOR MILLING INSERTS

COATED GRADES

GRADE	GRADE COMPOSITION	APPLICATION
C65+ C650+	TiC+TiCN+TiN	A TRIPLE COATED TITANIUM CARBIDE AND TITANIUM NITRIDE GRADE. GOOD WEAR RESISTANCE FOR MILLING STEELS AND CAST IRONS.
C77+	TiC+TiCN+TiN	FIRST CHOICE GENERAL PURPOSE COATED STEEL MILLING GRADE. A TRIPLE COATED TITANIUM CARBIDE AND TITANIUM NITRIDE GRADE ON A TOUGH CARBIDE SUBSTRATE. THE HIGH TOUGHNESS IS WELL SUITED FOR A BROAD RANGE OF STEEL MILLING APPLICATIONS.
C75+ C750+	TiC+TiCN+TiN PVD TiAlN	EXCELLENT PERFORMANCE WHEN GENERAL MILLING TO HEAVY ROUGHING OF STEELS AND STAINLESS STEEL IN UNSTABLE CONDITIONS REQUIRING HIGH TOUGHNESS.
P35M+	TiN+TiCN+Al ₂ O ₃ +TiN	FIRST CHOICE FOR MILLING STAINLESS STEEL WHEN COMBINED WITH A T-LAND. ALSO FAVOURABLE WHEN MILLING CAST STEEL, ALLOY STEEL AND CARBON STEEL. A SUPERIOR TRIPLE COATED GRADE.
P35S+	TiC+TiAlN	A TOUGH PVD TiAlN COATED GENERAL PURPOSE STEEL MILLING GRADE.
M20M+	TiCN+Al ₂ O ₃	A GENERAL PURPOSE COATED MILLING GRADE FOR CAST IRON AND NON-FERROUS MATERIALS.

COLBIDE GRADE COMPARISON CHART FOR MILLING INSERTS

COATED GRADES

ANSI	COLBIDE	ISCAR	KENNA-METAL	SOWA	SANDVIK	SECO	WIDIA
C7, C6, C2	MILLING STEELS, NON-FERROUS C65+, C650+	IC520M	KC715M	-	GC4220	MP1500	TN6505
C6, C5	MILLING STEELS C77+	IC520M	KC725M	PM25C	GC4230	T25M T250M	TN7525
C5	MILLING STEELS, STAINLESS C75+, C750+	IC4050	KC525M KC725M KCPM20	MM30P PM30C	GC2030 GC2040 GC4240	F40M T25M T350M	TN6425
C5	MILLING STAINLESS P35M+	IC4050	KC725M KCPM20	PM30C	GC1025 GC2030 GC2040	T25M T350M	TN6425
C5	MILLING STEELS P35S+	IC328 IC520M	KCPK30	PM30P PM40P	-	MP2500 T350M	TN6525 TN6540 TN7535
C3, C2	MILLING NON-FERROUS M20M+	IC4050 IC5100	KC520M KC915M KCK15	KM20C	GC3040 GC3220	MK1500 MK2000 MK3000	TN5515 TN6510 TN6520

This chart is for guidance only. No quality or performance equivalency is implied.

It is based on published data and not authorized by each manufacturer.



COLBIDE GRADE SYSTEM FOR MILLING INSERTS

UNCOATED INSERTS

GRADE	GRADE COMPOSITION	APPLICATION
C7	TUNGSTEN CARBIDE	An uncoated grade designed for added wear resistance when milling tool steels, heat treated and pre-hardened steels. May also be used for stainless steels.
P25M	TUNGSTEN CARBIDE	First choice general purpose uncoated steel milling grade combining good toughness with good wear resistance.
P30M P35M	TUNGSTEN CARBIDE	Uncoated grades designed with the quality of toughness for shock and wear resistance. The flank wear is consistent reducing chipping and thermo cracks. These qualities make P30M & P35M excellent investments when milling most steels.
M20M	TUNGSTEN CARBIDE	General purpose uncoated milling grade for cast iron and non-ferrous materials. Usually combined with an unhone sharp cutting edge.

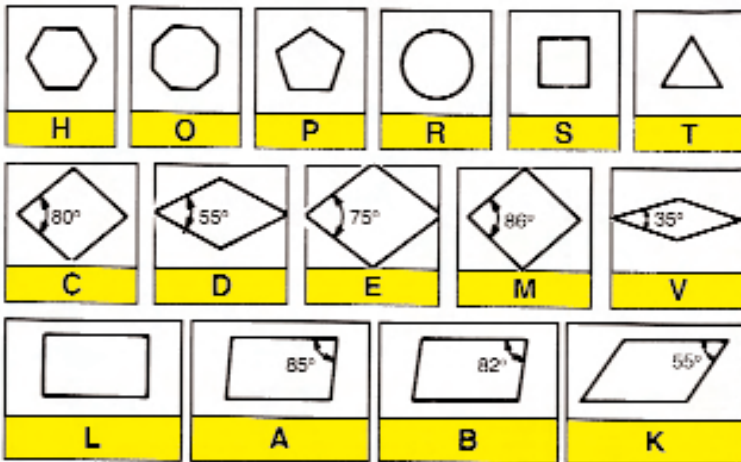
COLBIDE GRADE COMPARISON CHART FOR MILLING INSERTS

UNCOATED INSERTS

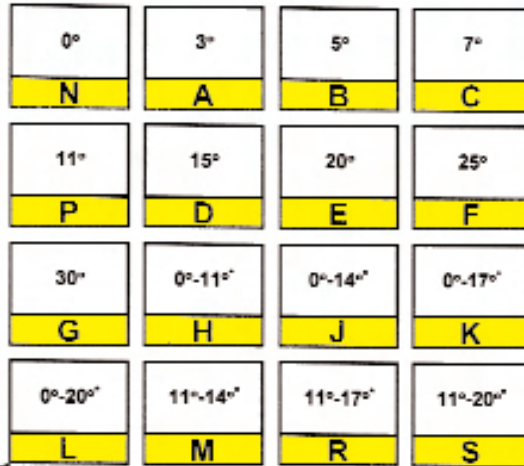
ANSI	COLBIDE	ISCAR	KENNA-METAL	SOWA	SANDVIK	SECO	WIDIA
C7, C6	C7	IC08	-	-	S1P	S10M	-
C6, C5	MILLING STEELS P25M	IC50M	K125M	PM20U PTM30U	SM30	S25M	TTM
C5	MILLING STEELS P30M, P35M	IC50M	K125M	PTM30U	SM30	S60M	TTR
C3, C2	MILLING NON-FERROUS M20M	IC20 IC28	KMF K313 K110M	KTM10U	H10F H13A	HX	THM THR

This chart is for guidance only. No quality or performance equivalency is implied. It is based on published data and not authorized by each manufacturer.

1 INSERT SHAPE



2 INSERT CLEARANCE ANGLE



*Secondary facet angle may vary by $\pm 1^\circ$



3 TOLERANCES

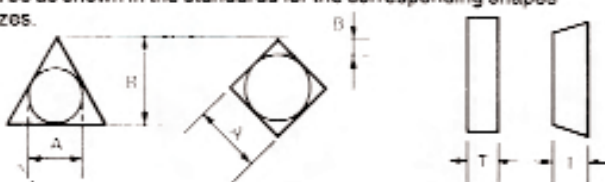
Letter Symbol	± Tolerances in inches		
	B	A	T
A	0.0002	0.001	0.001
B	0.0002	0.001	0.005
C	0.0005	0.001	0.001
D	0.0005	0.001	0.005
E	0.001	0.001	0.001
F	0.0002	0.0005	0.001
G	0.001	0.001	0.005
H	0.0005	0.0005	0.001
J	0.0002	0.002-0.005	0.001
K	0.0005	0.002-0.005	0.001
L	0.001	0.002-0.005	0.001
M	0.002-0.010 ¹	0.002-0.004 ¹	0.005
U	0.005-0.012 ¹	0.005-0.010 ¹	0.005
N	0.002-0.010 ¹	0.002-0.004 ¹	0.001

A: Theoretical diameter of the insert inscribed circle

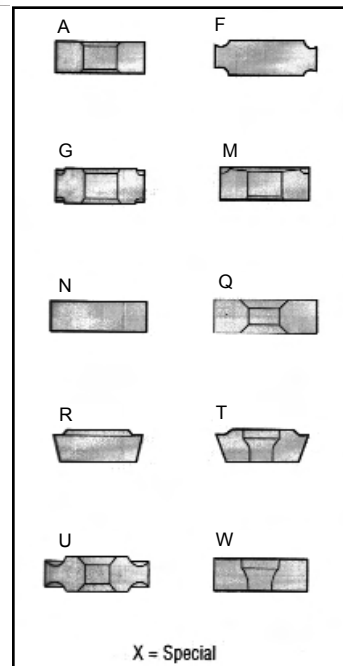
T: Thickness of the insert

B: These tolerances normally apply to indexable inserts with wiper flats (secondary cutting edges).

1 - The tolerance depends on the size and shape of the insert and should be as shown in the standards for the corresponding shapes and sizes.



4 TYPE OF INSERT



To Order Call:
1-800-263-9860

MILLING INSERTS – ANSI CODE KEY

5 INSCRIBED CIRCLE

INCHES

In 1/32" for IC < 1/4"
In 1/8" for IC > 1/4"

CUTTING EDGE LENGTH

For rectangular and rhomboidal inserts cutting edge length is indicated in 1/4"

6 THICKNESS

INCHES

In 1/32" for inserts of IC < 1/4"
In 1/16" for inserts of IC > 1/4"

For rectangular and rhomboidal inserts, width is used as reference instead of IC

7 RADIUS

INCHES

RADIUS

0	Sharp Point	4	1/16"
1	1/64"	6	3/32"
2	1/32"	8	1/8"
3	3/64"		

A Square Insert 45° Chamfer
D Square Insert 30° Chamfer
E Square Insert 15° Chamfer
F Square Insert 3° Chamfer
K Square Insert 30° Double Chamfer
L Square Insert 15° Double Chamfer
M Square Insert 3° Double Chamfer
N Truncated Triangle Insert
P Flatted Corner Insert



8 SPECIAL CUTTING POINT CONFIG.

Only appears following a letter in seventh position. The wiper flat/facet of a milling insert. (This position shall only be used when required).

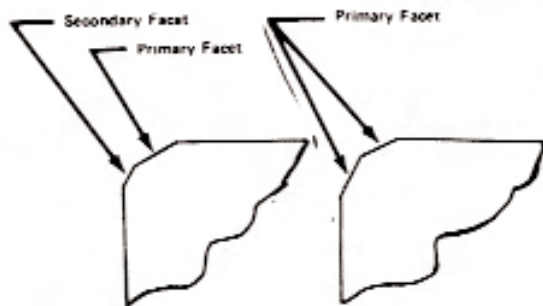
A = 3° F = 25°
B = 5° G = 30°
C = 7° N = 0°
D = 15° P = 11°
E = 20°
Z = Special

9 OTHER CONDITIONS

A - Honed
B - Honed
C - Honed
E - Honed
J - Polished (4 microinch AA) (Rake Surface Only)
T - Negative Land

10 HAND

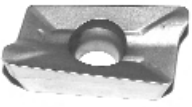
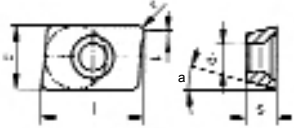
R - Right
L - Left
N - Neutral

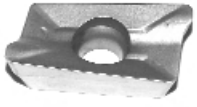
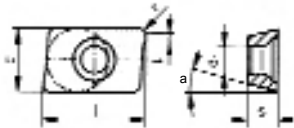


Comparison cutting edge length (pos. 5) to IC in inches

	.238	.354	.433	.630	.866	1.063	1.299	1.732
				.354	.472	.591	.748	.984
65°			.276	.433	.591	.748	.906	1.220
80°			.236	.354	.472	.630	.748	.984
IC=d	5/32"	7/32"	1/4"	3/8"	1/2"	5/8"	3/4"	1"

To Order Call:
1-800-263-9860


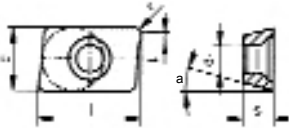
STYLE	ORDER NO.	DIMENSIONS (inch)							GRADE									
		d	d ₁	l	l ₁	s	a	r	COATED					UNCOATED				
									C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M	M20M
ADKT  	ADKT 1505 PDER	.377	.173	.601	.049	.222	15°	.031		•								
	1505 PDTR																	


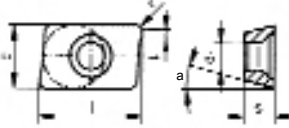
STYLE	ORDER NO.	DIMENSIONS (inch)							GRADE																									
		d	d ₁	l	l ₁	s	a	r	COATED					UNCOATED																				
									C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M	M20M																
APKT  	APKT 1003 PDER	.262	.110	.420	.047	.138	11°	.019			•	•																						
	1003 PDTR																																	
	1604 PDER																		.374	.173	.655	.056	.207	11°	.031		•	•	•	•				

• In Stock

To Order Call:
1-800-263-9860

MILLING INSERTS (RADIUS SCREW-ON TYPE)



STYLE	ORDER NO.	DIMENSIONS (inch)							GRADE									
									COATED						UNCOATED			
		d	d ₁	l	l ₁	s	a	r	C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M	M20M
ADKT...R  	ADKT 150516-R	.374	.173	.601	-	.237	15°	.063										
	150532-R	.374	.173	.614	-	.248	15°	.125										

STYLE	ORDER NO.	DIMENSIONS (inch)							GRADE									
									COATED						UNCOATED			
		d	d ₁	l	l ₁	s	a	r	C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M	M20M
APKT...R  	APKT 100316-R	.262	.110	.435	.039	.138	11°	.063			.							
	100330-R	.262	.110	.435	-	.138	11°	.118										
	160424-R	.382	.173	.675	-	.225	11°	.094				.						
	160432-R	.382	.173	.675	-	.225	11°	.125					.					


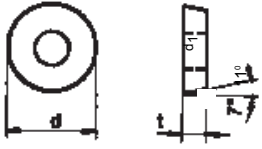
• In Stock

To Order Call:
1-800-263-9860

RECTANGULAR INSERT FOR 45° LEAD FACEMILLS

LNCX  	mm ic	ORDER NO.	(inch) DIMENSIONS				GRADE											
	<input type="text"/>		λ t W b	COATED				UNCOATED										
	18			C65+ C77+ P35S+ C750+ P35M+ M20M+	C7 P25M P30M M20M													
	LNCX 1806AZR 11	.739	.252	.394	.079													

SCREW-ON-TYPE

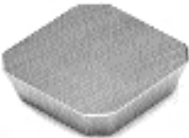
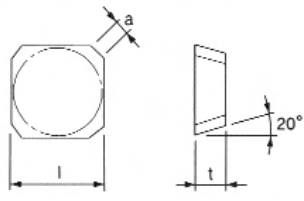
RPMT...T  	ORDER NO.	ISO	(inch) DIMENSIONS			GRADE												
			STYLE	d	t	d ₁	COATED				UNCOATED							
							C65+ C77+ P35S+ C750+ P35M+ M20M+	C7 P25M P30M M20M										
RPMT 120400T	120400	.472	.188	.173														


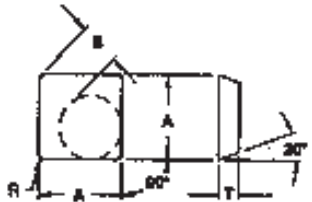
- In Stock

To Order Call:
1-800-263-9860

MILLING INSERTS


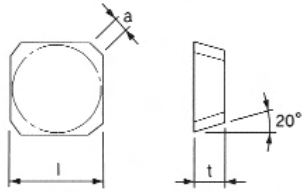



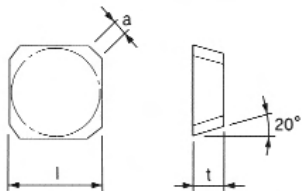
STYLE	ORDER NO.	ISO	DIMENSIONS (inch)			GRADE									
						COATED						UNCOATED			
			l	t	a	C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M	M20M
SEAN   Positive cutting rake *AFTN=Edge chamfer .004 x 20°	SEAN 42AFN	1203AFN	1/2	1/8	.090										
	42AFTN	1203AFTN	1/2	1/8	.090	•	•	•			•	•	•		
	53AFN	1504AFN	5/8	3/16	.094										
	53AFTN	1504AFTN	5/8	3/16	.094	•									

STYLE	ORDER NO.	ISO	DIMENSIONS (inch)			GRADE									
						COATED						UNCOATED			
			A	T	R	C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M	M20M
SEC SEG   Positive cutting rake *AFTN=Edge chamfer .004 x 20°	SEC 422	120308	1/2	1/8	1/32								•	•	•
	634	190416	3/4	3/16	1/16										
	SEC 422	120308	1/2	1/8	1/32								•	•	•

• In Stock

**To Order Call:
1-800-263-9860**

STYLE	ORDER NO.	ISO	DIMENSIONS (inch)			GRADE												
						COATED						UNCOATED						
			l	t	a	C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M	M20M			
SEKN  	SEKN 42AFN	1203AFN	1/2	1/8	.090													
	42AFTN	1203AFTN	1/2	1/8	.090	•	•		•	•		•	•	•				
	43AFTN	1204AFTN	1/2	3/16	.090	•	•							•	•	•		
	53AFTN	1504AFTN	5/8	3/16	.094		•		•					•	•			

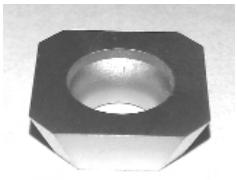
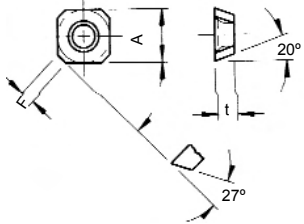
STYLE	ORDER NO.	ISO	DIMENSIONS (inch)			GRADE													
						COATED						UNCOATED							
			l	t	a	C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M	M20M				
SEKR (concave)  	SEKR 42AFTN	1203AFTN	1/2	1/8	.090		•		•										
	43AFTN	1204AFTN	1/2	3/16	.090														
	53AFTN	1504AFTN	5/8	3/16	.090														


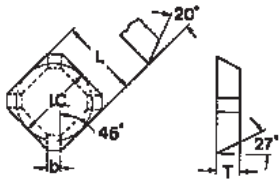
• In Stock

**To Order Call:
1-800-263-9860**

MILLING INSERTS

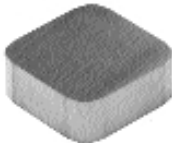
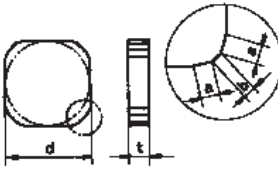


STYLE	ORDER NO.	ISO	DIMENSIONS (inch)			GRADE										
						COATED					UNCOATED					
			A	T	F	C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M	M20M	
SEHX  	SEHX 43AFSN	1204AFSN	1/2	3/16	.087				•	•						

STYLE	ORDER NO.	ISO	DIMENSIONS (inch)			GRADE								
						COATED					UNCOATED			
			L	T	b	C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M
SEMN  	SEMN 43AZ	1204AZ	1/2	3/16	.087	•	•		•				•	•
	43AFTN	1204AFTN	1/2	3/16	.087	•	•		•				•	•

• In Stock

To Order Call:
1-800-263-9860


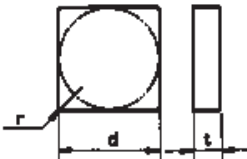
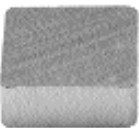
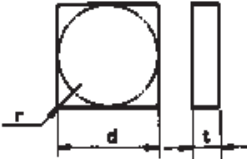
STYLE	ORDER NO.	ISO	DIMENSIONS (inch)				GRADE									
							COATED						UNCOATED			
			d	t	a	b	C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M	M20M
SNKN  	SNKN 43EN	1204EN	1/2	3/16	.055	.035		•		•					•	•
	53EN	1504EN	5/8	3/16	.055	.035									•	

• In Stock

To Order Call:
1-800-263-9860


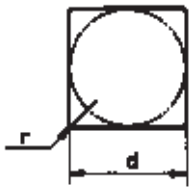

MILLING INSERTS






STYLE	ORDER NO.	ISO	DIMENSIONS (inch)			GRADE												
						COATED					UNCOATED							
			d	t	r	C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M	M20M			
SNG  	SNG 321	090304	3/8	1/8	1/64													
	322	090308			1/32													
	421	120304	1/2	1/8	1/64													
	422	120308			1/32													
	423	120312			3/64													
	431	120404	1/2	3/16	1/64													
	432	120408			1/32													
	433	120412			3/64													
	631	190404	3/4	3/16	1/64													
	632	190408			1/32													
	633	190412			3/64													
	634	190416			1/16													
	SNU  	SNU 422	120308	1/2	1/8	1/32												
		423	120312			3/64												
		432	120408	1/2	3/16	1/32												
		433	120412			3/64												
632		190408	3/4	3/16	1/32													
633		190412			3/64													
634		190416			1/16													

• In Stock

To Order Call:
1-800-263-9860




STYLE	ORDER NO.	ISO	DIMENSIONS (inch)			GRADE										
						COATED						UNCOATED				
			d	t	r	C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M	M20M	
SPG   	SPG 321	090304	3/8	1/8	1/64											
	322	090308			1/32											
	421	120304	1/2	1/8	1/64											
	422	120308			1/32											
	423	120312			3/64											
	424	120316			1/16											
	431	120404	1/2	3/16	1/64											
	432	120408			1/32											
	433	120412			3/64											
	531	150404	5/8	3/16	1/64											
	532	150408			1/32											
	533	150412			3/64											
	631	190404	3/4	3/16	1/64											
	632	190408			1/32											
	633	190412			3/64											
	634	190416			1/16											




STYLE	ORDER NO.	DIMENSIONS (inch)				GRADE									
						COATED						UNCOATED			
		d	t	a	b	C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M	M20M
SPKN   	SPKN 42EDR	1/2	1/8	.055	.039										
	42EDTR (ISO 1203)														
	43EDR	1/2	3/16	.055	.039										
	43EDTR (ISO 1204)														
	53EDR	5/8	3/16	.055	.039										
	53EDTR (ISO 1504)														

- In Stock

CONCAVE MILLING INSERTS

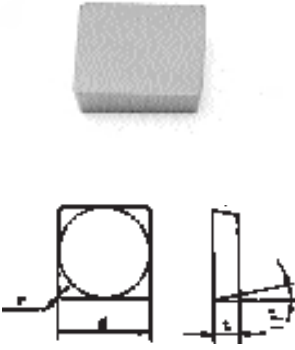


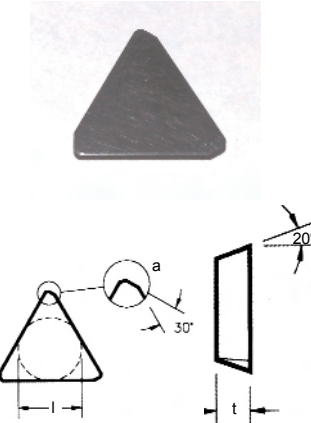
SPKR  	mm ic 	ORDER NO.	(inch) DIMENSIONS				GRADE											
			d	t	a	b	COATED						UNCOATED					
							C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M	M20M		
12	SPKR 42 EDR (ISO 1203)	1/2	1/8	.055	.039	•	•											
15	53 EDR (ISO 1504)	5/8	3/16	.055	.039		•											

STYLE	ORDER NO.	ISO	DIMENSIONS (inch)			GRADE														
			d	t	r	COATED						UNCOATED								
						C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M	M20M					
SPU   	SPU 321	090304	3/8	1/8	1/64															
	322	090308			1/32											•	•			
	421	120304	1/2	1/8	1/64															
	422	120308			1/32	•	•								•	•	•	•		
	423	120312			3/64	•											•	•	•	
	424	120316			1/16													•	•	•
	432	120408	1/2	3/16	1/32															
	433	120412			3/64												•	•	•	
	531	150404	5/8	3/16	1/64															
	532	150408			1/32															
	533	150412			3/64															
	632	190408	3/4	3/16	1/32		•													
	633	190412			3/64															
	634	190416			1/16															

• In Stock

To Order Call:
1-800-263-9860

STYLE	ORDER NO.	ISO	DIMENSIONS (inch)			GRADE									
						COATED						UNCOATED			
			d	t	r	C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M	M20M
SPU...T 	SPU 421T	120304			1/64										
	422T	120308	1/2	1/8	1/32										
	423T	120312			3/64										

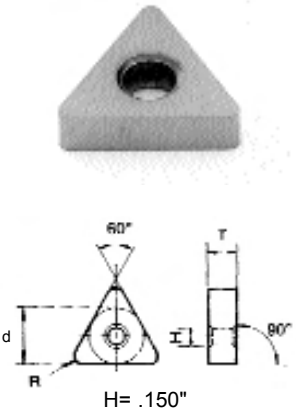
STYLE	ORDER NO.	ISO	DIMENSIONS (inch)			GRADE									
						COATED						UNCOATED			
			l	t	a	C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M	M20M
TEKN 	TEKN 43 PETR	2204PETR	1/2	3/16	.076										

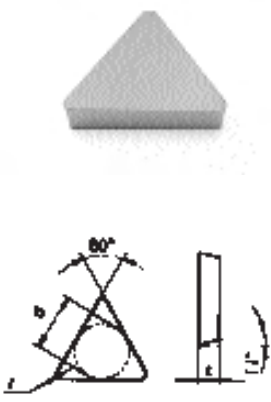
• In Stock

To Order Call:
1-800-263-9860


MILLING INSERTS



STYLE	ORDER NO.	ISO	DIMENSIONS (inch)			GRADE													
						COATED						UNCOATED							
			d	t	r	C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M	M20M				
TNGA 	TNGA 2.522	130308	5/16	1/8	1/32														

STYLE	ORDER NO.	ISO	DIMENSIONS (inch)			GRADE													
						COATED						UNCOATED							
			d	t	r	C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M	M20M				
TPG...T 	TPG 322T	160308	3/8	1/8	1/32														

To Order Call:
1-800-263-9860

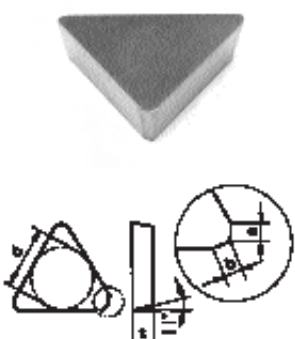
STYLE	ORDER NO.	ISO	DIMENSIONS (inch)			GRADE													
						COATED						UNCOATED							
			d	t	r	C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M	M20M				
TPG 	TPG 221	110304 222	1/4	1/8 110308	1/64						1/32								
	320	160302			1/128														
	321	160304			1/64														
	322	160308		3/8	1/8	1/32													
	323	160312				3/64													
	324	160316				1/16													
	331	160404				1/64													
	332	160408		3/8	3/16	1/32													
	333	160412				3/64													
	431	220404				1/64													
	432	220408				1/32													
	433	220412		1/2	3/16	3/64													
	434	220416				1/16													
	532	270408		5/8	3/16	1/32													

• In Stock

To Order Call:
1-800-263-9860

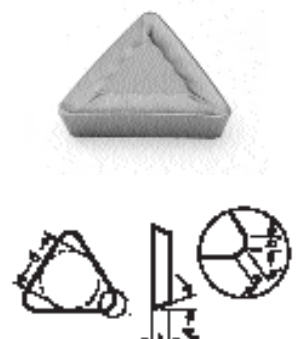
MILLING INSERTS



STYLE	ORDER NO.	DIMENSIONS (inch)				GRADE										
						COATED						UNCOATED				
		d	t	a	b	C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M	M20M	
TPKN 	TPKN 32PPR 32PPTR (ISO 1603)	3/8	1/8	.047	.039	•	•		•					•	•	
	TPKN 43PDR 43PDTR (ISO 2204)	1/2	3/16	.055	.039	•	•		•						•	•

• In Stock

CONVEX INSERTS FOR 0° LEAD SQUARE SHOULDER CUTTERS

TPKR 	mm ic	ORDER NO.	(inch) DIMENSIONS				GRADE									
			d	t	a	b	COATED						UNCOATED			
			d	t	a	b	C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M	M20M
	16	TPKR 32 PPR (ISO 1603)	3/8	1/8	.047	.039										
	22	43 PDR (ISO 2204)	1/2	3/16	.055	.039	•		•		•					

• In Stock

To Order Call:
1-800-263-9860


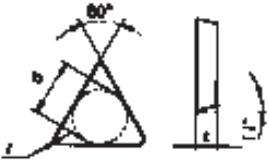
STYLE	ORDER NO.	ISO	DIMENSIONS (inch)			GRADE													
						COATED						UNCOATED							
			d	t	r	C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M	P35M	M20M			
TPU 	TPU 211	110204	1/4	3/32	1/64														
	212	110208			1/32														
	221	110304	1/4	1/8	1/64														
	222	110308			1/32														
	321	160304	3/8	1/8	1/64														
	322	160308			1/32														
	323	160312			3/64														
	324	160316			1/16														
	331	160404	3/8	3/16	1/64														
	332	160408			1/32														
	431	220404	1/2	3/16	1/64														
	432	220408			1/32														
	433	220412			3/64														
	434	220416			1/16														

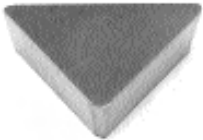
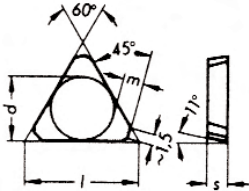
• In Stock

To Order Call:
1-800-263-9860

MILLING INSERTS

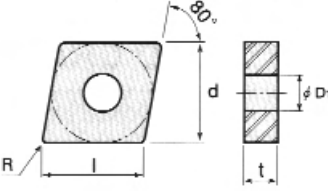
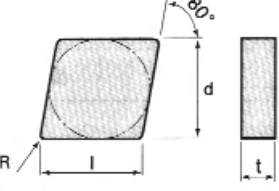
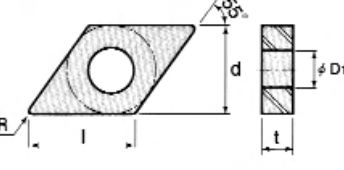
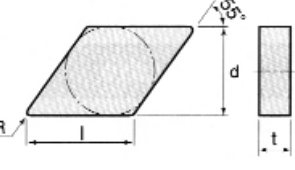
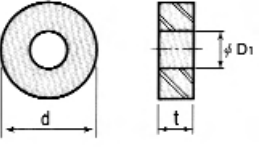


STYLE	ORDER NO.	ISO	DIMENSIONS (inch)			GRADE																														
						COATED						UNCOATED																								
			d	t	r	C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M	M20M																					
TPU...T  	TPU 221T	110304	1/4	1/8	1/64																															
	222T	110308														1/32																				
	321T	160304	3/8	1/8	1/64																															
	322T	160308																								1/32										
	323T	160312																								3/64										
	431T	220404	1/2	3/16	1/64																															
	432T	220408																																		1/32
	433T	220412																																		3/64

STYLE	ORDER NO.	ISO	DIMENSIONS (inch)			GRADE									
						COATED						UNCOATED			
			d	s	l	C65+	C77+	P35S+	C750+	P35M+	M20M+	C7	P25M	P30M	M20M
TPJ  	TPJ 32AER (m=.106)	1603AER	3/8	1/8	.650										
	42AER (m=.165)	2204AER	1/2	1/8	.866										
	47AER (m=.151)	22T3AER	1/2	5/32	.866										

• In Stock

To Order Call:
1-800-263-9860

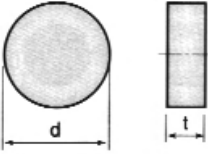
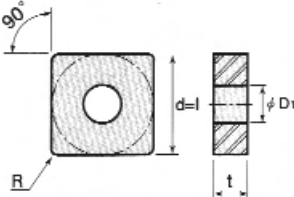
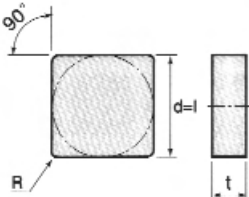
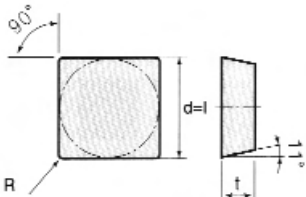
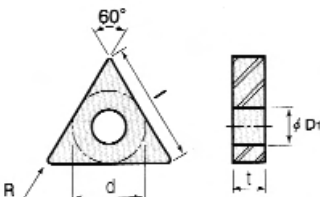
STYLE	ORDER NO.	ISO	DIMENSIONS (inch)				GRADE	
			d	t	R	D ₁	C20C	C30C
CNGA DIAMOND NEGATIVE (with hole) Precision Ground 80° Insert 	CNGA 431T 432T 433T	12 04 04T 12 04 08T 12 04 12T	1/2	3/16	1/64 1/32 3/64	.203	• • • • •	
CNGN DIAMOND NEGATIVE (without hole) Precision Ground 80° Insert 	CNGN 432T 433T	12 04 08T 12 04 12T	1/2	3/16	1/32 3/64	l=.508	• •	
DNGA DIAMOND NEGATIVE (with hole) Precision Ground 55° Insert 	DNGA 431T 432T 433T	15 04 04T 15 04 08T 15 04 12T	1/2	3/16	1/64 1/32 3/64	.203	• • • • • •	
DNGN DIAMOND NEGATIVE (without hole) Precision Ground 55° Insert 	DNGN 431T 432T 433T	15 04 04T 15 04 08T 15 04 12T	1/2	3/16	1/64 1/32 3/64	l=.610	• • • • •	
RNGA ROUND NEGATIVE (with hole) Precision Ground Insert 	RNGA 43T	12 04 00T	1/2	3/16	-	.203	•	

• In Stock

To Order Call:
1-800-263-9860

CERAMIC INSERTS



STYLE	ORDER NO.	ISO	DIMENSIONS (inch)				GRADE	
			d	t	R	D ₁	C20C	C30C
RNGN ROUND NEGATIVE (without hole) Precision Ground Insert 	RNGN 43T	12 04 00T	1/2	3/16	-	-		•
SNGA SQUARE NEGATIVE (with hole) Precision Ground Insert 	SNGA 432T 433T	12 04 08T 12 04 12T	1/2	3/16	1/32 3/64	.203		• •
SNGN SQUARE NEGATIVE (without hole) Precision Ground Insert 	SNGN 432T 433T	12 04 08T 12 04 12T	1/2	3/16	1/32 3/64	l=.500		• •
SPGN SQUARE POSITIVE (without hole) Precision Ground Insert 	SPGN 421T 422T	12 03 04T 12 03 08T	1/2	1/8	1/64 1/32	l=.500		• •
TNGA TRIANGLE NEGATIVE (with hole) Precision Ground Insert 	TNGA 331T 332T 333T 431T 432T 433T	16 04 04T 16 04 08T 16 04 12T 22 04 04T 22 04 08T 22 04 12T	1/2 3/8	3/16	1/64 1/32 3/64 1/64 1/32 3/64	.150 .203		• • • • • •

To Order Call:
1-800-263-9860

• In Stock

STYLE	ORDER NO.	ISO	DIMENSIONS (inch)				GRADE	
			d	t	R	D ₁	C20C	C30C
TNGN TRIANGLE NEGATIVE (without hole) Precision Ground Insert 	TNGN 331T	16 04 04T	3/8	3/16	1/64	l=.650	•	•
	332T	16 04 08T			1/32			
	333T	16 04 12T			3/64			
	432T	22 04 08T	1/2	3/16	1/32	l=.866	•	•
433T	22 04 12T	3/64						
TPGN TRIANGLE POSITIVE (without hole) Precision Ground Insert 	TPGN 221T	11 03 04T	1/4	1/8	1/64	l=.433	•	•
	222T	11 03 08T			1/32			
	321T	16 03 04T	3/8	1/8	1/64	l=.650	•	•
	322T	16 03 08T			1/32			
	323T	16 03 12T			3/64			
	432T	22 04 08T	1/2	3/16	1/32	l=.866	•	•
433T	22 04 12T	3/64						
VNGA DIAMOND NEGATIVE (with hole) Precision Ground 35° Insert 	VNGA 331T	16 04 04T	3/8	3/16	1/64	.150	•	•
	332T	16 04 08T			1/32			
WNGA TRIGON NEGATIVE (with hole) Precision Ground 80° Insert 	WNGA 431T	08 04 04T	1/2	3/16	1/64	.203	•	•
	432T	08 04 08T			1/32			

• In Stock

COLBIDE CERAMIC INSERT GRADE COMPARISON CHART

COLBIDE	KENAMETAL	KYOCERA	NTK	SANDVIK	SOWA	SUMITOMO	TUNGALOY	WIDIA
C20C	-	-	HC4	-	GP100	-	LX11	CW2015
C30C	KY1615	A65	HC2, HC5	CC650	GP300	NB90S	LX21	CW5025

**To Order Call:
1-800-263-9860**

TECHNICAL INFORMATION

CHARACTERISTICS:

- Capable of high speed cutting due to superior hardness at high temperatures
- Capable of machining hardened and difficult to cut materials
- High wear resistance enables long tool life
- Low chemical affinity to the workpiece results in a better finish and machining accuracy
- Excellent surface finish

APPLICATION:

- C20C** - An Al_2O_3 - TiCN based ceramic, suitable for finish cutting of high hardness and difficult to cut materials. Also good for finishing to light roughing of cast iron
- C30C** - An Al_2O_3 - TiC based ceramic, suitable for general roughing of steel and cast iron
Also good for interrupted cutting of cast iron

To Order Call:
1-800-263-9860

STYLE	ORDER NO.	ISO	DIMENSIONS (inch)				GRADE	
			d	t	d ₁	r	C32T	
CCMT 	CCMT 2(1.5)1	060204	1/4	3/32	.114	1/64	•	
	3(2.5)1	09T304	3/8	5/32	.177	1/64	•	
	3(2.5)2	09T308				1/32	•	
	431	120404	1/2	3/16	.217	1/64	•	
	432	120408				1/32	•	
CNMG 	CNMG 431	120404	1/2	3/16	.203	1/64	•	
	432	120408				1/32	•	
DCMT 	DCMT 2(1.5)1	070204	1/4	3/32	.114	1/64	•	
	3(2.5)1	11T304	3/8	5/32	.177	1/64	•	
	3(2.5)2	11T308				1/32	•	
DNMG 	DNMG 431	150404	1/2	3/16	.203	1/64	•	
	432	150408				1/32	•	
RCMX 	RCMX 120400	120400	.473	.188	.165	-	•	

• In Stock

**To Order Call:
1-800-263-9860**

CERMET INSERTS – TURNING



STYLE	ORDER NO.	ISO	DIMENSIONS (inch)				GRADE	
			d	t	d ₁	r	C32T	
RNMG 	RNMG 43	120400	1/2	3/16	.203	-	•	
SCMT 	SCMT 3(2.5)1	09T304	3/8	5/32	.177	1/64	•	
	3(2.5)2	09T308					1/32	•
	431	120404	1/2	3/16	.217	1/64	•	
	432	120408					1/32	•
SNMG 	SNMG 431	120404	1/2	3/16	.203	1/64	•	
432	120408	1/32					•	
TCMT 	TCMT 2(1.5)1	110204	1/4	3/32	.114	1/64	•	
	2(1.5)2	110208					1/32	•
	3(2.5)1	16T304	3/8	5/32	.177	1/64	•	
	3(2.5)2	16T308					1/32	•
TNGG 	TNGG 431R	220404	1/2	3/16	.203	1/64	•	
	431L	220404	1/2	3/16	.203	1/64	•	
	432R	220408	1/2	3/16	.203	1/32	•	
	432L	220408	1/2	3/16	.203	1/32	•	

• In Stock

**To Order Call:
1-800-263-9860**

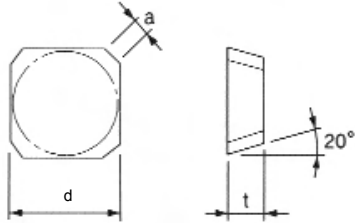

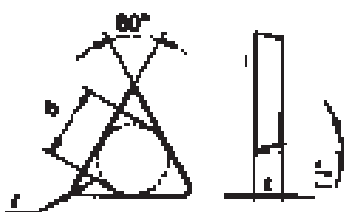
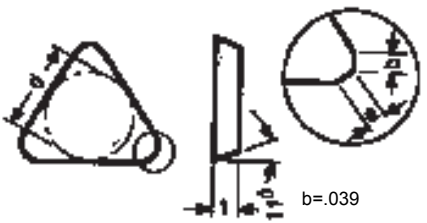
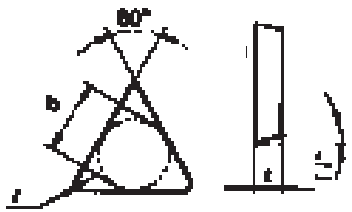
STYLE	ORDER NO.	ISO	DIMENSIONS (inch)				GRADE	
			d	t	d ₁	r	C32T	
TNMG 	TNMG 321	160304	3/8	1/8	.150	1/64	•	
	331	160404	3/8	3/16	.150	1/64	•	
	332	160408				1/32	•	
	431	220404	1/2	3/16	.203	1/64	•	
	432	220408				1/32	•	
TPMR 	TPMR 221	110304	1/4	1/8	-	1/64	•	
	321	160304	3/8	1/8	-	1/64	•	
	322	160308				1/32	•	
VBMT 	VBMT 331	160404	3/8	3/16	.173	1/64	•	
	332	160408				1/32	•	
VNMG 	VNMG 331	160404	3/8	3/16	.150	1/64	•	
	332	160408				1/32	•	
WNMG 	WNMG 431	080404	1/2	3/16	.203	1/64	•	
	432	080408				1/32	•	

• In Stock

**To Order Call:
1-800-263-9860**

CERMET INSERTS – MILLING



STYLE	ORDER NO.	ISO	DIMENSIONS (inch)				GRADE	
			d	t	a	r	C30T	
SEKN 	SEKN 42AFTN	1203AFTN	1/2	1/8	.090	-	•	
	53AFTN	1504AFTN	5/8	3/16	.094	-	•	
SPKN 	SPKN 42EDTR	1203EDTR	1/2	1/8	.055	-	•	
	53EDTR	1504EDTR	5/8	3/16	.055	-	•	
TPG 	TPG 321	160304	3/8	1/8	-	-	1/64	•
	322	160308					1/32	•
TPKN 	TPKN 32PPTR	1603PPTR	3/8	1/8	.047	-		
	43PDTR	2204PDTR	1/2	3/16	.055	-	•	
TPU 	TPU 321	160304	3/8	1/8	-	-	1/64	•
	322	160308					1/32	•
	432	220408	1/2	3/16	-	1/32		

• In Stock

**To Order Call:
1-800-263-9860**



CERMET INSERTS TECHNICAL INFORMATION

CHARACTERISTICS:

- Capable of high speed cutting due to superior hardness at high temperatures
- The excellent anti-oxidation characteristics results in longer tool life
- Wide application range from low to high cutting speeds
- Good surface finish

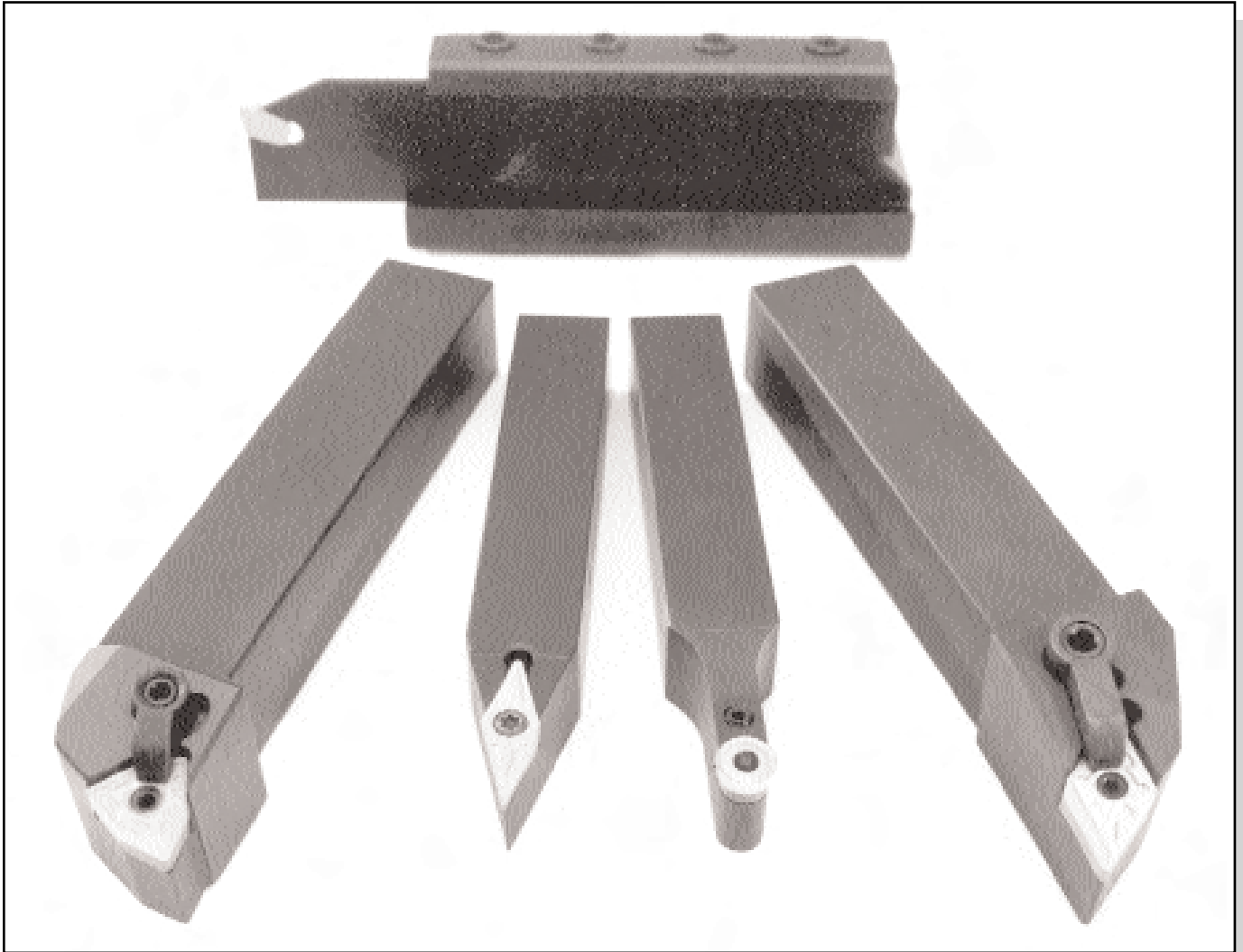
APPLICATION:

- C32T** - A titanium carbonitride based uncoated cermet covering a wide range of application from general purpose turning to finishing steel and cast iron
- C30T** - A titanium carbonitride based uncoated cermet for general milling of steel

COLBIDE CERMET INSERT GRADE COMPARISION CHART

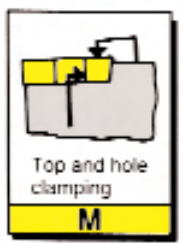
COLBIDE	KYOCERA	MITSUBISHI	NTK	SANDVIK	SOWA	SUMITOMO	TUNGALOY
C32T	TN30 TN60 TN90	NX2525 NX3035	C7X XT3	CT5015	PT10S PT20S	T110A T1200A	NS520 NS530
C30T	TC60	NX2525 NX4545	C7X	CT530	PM20S PM30S	T250A	NS540 NS740

**To Order Call:
1-800-263-9860**

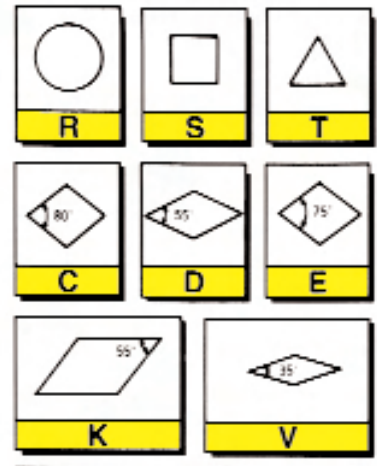


To Order Call:
1-800-263-9860

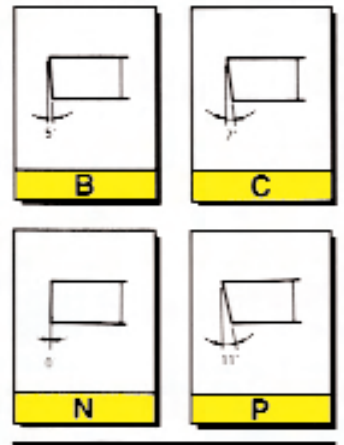
1 CLAMPING SYSTEM



2 INSERT SHAPE



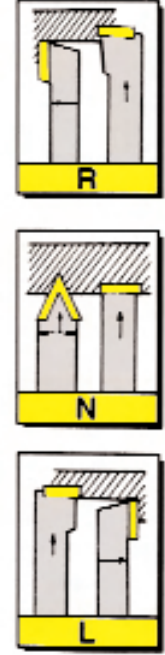
4 INSERT CLEARANCE ANGLE



3 STYLE

Symbol	Shape	Offset	Symbol	Shape	Offset	Symbol	Shape	Offset
A		without	H		with	S		with
			J		with	T		with
B		without	K		with	U		with
C		without	L		with	V		without
D		without	M		without	W		with
E		without	N		without	X		with
F		with	P		without	Y		with
G		with	Q		with	Z		with
			R		with			

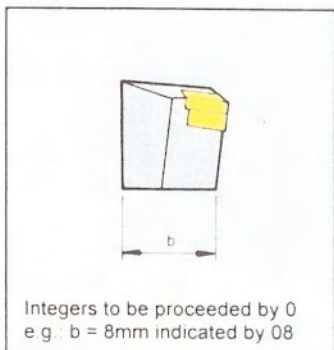
5 VERSION



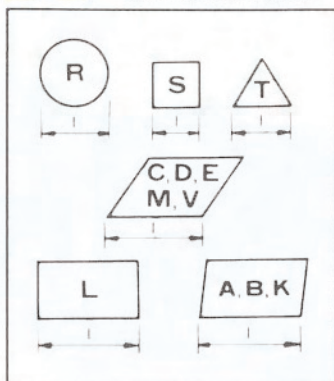
To Order Call:
1-800-263-9860

TURNING TOOLHOLDERS (metric)

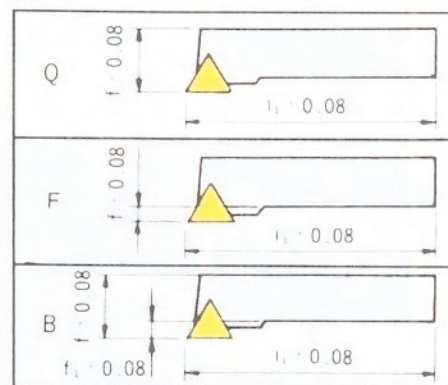
8 9 WIDTH



11 12 CUTTING EDGE LENGTH



13 QUALIFIED TOOL

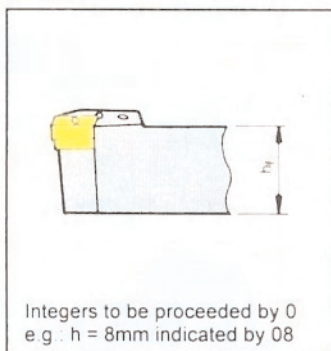


25 25 M 22

6 7 8 9 10 11 12

13 14

6 7 HEIGHT



10 TOOL LENGTH

l: mm	SYMBOL	l: mm	SYMBOL
Standard		150	M
32	A	160	N
40	B	170	P
50	C	180	Q
60	D	200	R
70	E	250	S
80	F	300	T
90	G	350	U
100	H	400	V
110	J	450	W
125	K	500	Y
140	L	SPECIAL	X

14 MANUFACTURERS TYPE DESIGNATION

When required a supplementary code can be added if the manufacturer wants to provide additional information.

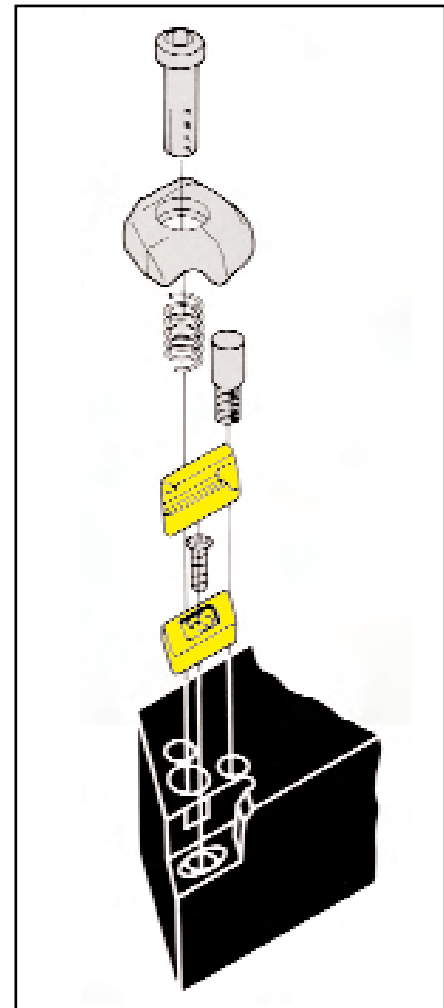
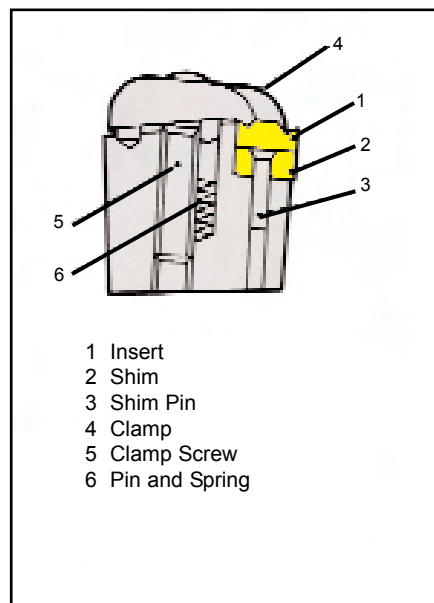
Note !
Letter symbol in 10th position can be replaced by a dash for standard length tools.

To Order Call:
1-800-263-9860

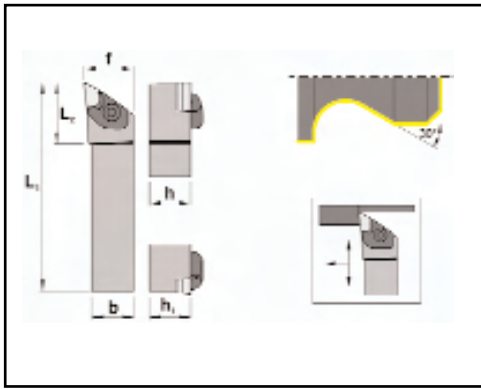


FEATURES:

- SECURE CLAMPING FOR HEAVY CUTTING
- LESS CUTTING RESISTANCE MINIMIZING CHATTERING
- UNIQUE CLAMP PULLS THE INSERT BACK INTO THE POCKET PERMITTING ACCURATE INSERT LOCATION AND RIGIDITY WHEN BACK CUTTING UP A FACE



To Order Call:
1-800-263-9860



CKJN R/L 93°

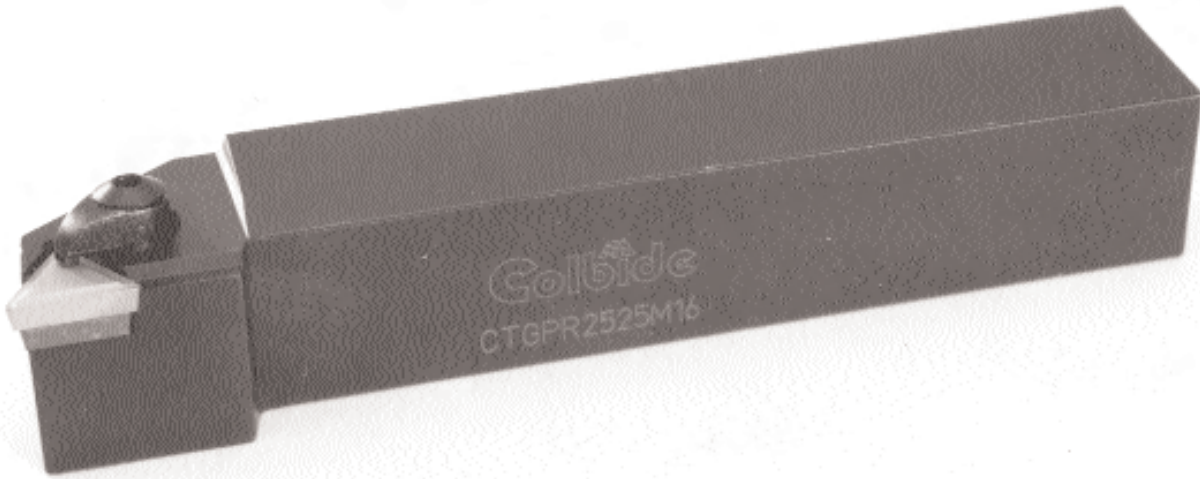
Negative Rake



ORDER NO.	DIMENSIONS (mm)					SPARE PARTS						INSERT TYPE		
	h-h ₁	b	L ₁	L ₂	f	Clamp	Screw	Spring	Pin	Shim	Shim Pin		R	L
CKJNR 2020 K16	20	20	125	34	30				4203			KNUX 160405 R11 160405 R12 160410 R11	•	
	2525 M16	25	25	150	34	2316	1614	4295	4204	3226	4012		•	
	3225 P16	32	25	170	34				4204				•	
CKJNL 2020 K16	20	20	125	34	30				4203			KNUX 160405 L11 160405 L12 160410 L11		•
	2525 M16	25	25	150	34	2326	1614	4295	4204	3236	4012			•
	3225 P16	32	25	170	34				4204					•

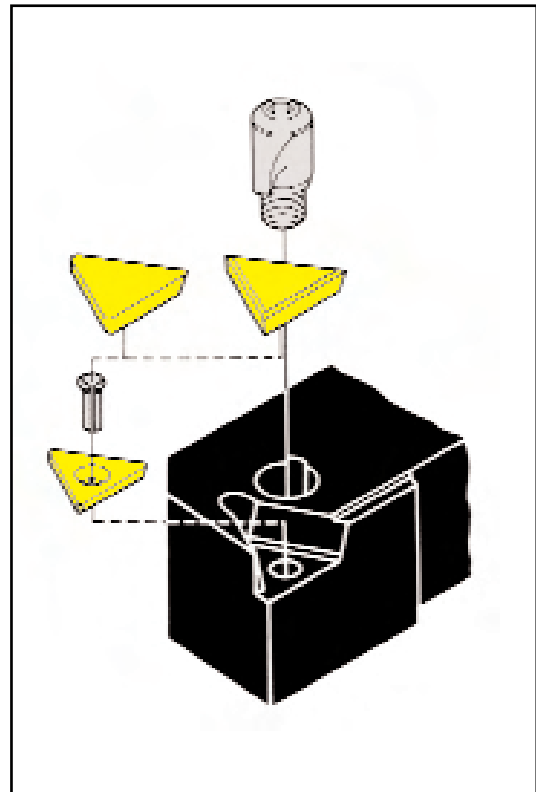
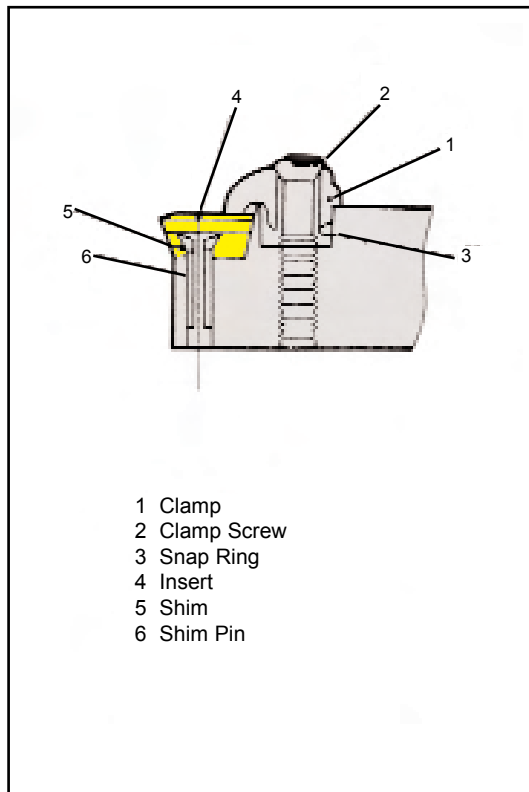
• In Stock

To Order Call:
1-800-263-9860

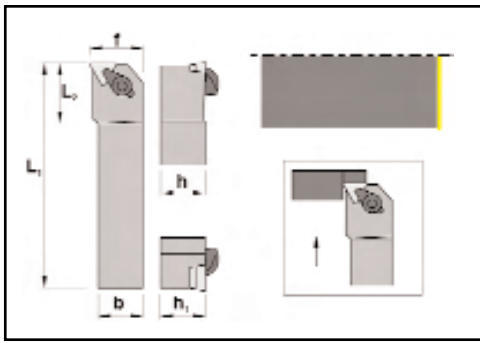


FEATURES:

- EASY SET UP BY USING COMPACT AND SIMPLE CLAMPING SYSTEM CONSISTING OF A CLAMP AND A SCREW WITH A SNAP RING
- DESIGNED FOR USE WITH INSERTS HAVING MOULDED CHIPBREAKERS (TPMR & TPGR)



To Order Call:
1-800-263-9860



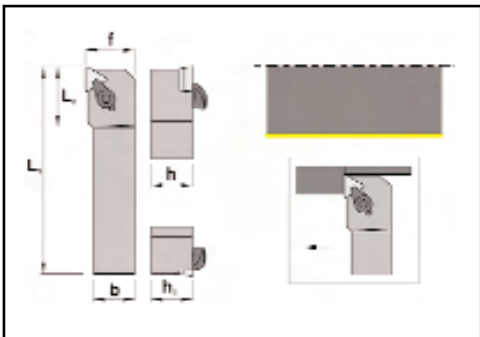
CTFP R/L
Positive Rake

90°



ORDER NO.	DIMENSIONS (mm)					SPARE PARTS						INSERT TYPE	R L	
	h-h ₁	b	L ₁	L ₂	f	Clamp Assembly	Key	Shim	Shim Pin					
CTFP R/L 1212 F11	12	12	80	18	16							TPGR, TPMR, TPU, 221	•	•
1616 H11	16	16	100	22	20	2207	5025	-	-				•	•
2020 K11	20	20	125	22	25								•	•
2020 K16	20	20	125	22	25	2209	5003	3116	4002			TPGR, TPMR, TPU, 322	•	•
2525 M16	25	25	150	22	32								•	•
3232 P22	32	32	170	34	40	2211	5004	3122	4012			TPGR, TPMR, TPU, 432	•	•

• In Stock



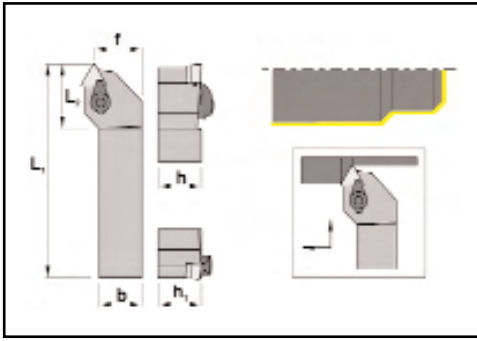
CTGP R/L
Positive Rake

90°

ORDER NO.	DIMENSIONS (mm)					SPARE PARTS						INSERT TYPE	R L	
	h-h ₁	b	L ₁	L ₂	f	Clamp Assembly	Key	Shim	Shim Pin					
CTGP R/L 1212 F11	12	12	80	18	16							TPGR, TPMR, TPU, 221	•	•
1616 H11	16	16	100	22	20	2207	5025	-	-				•	•
2020 K11	20	20	125	22	25								•	•
2020 K16	20	20	125	28	25	2209	5003	3116	4002			TPGR, TPMR, TPU, 322	•	•
2525 M16	25	25	150	28	32								•	•
3232 P22	32	32	170	34	40	2211	5004	3122	4012			TPGR, TPMR, TPU, 432	•	•

• In Stock

To Order Call:
1-800-263-9860



CTPP R/L
Positive Rake

60°

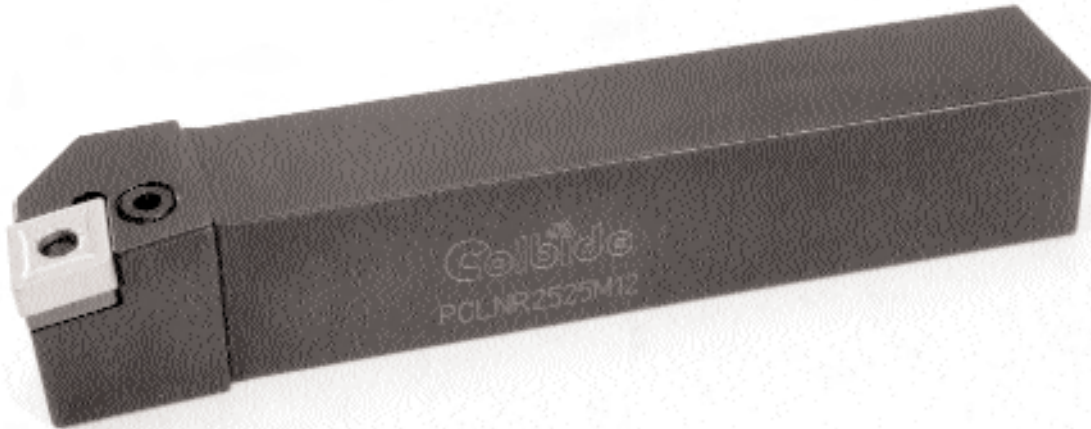
Colbide

ORDER NO.	DIMENSIONS (mm)					SPARE PARTS						INSERT TYPE	R	L
	h-h ₁	b	L ₁	L ₂	f	Clamp Assembly	Key	Shim	Shim Pin					
CTPP R/L 2020 K16 2525 M16	20	20	125	28	17	2209	5003	3116	4002			TPGR, TPMR, TPU, 322	•	•
	25	25	150	28	22								•	•

• In Stock

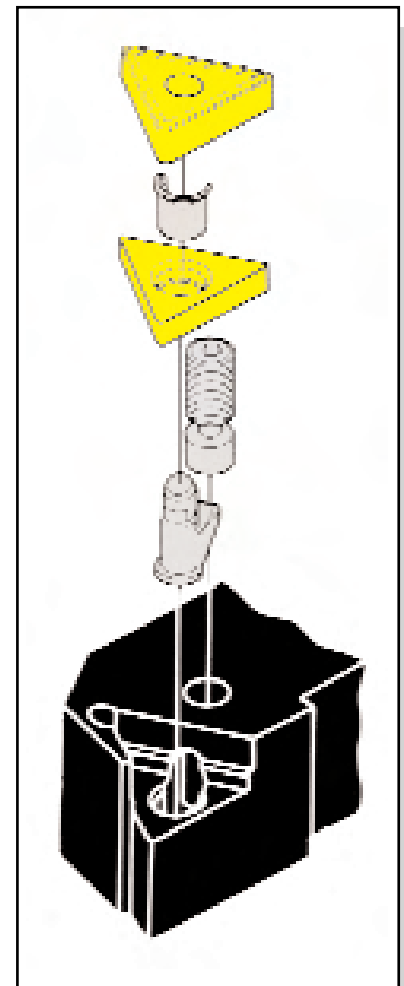
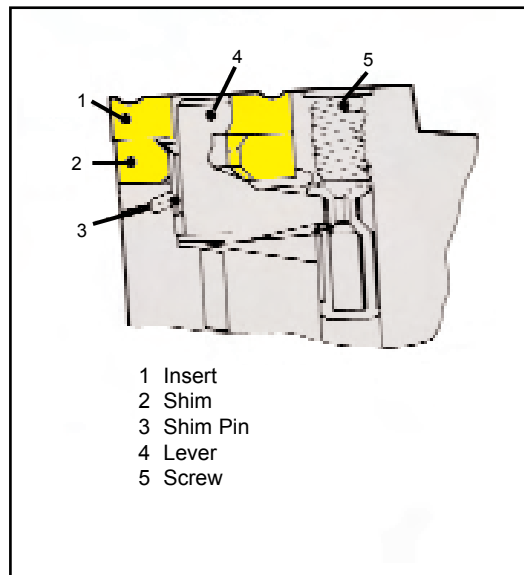
To Order Call:
1-800-263-9860

“P” LEVER TYPE TOOLHOLDERS (metric)

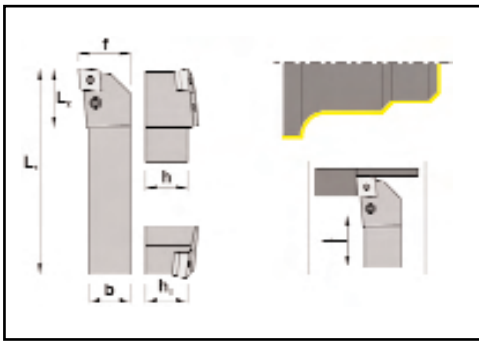


FEATURES:

- ENABLES USE OF ALL NEGATIVE RAKE PIN LOCK INSERTS
- LEVER SCREW CAN BE LOCKED FROM BOTH TOP AND BOTTOM
- EXCELLENT CHIP FLOW OVER TOP FACE OF INSERT BECAUSE OF CLEAR TOP SURFACE



To Order Call:
1-800-263-9860

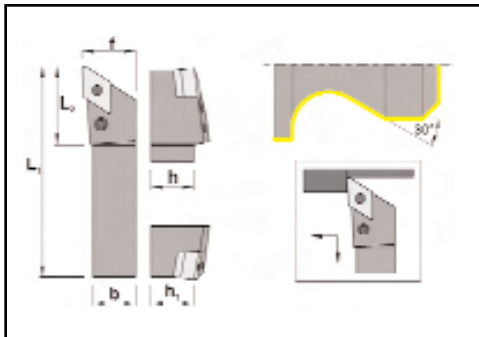


PCLN R/L 95°
Negative Rake



ORDER NO.	DIMENSIONS (mm)					SPARE PARTS						INSERT TYPE			
	h=h ₁	b	L ₁	L ₂	f	Lever	Screw	Key	Shim	Shim Pin	R		L		
PCLN R/L 1616 H12	16	16	100	26	20	8312	1648						CNGP	•	•
2020 K12	20	20	125	28	25								CNMA, CNMG,	•	•
2525 M12	25	25	150	28	32	8012	1608	5003	3612	4112			CNMM, CNMP,	•	•
3225 P12	32	25	170	28	32								432	•	•
3232 P19	32	32	170	42	40	8019	1610	5004	3619	4119			CNMA, CNMG,	•	•
4040 S19	40	40	250	45	50								CNMM, 643		

• In Stock



PDJN R/L 93°
Negative Rake

ORDER NO.	DIMENSIONS (mm)					SPARE PARTS						INSERT TYPE			
	h=h ₁	b	L ₁	L ₂	f	Lever	Screw	Key	Shim	Shim Pin	R		L		
PDJN R/L 2020 K15	20	20	125	34	25								DNMA, DNMG,	•	•
2525 M15	25	25	150	34	32	8415	1638	5003	3725	4135			DNMM, DNMP,	•	•
3225 P15	32	25	170	34	32								432	•	•

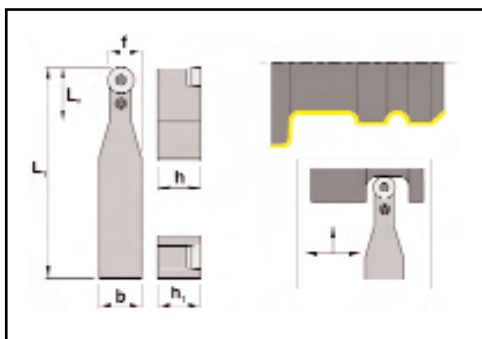
For DNMA, DNMG, DNMM & DNMP 442 Spare Parts - Shim 3715, Shim Pin 4112

• In Stock

To Order Call:
1-800-263-9860

PRDCN

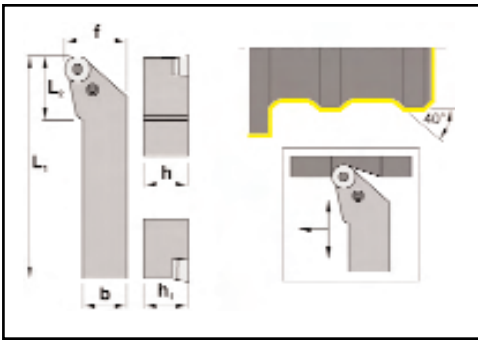
Positive Rake



ORDER NO.	DIMENSIONS (mm)					SPARE PARTS						INSERT TYPE		
	h-h ₁	b	L ₁	L ₂	f	Lever	Screw	Key	Shim	Shim Pin			N	
PRDCN 2020 K10	20	20	125	22	15.0	8110	1705	5002	3810	4110		RCMT, RCMX 1003	•	
2020 K12	20	20	125	28	16.0	8112	1606	5025	3812	4110		RCMT, RCMX 1204	•	
2525 M12	25	25	150	28	18.5									
3225 P16	32	25	170	34	20.5	8116	1706	5025	3816	4116		RCMT, RCMX 1606	•	
3232 P20	32	32	170	42	26.0	8120	1708	5003	3820	4115		RCMT, RCMX 2006	•	
4040 S25	40	40	250	45	32.5	8125	1710	5004	3825	4119		RCMT, RCMX 2507	•	
5050 V32	50	50	400	52	41.0	8132	1612	5005	3832	4125		RCMT, RCMX 3209	•	

• In Stock

To Order Call:
1-800-263-9860



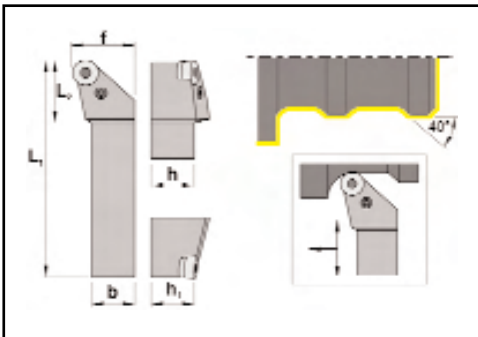
PRSC R/L

Positive Rake



ORDER NO.	DIMENSIONS (mm)					SPARE PARTS						INSERT TYPE		
	h-h ₁	b	L ₁	L ₂	f	Lever	Screw	Key	Shim	Shim Pin			R	L
PRSC R/L 2525 M12	25	25	150	28	32	8112	1606	5025	3812	4110		RCMT,RCMX, 1204	•	

• In Stock



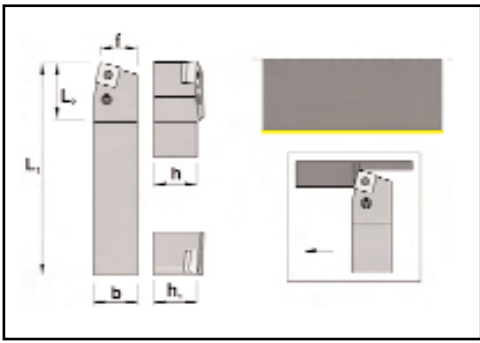
PRSN R/L

Negative Rake

ORDER NO.	DIMENSIONS (mm)					SPARE PARTS						INSERT TYPE		
	h-h ₁	b	L ₁	L ₂	f	Lever	Screw	Key	Shim	Shim Pin			R	L
PRSN R/L 2525 M12	25	25	150	28	32	8012	1608	5003	3912	4112		RNMA, RNMG, 43		

• In Stock

To Order Call:
1-800-263-9860

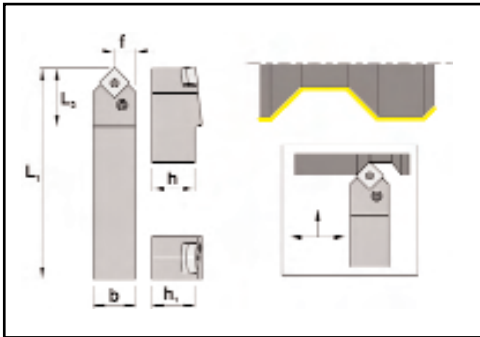


PSBN R/L 75° Negative Rake



ORDER NO.	DIMENSIONS (mm)					SPARE PARTS						INSERT TYPE		
	h-h ₁	b	L ₁	L ₂	f	Lever	Screw	Key	Shim	Shim Pin			R	L
PSBN R/L 2020 K09	20	20	125	22	17	8009	1606	5025	3509	4110		SNMA, SNMG, SNMM, SNGG/R, 322	•	
2020 K12	20	20	125	28	17							SNMA, SNMG, SNMM, SNGG R/L, 432	•	•
2525 M12	25	25	150	28	22	8012	1608	5003	3512	4112			•	•
3225 P12	32	25	170	28	22								•	

• In Stock

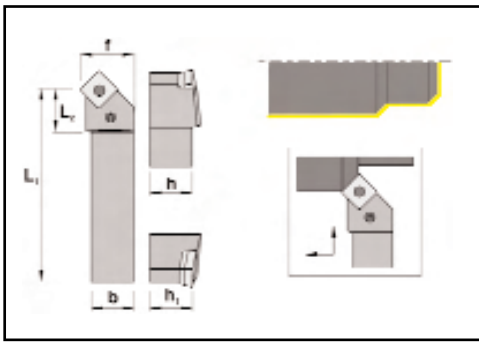


PSDNN 45° Negative Rake

ORDER NO.	DIMENSIONS (mm)					SPARE PARTS						INSERT TYPE		
	h-h ₁	b	L ₁	L ₂	f	Lever	Screw	Key	Shim	Shim Pin			N	
PSDNN 2525 M12	25	25	150	28	12.5	8012	1608	5003	3512	4112		SNMA, SNMG, SNMM, 432	•	

• In Stock

**To Order Call:
1-800-263-9860**



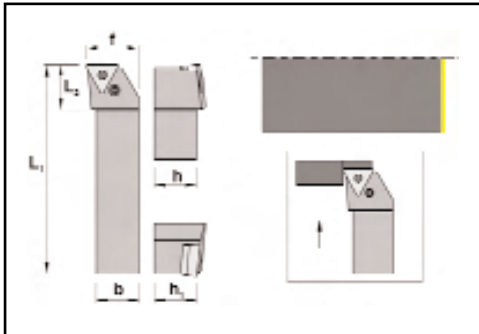
PSSNR
Negative Rake

45°

Colbide

ORDER NO.	DIMENSIONS (mm)					SPARE PARTS						INSERT TYPE				
	h-h ₁	b	L ₁	L ₂	f	Lever	Screw	Key	Shim	Shim Pin			R	L		
PSSNR 2020 K12	20	20	125	28	25											
2525 M12	25	25	150	28	32	8012	1608	5003	3512	4112		SNMA, SNMG, SNMM, SNGG/R, 432	•			
3225 P12	32	25	170	28	32								•			
3232 P19	32	32	170	42	40	8019	1610	5004	3519	4119		SNMA, SNMG, SNMM, 643	•			

• In Stock



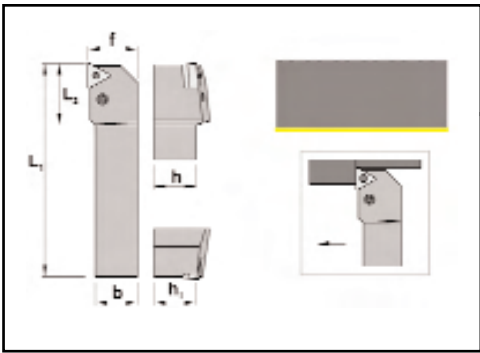
PTFN R/L
Negative Rake

90°

ORDER NO.	DIMENSIONS (mm)					SPARE PARTS						INSERT TYPE				
	h-h ₁	b	L ₁	L ₂	f	Lever	Screw	Key	Shim	Shim Pin			R	L		
PTFN R/L 2020 K16	20	20	125	22	25											
2525 M16	25	25	150	22	32	8009	1606	5025	3416	4109		TNMA, TNMG, TNMM, TNMP, TNGGR/L, 332	•	•		
2525 M22	25	25	150	28	32								•	•		
3225 P22	32	25	170	28	32	8012	1608	5003	3422	4112		TNMA, TNMG, TNMM, TNMP, TNGGR/L, 432	•	•		

• In Stock

To Order Call:
1-800-263-9860



PTCN R/L 90°
Negative Rake

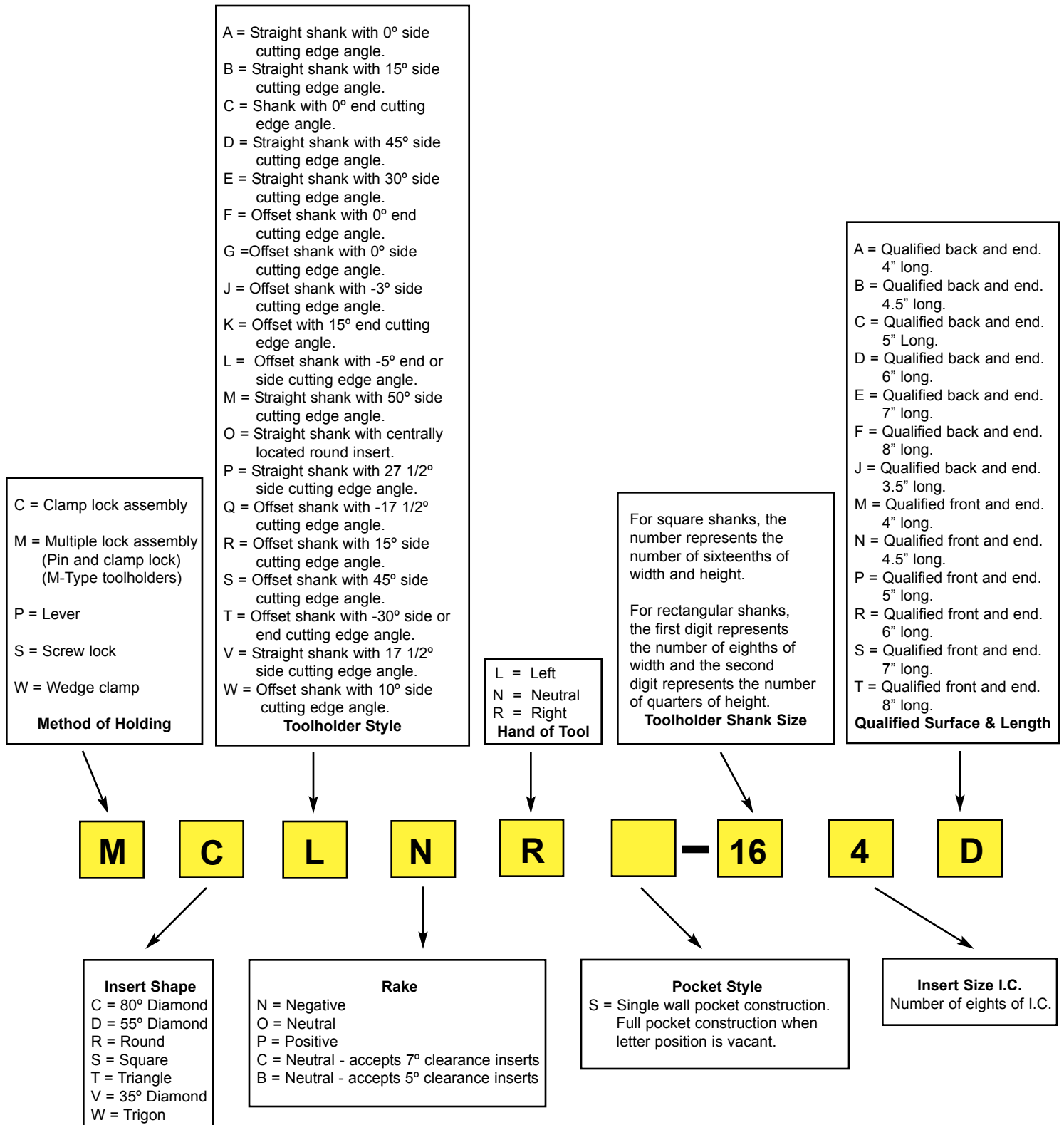


ORDER NO.	DIMENSIONS (mm)					SPARE PARTS						INSERT TYPE		
	h-h ₁	b	L ₁	L ₂	f	Lever	Screw	Key	Shim	Shim Pin			R	L
PTCN R/L 1616 H16	16	16	100	22	20							TNMA, TNMG, TNMM, TNMP, TNGCR/L, 332	•	•
2020 K16	20	20	125	22	25	8009	1606	5025	3416	4109	•		•	
2525 M16	25	25	150	22	32						•		•	
3225 P16	32	25	170	22	32						•		•	
2525 M22	25	25	150	28	32	8012	1608	5003	3422	4112	TNMA, TNMG, TNMM, TNMP, TNGCR/L, 432	•	•	
3232 P22	32	32	170	28	40							•	•	
3232 P27	32	32	170	42	40	8015	1708	5003	3427	4115		TNMA, TNMG, TNMM, 543	•	•
5050 T33	50	50	300	45	60	8019	1610	5004	3433	4133	TNMA, TNMG, TNMM, 666	•		

• In Stock

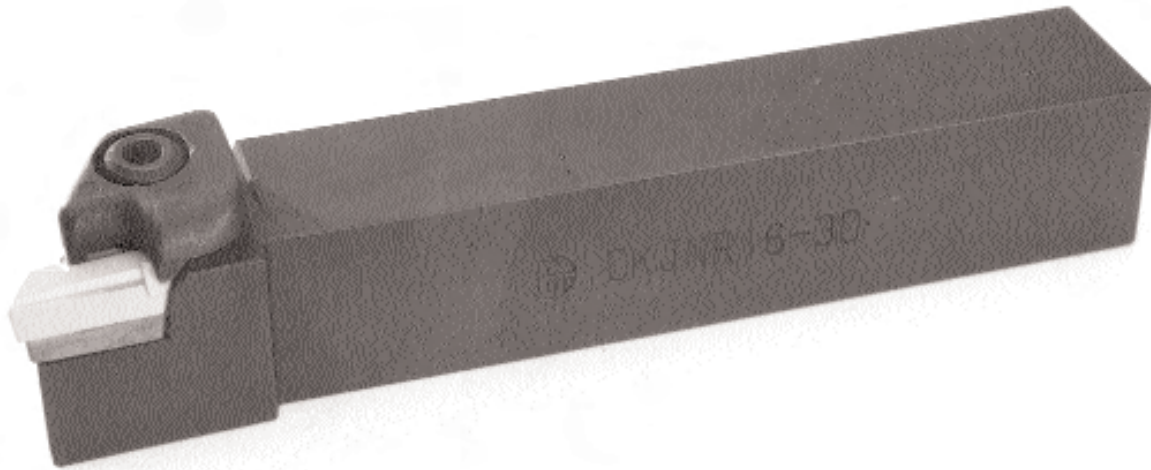
To Order Call:
1-800-263-9860

External Toolholders Identification System



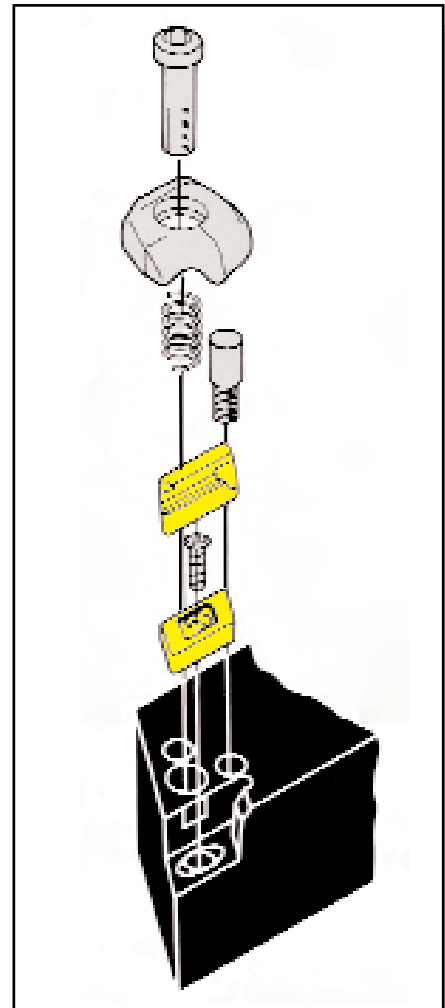
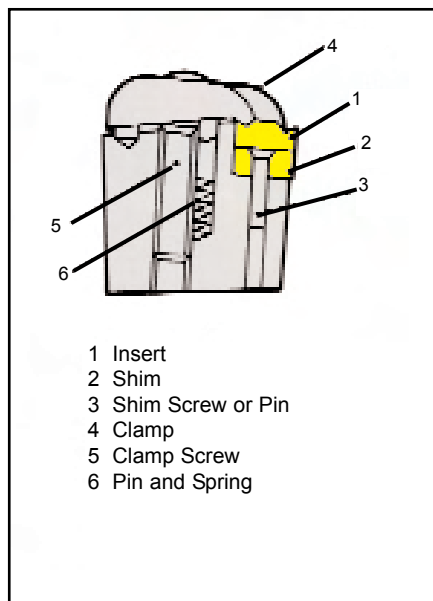
To Order Call:
1-800-263-9860

COPYING TOOLHOLDERS (inch)

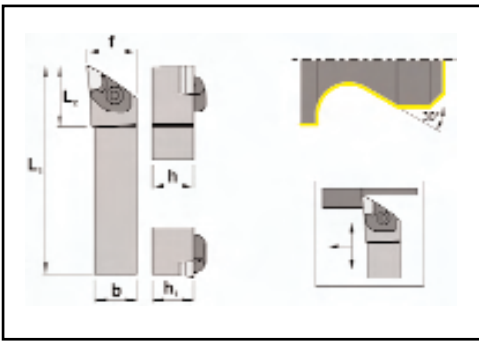


FEATURES:

- SECURE CLAMPING FOR HEAVY CUTTING
- LESS CUTTING RESISTANCE MINIMIZING CHATTERING
- UNIQUE CLAMP PULLS THE INSERT BACK INTO THE POCKET PERMITTING ACCURATE INSERT LOCATION AND RIGIDITY WHEN BACK CUTTING UP A FACE



To Order Call:
1-800-263-9860



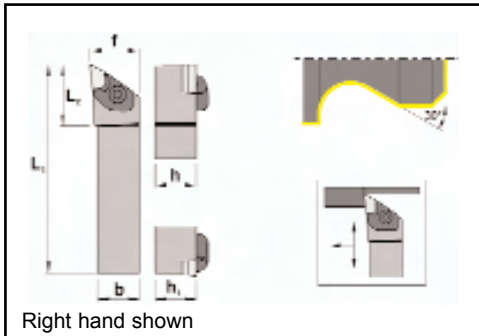
CKJNR
Negative Rake

93°



ORDER NO.	DIMENSIONS (inch)					SPARE PARTS						INSERT TYPE		
	h-h ₁	b	L ₁	L ₂	f	Clamp	Clamp Screw	Spring	Shim	Shim Pin	Pin		R	L
CKJNR 16-3D 20-3E	1.000	1.000	6.00	1.340	1.250	2316	1614	4295	3226	4012	4204	KNUX 160405R11 160405R12 160410R11	•	•
	1.250	1.250	7.00	1.340	1.500									

• In Stock



CKJNL
Negative Rake

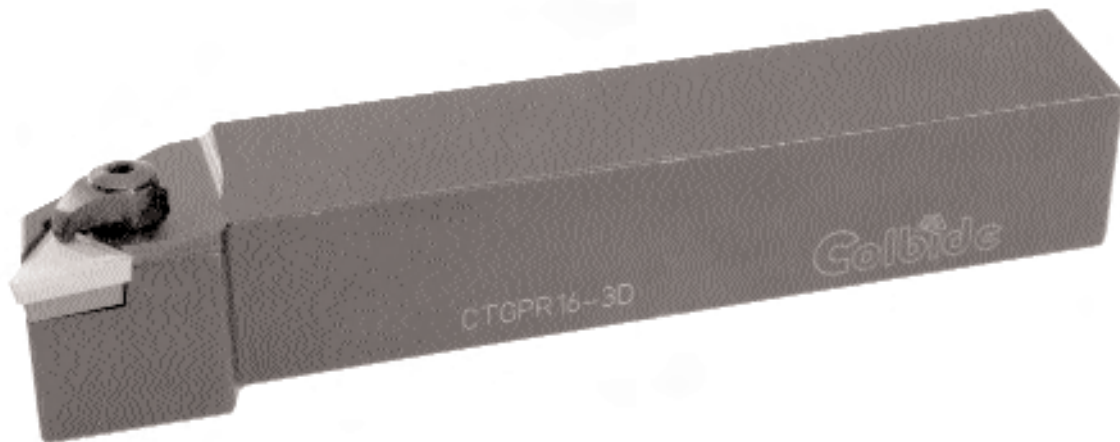
93°

Right hand shown

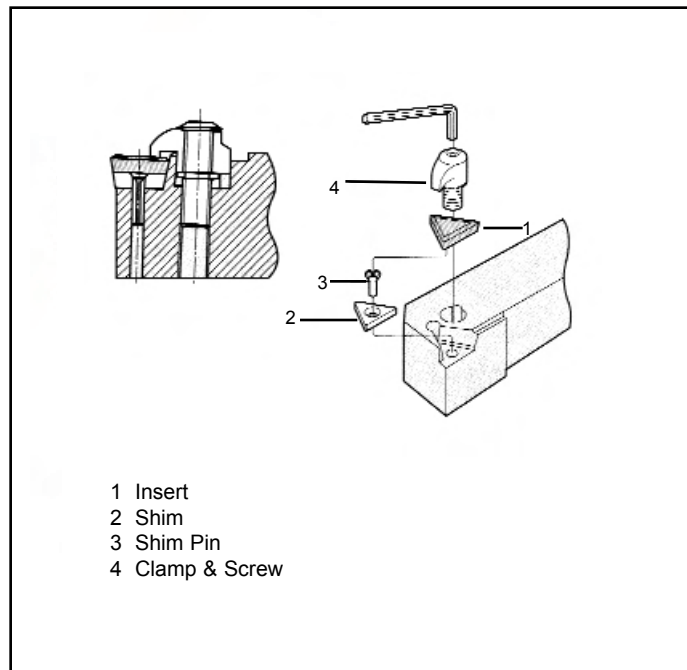
ORDER NO.	DIMENSIONS (inch)					SPARE PARTS						INSERT TYPE		
	h-h ₁	b	L ₁	L ₂	f	Clamp	Clamp Screw	Spring	Shim	Shim Pin	Pin		R	L
CKJNL 16-3D 20-3E	1.000	1.000	6.00	1.340	1.250	2326	1614	4295	3236	4012	4204	KNUX 160405L11 160405L12 160410L11	•	•
	1.250	1.250	7.00	1.340	1.500									

• In Stock

**To Order Call:
1-800-263-9860**

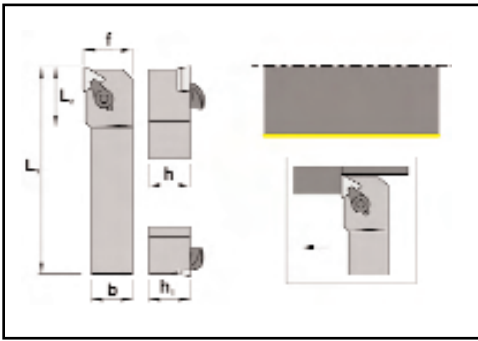
**FEATURES:**

- EASY SET UP BY USING COMPACT AND SIMPLE CLAMPING SYSTEM CONSISTING OF A CLAMP AND A SCREW
- DESIGNED FOR USE WITH INSERTS HAVING MOULDED CHIPBREAKERS (TPMR & TPGR)



**To Order Call:
1-800-263-9860**

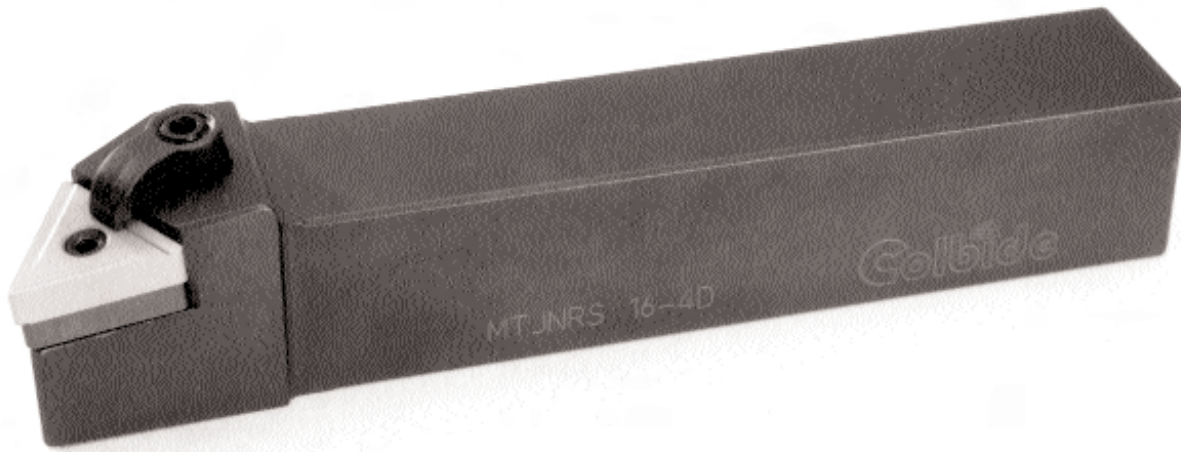
CTGP R/L 90°
Positive Rake



ORDER NO.	DIMENSIONS (inch)					SPARE PARTS						INSERT TYPE	R	L
	h-h ₁	b	L ₁	L ₂	f	Clamp	Key	Shim	Shim Pin	Clamp Screw				
CTGP R/L 12-3B 16-3D	0.750	0.750	4.50	1.000	1.000	CL20	5103	3116	4002	XNS47	TPGR, TPMR, TPU, 322	•	•	
	1.000	1.000	6.00	1.000	1.250					XNS48		•	•	

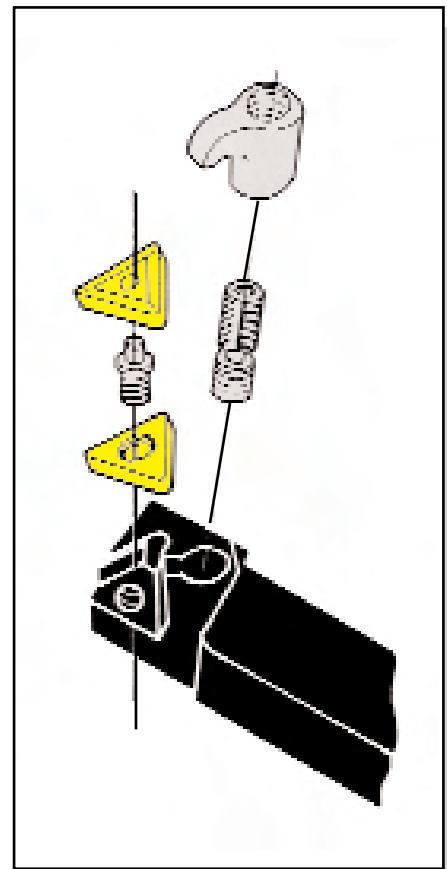
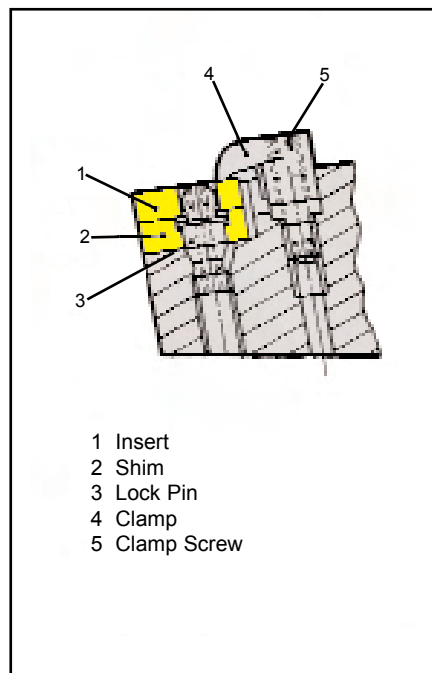
• In Stock

To Order Call:
1-800-263-9860

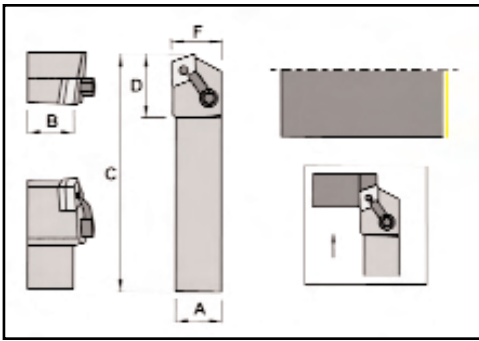


FEATURES:

- ENABLES USE OF ALL NEGATIVE RAKE PIN LOCK INSERTS
- FIRM CLAMPING OF INSERT BY USING BOTH TOP CLAMP AND LOCK PIN
- BOTH TOP CLAMP AND LOCK PIN CAN BE LOCKED FROM TOP OR BOTTOM
- WELL SUITED FOR OPERATIONS RANGING FROM LIGHT FINISHING TO HEAVY CUTTING



To Order Call:
1-800-263-9860

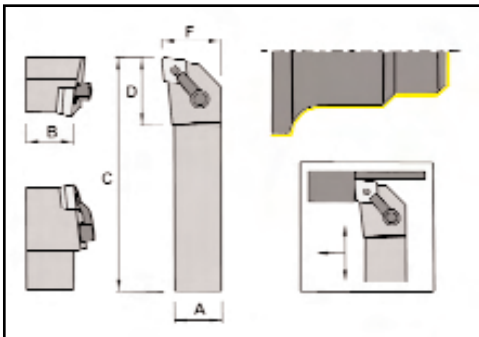


MCKN R/L 75° Negative Rake



ORDER NO.	DIMENSIONS (inch)					SPARE PARTS						INSERT TYPE		
	A	B	C	D	F	Shim	Lock Pin	Key	Clamp	Clamp Screw	Key		R	L
MCKN R/L 12-4B	0.750	0.750	4.50	1.200	1.000	ICSN432	NL46	5124	CL20	XNS48	5103	CNMA, CNMG, CNMM, CNMP, CNGP, 432	•	•
16-4D	1.000	1.000	6.00	1.200	1.250									

• In Stock

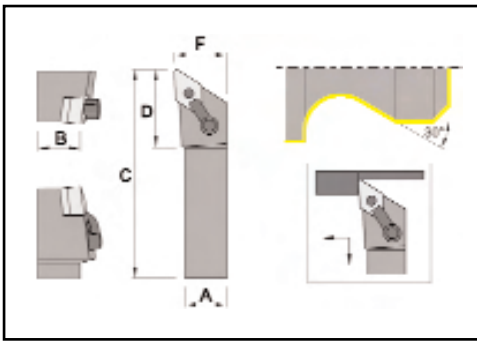


MCLN R/L 95° Negative Rake

ORDER NO.	DIMENSIONS (inch)					SPARE PARTS						INSERT TYPE		
	A	B	C	D	F	Shim	Lock Pin	Key	Clamp	Clamp Screw	Key		R	L
MCLN R/L 12-4B	0.750	0.750	4.50	1.130	1.000	ICSN432	NL46	5124	CL20	XNS48	5103	CNMA, CNMG, CNMM, CNMP, CNGP, 432	•	•
16-4D	1.000	1.000	6.00	1.130	1.250									
20-4D	1.250	1.250	6.00	1.130	1.500									
24-6D	1.500	1.500	6.00	1.510	2.000	ICSN633	NL68	5135	CL12	XNS510	5104	CNMA, CNMG, CNMM, CNMP, 643	•	•

• In Stock

**To Order Call:
1-800-263-9860**

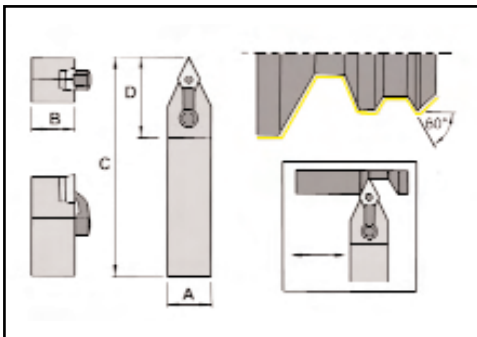


MDJN R/L 93° Negative Rake



ORDER NO.	DIMENSIONS (inch)					SPARE PARTS						INSERT TYPE	R	L
	A	B	C	D	F	Shim	Lock Pin	Key	Clamp	Clamp Screw	Key			
MDJN R/L 12-4B	0.750	0.750	4.50	1.500	1.000							DNMA, DNMG, DNMM, DNMP, 432	•	•
16-4D	1.000	1.000	6.00	1.500	1.250	IDSN432	NL46	5124	CL20	XNS48	5103		•	•
20-4D	1.250	1.250	6.00	1.500	1.500								•	•

• In Stock

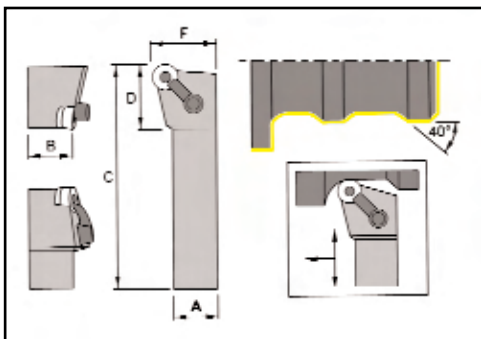


MDPNN 62.5° Negative Rake

ORDER NO.	DIMENSIONS (inch)					SPARE PARTS						INSERT TYPE	N
	A	B	C	D		Shim	Lock Pin	Key	Clamp	Clamp Screw	Key		
MDPNN 12-4B	0.750	0.750	4.50	1.620								DNMA, DNMG, DNMM, DNMP, 432	•
16-4D	1.000	1.000	6.00	1.620		IDSN432	NL46	5124	CL20	XNS48	5103		•
20-4D	1.250	1.250	6.00	1.620									•

• In Stock

**To Order Call:
1-800-263-9860**

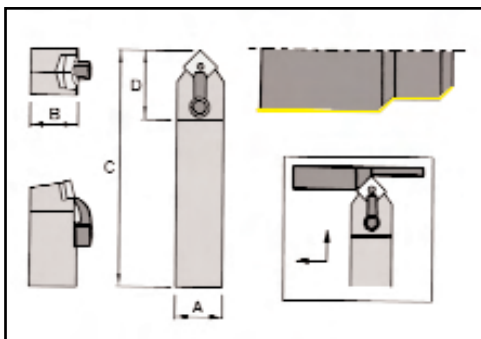


MRGN R/L

Negative Rake

ORDER NO.	DIMENSIONS (inch)					SPARE PARTS						INSERT TYPE	R	L
	A	B	C	D	F	Shim	Lock Pin	Key	Clamp	Clamp Screw	Key			
MRCNR 16-4D	1.000	1.000	6.00	1.060	1.250	IRSN43	NL46	5124	CL20	XNS48	5103	RNMA, RNMG, 43	•	

• In Stock



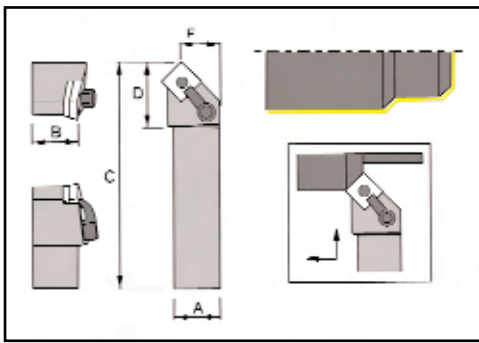
MSDNN

Negative Rake **45°**

ORDER NO.	DIMENSIONS (inch)				SPARE PARTS						INSERT TYPE	N
	A	B	C	D	Shim	Lock Pin	Key	Clamp	Clamp Screw	Key		
MSDNN 12-4B	0.750	0.750	4.50	1.300	ISSN432	NL46	5124	CL20	XNS48	5103	SNMA, SNMG, SNMM, 432	•
16-4D	1.000	1.000	6.00	1.300								•

• In Stock

To Order Call:
1-800-263-9860



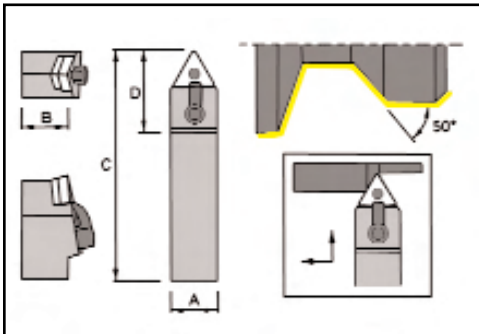
MSSNR
Negative Rake

45°



ORDER NO.	DIMENSIONS (inch)					SPARE PARTS						INSERT TYPE	R	L
	A	B	C	D	F	Shim	Lock Pin	Key	Clamp	Clamp Screw	Key			
MSSNR 12-4B 16-4D	0.750 1.000	0.750 1.000	4.50 6.00	1.300 1.300	0.675 0.925	ISSN432	NL46	5124	CL20	XNS48	5103	SNMA, SNMG, SNMM, 432	.	.

• In Stock



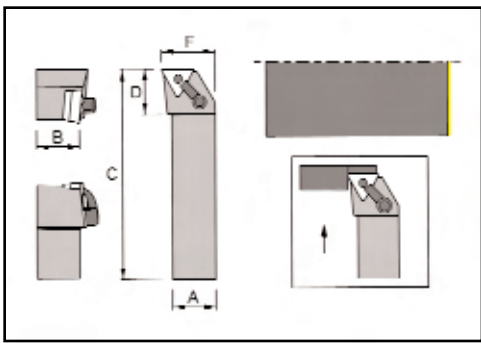
MTENNS
Negative Rake

60°

ORDER NO.	DIMENSIONS (inch)					SPARE PARTS						INSERT TYPE	N	
	A	B	C	D		Shim	Lock Pin	Key	Clamp	Clamp Screw	Key			
MTENNS 12-3B 16-3D	0.750 1.000	0.750 1.000	4.50 6.00	1.300 1.300		ITSN322	NL34L	5102	CL20	XNS48	5103	TNMA, TNMG, TNMM, TNMP, 332	.	.
16-4D 20-4D	1.000 1.250	1.000 1.250	6.00 6.00	1.500 1.500		ITSN432	NL46	5124	CL20	XNS48	5103	TNMA, TNMG, TNMM, TNMP, 432	.	.

• In Stock

To Order Call:
1-800-263-9860

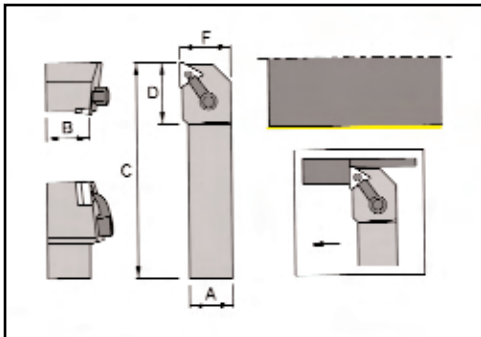


MTFN R/L 90° Negative Rake



ORDER NO.	DIMENSIONS (inch)					SPARE PARTS						INSERT TYPE		
	A	B	C	D	F	Shim	Lock Pin	Key	Clamp	Clamp Screw	Key		R	L
MTFN R/L 12-3B	0.750	0.750	4.50	1.000	1.000	ITSN322	NL34L	5102	CL20	XNS48	5103	TNMA, TNMG, TNMM, TNMP, TNGGR/L, 332	•	•
16-4D	1.000	1.000	6.00	1.000	1.250	ITSN432	NL46	5124	CL20	XNS48	5103	TNMA, TNMG, TNMM, TNMP, TNGGR/L, 432	•	•

• In Stock

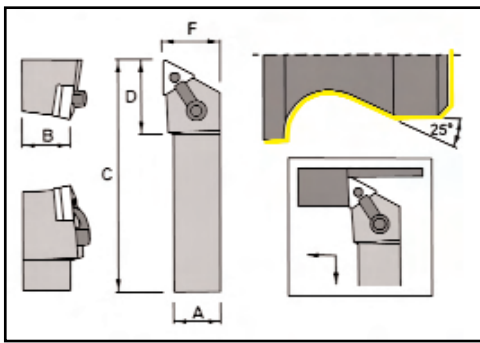


MTGN R/L 90° Negative Rake

ORDER NO.	DIMENSIONS (inch)					SPARE PARTS						INSERT TYPE		
	A	B	C	D	F	Shim	Lock Pin	Key	Clamp	Clamp Screw	Key		R	L
MTGN R/L 12-3B	0.750	0.750	4.50	1.060	1.000	ITSN322	NL34L	5102	CL20	XNS48	5103	TNMA, TNMG, TNMM, TNMP, TNGGR/L, 332	•	•
16-3D	1.000	1.000	6.00	1.060	1.250									
16-4D	1.000	1.000	6.00	1.220	1.250	ITSN432	NL46	5124	CL20	XNS48	5103	TNMA, TNMG, TNMM, TNMP, TNGGR/L, 432	•	•
20-4D	1.250	1.250	6.00	1.220	1.500									

• In Stock

To Order Call:
1-800-263-9860



MTJN RS/LS

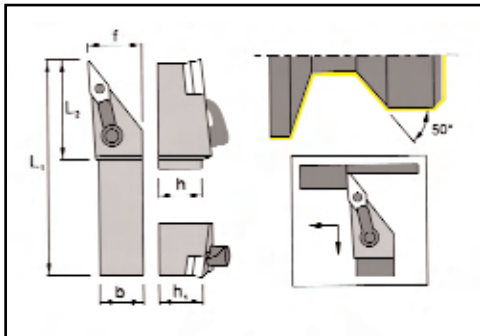
Negative Rake

93°



ORDER NO.	DIMENSIONS (inch)					SPARE PARTS						INSERT TYPE	R	L
	A	B	C	D	F	Shim	Lock Pin	Key	Clamp	Clamp Screw	Key			
MTJN RS/LS 12-3B 16-3D	0.750	0.750	4.50	1.030	1.000	ITSN322	NL34L	5102	CL20	XNS48	5103	TNMA, TNMG, TNMM, TNMP, TNGGR/L, 332	•	•
	1.000	1.000	6.00	1.030	1.250									
16-4D 20-4D	1.000	1.000	6.00	1.250	1.250	ITSN432	NL46	5124	CL20	XNS48	5103	TNMA, TNMG, TNMM, TNMP, TNGGR/L, 432	•	•
	1.250	1.250	6.00	1.250	1.500									
20-5D	1.250	1.250	6.00	1.440	1.500	ITSN533	NL58	5103	CL12	XNS510	5104	TNMA, TNMG, TNMM, 544		

• In Stock



MVJN R/L

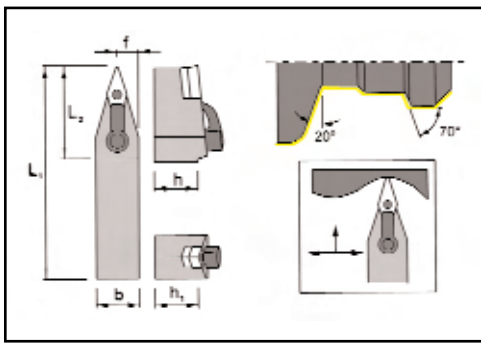
Negative Rake

93°

ORDER NO.	DIMENSIONS (inch)					SPARE PARTS						INSERT TYPE	R	L
	h-h ₁	b	L ₁	L ₂	f	Shim	Lock Pin	Key	Clamp	Clamp Screw	Key			
MVJN R/L 12-3B 16-3D	0.750	0.750	4.50	1.620	1.000	IVSN322	NL34L	5102	CL22	XNS48	5103	VNMA, VNMG, VNMP, 332	•	•
	1.000	1.000	6.00	1.620	1.250									
16-4D	1.000	1.000	6.00	1.880	1.250	IVSN433	NL46	5124	CL30	XNS510	5104	VNMA, VNMG, VNMP, 432	•	•

• In Stock

To Order Call:
1-800-263-9860



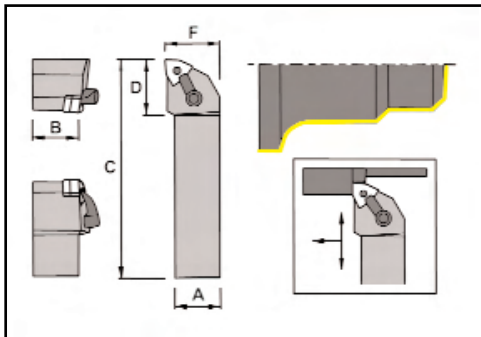
MVVNN
Negative Rake

72°



ORDER NO.	DIMENSIONS (inch)					SPARE PARTS						INSERT TYPE		
	h/h ₁	b	L ₁	L ₂	f	Shim	Lock Pin	Key	Clamp	Clamp Screw	Key	N	L	
MVVNN 12-3B	0.750	0.750	4.50	1.620	.375									
16-3D	1.000	1.000	6.00	1.620	.500	IVSN322	NL34L	5102	CL22	XNS48	5103			
20-3D	1.250	1.250	6.00	1.620	.625									
16-4D	1.000	1.000	6.00	2.060	.500	IVSN433	NL46	5124	CL30	XNS510	5104			

• In Stock



MWLN R/L **95°**
Negative Rake

ORDER NO.	DIMENSIONS (inch)					SPARE PARTS						INSERT TYPE	
	A	B	C	D	F	Shim	Lock Pin	Key	Clamp	Clamp Screw	Key	R	L
MWLN R/L 12-3B	0.750	0.750	4.50	1.000	1.000	IWSN322	NL34L	5102	CL6	XNS36	5124		
16-3D	1.000	1.000	6.00	1.000	1.250								
12-4B	0.750	0.750	4.50	1.070	1.000								
16-4D	1.000	1.000	6.00	1.070	1.250	IWSN433	NL46	5124	CL20	XNS48	5103		
20-4D	1.250	1.250	6.00	1.070	1.500								

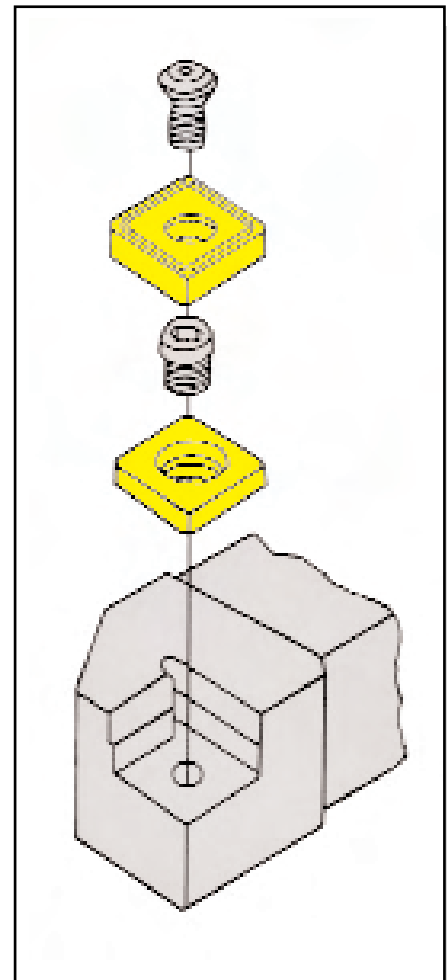
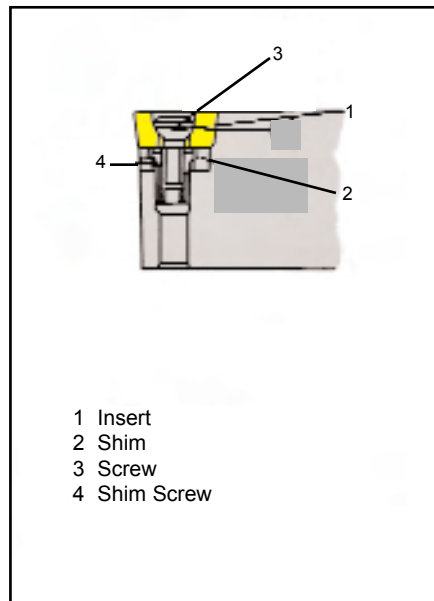
• In Stock

To Order Call:
1-800-263-9860

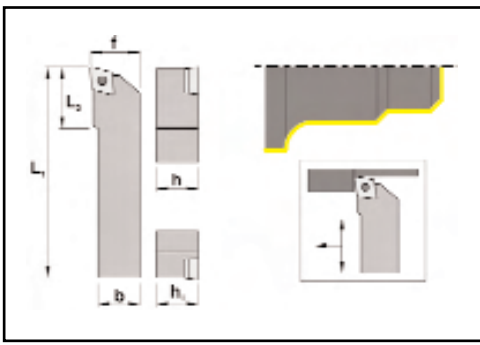


FEATURES:

- EXCELLENT CHIP FLOW WITH CLEAR TOP SURFACE WHEN USING SCREW-ON CLAMPING SYSTEM
- SUITABLE FOR EXTERNAL FINISHING AND COPYING USING SMALL SHANK TOOLHOLDERS
- DESIGNED WITH MINIMUM SPARE PARTS



To Order Call:
1-800-263-9860



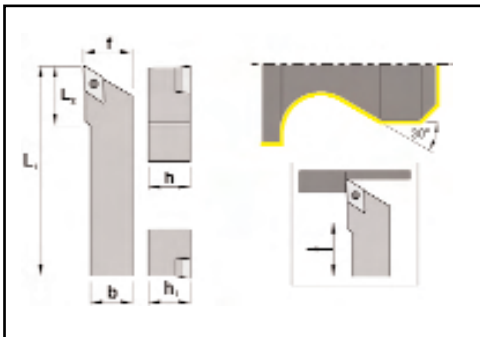
SCLC R/L 95°

Positive Rake



ORDER NO.	DIMENSIONS (inch)					SPARE PARTS						INSERT TYPE	R	L
	h-h ₁	b	L ₁	L ₂	f	Screw	Key	Shim	Shim Screw					
SCLC R/L 06-2	0.375	0.375	2.50	0.390	0.500	1225	5507	-	-			CCGT, CCMT, 2(1.5)1	•	•
08-3	0.500	0.500	3.50	0.630	0.625	1440	5515	-	-			CCGT, CCMT, 3(2.5)1	•	•
10-3	0.625	0.625	4.00	0.630	0.750									
12-3B	0.750	0.750	4.50	0.630	1.000	1240								
16-3D	1.000	1.000	6.00	0.630	1.250									
12-4B	0.750	0.750	4.50	1.000	1.000	1540	5517	3614	1760			CCGT, CCMT, 432	•	•
16-4D	1.000	1.000	6.00	1.000	1.250									

• In Stock



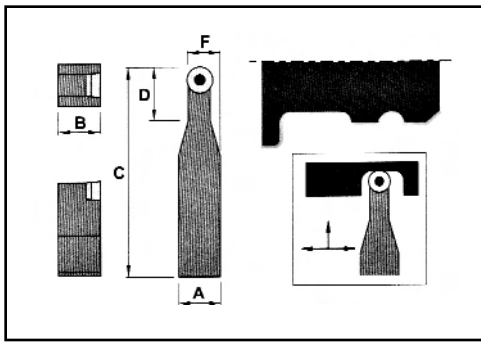
SDJC R/L 93°

Positive Rake

ORDER NO.	DIMENSIONS (inch)					SPARE PARTS						INSERT TYPE	R	L
	h-h ₁	b	L ₁	L ₂	f	Screw	Key	Shim	Shim Screw					
SDJC R/L 08-2	0.500	0.500	3.50	0.670	0.625	1225	5507	-	-			DCGT, DCMT, 2(1.5)1	•	•
12-3B	0.750	0.750	4.50	1.000	1.000	1335	5516	3714	1750			DCGT, DCMT, 3(2.5)1	•	•
16-3D	1.000	1.000	6.00	1.100	1.250									

• In Stock

To Order Call:
1-800-263-9860

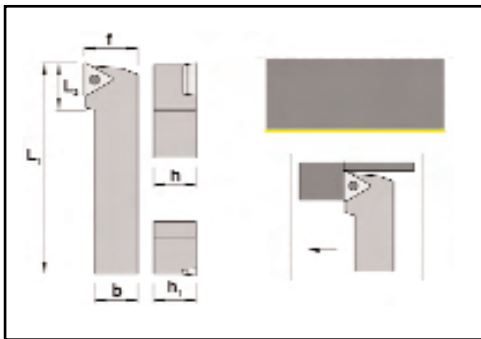


SRDCN
Positive Rake



ORDER NO.	DIMENSIONS (inch)					SPARE PARTS						INSERT TYPE		
	A	B	C	D	F	Screw	Key	Shim	Shim Screw				N	
SRDCN 16-4D	1.000	1.000	6.00	1.000	0.756	1335	5516	3814	1750			RCMT 1204M0	.	

• In Stock



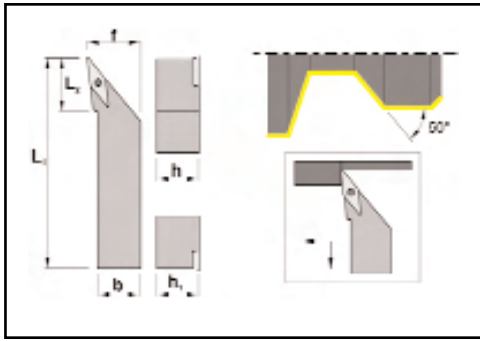
STGC R/L **90°**
Positive Rake



ORDER NO.	DIMENSIONS (inch)					SPARE PARTS						INSERT TYPE		
	h-h ₁	b	L ₁	L ₂	f	Screw	Key	Shim	Shim Screw				R	L
STGC R/L 08-2	0.500	0.500	3.50	0.560	0.625	1225	5507	-	-			TCGT, TCMT, 2(1.5)1	.	.
12-3B	0.750	0.750	4.50	1.000	1.000	1335	5516	3414	1750			TCGT, TCMT, 3(2.5)1	.	.
16-3D	1.000	1.000	6.00	1.000	1.250					.	.			

• In Stock

To Order Call:
1-800-263-9860



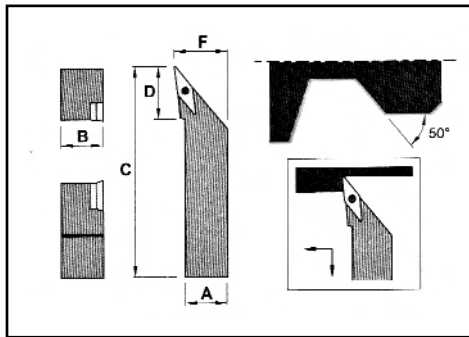
SVJB R/L
Positive Rake

93°



ORDER NO.	DIMENSIONS (inch)					SPARE PARTS						INSERT TYPE	R	L
	h-h ₁	b	L ₁	L ₂	f	Screw	Key	Shim	Shim Screw					
SVJB R/L 12-3B 16-3D	0.750	0.750	4.50	1.614	1.000	1335	5516	3718	1750			VBMT 332	•	•
	1.000	1.000	6.00	1.614	1.250								•	•

• In Stock



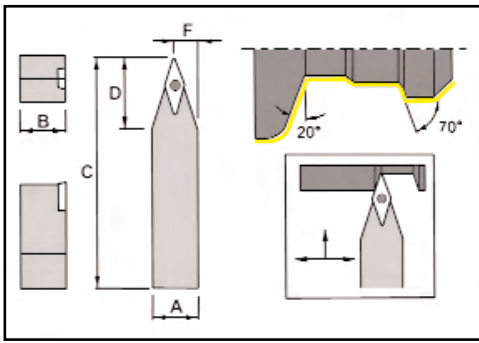
SVJC R/L
Positive Rake

93°

ORDER NO.	DIMENSIONS (inch)					SPARE PARTS						INSERT TYPE	R	L
	A	B	C	D	F	Screw	Key	Shim	Shim Screw					
SVJC R/L 16-3D	1.000	1.000	6.00	1.614	1.250	1335	5516	3718	1750			VCGT, VCMT 332-R	•	•

• In Stock

To Order Call:
1-800-263-9860



SVVBN
Positive Rake

72°

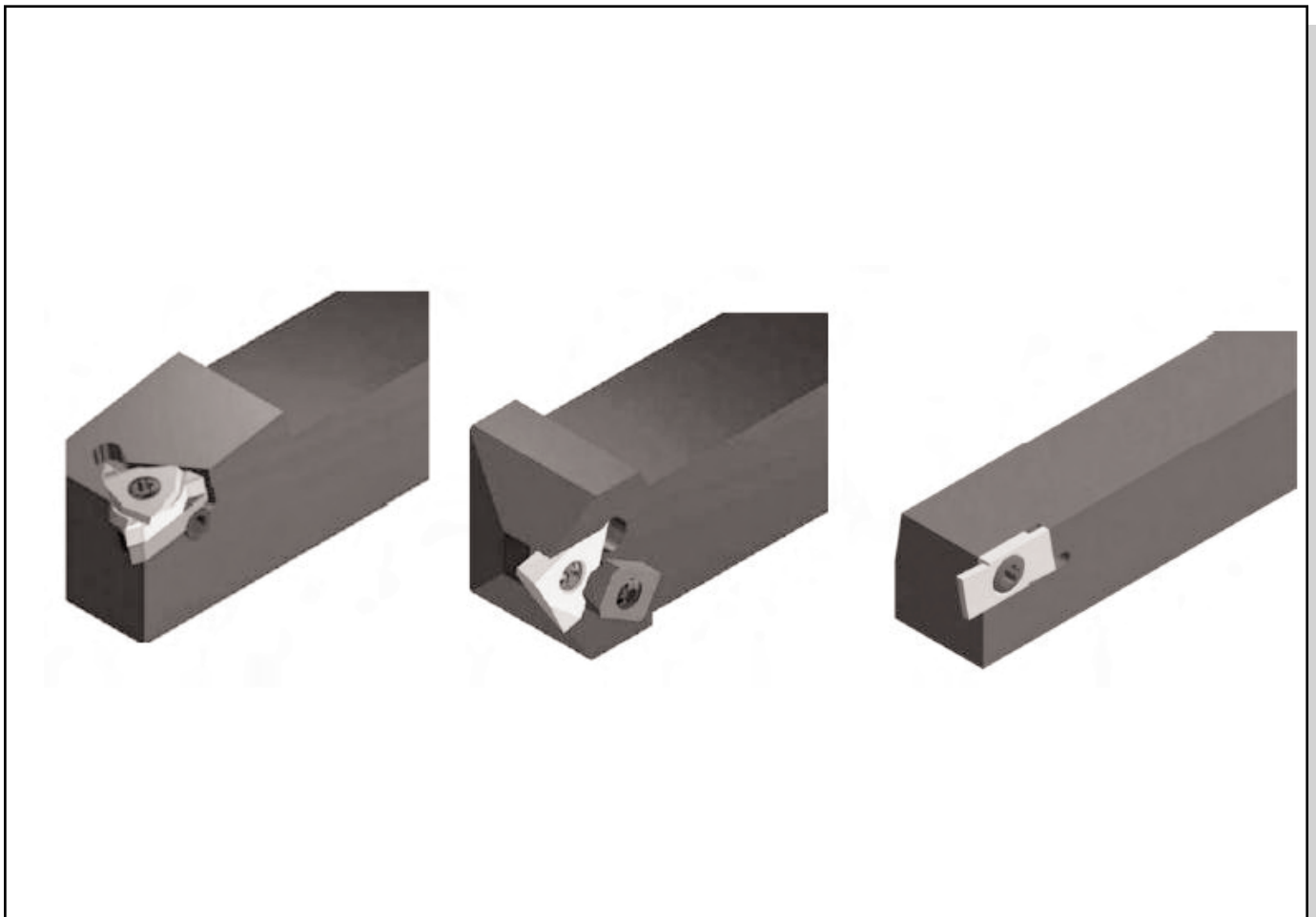
Colbide

ORDER NO.	DIMENSIONS (inch)					SPARE PARTS						INSERT TYPE	N
	A	B	C	D	F	Screw	Key	Shim	Shim Screw				
SVVBN 12-3B	0.750	0.750	4.50	1.212	0.398	1335	5516	3718	1750			VBMT 332	•
16-3D	1.000	1.000	6.00	1.610	0.523								•

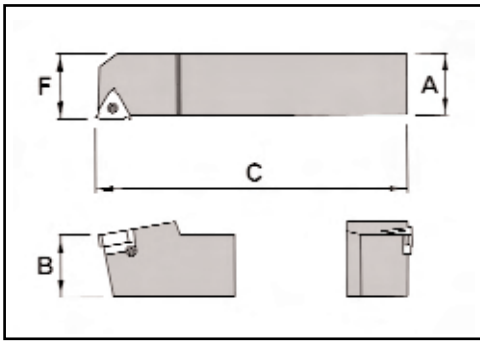
• In Stock

To Order Call:
1-800-263-9860

**SCREW-ON LAYDOWN THREADING
TOP CLAMP ON EDGE THREADING & GROOVING
MINI-SYSTEM FOR THREADING & GROOVING**



**To Order Call:
1-800-263-9860**



SE R/L Negative Rake LAYDOWN



ORDER NO.	DIMENSIONS (inch)					SPARE PARTS						INSERT TYPE	R	L
	A	B	C	F		Insert Screw	Key	Shim(R)	Shim(L)	Shim Screw				
SE R/L 0750 K16 1000 M16	0.750	0.750	5.00	0.750		SA3	5510	YE3	YI3	SY3		3 ER/IRISO	•	•
	1.000	1.000	6.00	1.000								3 ER/IRAG60	•	•
1000 M22	1.000	1.000	6.00	1.000		SA4	5520	YE4	YI4	SY4		4 ER/IRN60	•	•
1000 M27	1.000	1.000	6.00	1.250		SA5	5525	YE5	YI5	SY5		5 ERQ60	•	
1250P27	1.250	1.250	7.00	1.250										

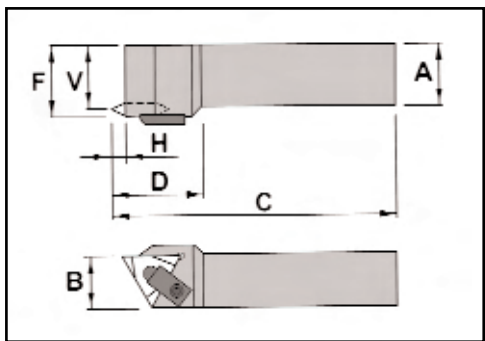
• In Stock

**To Order Call:
1-800-263-9860**

STCN R/L

0°

ON EDGE

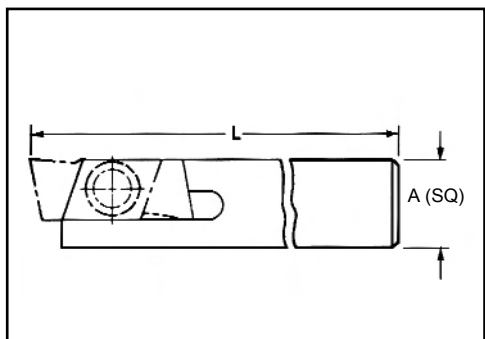


ORDER NO.	DIMENSIONS (inch)							SPARE PARTS					INSERT TYPE		
	A	B	C	D	F	H	V	Insert Screw	Key	Clamp	Clamp Screw	Key		R	L
STCN R/L 12-32	0.750	0.750	4.50	1.232	0.750	0.150	-	SD-1	5100	2101	1801	5103	TNMC, TPMC, 32NV, 32NT, 32NG	•	
12-43	0.750	0.750	6.00	1.250	1.000	0.230	0.906						TNMC, TPMC, 43NV, 43NT, 43NG	•	•
16-43	1.000	1.000	6.00	1.250	1.250	0.230	1.156	1936	5124	2101	1801	5103		•	•
20-43	1.250	1.250	6.00	1.250	1.500	0.230	1.406							•	•
16-54	1.000	1.000	6.00	1.340	1.250	0.300	1.125	1937	5124	2101	1801	5103	TNMC, TPMC, 54NV, 54NT,	•	•
20-54	1.250	1.250	7.00	1.340	1.500	0.300	1.375							•	•

• In Stock

THE-R

MINI-GROOVING & THREADING



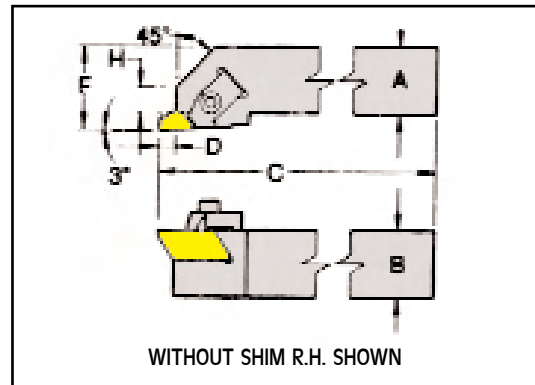
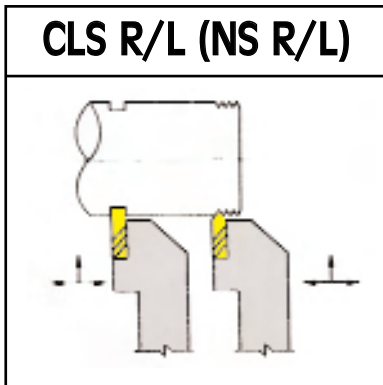
ORDER NO.	DIMENSIONS (inch)							SPARE PARTS					INSERT TYPE		
	A	L						Screw	Key					R	L
THE-7-1/2-R	.500	4.50											GIE-7-SG-R		•
THE-7-1.0-R1.00	4.50							M3X8.0	T8				GIE-7-GW-60-R		•

• In Stock

To Order Call:
1-800-263-9860

Starter kits available

COLBIDE NOTCH THREADING & GROOVING TOOLHOLDERS



FEATURES:

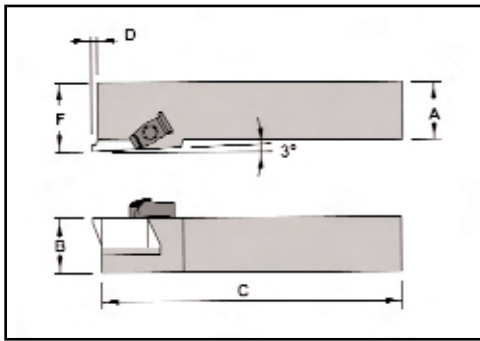
- LOCKING FORCES ARE IN THREE (3) DIRECTIONS, HOLDING THE INSERT DOWN, IN, AND BACK AGAINST THE WALLS FOR COMPLETE POCKETING
- INSERT IS RIGIDLY AND ACCURATELY CLAMPED
- FAST AND EASY INDEXING OF INSERT
- SIMPLE CLAMP REPLACEMENT
- INTERCHANGEABLE INTO YOUR PRESENT HOLDING SYSTEM

INSERT TYPE:

- CNA** = Acme Threading Insert
- CNG** = Grooving Insert
- CNR** = Full Radius Grooving Insert
- CNT** = Threading Insert
- CNTP** = Threading Positive Insert

To Order Call:
1-800-263-9860

CLS R/L (NS R/L)



ORDER NO.	DIMENSIONS (inch)					SPARE PARTS						INSERT TYPE	R	L
	A	B	C	D	F	Shim	Shim Screw	Clamp (R)	Clamp (L)	Key	Clamp Screw			
CLS R/L 12-2B	0.750	0.750	4.50	.138	1.000	-	-	TF74	TF75	5124	1291	CNG, CNT, CNTP, 2R/L	•	•
12-3B	0.750	0.750	4.50	0.210	1.000	-	-	-	-	-	-	CNA, CNG, CNR, CNT, CNTP, 3R/L	•	•
16-3D	1.000	1.000	6.00	0.210	1.250	-	-	TF72	TF73	5104	1297	CNA, CNG, CNR, CNT, CNTP, 3R/L	•	•
20-3D	1.250	1.250	6.00	0.210	1.500	-	-	-	-	-	-	CNA, CNG, CNR, CNT, CNTP, 3R/L	•	•
16-4D	1.000	1.000	6.00	0.294	1.250	-	-	-	-	-	-	CNA, CNG, CNT, CNTP, 4R/L	•	•
20-4D	1.250	1.250	6.00	0.294	1.500	3521	1625	TF72	TF73	5104	1297	CNA, CNG, CNT, CNTP, 4R/L	•	•
24-4D	1.500	1.500	6.00	0.294	1.750	-	-	-	-	-	-	CNA, CNG, CNT, CNTP, 4R/L	•	•

• In Stock

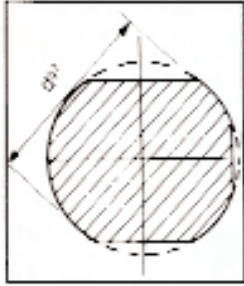
To Order Call:
1-800-263-9860






To Order Call:
1-800-263-9860

Internal Boring Bar Identification System


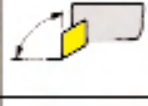


2 SHANK DIAMETER (mm)





4 CLAMPING SYSTEM

S	
P	
C	

6 STYLE

L	
U	
F	
K	

8 HAND

R	
L	

10 MANUFACTURERS TYPE DESIGNATION

At the option of the manufacturer
e.g.: W=wedge design

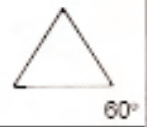


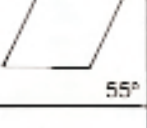
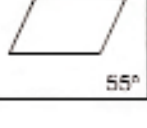
1 SHANK COMPOSITION

S	Solid steel
----------	-------------


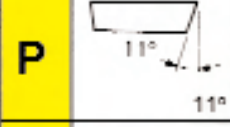
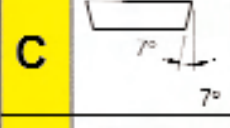
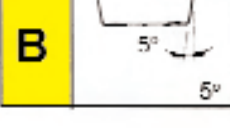
3 SHANK LENGTH

SHANK LENGTH (mm)	
K	125
M	150
Q	180
R	200
S	250
T	300
U	350
V	400
W	450
Y	500
X	Special


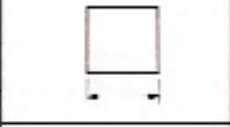
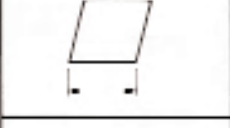

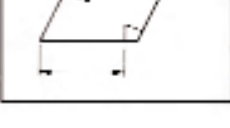
5 INSERT SHAPE

T	
S	
C	
D	
K	

7 INSERT CLEARANCE ANGLE

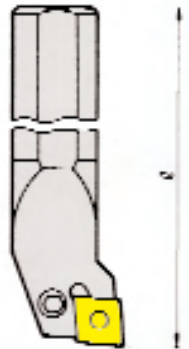
N	
P	
C	
B	

9 CUTTING EDGE LENGTH (mm)

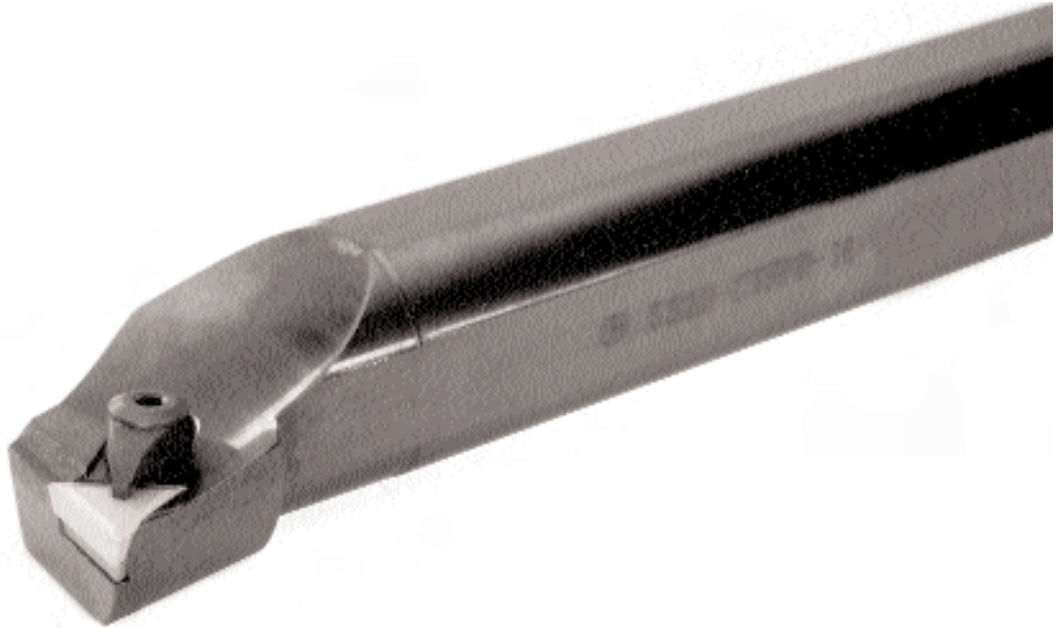






ISO Code Example: S 32 U-C T F P R 16

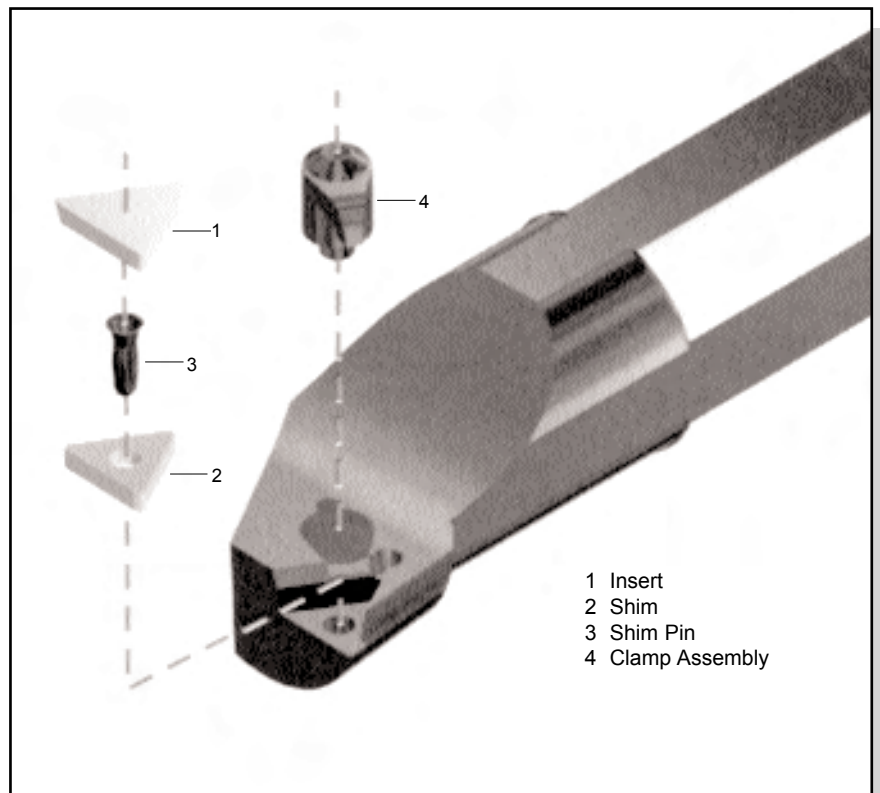
1 2 3 4 5 6 7 8 9 10



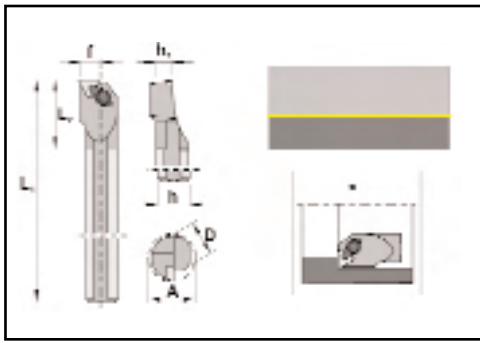
To Order Call:
1-800-263-9860

**FEATURES:**

- EASY SET UP BY USING COMPACT AND SIMPLE CLAMPING SYSTEM CONSISTING OF A CLAMP AND A SCREW (ASSEMBLY)
- DESIGNED FOR USE WITH INSERTS HAVING MOULDED CHIPBREAKERS (TPMR, TPGR)



To Order Call:
1-800-263-9860



CTFPR
Positive Rake

90°

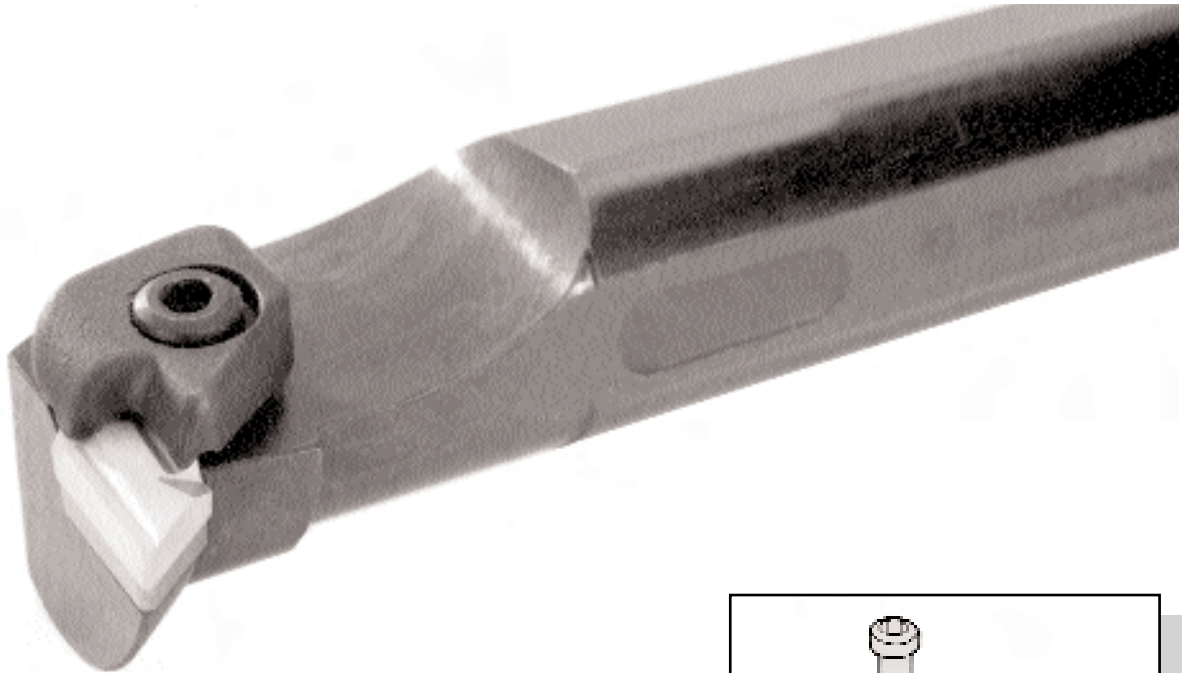


ORDER NO.	DIMENSIONS (mm)							SPARE PARTS						INSERT TYPE	R
	D	h	h ₁	L ₁	L ₂	f	A	Clamp Assembly	Key	Shim	Shim Pin				
S10M CTFPR 09 S12M CTFPR 09	10 12	9 11	4.50 5.50	150 150	25 25	7 9	13 16	2000	5015	-	-			TPGR, TPMR, 731	•
S16R CTFPR 11 S20S CTFPR 11	16 20	15 18	7.50 9.00	200 250	30 35	11 13	20 24	2107	5025	-	-			TPGR, TPMR, TPU,221	• •
S16R CTFPR 16 S20S CTFPR 16 S25T CTFPR 16 S32U CTFPR 16	16 20 25 32	15 18 23 30	7.50 9.00 11.50 15.00	200 250 300 350	30 35 40 50	11 13 17 22	20 24 31 39	2119 2109 2209	5003	-	-	3116 4002		TPGR, TPMR, TPU, 322	• • • •
S40V CTFPR 22 S50W CTFPR 22	40 50	37 47	18.50 23.50	400 450	60 65	27 35	48 61	2211	5004	3122	4012			TPGR, TPMR TPU, 432	• •

- In Stock

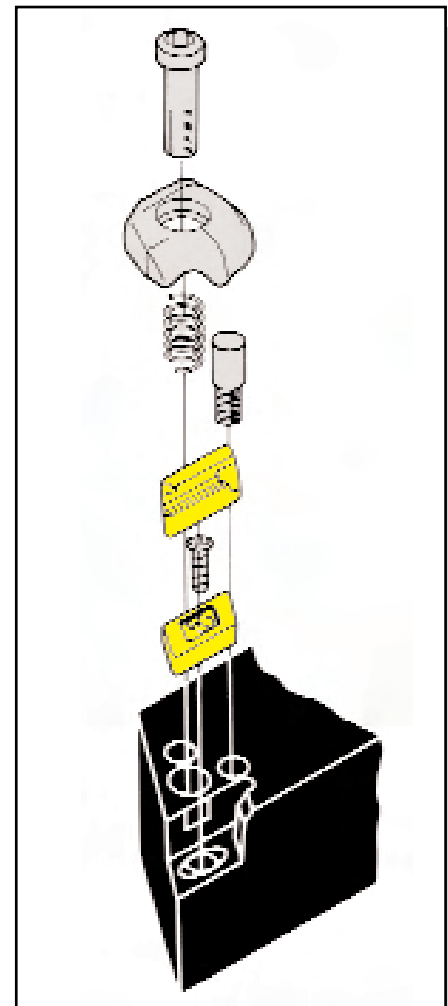
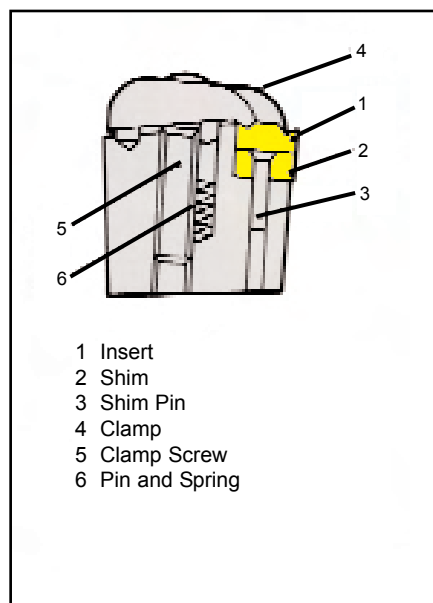
To Order Call:
1-800-263-9860

COPYING BORING BARS (metric)

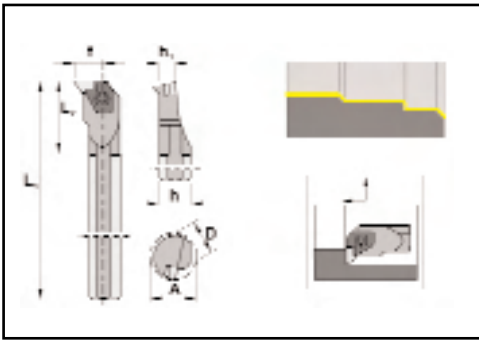


FEATURES:

- SECURE CLAMPING FOR HEAVY CUTTING
- LESS CUTTING RESISTANCE MINIMIZING CHATTERING
- UNIQUE CLAMP PULLS THE INSERT BACK INTO THE POCKET PERMITTING ACCURATE INSERT LOCATION AND RIGIDITY WHEN BACK CUTTING UP A FACE



To Order Call:
1-800-263-9860



CKUNR
Negative Rake

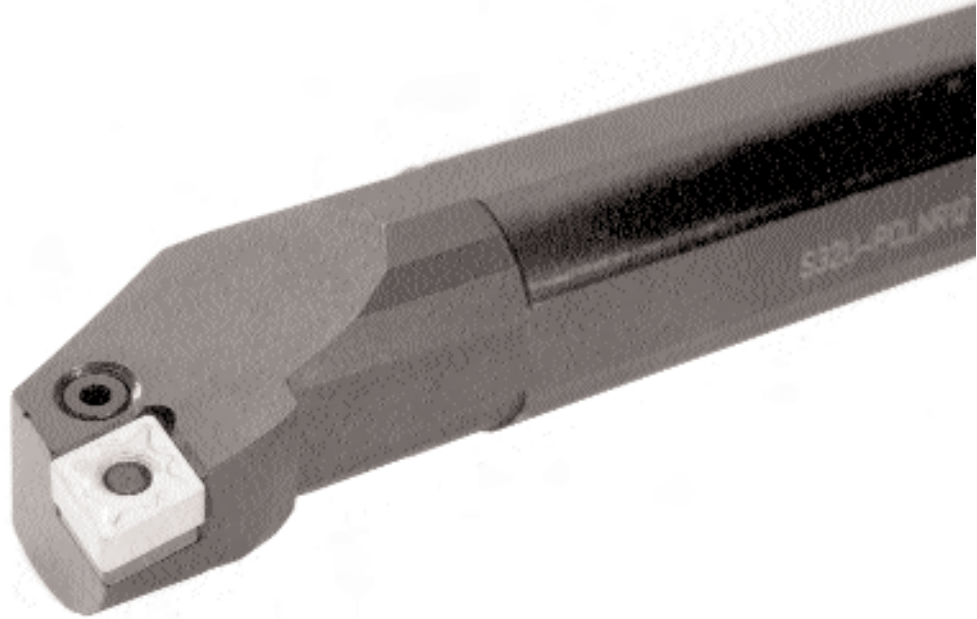
93°

Colbide

ORDER NO.	DIMENSIONS (mm)							SPARE PARTS						INSERT TYPE	R				
	D	h	h ₁	L ₁	L ₂	f	A	Clamp	Screw	Shim Pin	Spring	Pin	Shim						
S25T CKUNR 16	25	23	11.50	300	50	20.5	37	2326	1614	-	4295	4201	-	KNUX 160405 L11	·				
S32U CKUNR 16	32	30	15.00	350	54	22.0	39			4012		4202	3236			KNUX 160405 L12	·		
S40V CKUNR 16	40	37	18.50	400	60	27.0	48			4204		4204						KNUX 160410 L11	·
S50W CKUNR 16	50	47	23.50	450	65	35.0	61												
									Key 5004										

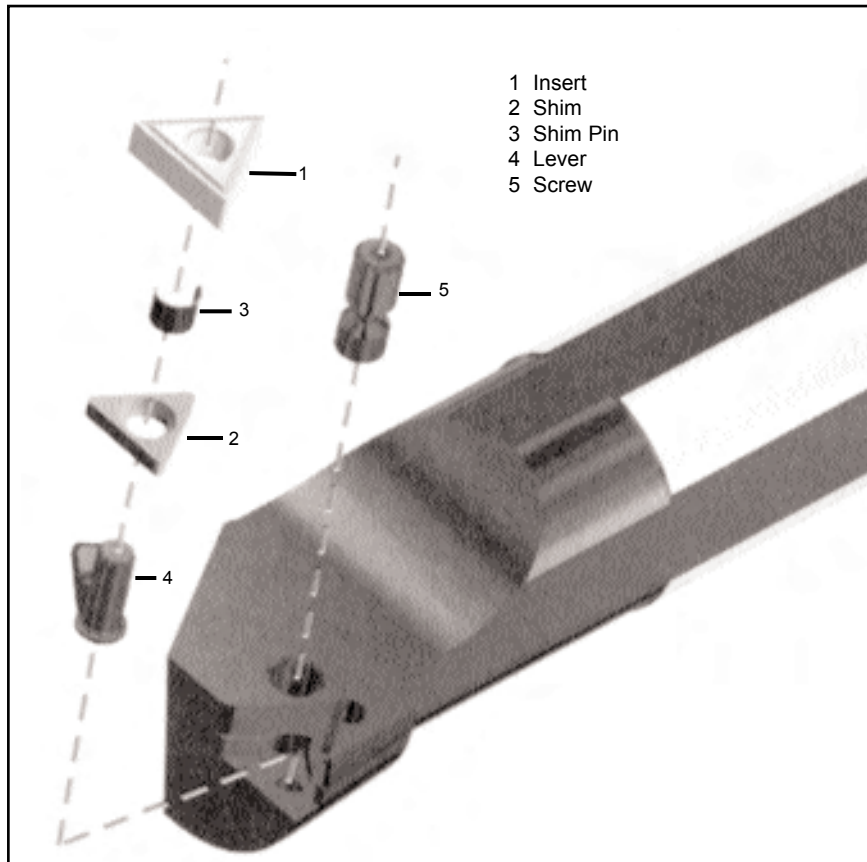
· In Stock

To Order Call:
1-800-263-9860

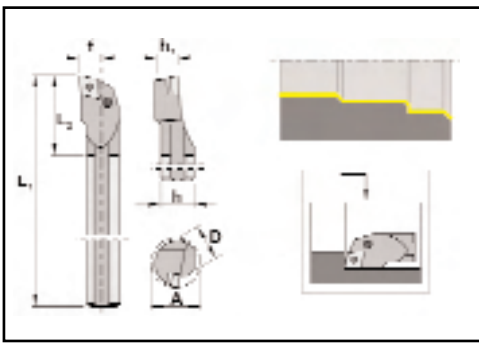


FEATURES:

- ENABLES USE OF ALL NEGATIVE RAKE PIN LOCK INSERTS
- LEVER SCREW CAN BE LOCKED FROM BOTH TOP AND BOTTOM
- EXCELLENT CHIP FLOW OVER TOP FACE OF INSERT BECAUSE OF CLEAR TOP SURFACE



To Order Call:
1-800-263-9860



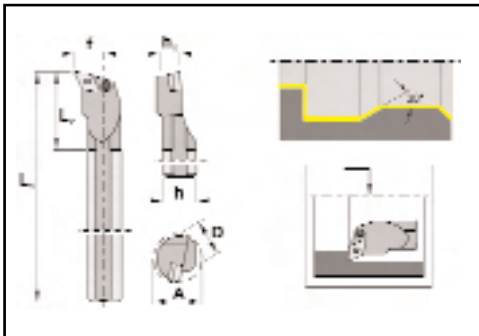
PCLNR
Negative Rake

95°



ORDER NO.	DIMENSIONS (mm)							SPARE PARTS						INSERT TYPE	R
	D	h	h ₁	L ₁	L ₂	f	A	Lever	Screw	Key	Shim	Shim Pin			
S25T PCLNR 12	25	23	11.50	300	40	17	31	8212	1626	5025	-	-	CNMA, CNMG, CNMM, CNMP, CNGP, 432	• • • •	
S32U PCLNR 12	32	30	15.00	350	50	22	39	8312	1648						
S40V PCLNR 12	40	37	18.50	400	60	27	48	8012	1608	5003	3612	4112			
S50W PCLNR 12	50	47	23.50	450	65	35	61								
S50W PCLNR 19	50	47	23.50	450	65	35	61	8219	1610	5004	3619	4129	CNMA, CNMG, CNMM, 643	•	

• In Stock



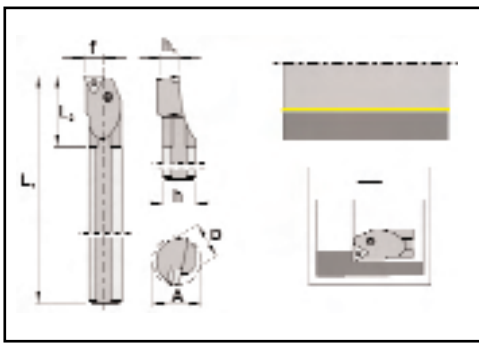
PDUNR
Negative Rake

93°

ORDER NO.	DIMENSIONS (mm)							SPARE PARTS						INSERT TYPE	R
	D	h	h ₁	L ₁	L ₂	f	A	Lever	Screw	Key	Shim	Shim Pin			
S32U PDUNR 15	32	30	15.00	350	50	22	39	8415	1648	5003	3715	4112	DNMA, DNMG, DNMM, DNMP, 432	• • •	
S40V PDUNR 15	40	37	18.50	400	60	27	48		1638						
S50W PDUNR 15	50	47	23.50	450	65	35	61								

• In Stock

To Order Call:
1-800-263-9860



PTFNR
Negative Rake

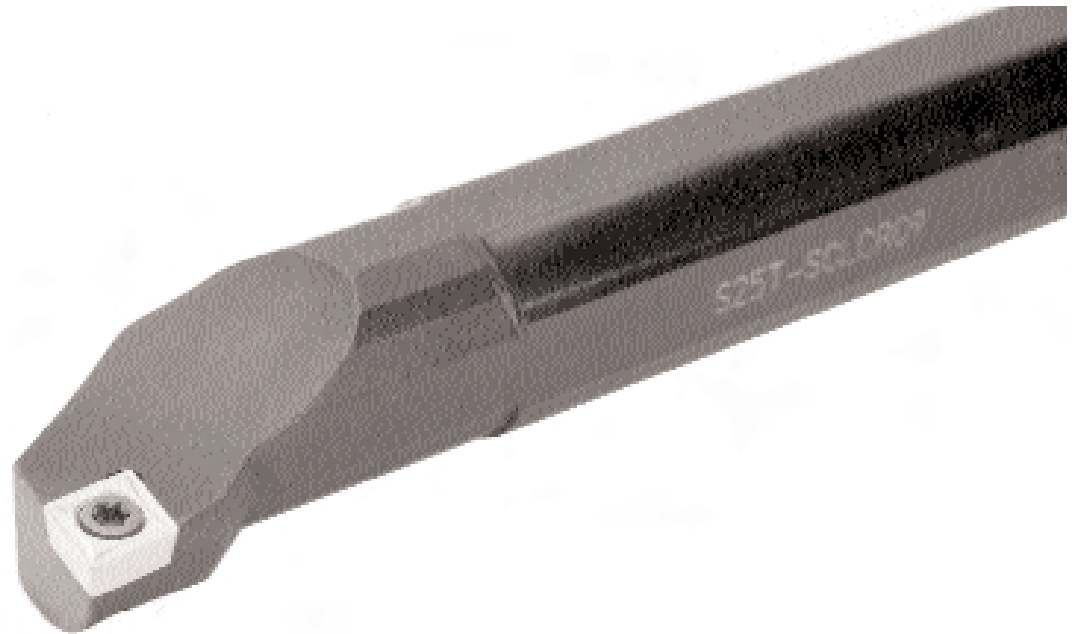
90°

Colbide

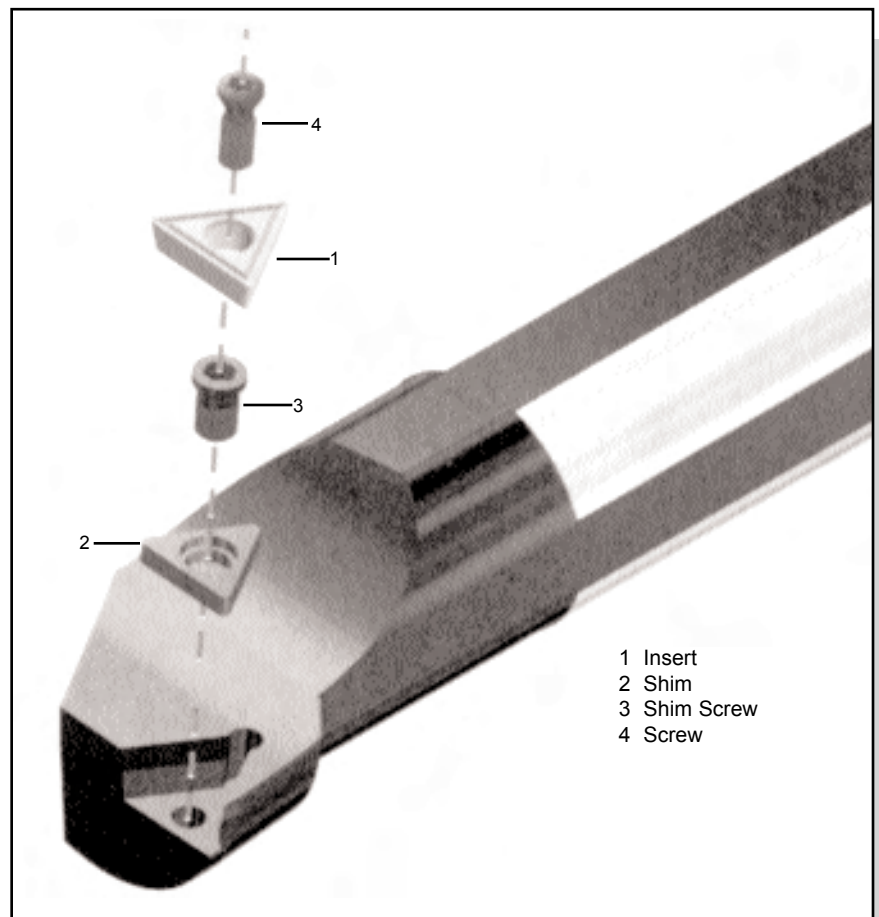
ORDER NO.	DIMENSIONS (mm)							SPARE PARTS						INSERT TYPE	R
	D	h	h ₁	L ₁	L ₂	f	A	Lever	Screw	Key	Shim	Shim Pin			
S25T PTFNR 16 S32U PTFNR 16	25 32	23 30	11.50 15.00	300 350	40 50	17 22	31 39	8216 8009	1605 1606	5002 5025	- 3416	- 4109	TNMA, TNMG, TNMM, TNMP, TNGG/L, 332	• •	
S40V PTFNR 22 S50W PTFNR 22	40 50	37 47	18.50 23.50	400 450	60 65	27 35	48 61	8012	1608	5003	3422	4112	TNMA, TNMG, TNMP, TNGG/L, 432	• •	

• In Stock

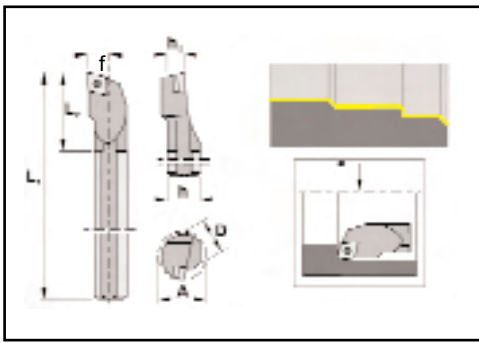
To Order Call:
1-800-263-9860

**FEATURES:**

- EXCELLENT CHIP FLOW WITH CLEAR TOP SURFACE WHEN USING SCREW-ON CLAMPING SYSTEM
- SUITABLE FOR INTERNAL FINISHING USING SMALL SHANK BORING BARS
- DESIGNED WITH MINIMUM SPARE PARTS



**To Order Call:
1-800-263-9860**



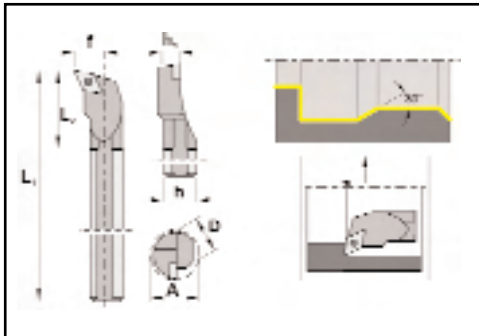
SCLCR
Positive Rake

95°



ORDER NO.	DIMENSIONS (mm)							SPARE PARTS					INSERT TYPE	R
	D	h	h ₁	L ₁	L ₂	f	A	Screw	Key	Shim	Shim Screw			
S08K SCLCR 06	8	7	3.50	125	16	5	11	1425	5507	-	-	CCMT, CCGT, 2(1.5)1	• • •	
S10M SCLCR 06	10	9	4.50	150	25	7	13							
S12M SCLCR 06	12	11	5.50	150	25	9	16							
S12Q SCLCR 09	12	11	5.50	180	25	9	16	1440	5515	-	-	CCMT, CCGT, 3(2.5)1	• • • •	
S16R SCLCR 09	16	15	7.50	200	30	11	20							
S20S SCLCR 09	20	18	9.00	250	35	13	24							
S25T SCLCR 09	25	23	11.50	300	40	17	31							

• In Stock



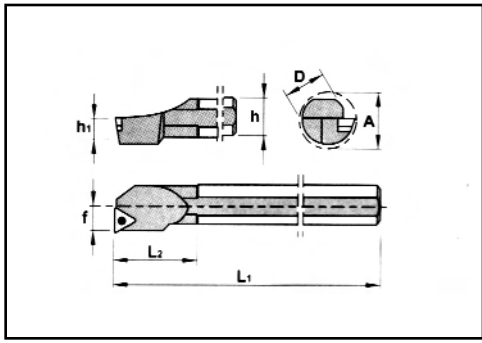
SDUCR
Positive Rake

93°

ORDER NO.	DIMENSIONS (mm)							SPARE PARTS					INSERT TYPE	R
	D	h	h ₁	L ₁	L ₂	f	A	Screw	Key	Shim	Shim Screw			
S10M SDUCR 07	10	9	4.50	150	25	7	13	1425	5507	-	-	DCGT, DCMT 2(1.5)1	• • •	
S12M SDUCR 07	12	11	5.50	150	25	9	16	1225						
S16R SDUCR 07	16	15	7.50	200	30	11	20							
S20S SDUCR 11	20	18	9.00	250	35	13	24	1240	5515	-	-	DCGT, DCMT, 3(2.5)1	• •	
S25T SDUCR 11	25	23	11.50	300	40	17	31							

• In Stock

To Order Call:
1-800-263-9860



STFCR
Positive Rake

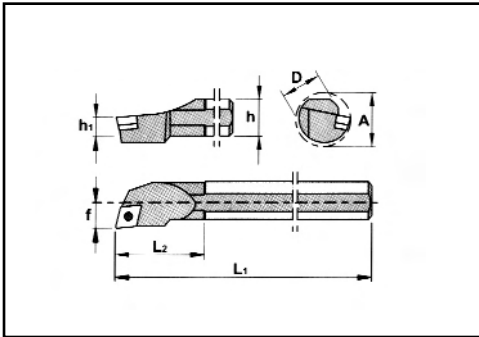
90°

Colbide

ORDER NO.	DIMENSIONS (mm)							SPARE PARTS						INSERT TYPE	R
	D	h	h ₁	L ₁	L ₂	f	A	Screw	Key	Shim	Shim Screw				
S10M STFCR 09	10	9	4.50	150	25	7	13	1222	5506	-	-			TCMT 1.8(1.5)1	•
S12M STFCR 11	12	11	5.50	150	25	9	16							TCGT, TCMT 2(1.5)1	•
S16R STFCR 11	16	15	7.50	200	30	11	20	1225	5507	-	-				•
S20S STFCR 11	20	18	9.00	250	35	13	24								•
S25T STFCR 16	25	23	11.50	300	40	17	31	1240	5515	-	-			TCGT, TCMT 3(2.5)1	•

• In Stock

HEAVY METAL BORING BAR (metric)



H-SCLCR
Positive Rake

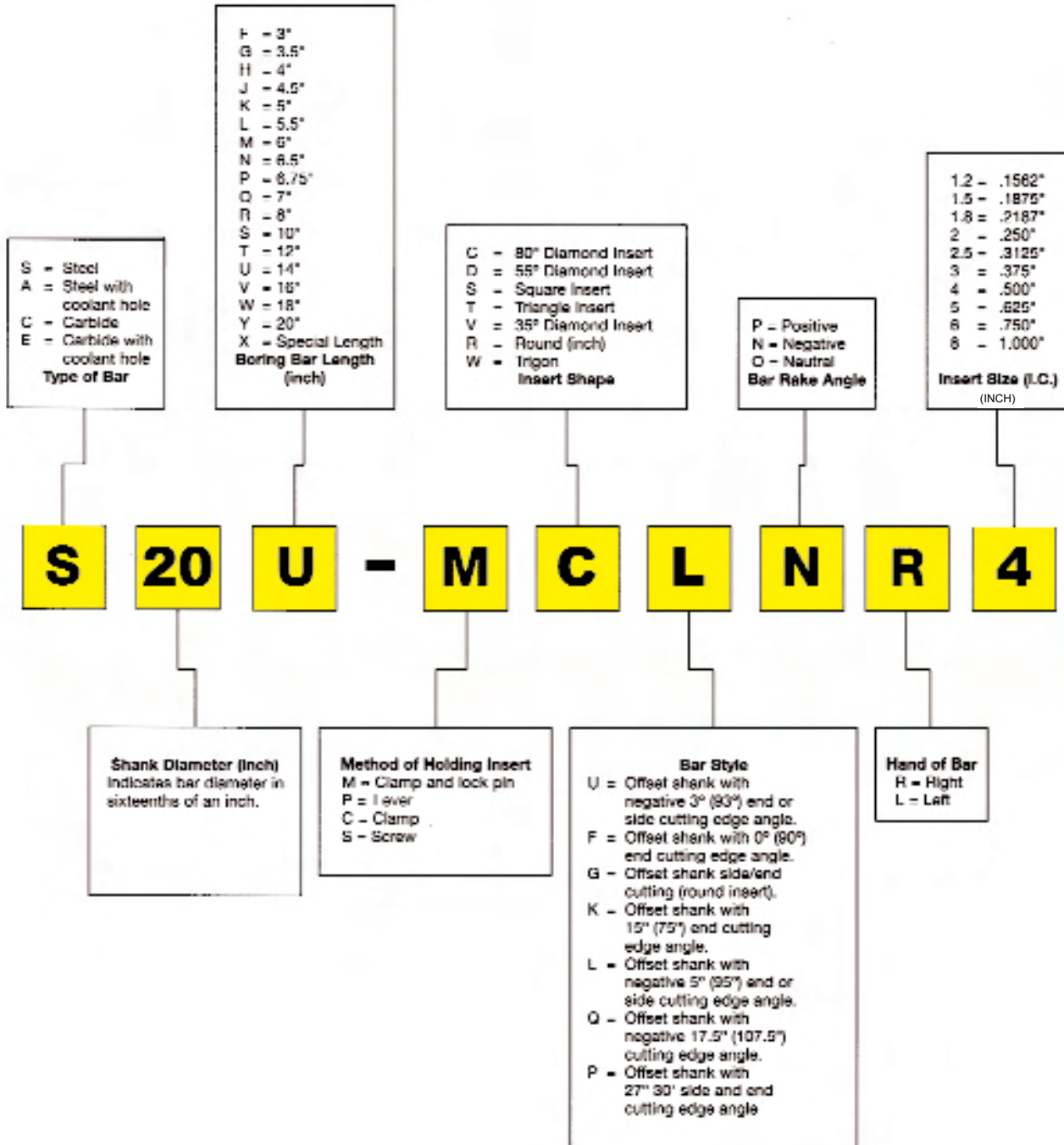
95°

ORDER NO.	DIMENSIONS (mm)							SPARE PARTS						INSERT TYPE	R
	D	h	h ₁	L ₁	L ₂	f	A	Screw	Key	Shim	Shim Screw				
H08K SCLCR 06	8	7	3.50	125	16	5	11							CCGT, CCMT 2(1.5)1	•
H10M SCLCR 06	10	9	4.50	150	25	7	13	1425	5507	-	-				•
H12M SCLCR 06	12	11	5.50	150	25	9	16								•
H16R SCLCR 09	16	15	7.50	200	30	11	20	1440	5515	-	-			CCGT, CCMT 3(2.5)1	•

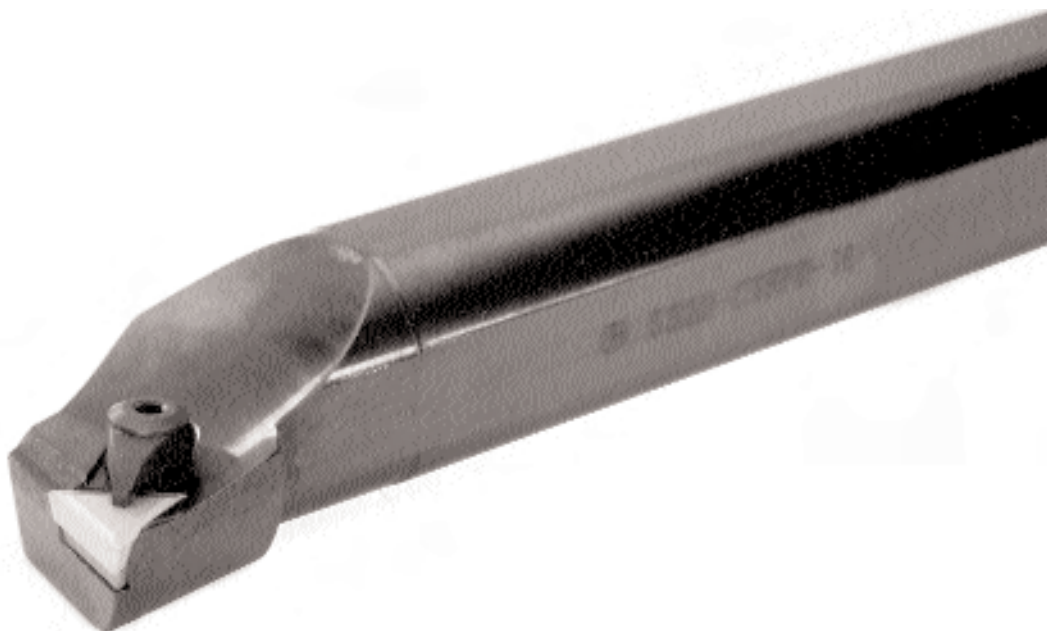
• In Stock

To Order Call:
1-800-263-9860

Internal Boring Bar Identification System

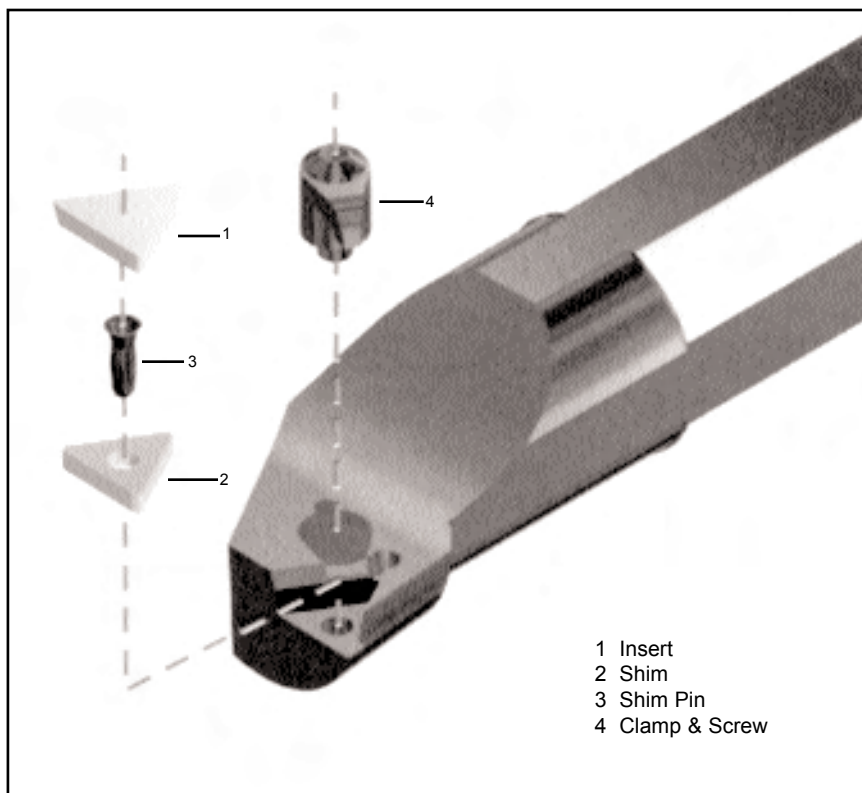


To Order Call:
1-800-263-9860

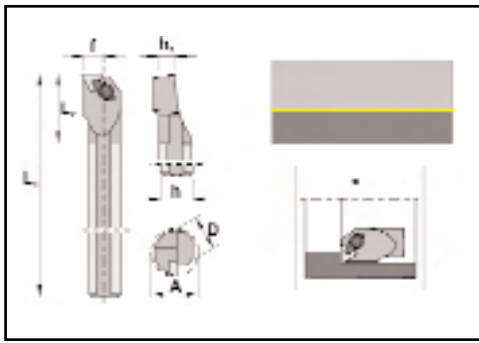


FEATURES:

- EASY SET UP BY USING COMPACT AND SIMPLE CLAMPING SYSTEM CONSISTING OF A CLAMP AND A SCREW
- DESIGNED FOR USE WITH INSERTS HAVING MOULDED CHIPBREAKERS (TPMR & TPGR)



To Order Call:
1-800-263-9860



CTFPR
Positive Rake

90°

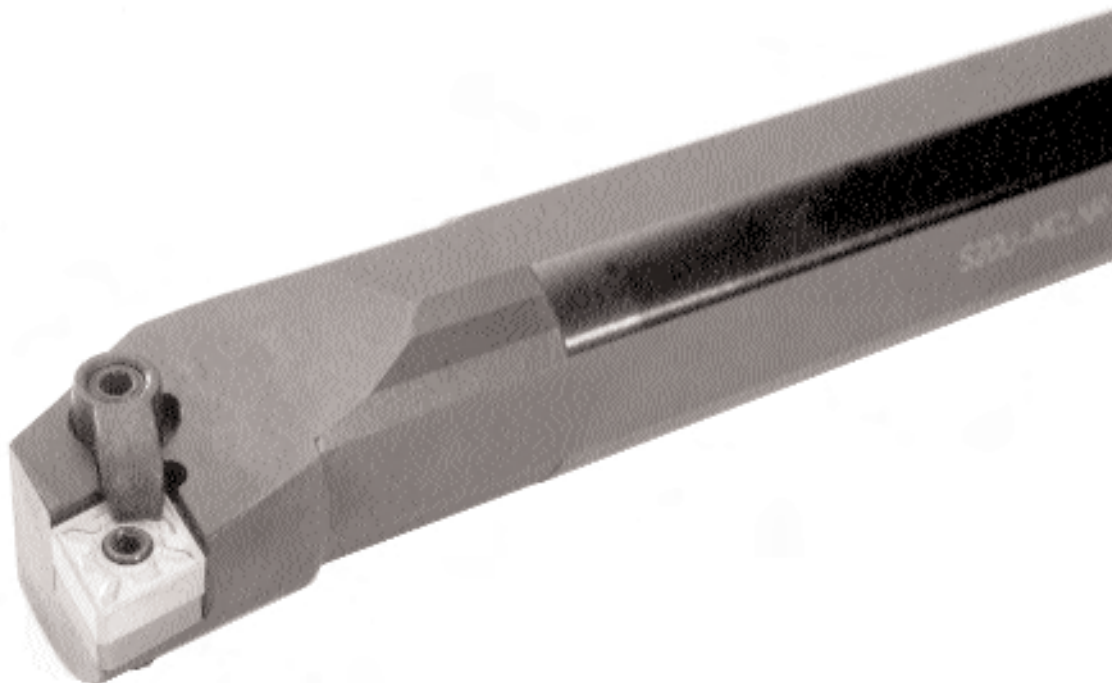
Colbide

ORDER NO.	DIMENSIONS (inch)							SPARE PARTS						INSERT TYPE	R
	D	h	h ₁	L ₁	L ₂	f	A	Clamp	Clamp Screw	Snap Ring	Shim	Shim Pin	Key		
S16T CTFPR 3	1.000	0.900	.450	12.00	2.50	.640	1.220	CL7	XNS34	-	-	-	5124	TPGR, TPMR, TPU, 322	•
S20U CTFPR 3	1.250	1.180	.590	14.00	3.00	.765	1.600								
S24U CTFPR 4	1.500	1.370	.685	14.00	3.00	.890	2.120	CL20	XNS47	-	3122	4012	5103	TPGR, TPMR, TPU, 432	•

Left hand ANSI boring bars subject to quotation

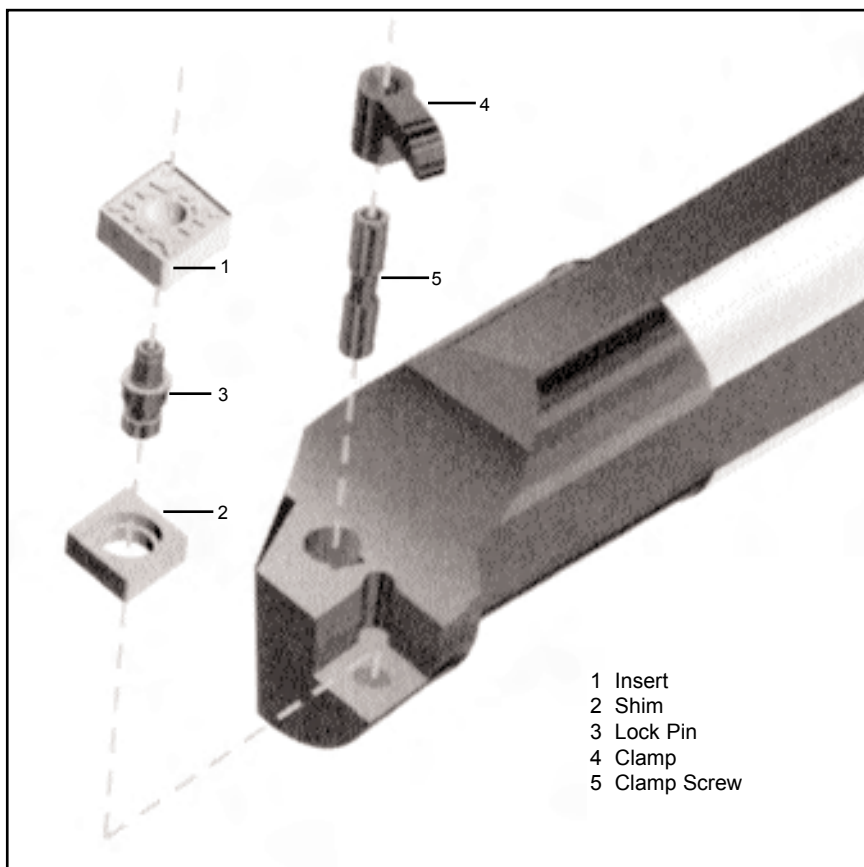
• In Stock

To Order Call:
1-800-263-9860

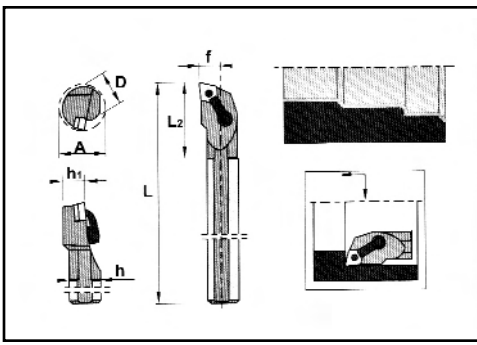


FEATURES:

- ENABLES USE OF ALL NEGATIVE RAKE PIN LOCK INSERTS
- FIRM CLAMPING OF INSERT BY USING BOTH TOP CLAMP AND LOCK PIN
- BOTH TOP CLAMP AND LOCK PIN CAN BE LOCKED FROM TOP OR BOTTOM
- WELL SUITED FOR OPERATIONS RANGING FROM LIGHT FINISHING TO HEAVY CUTTING



**To Order Call:
1-800-263-9860**



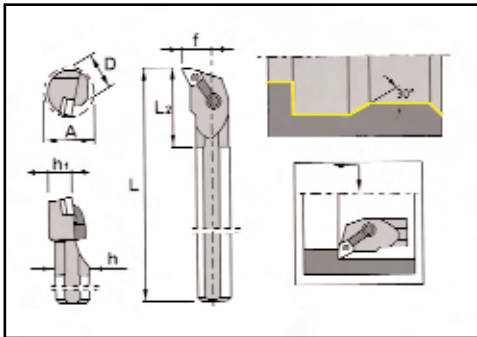
MCLNR
Negative Rake

95°



ORDER NO.	DIMENSIONS (inch)							SPARE PARTS						INSERT TYPE	R
	D	h	h ₁	L	L ₂	f	A	Shim	Lock Pin	Key	Clamp	Clamp Screw	Key		
S16T MCLNR 4	1.000	0.900	0.450	12.00	2.50	0.640	1.280	-	NL44			XNS47		CNGP, CNMA, CNMG, CNMP, 432	• • • •
S20U MCLNR 4	1.250	1.180	0.590	14.00	3.00	0.765	1.530	ICSN 432	NL46	5124	CL20	XNS48	5103		
S24U MCLNR 4	1.500	1.370	0.685	14.00	3.00	0.890	1.780								
S32V MCLNR 4	2.000	1.870	0.935	16.00	4.00	1.281	2.562								

• In Stock



MDUNR
Negative Rake

93°

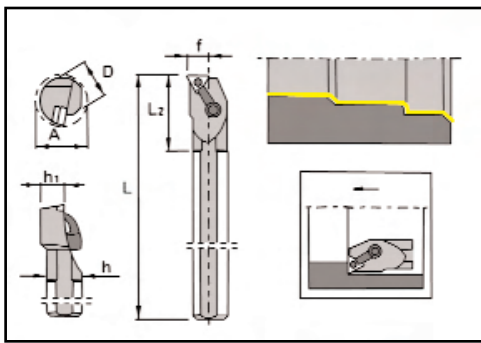


ORDER NO.	DIMENSIONS (inch)							SPARE PARTS						INSERT TYPE	R
	D	h	h ₁	L	L ₂	f	A	Shim	Lock Pin	Key	Clamp	Clamp Screw	Key		
S16T MDUNR 4	1.000	0.900	0.450	12.00	2.50	0.875	1.750	-	NL44			XNS47		DNMA, DNMG, DNMM, DNMP, 432	• • • •
S20U MDUNR 4	1.250	1.180	0.590	14.00	3.00	1.000	2.000	IDSN 432	NL46	5124	CL20	XNS48	5103		
S24U MDUNR 4	1.500	1.370	0.685	14.00	3.00	1.125	2.250								
S32V MDUNR 4	2.000	1.870	0.935	16.00	4.00	1.500	3.000								

• In Stock

To Order Call:
1-800-263-9860

Left hand ANSI boring bars subject to quotation
Coolant hole ANSI boring bars subject to quotation



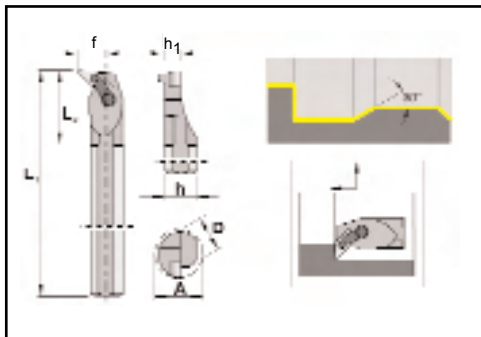
MTFNR
Negative Rake

90°



ORDER NO.	DIMENSIONS (inch)							SPARE PARTS						INSERT TYPE	R
	D	h	h ₁	L	L ₂	f	A	Shim	Lock Pin	Key	Clamp	Clamp Screw	Key		
S16T MTFNR 3	1.000	0.900	0.450	12.00	2.50	0.640	1.280	-	NL33L			XNS47		TNGG/L TNMA, TNMG TNMM, TNMP, 332	• • •
S20U MTFNR 3	1.250	1.180	0.590	14.00	3.00	0.765	1.530	ITSN 322	NL34L	5102	CL20	XNS48	5103		
S24U MTFNR 3	1.500	1.370	0.685	14.00	3.00	0.890	1.780								
S20U MTFNR 4	1.250	1.180	0.590	14.00	3.00	0.765	1.530	ITSN 432	NL46	5124	CL20	XNS48	5103	TNGG/L TNMA, TNMG, TNMM, TNMP, 432	• • •
S24U MTFNR 4	1.500	1.370	0.685	14.00	3.00	0.890	1.780								
S32V MTFNR 4	2.000	1.870	0.935	16.00	4.00	1.281	2.562								

• In Stock



MVUNR
Negative Rake

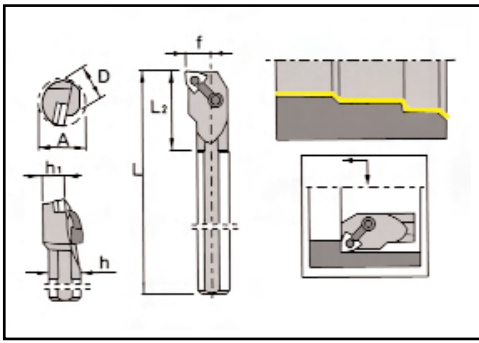
93°

ORDER NO.	DIMENSIONS (inch)							SPARE PARTS						INSERT TYPE	R
	D	h	h ₁	L	L ₂	f	A	Shim	Lock Pin	Key	Clamp	Clamp Screw	Key		
S16T MVUNR 3	1.000	0.900	0.450	12.00	2.50	1.000	2.000	IVSN 322	NL34L	5102	CL22	XNS47	5103	VNMA, VNMG, VNMP, 332	• • •
S20U MVUNR 3	1.250	1.180	0.590	14.00	3.00	1.125	2.250					XNS48			
S24U MVUNR 3	1.500	1.370	0.685	14.00	3.00	1.250	2.500								

• In Stock

To Order Call:
1-800-263-9860

Left hand ANSI boring bars subject to quotation
Coolant hole ANSI boring bars subject to quotation



MWLNR
Negative Rake

95°

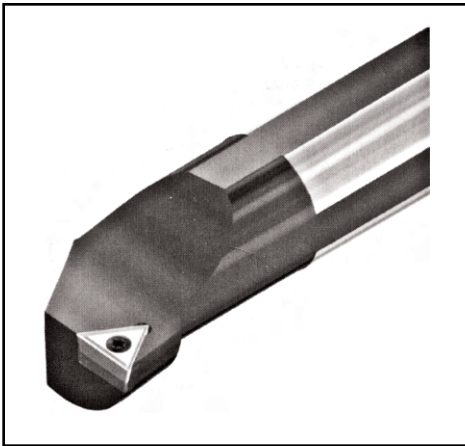


ORDER NO.	DIMENSIONS (inch)							SPARE PARTS						INSERT TYPE	R
	D	h	h ₁	L	L ₂	f	A	Shim	Lock Pin	Key	Clamp	Clamp Screw	Key		
S16T MWLNR 4	1.000	0.900	0.450	12.00	2.50	0.640	1.280	-	NL44			XNS47		WNMA, WNMG 432	• •
S20U MWLNR 4	1.250	1.180	0.590	14.00	3.00	0.765	1.530	IWSN 432	NL46	5124	CL20	XNS48	5103		
S24U MWLNR 4	1.500	1.370	0.685	14.00	3.00	0.890	1.780								

Left hand ANSI boring bars subject to quotation
Coolant hole ANSI boring bars subject to quotation

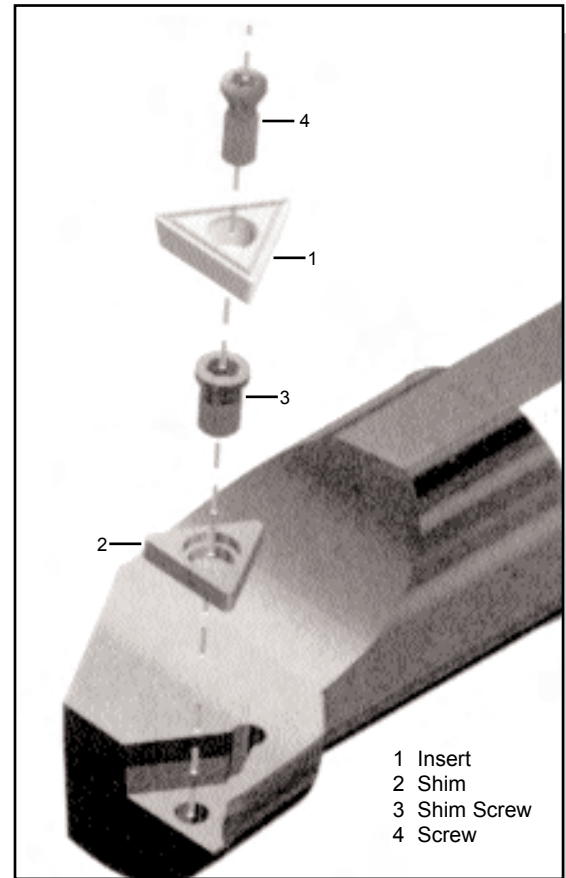
• In Stock

To Order Call:
1-800-263-9860

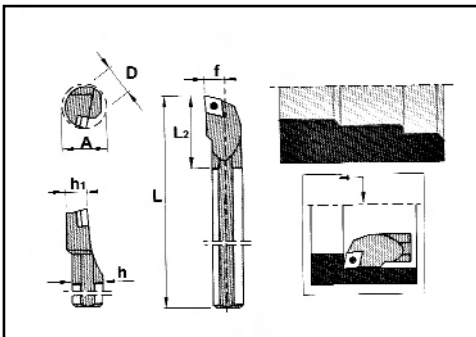


FEATURES:

- EXCELLENT CHIP FLOW WITH CLEAR TOP SURFACE WHEN USING SCREW-ON CLAMPING SYSTEM
- SUITABLE FOR INTERNAL FINISHING USING SMALL SHANK BORING BARS
- DESIGNED WITH MINIMUM SPARE PARTS



- 1 Insert
- 2 Shim
- 3 Shim Screw
- 4 Screw



SCLCR Positive Rake

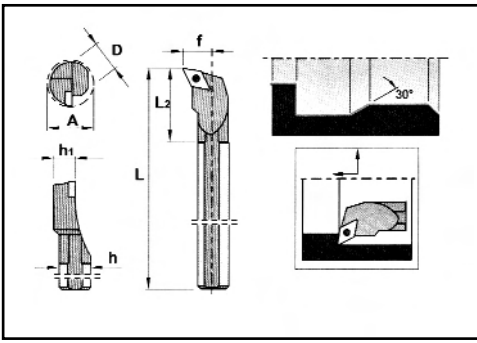
95°

Set SCLCR-2 - 4 piece boring bar set available. Please enquire

ORDER NO.	DIMENSIONS (inch)							SPARE PARTS					INSERT TYPE	R	
	D	h	h ₁	L	L ₂	f	A	Screw	Key	Shim	Shim Screw				
S06M SCLCR 2	0.375	0.340	0.170	6.00	0.830	0.250	0.500							CCMT, CCGT, 2(1.5)1	•
S08M SCLCR 2	0.500	0.460	0.230	6.00	0.910	0.312	0.625	1425	5507	-	-				•
S10R SCLCR 2	0.625	0.580	0.290	8.00	1.060	0.406	0.812								•
S10R SCLCR 3	0.625	0.580	0.290	8.00	1.060	0.406	0.812							CCMT, CCGT, 3(2.5)1	•
S12S SCLCR 3M	0.750	0.710	0.355	10.00	1.580	0.500	1.000	1440	5515	-	-				•
S16T SCLCR 3M	1.000	0.900	0.450	12.00	1.810	0.640	1.280								•
S16T SCLCR 4	1.000	0.900	0.450	12.00	3.000	0.640	1.280	1250	5520	-	-			CCMT, CCGT, 432	•

Left hand ANSI boring bars subject to quotation
Coolant hole ANSI boring bars subject to quotation

• In Stock



SDUCR Positive Rake

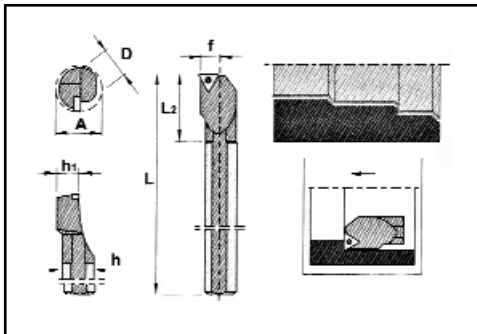
93°



ORDER NO.	DIMENSIONS (inch)							SPARE PARTS						INSERT TYPE	R
	D	h	h ₁	L	L ₂	f	A	Screw	Key	Shim	Shim Screw				
S06M SDUCR 2	0.375	0.340	0.170	6.00	0.830	0.375	0.750	1425	5507	-	-			DCGT, DCMT 2(1.5)1	•
S08M SDUCR 2	0.500	0.460	0.230	6.00	0.910	0.438	0.875								
S10R SDUCR 2	0.625	0.580	0.290	8.00	1.060	0.500	1.000								
S12S SDUCR 3M	0.750	0.710	0.355	10.00	1.580	0.625	1.250	1240	5515	-	-			DCGT, DCMT, 3(2.5)1	•
S16T SDUCR 3M	1.000	0.900	0.450	12.00	1.810	0.750	1.500								

• In Stock

Set SDUCR-2 - 3 piece boring bar set available. Please enquire



STFCR Positive Rake

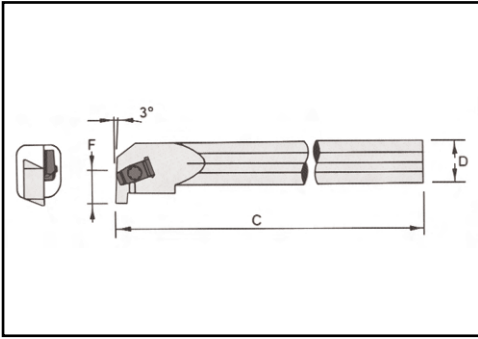
90°

ORDER NO.	DIMENSIONS (inch)							SPARE PARTS						INSERT TYPE	R
	D	h	h ₁	L	L ₂	f	A	Screw	Key	Shim	Shim Screw				
S08M STFCR 2	0.500	0.460	0.230	6.00	0.800	0.312	0.625	1425	5507	-	-			TCGT, TCMT, 2(1.5)1	•
S10R STFCR 2	0.625	0.580	0.290	8.00	0.960	0.406	0.812								
S12S STFCR 2	0.750	0.710	0.355	10.00	1.420	0.500	1.000								
S12S STFCR 3	0.750	0.710	0.355	10.00	1.420	0.500	1.000	1240	5515	-	-			TCGT, TCMT, 3(2.5)1	•
S16T STFCR 3	1.000	0.900	0.450	12.00	1.930	0.640	1.280								

• In Stock

To Order Call:
1-800-263-9860

Left hand ANSI boring bars subject to quotation
Coolant hole ANSI boring bars subject to quotation



COLBIDE NOTCH THREADING & GROOVING BORING BARS CLER (NNTO)

ORDER NO.	DIMENSIONS (inch)							SPARE PARTS					INSERT TYPE	R	
	Min. Bore	D	C	F				Key	Clamp Screw	Clamp (R)					
A10S CLER 2	1.000	0.625	10.00	0.500										CNG, CNT, CNTP 2L	• • •
A12S CLER 2	1.125	0.750	10.00	0.562				5124	1291	TF147					
A16T CLER 2	1.375	1.000	12.00	0.688						TF75					
A16T-CLER-3	1.375	1.000	12.00	0.688										CNA, CNG, CNT, CNTP 3L	• • • •
A20U-CLER-3	1.750	1.250	14.00	0.875				5104	1297	TF73					
A24U CLER 3	2.000	1.500	14.00	1.000											
A32V CLER 3	2.500	2.000	16.00	1.250											
A28U CLER-4	2.500	1.750	14.00	1.250				5104	1297	TF73				CNA, CNG, CNT, CNTP 4L	• •
A32V CLER-4	2.750	2.000	16.00	1.375											

Left hand ANSI boring bars subject to quotation

• In Stock

FEATURES:

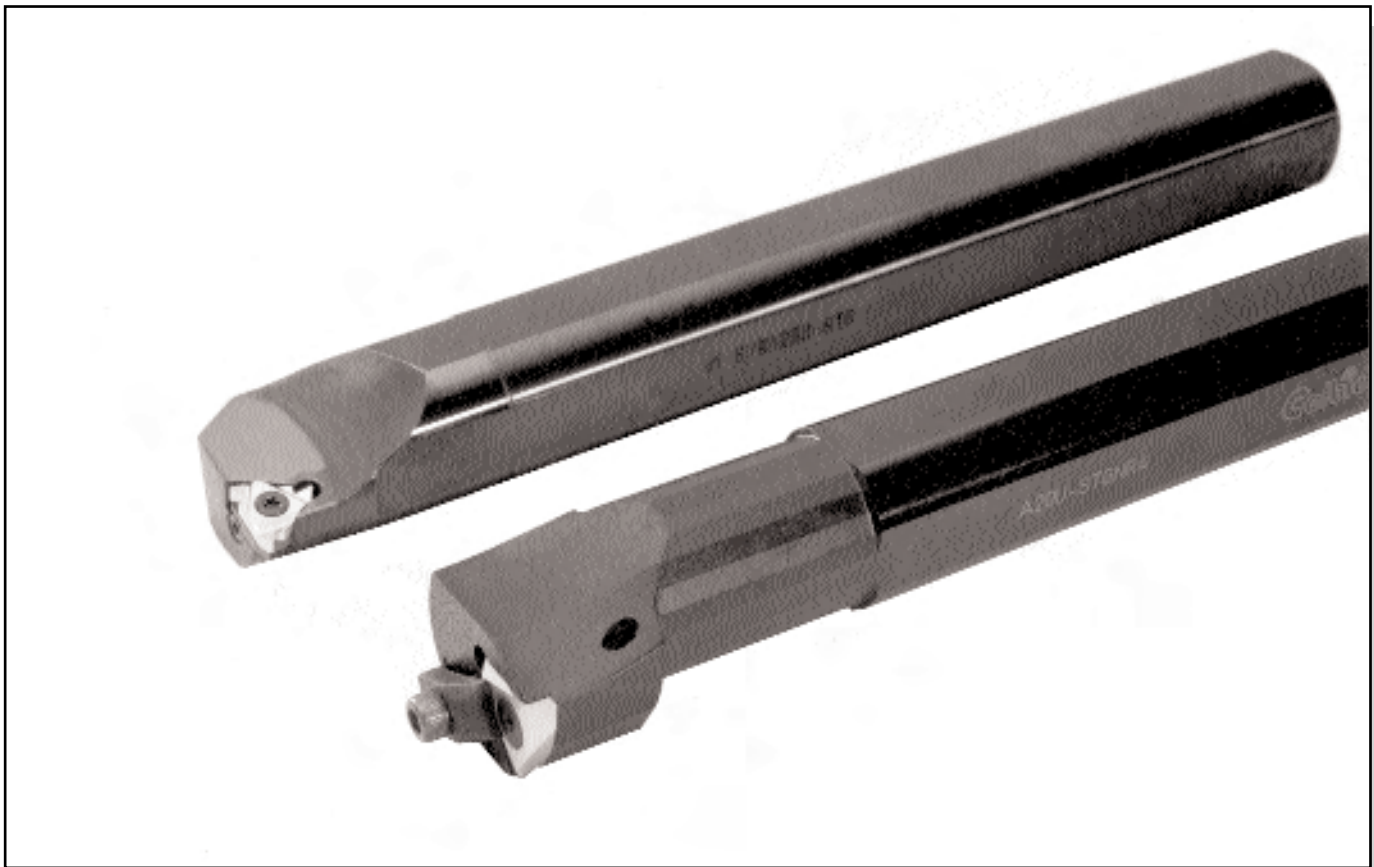
- LOCKING FORCES ARE IN THREE (3) DIRECTIONS, HOLDING THE INSERT DOWN, IN, AND BACK AGAINST THE WALLS FOR COMPLETE POCKETING
- INSERT IS RIGIDLY AND ACCURATELY CLAMPED
- FAST AND EASY INDEXING OF INSERT
- SIMPLE CLAMP REPLACEMENT
- COOLANT HOLE
- INTERCHANGEABLE INTO YOUR PRESENT HOLDING SYSTEM

INSERT TYPE:

- CNA** = ACME THREADING INSERT
- CNG** = GROOVING INSERT
- CNT** = THREADING INSERT
- CNTP** = THREADING POSITIVE INSERT
- CNR** = FULL RADIUS GROOVING INSERT

**To Order Call:
1-800-263-9860**

SCREW-ON LAYDOWN THREADING TOP CLAMP ON EDGE THREADING & GROOVING

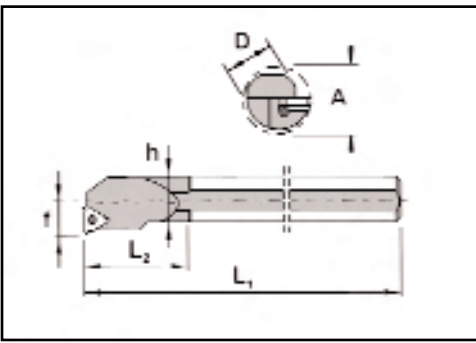


To Order Call:
1-800-263-9860

SIR SCREW-ON LAYDOWN



THREADING Negative Rake

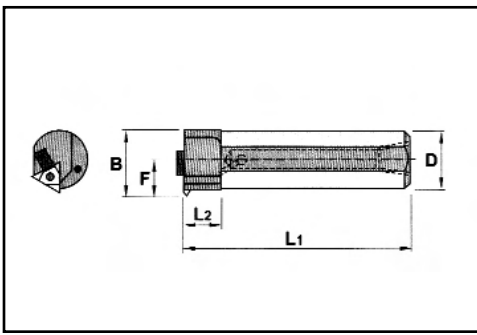


ORDER NO.	DIMENSIONS (inch)							SPARE PARTS						INSERT TYPE	R
	D	h	L ₁	L ₂	f	A	Insert Screw	Key	Shim (R)	Shim Screw					
SIR 0375 K11	0.625	0.380	5.00	1.250	0.260	0.470		1225	5507	-	-			2 IRAG60	•
SIR 0500 M16	0.625	0.500	6.00	1.250	0.390	0.640		SN3	5510	-	-			3 IRAG60	•
SIR 0625 P16	0.625	0.620	7.00	1.500	0.460	0.750				SA3T	5510	-	-		
SIR 0750 P16	0.750	0.750	7.00	1.500	0.510	1.000		SA3	5510			Y13	SY3		
SIR 1000 R16	1.000	1.000	8.00	1.500	0.650	1.200				SA3	5510	Y13	SY3		
SIR 1250 S16	1.250	1.250	10.00	1.500	0.770	1.420		SA3	5510			Y13	SY3		
SIR 0750 P22	0.750	0.750	7.00	1.500	0.510	0.950				SA4	5520	Y14	SY4		
SIR 1000 R22	1.000	1.000	8.00	1.500	0.710	1.200		SA4	5520			Y14	SY4		
SIR 1250 S22	1.250	1.250	10.00	1.500	0.850	1.500				SA4	5520	Y14	SY4		

Left hand ANSI boring bars subject to quotation

• In Stock

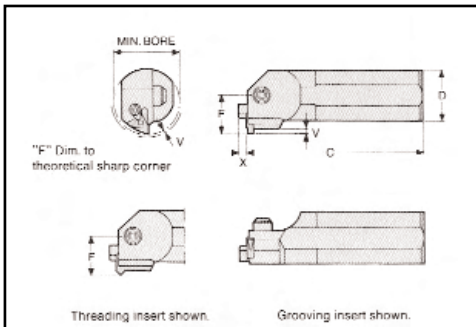
**To Order Call:
1-800-263-9860**



STCNR TOP CLAMP ON EDGE THREADING & GROOVING - Coolant Hole

ORDER NO.	DIMENSIONS (inch)						SPARE PARTS					INSERT TYPE	R
	D	B	F	L1	L2	Insert Screw	Clamp	Clamp Screw	Insert Screw key	Clamp Screw key			
A20U STCNR 4 A32V STCNR 4	1.250 2.000	1.500 2.260	0.875 1.260	14.00 16.00	1.120 1.120		1936	2101	1801	5124	5103	TNMC, TPMC, 43NV, 43NT, 43NG	•
A32V STCNR 5	2.000	2.375	1.375	16.00	1.880		1937	2101	1801	5124	5103	TNMC, TPMC, 54NV, 54NT, 54NG	•

• In Stock



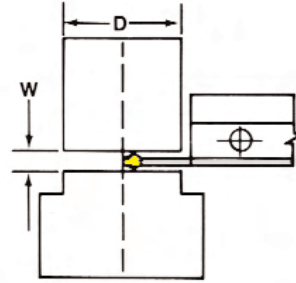
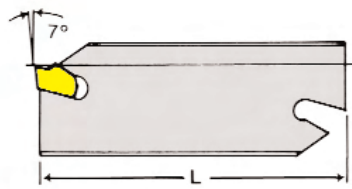
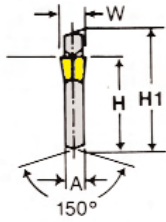
STGNR TOP CLAMP ON EDGE THREADING & GROOVING - Coolant Hole

ORDER NO.	DIMENSIONS (inch)						SPARE PARTS					INSERT TYPE	R
	Min Bore	C	D	F	V	Insert Screw	Clamp	Clamp Screw	Insert Screw key	Clamp Screw key			
A20U STGNR 3	1.788	14.00	1.250	0.875	.102		1906	2101	1801	5100	5103	TNMC, TPMC, 32NV, 32NT, 32NG	•
A24U STGNR 4	2.625	14.00	1.500	0.985	.160		1936	2101	1801	5124	5103	TNMC, TPMC, 43NV, 43NT, 43NG	•

• In Stock

To Order Call:
1-800-263-9860

Left hand ANSI boring bars subject to quotation

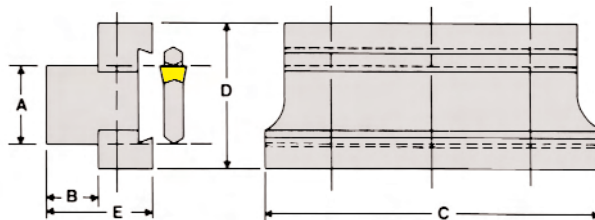


ORDER NO.	WIDTH=W ± .004"	D MAX.	A	L	H	H1	INSERT TYPE
KSXB 26-2	.087	2.00	.063	4.33	.842	1.00	GTN 2, GTN 3, GTR/L 3 GTN 4, GTR/L 4
KSXB 26-3	.122	3.00	.094	4.33	.842	1.00	
KSXB 26-4	.161	3.15	.125	4.33	.842	1.00	
KSXB 32-3	.122	3.94	.094	5.90	.984	1.25	GTN 3, GTR/L 3 GTN 4, GTR/L 4
KSXB 32-4	.161	3.94	.125	5.90	.984	1.25	

ORDER NO.	WIDTH=W ± .004"	D MAX.	A	L	H	H1	INSERT TYPE
KSOB 26-2	.087	2.00	.063	4.33	.842	1.00	KSON 2 KSON 3 KSON 4
KSOB 26-3	.118	3.00	.094	4.33	.842	1.00	
KSOB 26-4	.161	3.15	.125	4.33	.842	1.00	
KSOB 32-3	.118	4.00	.094	5.90	.984	1.25	KSON 3 KSON 4
KSOB 32-4	.161	4.00	.125	5.90	.984	1.25	

“Positive stop” cut-off and grooving blades available in both HSS (PS-IH) and non-HSS (IH-PS). Please enquire

TOOL BLOCKS

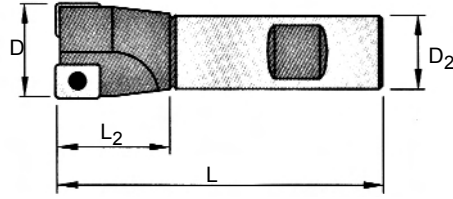


ORDER NO.	A	B	C	D	E	BLADE STYLE USED
KTBN 20-5	.788	.750	3.425	1.50	1.30	KSXB 26-2 KSXB 26-3 KSXB 26-4 KSOB 26-3, 26-2 KSOB 26-4
KTBN 20-6	.788	.750	3.935	1.900	1.380	KSXB 32-3 KSXB 32-4 KSOB 32-3 KSOB 32-4
KTBN 25-6	.985	.790	4.340	1.885	1.425	
KTBN 32-6	1.185	1.115	4.725	1.890	1.750	

To Order Call:
1-800-263-9860

Starter kits available. Please enquire

Colbide 90° SQUARE SHOULDER INDEXABLE END MILL



STANDARD LENGTH

ORDER NO.	DIMENSIONS(inch)					SPARE PARTS		INSERT TYPE
	D	D ₂	L	L ₂	Flutes	Insert Screw	Torx Key	
924.037	.375	.500	3.00	.640	1	TX25C	CT08	APKT 1003
924.050	.500	.625	3.25	.750	1			
924.062	.625	.625	3.25	1.00	2			
924.075	.750	.750	4.00	1.00	2			
924.075 - 3 Flute	.750	.750	4.00	1.00	3			
924.100	1.00	1.00	4.50	1.00	4			
921.100	1.00	1.00	4.50	1.57	2	TX35	CT15	APKT 1604
921.125	1.25	1.00	5.00	1.57	3			
921.150	1.50	1.00	5.35	2.00	4			
927.100	1.00	1.00	4.50	1.57	2	TX35	CT15	ADKT 1505
927.125	1.25	1.00	5.00	1.57	3			
927.150	1.50	1.00	5.35	2.00	4			

LONG LENGTH

ORDER NO.	DIMENSIONS (inch)					SPARE PARTS		INSERT TYPE
	D	D ₂	L	L ₂	Flutes	Insert Screw	Torx Key	
924.075 - Long	.750	.750	7.87	1.00	3	TX25C	CT08	APKT 1003
924.100 - Long	1.00	1.00	7.87	1.00	4			
924.125 - Long	1.25	1.00	7.87	1.00	5			
927.100 - Long	1.00	1.00	7.87	1.57	2	TX35	CT15	ADKT 1505
927.125 - Long	1.25	1.00	7.87	1.57	3			

KIT 924
4-piece 90° Square Shoulder
Indexable End Mill Kit

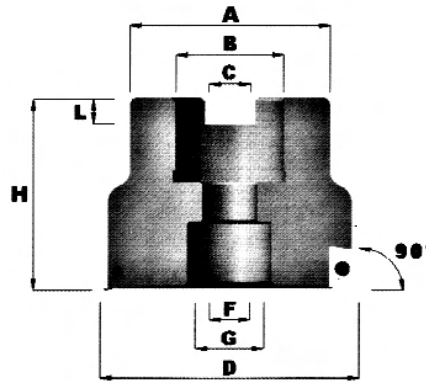
Includes: 10 pieces APKT 1003PDER P35S+ or C750+ or M20M+

Plus 1 piece 924.037 - 3/8"
1 piece 924.050 - 1/2"
1 piece 924.062 - 5/8"
1 piece 924.075 - 3/4"

To Order Call:
1-800-263-9860

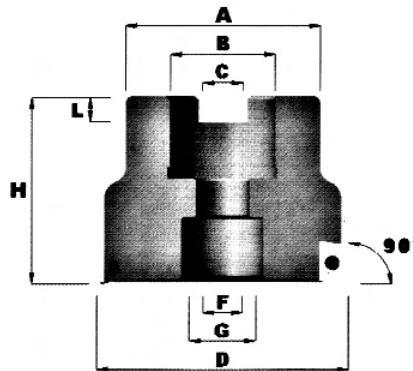
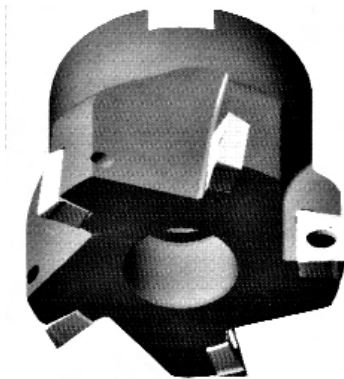
90° SQUARE SHOULDER SHELL TYPE MILLING CUTTERS

STYLE 923 - APKT 1003



ORDER NO.	DIMENSIONS (inch)									SPARE PARTS		INSERT
	D	Flutes	A	B	C	F	G	H	L	Insert Screw	Torx Key	
923.150	1.500	6	1.48	.750	.320	.410	.580	1.57	.230	TX25C	CT08	APKT 1003
923.200	2.000	7	1.73									
923.250	2.500	9	2.165									
923.300	3.000	11	2.165	1.00	.380	.510	.728	1.97				

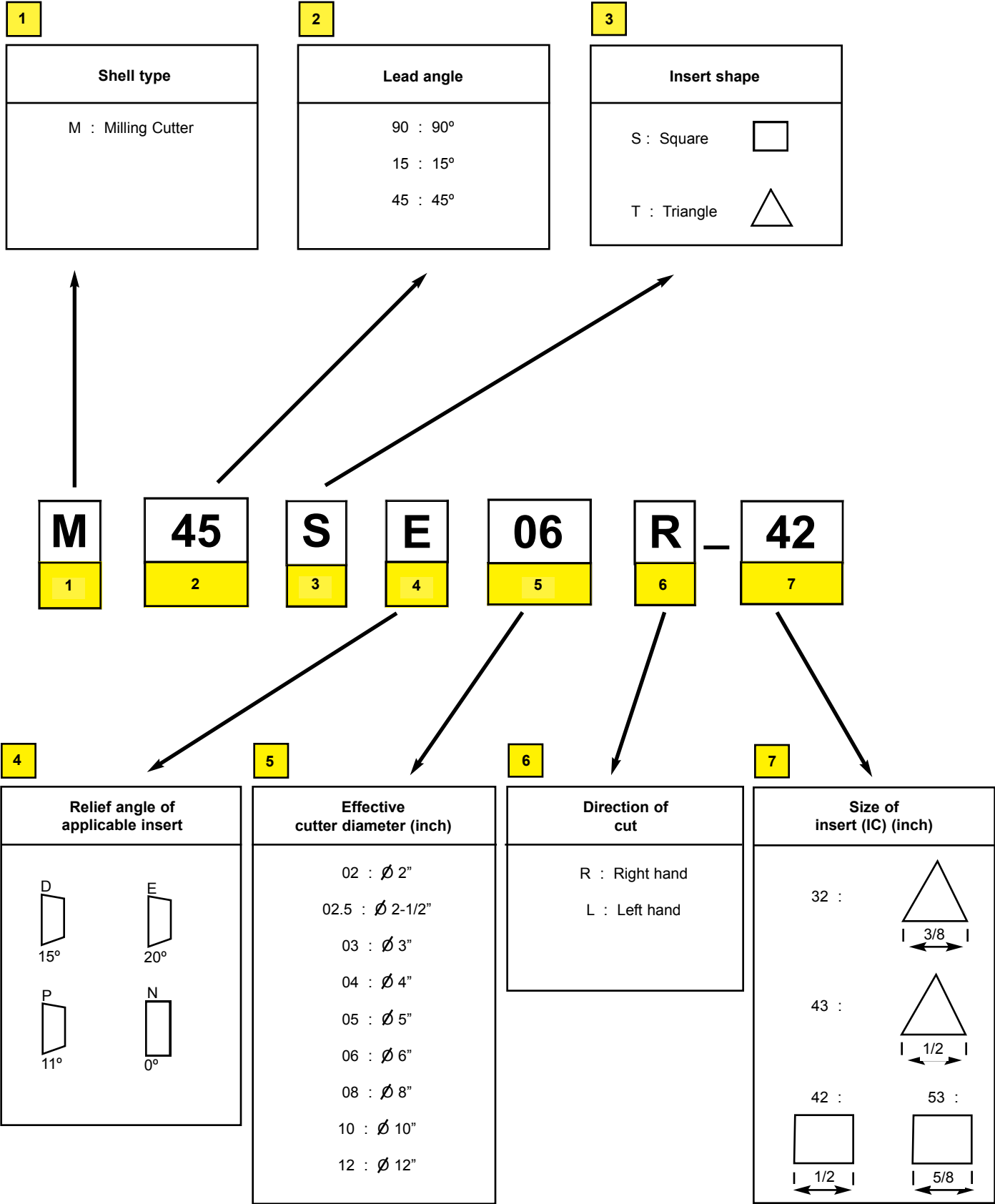
STYLE 920 - APKT 1604 STYLE 926 - ADKT 1505



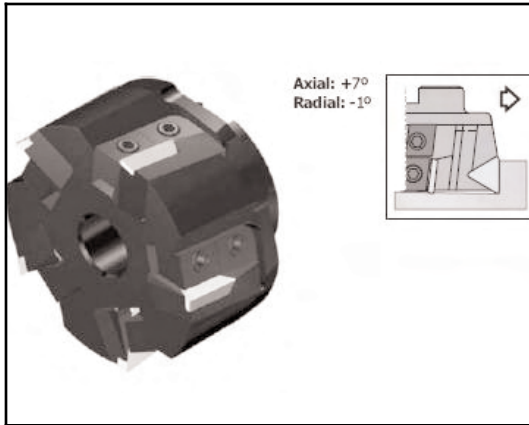
ORDER NO.	DIMENSIONS (inch)										SPARE PARTS		STYLE & INSERT	
	D	Flutes	A	B	C	F (920)	F (926)	G	H	L	Insert Screw	Torx Key	920	926
920/926.200	2.000	4	1.73	.750	.320	.390	.410	.580	1.57	.230	TX35L	CT15	APKT 1604	ADKT 1505
920/926.250	2.500	5												
920/926.300	3.000	6	2.00	1.00	.380	.500	.540	.725	1.97					
920/926.400	4.000	7	3.00	1.50	.630	.665	.780	1.97		.380				

Opposite (unused insert) Corner Shell Type Milling Cutters available

**To Order Call:
1-800-263-9860**

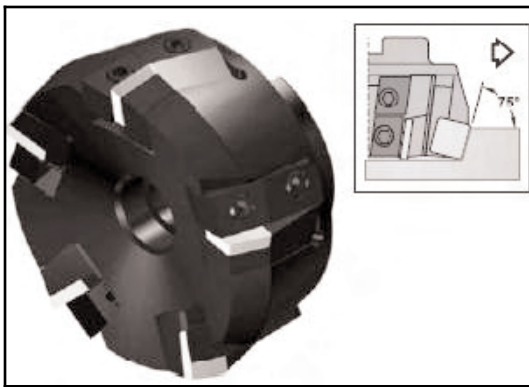


To Order Call:
1-800-263-9860



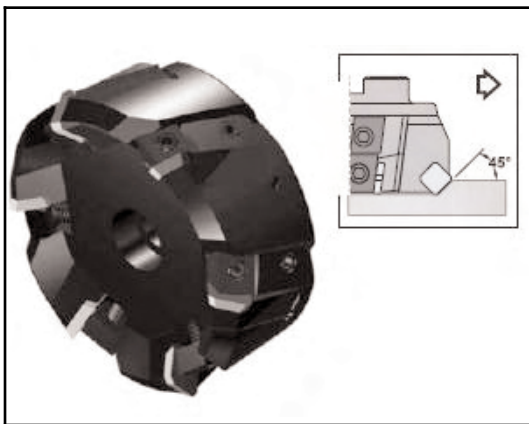
Square Shoulder Milling 0° Lead Angle (course pitch)

Style	Cutter Dia.	Takes Insert
M90TP 02R 32	2"	TPKN, TPKR, 32PPR, PPTR TPU, TPG 322
M90TP 02.5R 32	2-1/2"	
M90TP 03R 43	3"	TPKN, TPKR 43PDR, PDTR TPU, TPG 432
M90TP 04R 43	4"	
M90TP 05R 43	5"	
M90TP 06R 43	6"	
M90TP 08R 43	8"	
M90TP 10R 43	10"	



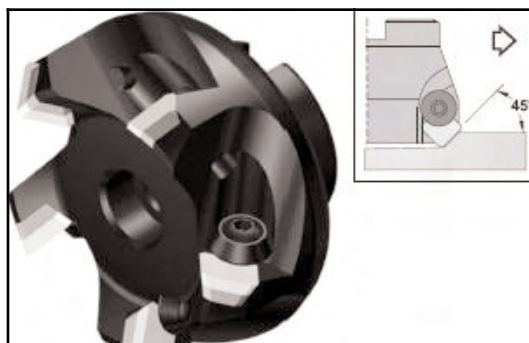
Face Milling 15° Lead Angle

Style	Cutter Dia.	Takes Insert
M15SP 03R 42	3"	SPKN, SPKR 42EDR, EDTR SPU, SPG 422
M15SP 04R 42	4"	
M15SP 05R 42	5"	
M15SP 06R 42	6"	
M15SP 05R 53	5"	SPKN, SPKR 53EDR, SPG 533



Face Milling 45° Lead Angle

Style	Cutter Dia.	Takes Insert
M45SE 03R 42	3"	SEAN 42AFTN AFN SEKN 42AFTN, AFN SEKR 42AFTN, AFN SEC, SEG 422
M45SE 04R 42	4"	
M45SE 05R 42	5"	
M45SE 06R 42	6"	
M45SE 08R 42	8"	
M45SE 10R 42	10"	



Econo Mill 45° Lead Angle

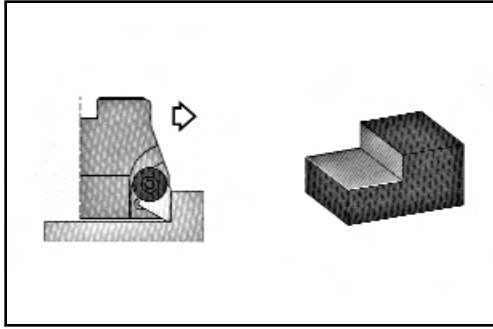
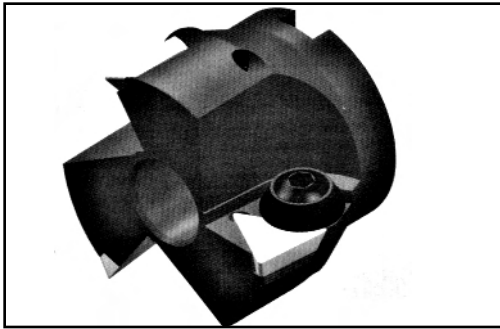
Style	Cutter Dia.	Takes Insert
220.13-4-45°	4"	SEAN 42AFTN AFN SEKN 42AFTN, AFN SEKR 42AFTN, AFN SEC, SEG 422

To Order Call:
1-800-263-9860

Other diameters available SPARE PARTS AVAILABLE PLEASE ENQUIRE



ECONOMY INDEXABLE 90° SQUARE SHOULDER MILLING CUTTERS/END MILLS

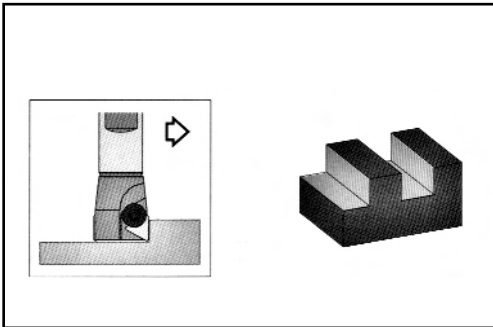
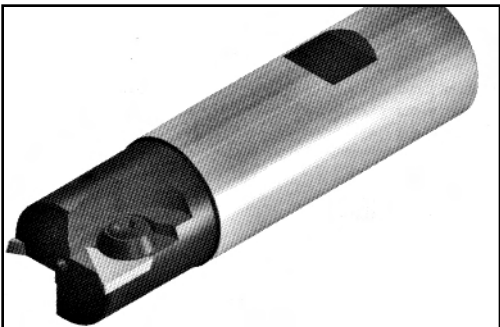


Radial rake angle 0°
Setting angle 90°
Axial rake angle 0°

Economy Indexable Shell Mill Square Shoulder 90° Positive Rake (right hand)

ORDER NO.	DIMENSIONS (inch)		NO. OF INSERTS	SPARE PARTS				INSERT TYPE	R
	Cutter Dia.	Bore Dia.		Clamp Screw	Shim	Shim Screw	Allen Key		
220.17-2.00	2	3/4	3	C174.16-644	-	-	C4SMS795	TPU 322	•
220.17-2.50	2-1/2	1	3	C174.16-648	C175.11-624	C174.10-650	C5SMS795	TPG, TPU 432 TPKN 43	•
220.17-3.00	3	1	4						•
220.17-4.00	4	1-1/2	5						•

• In Stock



Cutting rake angle 0°
Setting angle 90°
Axial rake angle 0°

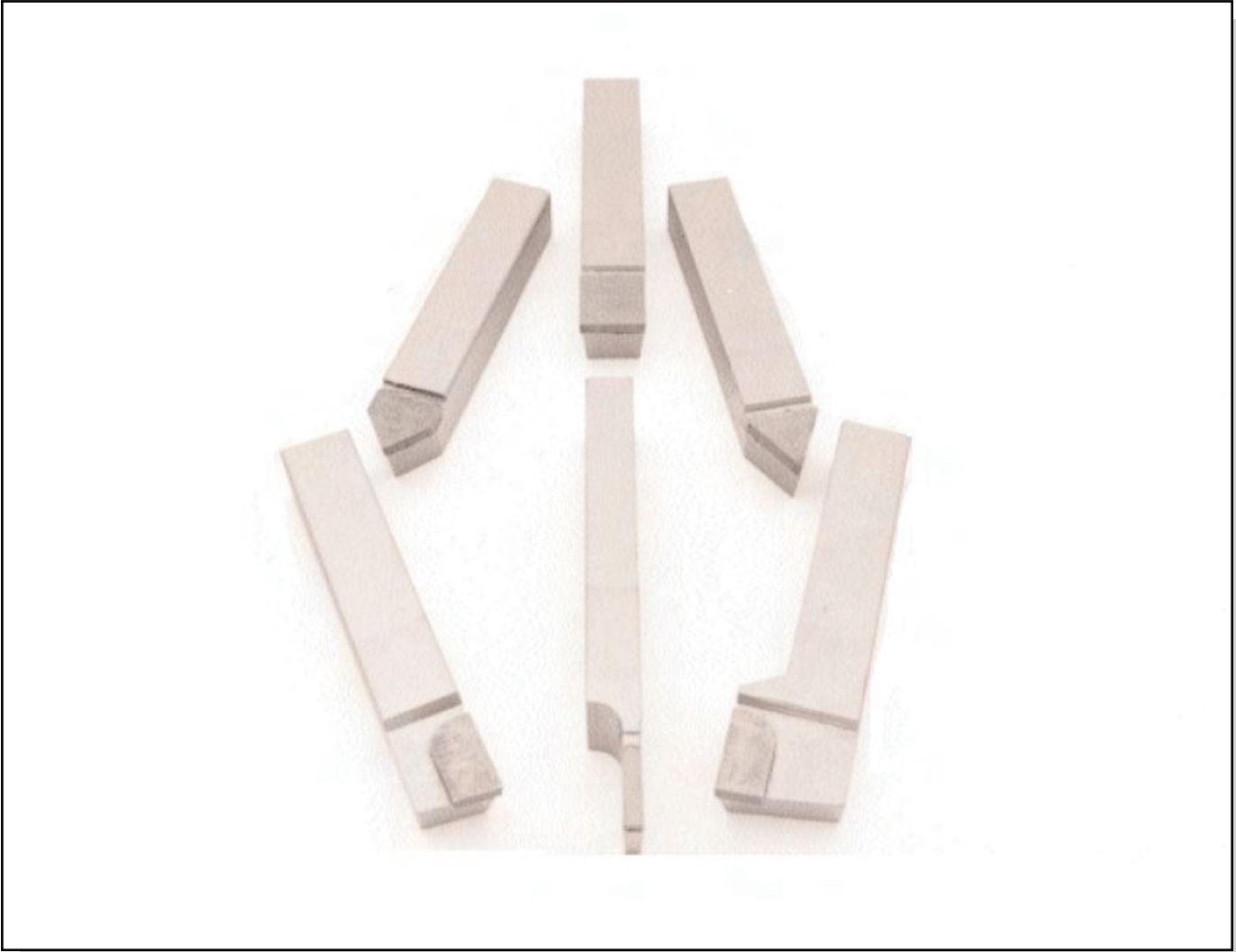
Economy Indexable End Mill Square Shoulder 90° Positive Rake (right hand)

ORDER NO.	DIMENSIONS (inch)		NO. OF INSERTS	SPARE PARTS		INSERT TYPE	R
	Cutter Dia.	Shank Dia.		Clamp Screw	Allen Key		
215.17-1919.3-1	3/4	3/4" Dia. Weldon	1	C174.16-636	C3SMS795	TPU 211	•
215.17-1919.3-2			2			TPU 211	•
215.17-1926.3			2			TPU 221	•
215.17-1931.3	1-1/4	1" Dia. Weldon	2	C174.16-644	C4SMS795	TPU 322	•
215.17-2626.3	1		2	C174.16-636	C3SMS795	TPU 221	•
215.17-2631.3	1-1/4		2	C174.16-644	C4SMS795	TPU 322	•
215.17-2638.3	1-1/2	3	C174.16-634	TPU 322		•	
215.17-8051.4	2	Bridgeport R8	3	C174.16-644	C4SMS795	TPU 322	•

TPG and TPKN precision ground inserts can also be used

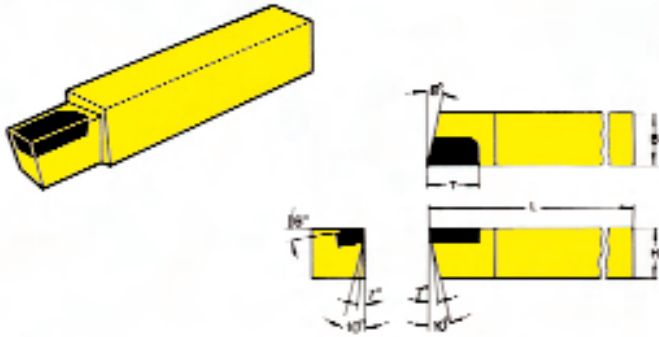
• In Stock

**To Order Call:
1-800-263-9860**



**To Order Call:
1-800-263-9860**

Style AR and AL

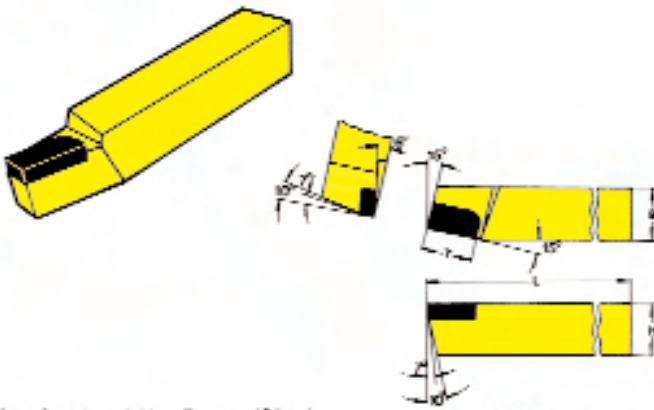


C2 - Cast Iron & Non-Ferrous (Silver)
 C5 - Roughing to General Purpose Steel (Gold)
 C6 - General Purpose to Finishing Steel (Gold)

Right Hand Shown

ORDER NO.		DIMENSIONS			
Right Hand	Left Hand	H	B	L	T
AR-4	AL-4	1/4	1/4	2	5/16
AR-5	AL-5	5/16	5/16	2 1/4	1/2
AR-6	AL-6	3/8	3/8	2 1/2	1/2
AR-7	AL-7	7/16	7/16	3	1/2
AR-8	AL-8	1/2	1/2	3 1/2	5/8
AR-10	AL-10	5/8	5/8	4	3/4
AR-12	AL-12	3/4	3/4	4 1/2	13/16
AR-16	AL-16	1	1	7	1
AR-20	AL-20	1 1/4	1 1/4	8	1

Style BR and BL

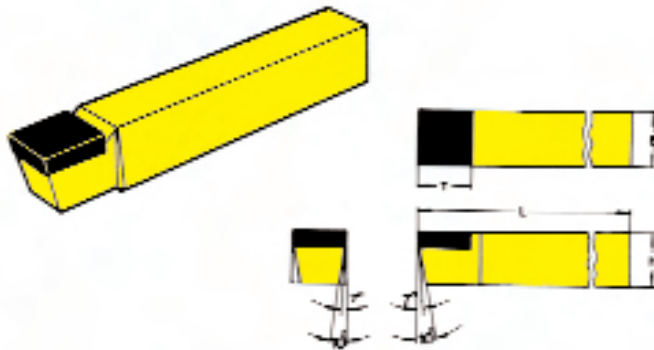


C2 - Cast Iron & Non-Ferrous (Silver)
 C5 - Roughing to General Purpose Steel (Gold)
 C6 - General Purpose to Finishing Steel (Gold)

Right Hand Shown

ORDER NO.		DIMENSIONS			
Right Hand	Left Hand	H	B	L	T
BR-4	BL-4	1/4	1/4	2	1/4
BR-5	BL-5	5/16	5/16	2 1/4	5/16
BR-6	BL-6	3/8	3/8	2 1/2	1/2
BR-7	BL-7	7/16	7/16	3	1/2
BR-8	BL-8	1/2	1/2	3 1/2	5/8
BR-10	BL-10	5/8	5/8	4	3/4
BR-12	BL-12	3/4	3/4	4 1/2	13/16
BR-16	BL-16	1	1	7	1
BR-20	BL-20	1 1/4	1 1/4	8	1

Style C



C2 - Cast Iron & Non-Ferrous (Silver)
 C5 - Roughing to General Purpose Steel (Gold)
 C6 - General Purpose to Finishing Steel (Gold)

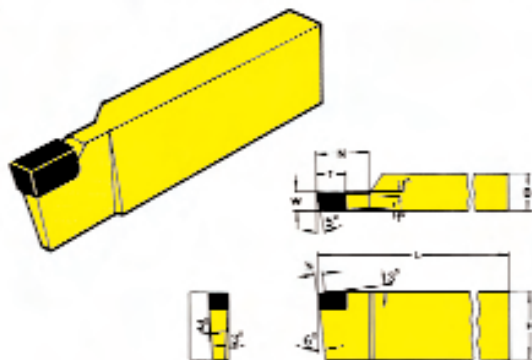
ORDER NO.	DIMENSIONS			
	H	B	L	T
C-4	1/4	1/4	2	1/4
C-5	5/16	5/16	2 1/4	5/16
C-6	3/8	3/8	2 1/2	3/8
C-7	7/16	7/16	3	7/16
C-8	1/2	1/2	3 1/2	1/2
C-10	5/8	5/8	4	5/8
C-12	3/4	3/4	4 1/2	3/4
C-16	1	1	7	1

To Order Call:
1-800-263-9860

STANDARD BRAZED TOOLS



Style CTR and CTL (COR and COL)

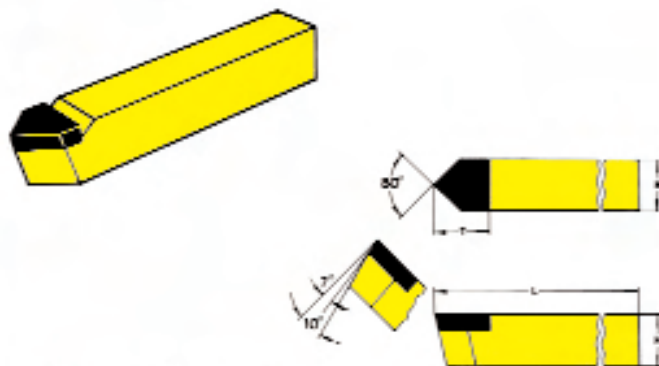


C2 - Cast Iron & Non-Ferrous (Silver) Right Hand Shown
 C5 - Roughing to General Purpose Steel (Gold)
 C6 - General Purpose to Finishing Steel (Gold)

ORDER NO.		DIMENSIONS				
Right Hand	Left Hand	H	B	L	N	W
CTR-112*	CTL-112*	1	1/2	5	1/2	1/8
CTR-120	CTL-120	1	1/2	5	1	5/16
CTR-121	CTL-121	1	1/2	5	1	1/4
CTR-122	CTL-122	1	1/2	5	13/16	3/16
CTR-130	CTL-130	1 1/4	5/8	5	1 1/4	3/8
CTR-140	CTL-140	1 1/2	3/4	6	1 1/4	3/8

* ALSO AVAILABLE IN 1/2 X 1/2 SHANK

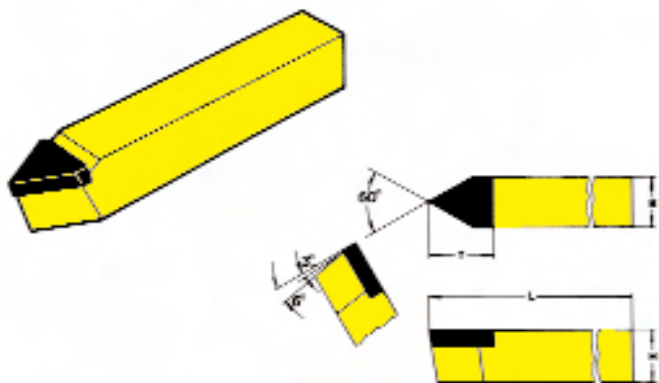
Style D



C2 - Cast Iron & Non-Ferrous (Silver)
 C5 - Roughing to General Purpose Steel (Gold)
 C6 - General Purpose to Finishing Steel (Gold)

ORDER NO.	DIMENSIONS			
	H	B	L	T
D-4	1/4	1/4	2	5/16
D-5	5/16	5/16	2 1/4	3/8
D-6	3/8	3/8	2 1/2	1/2
D-7	7/16	7/16	3	1/2
D-8	1/2	1/2	3 1/2	1/2
D-10	5/8	5/8	4	5/8
D-12	3/4	3/4	4 1/2	3/4
D-16	1	1	7	3/4

Style E

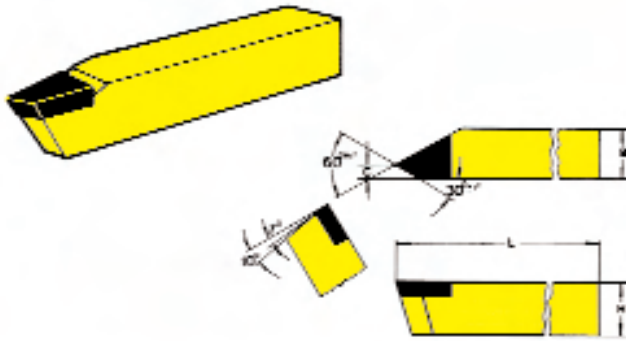


C2 - Cast Iron & Non-Ferrous (Silver)
 C5 - Roughing to General Purpose Steel (Gold)
 C6 - General Purpose to Finishing Steel (Gold)

ORDER NO.	DIMENSIONS			
	H	B	L	T
E-4	1/4	1/4	2	1/4
E-5	5/16	5/16	2 1/4	5/16
E-6	3/8	3/8	2 1/2	3/8
E-7	7/16	7/16	3	1/2
E-8	1/2	1/2	3 1/2	1/2
E-10	5/8	5/8	4	5/8
E-12	3/4	3/4	4 1/2	3/4

To Order Call:
1-800-263-9860

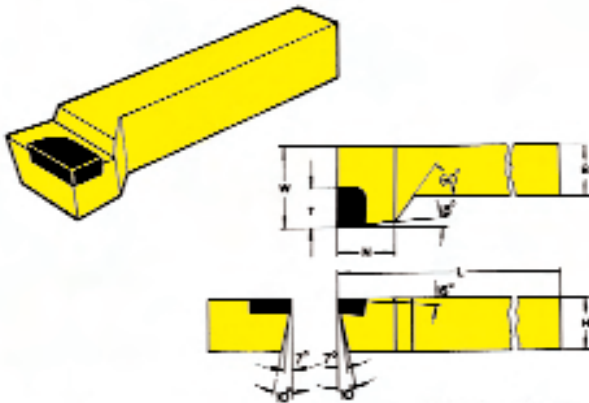
Style ER and EL



C2 - Cast Iron & Non-Ferrous (Silver)
 C5 - Roughing to General Purpose Steel (Gold)
 C6 - General Purpose to Finishing Steel (Gold)

ORDER NO.		DIMENSIONS				
Right Hand	Left Hand	H	B	L	C	
ER-5	EL-5	5/16	5/16	2 1/4	1/16	
ER-6	EL-6	3/8	3/8	2 1/2	3/64	
ER-8	EL-8	1/2	1/2	3 1/2	3/32	
ER-10	EL-10	5/8	5/8	4	3/32	
ER-12	EL-12	3/4	3/4	4 1/2	1/8	

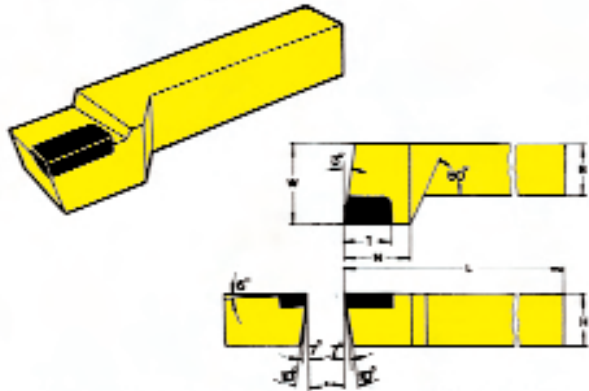
Style FR and FL



C2 - Cast Iron & Non-Ferrous (Silver)
 C5 - Roughing to General Purpose Steel (Gold)
 C6 - General Purpose to Finishing Steel (Gold)

ORDER NO.		DIMENSIONS				
Right Hand	Left Hand	H	B	L	N	W
FR-8	FL-8	1/2	1/2	3 1/2	7/16	3/4
FR-10	FL-10	5/8	5/8	4	5/8	1
FR-12	FL-12	3/4	3/4	4 1/2	11/16	1 3/8
FR-16	FL-16	1	1	7	13/16	1 3/4

Style GR and GL

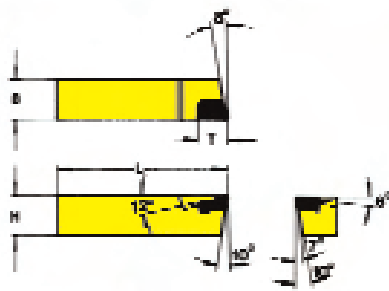


C2 - Cast Iron & Non-Ferrous (Silver)
 C5 - Roughing to General Purpose Steel (Gold)
 C6 - General Purpose to Finishing Steel (Gold)

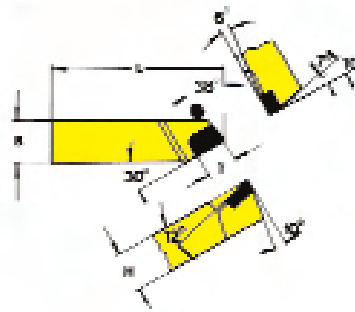
ORDER NO.		DIMENSIONS				
Right Hand	Left Hand	H	B	L	N	W
GR-8	GL-8	1/2	1/2	3 1/2	1	3/4
GR-10	GL-10	5/8	5/8	4	1 1/4	1
GR-12	GL-12	3/4	3/4	4 1/2	1 3/8	1 1/8
GR-16	GL-16	1	1	7	1 1/2	1 1/2

To Order Call:
1-800-263-9860

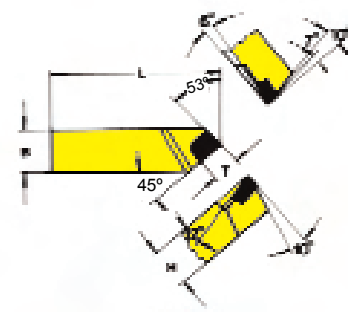
Style TSA, TSC and TSE



TSA



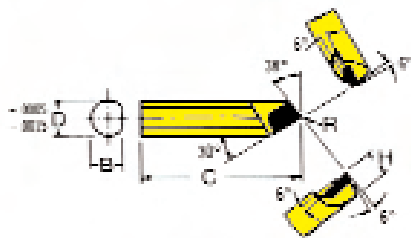
TSC



TSE

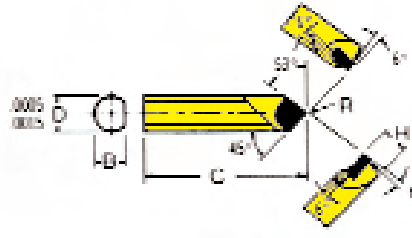
ORDER NO.			DIMENSIONS					
Style TSA	Style TSC	Style TSE	H	B	L	T	R	
TSA-5	TSC-5	TSE-5	5/16	5/16	1 1/2	5/16	1/64	
TSA-6	TSC-6	TSE-6	3/8	3/8	1 3/4	5/16	1/64	
TSA-8	TSC-8	TSE-8	1/2	1/2	2 1/2	7/16	1/32	
TSA-10	TSC-10	TSE-10	5/8	5/8	3	9/16	1/32	
TSA-12	TSC-12	TSE-12	3/4	3/4	3 1/2	5/8	1/32	

Style TRC, TRE and TRG



TRC

Round shank boring tool
- for use mainly in 30° boring bars.



TRE

Round shank boring tool
- for use mainly in 45° boring bars.



TRG

Round shank boring tool
- for use mainly in 90° boring bars
for recessing and grooving

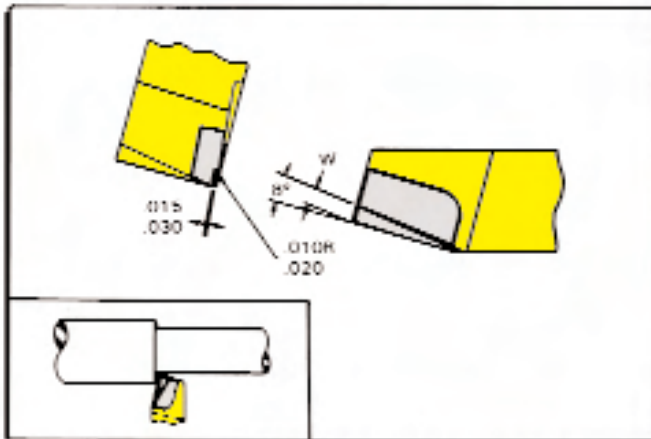
ORDER NO.			DIMENSIONS					
Style TRC	Style TRE	Style TRG	D	B	C	H	M	R
TRC-5	TRE-5	-	5/16	19/64	1 1/2	7/32	-	1/64
TRC-6	-	-	3/8	11/32	1 3/4	9/32	-	1/64
TRC-8	-	-	1/2	15/32	2 1/2	3/8	-	1/32
-	TRE-6	-	3/8	11/32	1 3/4	9/32	-	1/64
-	TRE-8	-	1/2	15/32	2 1/2	3/8	-	1/32
-	-	TRG-5	5/16	19/64	1 1/2	-	1/4	1/4
-	-	TRG-6	3/8	11/32	1 3/4	-	1/4	5/16
-	-	TRG-7	7/16	13/32	2 1/2	-	3/8	5/16
-	-	TRG-8	1/2	15/32	2 1/2	-	3/8	3/8

TSA, TSC, TSE, TRC, TRE, TRG, STOCKED IN GRADE C2, C5, C6

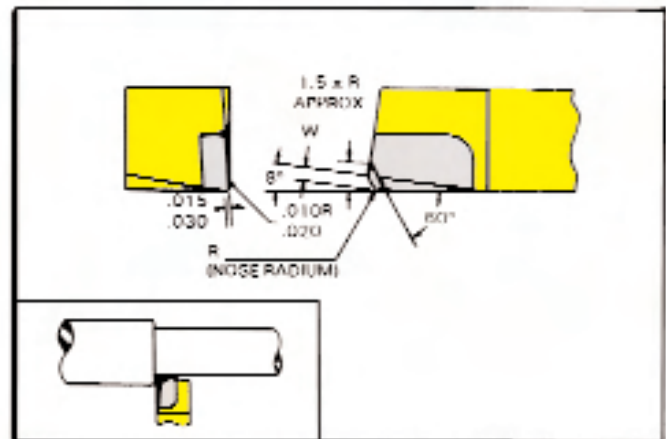
Limited Quantities Please Enquire

To Order Call:
1-800-263-9860

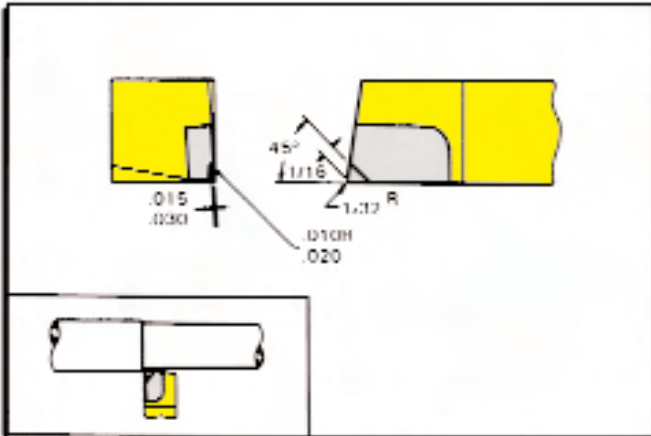
Suggested Chipbreaker Designs for Brazed Tools



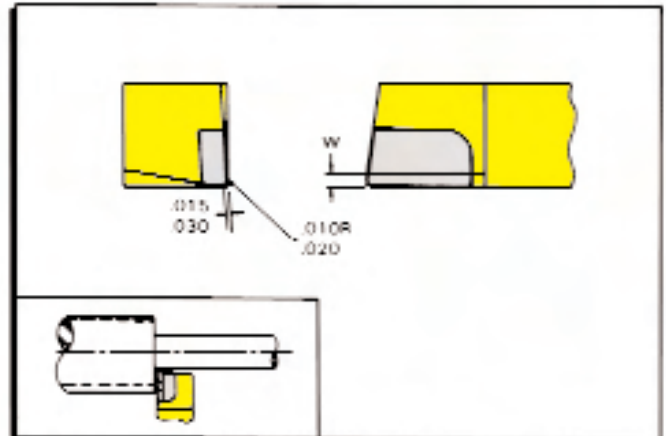
Chipbreaker for general use in continuous cuts on concentric work pieces.



Chipbreaker for tool having a large nose radius. Most generally used with heavy feeds.



Chipbreaker for light or finishing cuts having maximum depth of 1/22 inch.



Parallel type chipbreaker for cuts extending to 90° shoulder or on eccentric work pieces.

COMPARISON GRADES

(USA) ANSI	COLBIDE	Seco	Kennametal	Valenite	ISO
C2	C2	883	K6, K68	VPUK20	K30
C5	C5	370	K21	VPUP30	P30
C6	C6	370	-	-	P20

This chart is for guidance only. No quality or performance equivalency is implied. It is based on published data and not authorized by each manufacturer.

To Order Call:
1-800-263-9860

TURNING INSERTS	Page		Page	MILLING INSERTS (Cont'd)	Page
CCMT	2	GROOVING INSERTS	32	SEC/SEG	49
CNGP	2	GTN	32	SEKN	50
CNMG	3	GTR/L	32	SEHX	51
CNMG...AC	3	KSON	32	SEKR	50
CNMG...KC	3	MULTI GROOVING INSERTS		SEMN	51
CNMG...KM	4	CWD	33	SNKN	52
CNMG...MH	4	MINI SYSTEM GROOVING INSERTS		SNG	53
CNMM...KH	4	GIE	33	SNU	53
CNMP	2	DRILL INSERTS		SPG	54
DCMT	5	WCMT	31	SPKN	54
DNMG	6	BRAKE DRUM INSERTS		SPKR	55
DNMG...KC	6	FMC TRI TIP	31	SPU...T	56
DNMG...KM	6	CHIPBREAKERS		TEKN	56
DNMG...MH	7	CBT	31	TNGA	57
DNMP	7	60° "V" THREADING INSERTS		TPG...T	57
ECMT	8	TNMA	34	TPG	58
EPMT	8	TNMC	34	TPJ	61
KNUX	9	TPMC	35	TPKN	59
RCMT	10	29° ACME THREADING INSERTS		TPKR	59
RCMX	10	TNMC-NT	35	TPU	60
RNMG	10	MINI-SYSTEM THREADING INSERTS		TPU...T	61
SCMT	11	GIE	36	CERAMIC INSERTS	
SNG	11	COLBIDE NOTCH THREADING INSERTS		CNGA	62
SNMG	12	CNT	37	CNGN	62
SNMG...KC	12	CNTP	37	DNGA	62
SNMG...KM	13	CNA	37	DNGN	62
SNMG...MH	13	COLBIDE NOTCH GROOVING INSERTS		RNGA	62
SNMM...KH	13	CNG	38	RNGN	63
SNU	14	COLBIDE NOTCH FULL-RADIUS GROOVING INSERTS		SNGA	63
SPG	14	CNR	38	SNGN	63
SPGR	15	LAYDOWN THREADING INSERTS		SPGN	63
SPMR	15	PARTIAL PROFILE 60°		TNGA	63
SPU	16	ER/IR AG60	40	TNGN	64
TCGR	17	ISO METRIC 60° FULL PROFILE		TPGN	64
TCMT	17	3 ER/IR ISO	40	VNGA	64
TCMW	17	UN AMERICAN 60° FULL PROFILE		WNGA	64
TNGG...R	18	3 ER/IR UN	41	CERMET INSERTS - TURNING	
TNGG...L	18	ACME 29° FULL PROFILE		CCMT	66
TNMG	19	3 ER/IR ACME	41	CNMG	66
TNMG...ER	19	4 ER/IR ACME	41	DCMT	66
TNMG...EL	20	MILLING INSERTS		DNMG	66
TNMG...R	20	ADKT	46	RCMX	66
TNMG...L	20	APKT	46	RNMG	67
TNMG...AC	21	ADKT-R (Radius)	47	SCMT	67
TNMG...KC	21	APKT-R (Radius)	47	SNMG	67
TNMG...KM	21	LNCX	48	TCMT	67
TNMG...MH	22	RPMT...T	48	TNGG	67
TNMM...KH	22	SDMT	48	TNMG	68
TNMP	22	SEAN	49	TPMR	68
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TPMR	24	DCGT	29	WNMG	68
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VNMG...KM	26			TPG	69
VNMP	26			TPKN	69
WNGM...AC	27			TPU	69
WNGM...KC	27				
WNGM...KM	27				
WNGM...MH	28				

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CKJN R/L 93 ⁰	75	STCN R/L	106	90° SQUARE SHOULDER	
“C” TOP CLAMP TYPE		MINI-SYSTEM FOR THREADING		INDEXABLE END MILLS	
CTFP R/L 90 ⁰	77	& GROOVING		STANDARD LENGTH	135
CTGP R/L 90 ⁰	77	THE-R	106	LONG LENGTH	135
CTTP R/L 60 ⁰	78	COLBIDE NOTCH		90° SQUARE SHOULDER SHELL	
“P” LEVER TYPE		THREADING & GROOVING TYPE		TYPE MILLING CUTTERS	
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PDJN R/L 93 ⁰	80	BORING BARS/metric		STYLE 920 - APKT 1604	136
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PRSN R/L	82	COPYING TYPE		(SHELL TYPE)	
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PSDNN 45 ⁰	83	“P” LEVER TYPE		MILLING 0°	138
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“C” TOP CLAMP TYPE		STFCR 90 ⁰	120	END MILLS	139
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**CANADA INC.
ESTABLISHED 1973**

**113 Cushman Rd. Unit 41
St. Catharines, Ontario, Canada L2M 6S9
www.colbidecanada.com**

Toll Free: 1-800-263-9860

Email: colbide@colbidecanada.com

Phone: 905-682-7265

Fax: 905-682-4440

COAST TO COAST