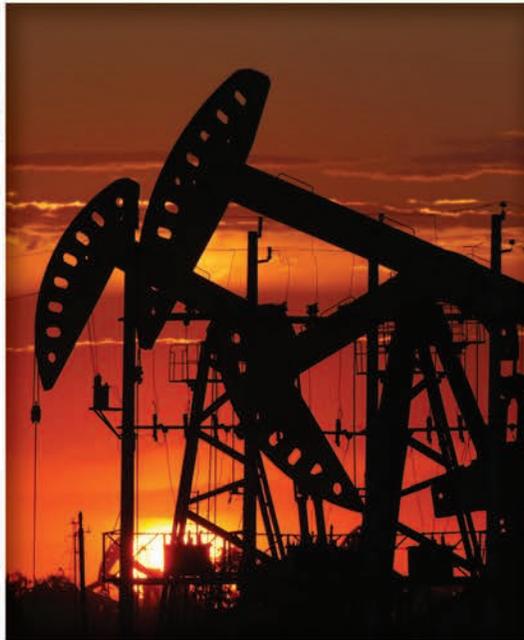




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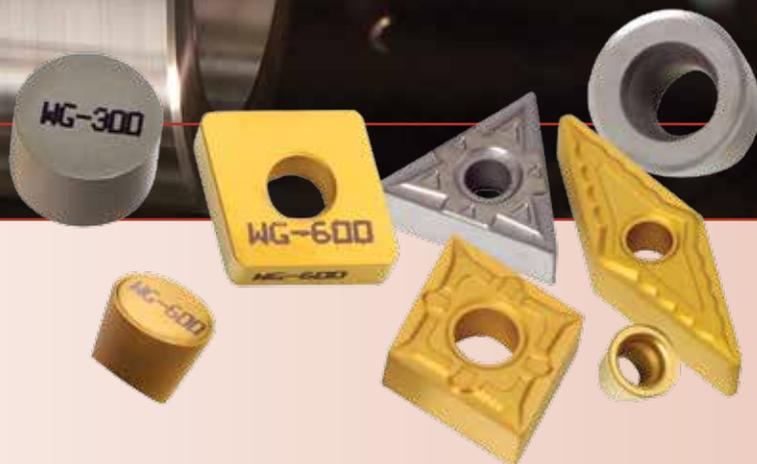
metalcutting tools and systems



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TUBE SCARFING	
SPECIAL ENGINEERING	
APPLICATION and TECHNICAL INFORMATION	

2016 METRIC

TURNING AND BORING



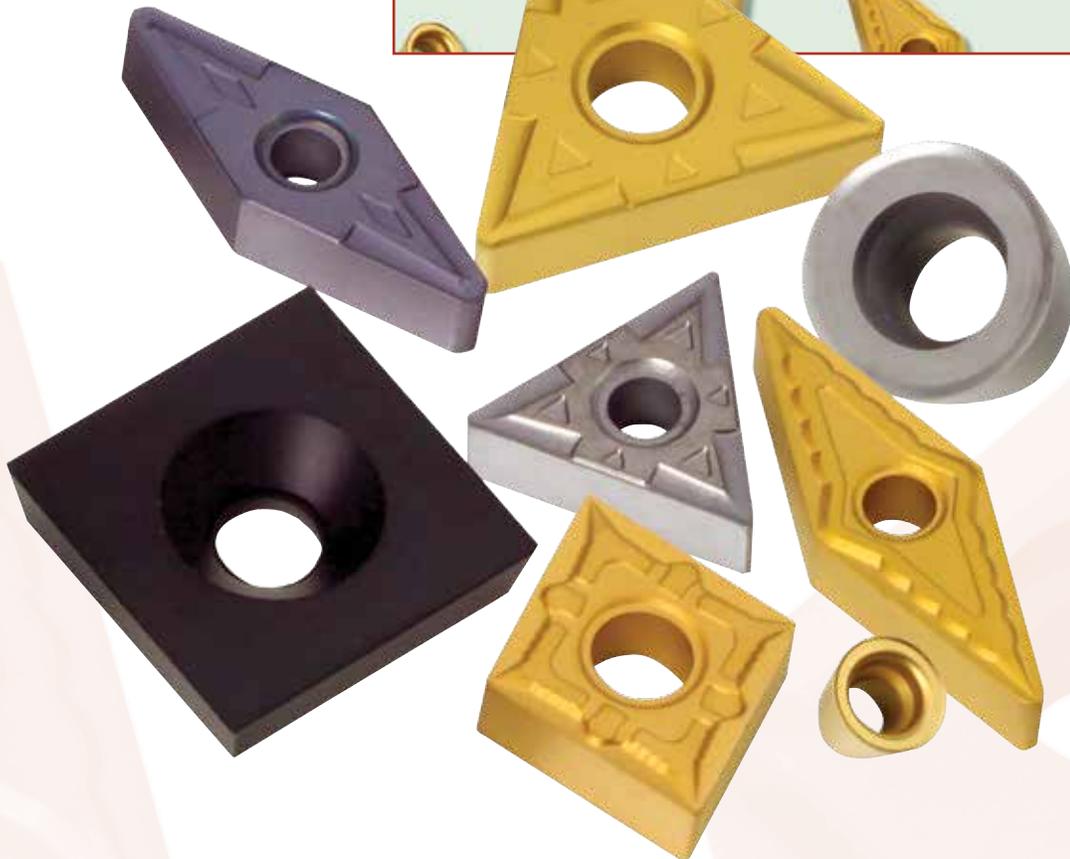
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Advanced Carbide Inserts

Greenleaf offers a comprehensive line of carbide inserts in grades ranging from sub-micron C-1 through C-8 classifications. An industry pioneer in coated carbide, Greenleaf offers a variety of uncoated, MT-CVD coated and PVD-coated grades. Carbide inserts are available in ANSI standard geometries with multi-purpose chipbreakers for heavy roughing through finishing.



*Greenleaf Corporation is continually upgrading its products.
For the most current information, please visit our web site at:*

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Carbide Insert Grade Description

CARBIDE

Greenleaf offers a comprehensive line of carbide inserts in grades ranging from sub-micron C-1 through C-8 classifications. An industry pioneer in coated carbide, Greenleaf offers a variety of uncoated, MT-CVD coated and PVD-coated grades. Carbide inserts are available in ANSI standard geometries with multi-purpose chipbreakers for heavy roughing through finishing.

COATED – MT-CVD

GA5023 A high-speed performance grade for turning and milling cast iron. GA5023 features an advanced MT-CVD coating specifically developed for abrasive wear resistance. Application ranges from roughing to finishing on most cast iron materials including gray iron, ductile, nodular and other alloyed irons. The high wear and shock resistance of GA5023 allows machining at high speeds and a variety of feeds.

GA5025 A high-speed MT-CVD coated grade for turning, light roughing and finishing of carbon and alloy steels, as well as selected stainless steels.

GA5026 A high-speed grade developed for turning nickel- and cobalt-based super-alloys, stainless steels, and refractory metals. The advanced MT-CVD coating over a micro-grain substrate offers high wear resistance. GA5026 has exceptional resistance to the notching and deformation common to machining high strength materials. Apply at high speeds and light feeds in turning and selected milling applications.

GA5035 A high-performance MT-CVD coated grade for turning all types of steels, and selected stainless steels. GA5035 can be used in rough, semi-finish, and finish turning situations requiring resistance to heat deformation, thermal shock, and abrasion. GA5035 should be applied at high speeds and a range of feeds.

GA5036 A high-performance MT-CVD coated grade for milling steels at high speed. GA5036 should be used when milling forged and cast steels and selected ductile irons. GA5036 has a unique combination of toughness and heat resistance making it suitable for heavy- and light-duty milling at high cutting speeds.

GA5125 New high-performance MT-CVD coated carbide milling grade especially suited for manganese steel. GA5125 is also applicable on chrome-moly steel, tool steel and similar high alloy steels. GA5125 provides excellent resistance to abrasion, crater wear, thermal shock, deformation and edge build-up. GA5125 should be applied at high speeds with moderate feed rates.

COATED – PVD

G-915 Multi-layer PVD-coated grade, excellent for cut off, milling and turning high-temp alloys, stainless steel, and low carbon steels. The multi-layer PVD coating adds heat and abrasion resistance to the tough, shock-resistant substrate. G-915 should be run at moderate speeds and moderate to high feeds in milling and interrupted turning applications.

G-920 PVD-coated grade for turning and milling high-strength materials such as high-temp alloys, titanium and stainless steel. G-920 is also an excellent grade for aluminum and refractory metals. This grade has the resistance to deformation and notching required for higher speeds than G-910.

G-9230 PVD-coated grade developed for medium to heavy machining of nickel alloys, cobalt alloys, titanium alloys, stainless steels and alloyed irons. G-9230 has superior wear resistance and toughness and is excellent for cast and forged scale machining conditions.

G-925 Multi-layer PVD-coated grade specifically designed for machining abrasive and difficult-to-machine materials. Typical applications include high-temp alloys, titanium and other refractory metals, stainless steel, and many cast irons. G-925 exhibits excellent resistance to notching and deformation. Apply at moderate to high speeds and moderate feeds.

UNCOATED

G-02 An excellent general-purpose grade for all types of machining of cast irons. G-02 should be used at moderate speeds and feeds. Also good for light roughing and finishing of high-temperature alloys, stainless steels, and aluminums.

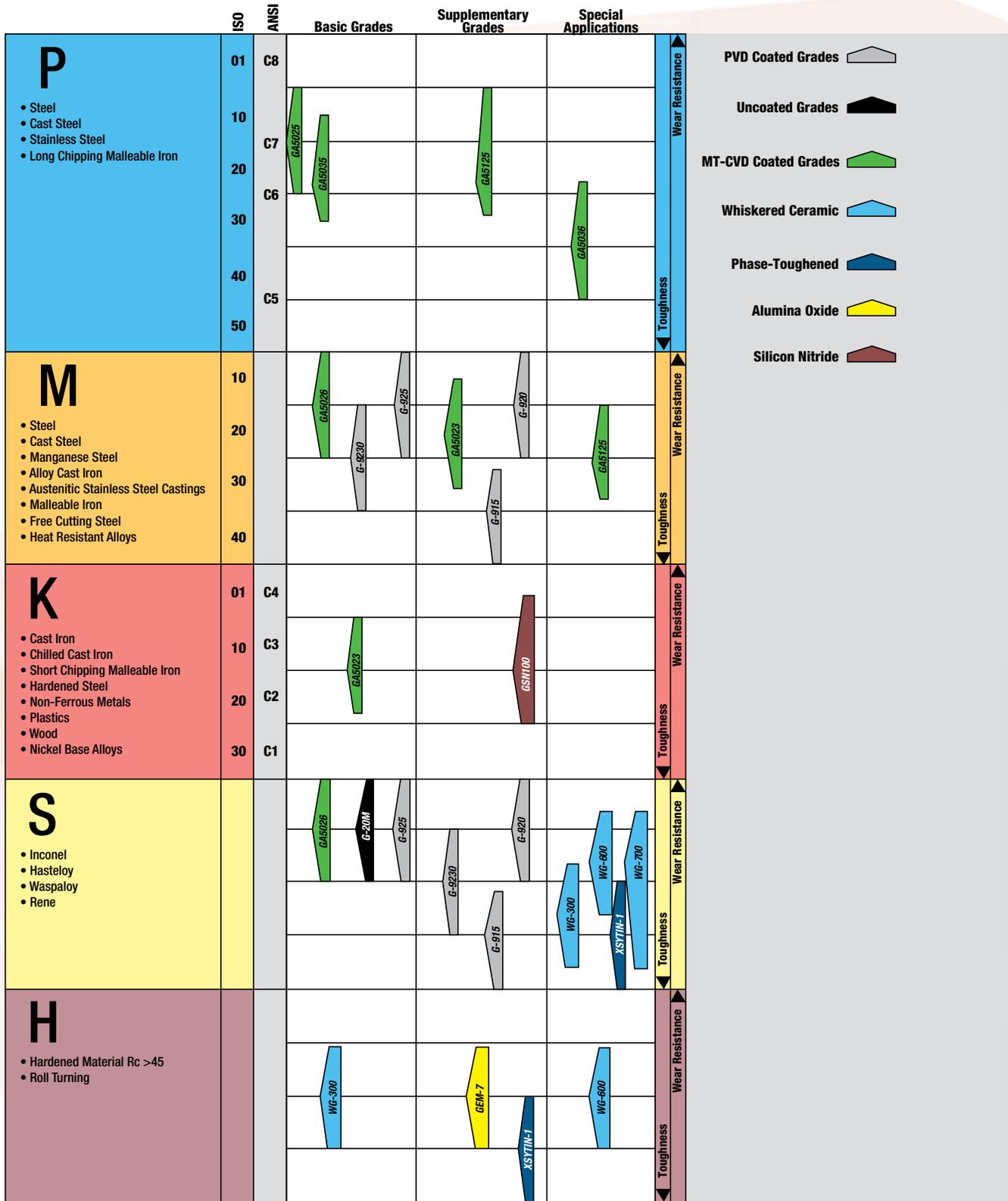
G-60 Used for heavy, rough turning of steel, steel castings, and steel forgings. G-60 should be used at moderate speeds and feeds.

G-20M A sub-micron C-2 carbide grade suited for use in turning and milling titanium and nickel-based super-alloys. G-20M has the strength and edge wear characteristics to resist notching when turning high-strength materials.

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Insert Grade Reference for Turning



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Chipform Application Range

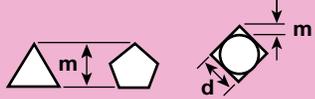
PRECISION FINISHING		<p>TF Precision ground chipbreaker for nickel alloys. Good for feeds up to 0,22/rev and depths to 0,76.</p>	
FINISHING		<p>FF and FF2 For finishing all types of material. Designed for feeds up to 0,47/rev and 3,81 depth of cut.</p>	
GENERAL PURPOSE		<p>GP and GP2 General purpose chipbreaker. Feed rates up to 0,56/rev and 6,35 depth of cut.</p>	
MEDIUM ROUGHING		<p>MR and MR2 Used for medium roughing of all material. Feeds up to 0,71/rev and depths up to 7,62.</p>	
HEAVY ROUGHING		<p>HR Heavy roughing for all materials. Feeds above 0,58/rev. One-sided chipbreaker for heaviest feeds (MM). <i>Example: CNMM-190612 HR</i></p>	

I.S.O. Identification for Turning and Boring Inserts

- A 85° parallelogram
- B 82° parallelogram
- C 80° diamond
- D 55° diamond
- H hexagon
- K 55° parallelogram
- L 90° rectangle
- M 86° diamond
- O octagon
- P pentagon
- R round
- S square
- T triangle
- V 35° diamond
- W 80° Trigon

Shape

T



	Dimensions		
	m	s	d
A	0.005	0.025	0.025
B	0.005	0.025	0.013
C	0.013	0.025	0.025
D	0.013	0.025	0.013
E	0.025	0.025	0.025
G	0.025	0.130	0.025
J	0.005	0.025	0.050-0.130
K	0.013	0.025	0.050-0.130
L	0.025	0.025	0.050-0.130
M	0.080-0.180	0.130	0.050-0.130
U	0.130-0.380	0.130	0.080-0.250

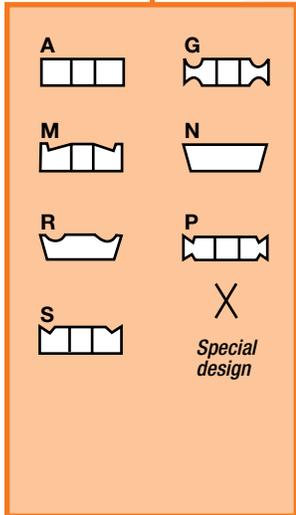
Tolerance Class (±mm)

M

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

Clearances

G



Type

Comparison cutting edge length in mm – IC in inches

△	06	09	11	16	22	27	33	44
□ ○				09	12	15	19	25
55°					15	19		
80°					12	16	19	25
35°				16	22			
IC = d	5/32"	7/32"	1/4"	3/8"	1/2"	5/8"	3/4"	
1"								

Integers to be preceded by a 0.
Example: 9,52 mm indicated by 09.

Cutting Edge Length

Cutting Edge

22

04

01	s= 1,59
T1	s= 1,98
02	s= 2,38
03	s= 3,18
T3	s= 3,97
04	s= 4,76
05	s= 5,56
06	s= 6,35
07	s= 7,94
09	s= 9,52
10	s= 10,00
12	s= 12,00

Thickness

08

E

Radius in terms of 0.1 mm

00	Round insert
00	sharp point
02	0.2
04	0.4
05	0.5
08	0.8
10	1.0
12	1.2
15	1.5
16	1.6
24	2.4
32	3.2
40	4.0

Cutting Point Configuration

A.N.S.I. Identification for Turning and Boring Inserts

	Roll Dim. B	I.C. A	Thickness 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

Tolerance Class ⁽¹⁾

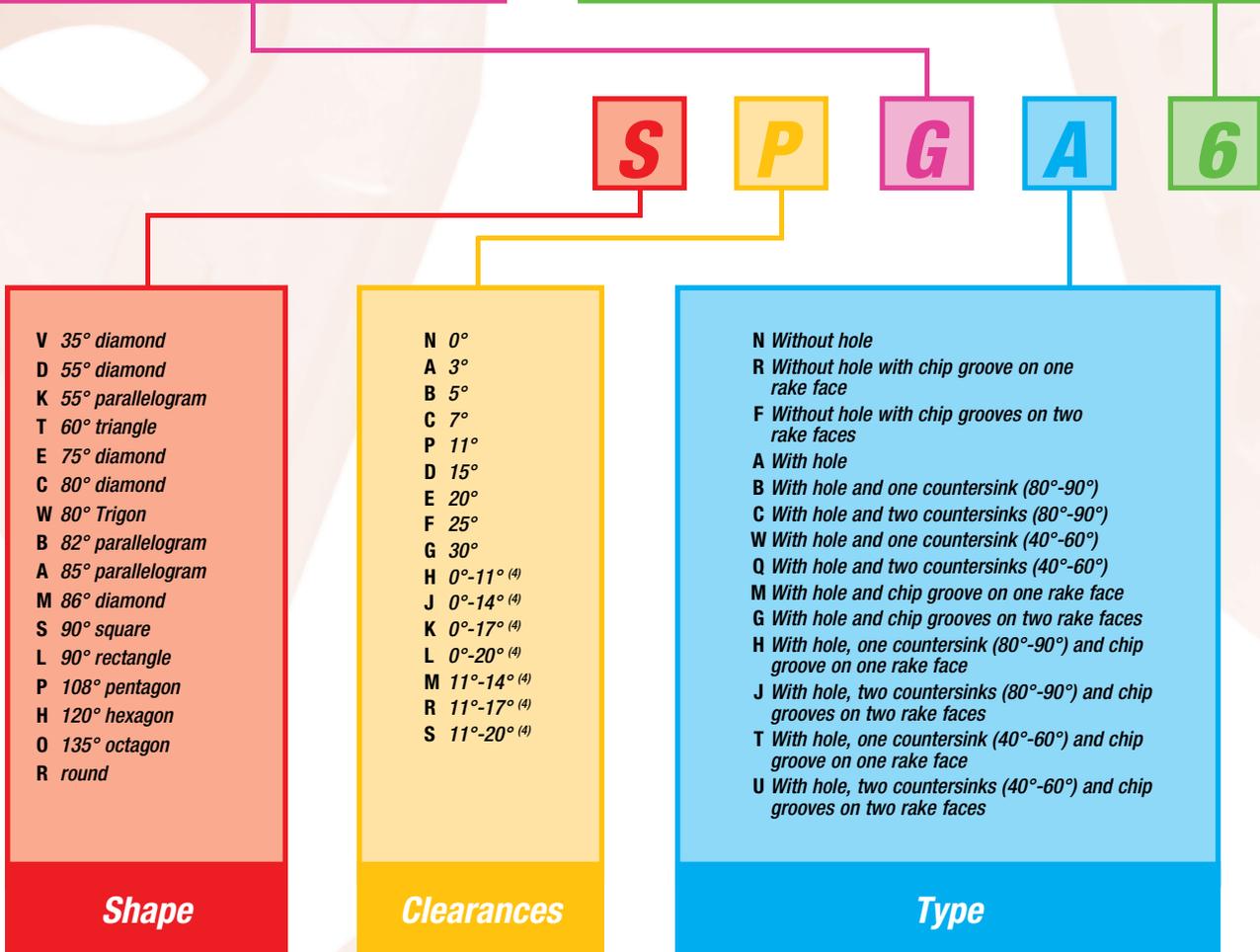
Regular polygons and diamonds
Number of 1/8ths of an inch in the inscribed circle as per table below:

Example:

5/32" I.C.	1.2
3/16" I.C.	1.5
7/32" I.C.	1.8
1/4" I.C.	2
5/16" I.C.	2.5
3/8" I.C.	3
1/2" I.C.	4
5/8" I.C.	5
3/4" I.C.	6
7/8" I.C.	7
1" I.C.	8
1-1/4" I.C.	10

Rectangles and parallelograms
Use two digits to size
1st digit: Number of 1/8ths of an inch in width
2nd digit: Number of 1/4ths of an inch in length

Size (I.C.)



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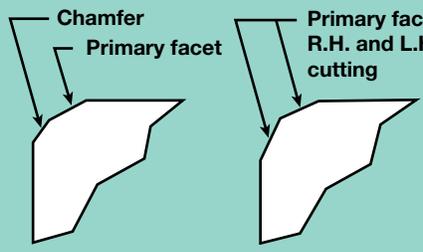
Regular polygons, diamonds, rectangles and parallelograms:
Number of 1/16ths of an inch in thickness as per table below:

Example:

3/32"	1.5
1/8"	2
5/32"	2.5
3/16"	3
7/32"	3.5
1/4"	4
5/16"	5
3/8"	6
7/16"	7
1/2"	8

Thickness

Only used following a letter in the seventh position.
Number of 1/64ths of an inch in the primary facet length.



Special Cutting Point Definition

R Right
L Left

Hand (5)

3

3

A

0	Sharp Corner
1	1/64" radius
2	1/32" radius
3	3/64" radius
4	1/16" radius
5	5/64" radius
6	3/32" radius
7	7/64" radius
8	1/8" radius

A Square insert with 45° chamfer
D Square insert with 30° chamfer
E Square insert with 15° chamfer
F Square insert with 3° chamfer
K Square insert with 30° double chamfer
L Square insert with 15° double chamfer
M Square insert with 3° double chamfer
N Truncated triangular insert
P Flatted corner triangle – 90°

Cutting Point Configuration

A	Honed (0.0005 to 0.001")
B	Honed (0.001 to 0.002")
C	Honed (0.005 to less than 0.007")
D	Honed (0.007" and over)
J	Polished to 4 microinch AA (rake face only)
T	Chamfered – manufacturer's standard (negative land – rake face only)

Other Conditions (5)

- (1) Tolerances given are plus and minus from nominal.
- (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 shown in the standards for the corresponding shapes and sizes (see ANSI B94.25).
- (4) Secondary facet angle may vary by +1°.
- (5) Shall only be used when required.
- (6) Dimensions are established prior to supplemental edge or coating modification.

Negative Inserts



80° Diamond
Chip Control
page: T 14



80° Diamond
Flat Top
page: T 15



80° Diamond
Flat Top
page: T 15



55° Diamond
Chip Control
page: T 16



55° Diamond
Flat Top
page: T 17



Round
Chip Control
page: T 18



Round
Flat Top
page: T 19

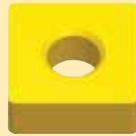


Round
Flat Top
page: T 19

Negative Inserts *continued*



Square
Chip Control
page: T 20



Square
Flat Top
page: T 21



Square
Flat Top
page: T 22-23



Triangle
Chip Control
page: T 24-25



Triangle
Flat Top
page: T 26



Triangle
Flat Top
page: T 27-28



35° Diamond
Chip Control
page: T 29



35° Diamond
Flat Top
page: T 30



80° Trigon
Chip Control
page: T 31



80° Trigon
Flat Top
page: T 32

Positive Inserts



80° Diamond
Positive Flat Top
page: T 33



Round
Positive Flat Top
page: T 33



Round
Positive Chip Control
page: T 34



Round
Positive Chip Control
page: T 34



Square
Positive Flat Top
page: T 35



Triangle
Positive Flat Top
page: T 36-37



Triangle
Positive Flat Top
page: T 38



80° Trigon
Chip Control: Screw On
page: T 39

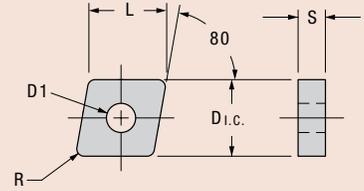
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80° Diamond Inserts

Chip Control



Shape: 80° Diamond	Part Number	Steel		Stainless Steel					Cast Iron	High-Temp Alloys					Part Number	Dimensions (millimeters)							
		P15	P25	P25	P35	M15	M15	M15	M20	M35	K15	S					D.I.C.	L	S	D1	R		
		GA5025	GA5035	GA5125	GA5036	GA5026	G-925	G-920	G-9230	GA5023	G-915	GA5023	GA5026	G-925		G-920	G-9230	G-915	G-20M	ANSI	D.I.C.	L	S
PRECISION FINISHING 	CNMG-120401.3-TF					○	○	○				○	○	○	○	○		CNMG-430.3-TF	12,70	12,88	4,75	5,16	0,13
	CNMG-120402.6-TF					○	●	●	○			○	○	○	○	○		CNMG-430.6-TF	12,70	12,88	4,75	5,16	0,25
	CNMG-120404-TF					●	●	●	●			●	●	●	●	●		CNMG-431-TF	12,70	12,88	4,75	5,16	0,38
	CNMG-120408-TF					●	●	●	●			●	●	●	●	●		CNMG-432-TF	12,70	12,88	4,75	5,16	0,79
	CNMG-120412-TF					●	●	●	●			●	●	●	●	○		CNMG-433-TF	12,70	12,88	4,75	5,16	1,19
FINISHING 	CNMG-120404-FF2	●	●	○	○	●	●	○	○	○	○	○	○	○	○	○		CNMG-431-FF2	12,70	12,88	4,75	5,16	0,38
	CNMG-120408-FF2					●	●	○	○			●	●	○	○	○		CNMG-432-FF2	12,70	12,88	4,75	5,16	0,79
	CNMG-120412-FF2	○	○	○		●	●	●	○	○	○	○	○	○	○	○		CNMG-433-FF2	12,70	12,88	4,75	5,16	1,19
	CNMG-120416-FF2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		CNMG-434-FF2	12,70	12,88	4,75	5,16	1,57
	CNMG-160608-FF	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		CNMG-542-FF	15,88	16,13	6,35	6,35	0,79
	CNMG-160612-FF	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		CNMG-543-FF	15,88	16,13	6,35	6,35	1,19
CNMG-190612-FF	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		CNMG-643-FF	19,05	19,33	6,35	7,92	1,19	
GENERAL PURPOSE 	CNMG-120408-GP2	●	●	○	○	●	●	○	○	○	○	○	○	○	○	○		CNMG-432-GP2	12,70	12,88	4,75	5,16	0,79
	CNMG-120412-GP2	●	●	○	○	●	●	○	○	○	○	○	○	○	○	○		CNMG-433-GP2	12,70	12,88	4,75	5,16	1,19
	CNMG-120416-GP2	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○		CNMG-434-GP2	12,70	12,88	4,75	5,16	1,57
	CNMG-160608-GP2	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○		CNMG-542-GP2	15,88	16,13	6,35	6,35	0,79
	CNMG-160612-GP2	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○		CNMG-543-GP2	15,88	16,13	6,35	6,35	1,19
	CNMG-190612-GP	○	●	○	○										○	●		CNMG-643-GP	19,05	19,33	6,35	7,92	1,19
MEDIUM ROUGHING 	CNMG-120408-MR2	●	●	○	○	●	●	○	○	○	○	○	○	○	○	○		CNMG-432-MR2	12,70	12,88	4,75	5,16	0,79
	CNMG-120412-MR2	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○		CNMG-433-MR2	12,70	12,88	4,75	5,16	1,19
	CNMG-120416-MR2	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○		CNMG-434-MR2	12,70	12,88	4,75	5,16	1,57
	CNMG-160608-MR2	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○		CNMG-542-MR2	15,88	16,13	6,35	6,35	0,79
	CNMG-160612-MR2	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○		CNMG-543-MR2	15,88	16,13	6,35	6,35	1,19
	CNMG-190608-MR	○	○	○	○										○	○		CNMG-642-MR	19,05	19,33	6,35	7,92	0,79
	CNMG-190612-MR	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○		CNMG-643-MR	19,05	19,33	6,35	7,92	1,19
	CNMG-190616-MR	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		CNMG-644-MR	19,05	19,33	6,35	7,92	1,57
HEAVY ROUGHING 	CNMM-190612-HR	○	○	○	○	○	○	○	○	○	○	○	○	○	○		CNMM-643-HR	19,05	19,33	6,35	7,92	1,19	
	CNMM-250924-HR	○	○	○	○	○	○	○	○	○	○	○	○	○	○		CNMM-866-HR	25,40	25,78	9,53	9,12	2,39	

Carbide Coatings



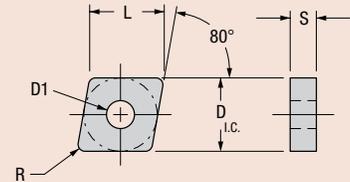
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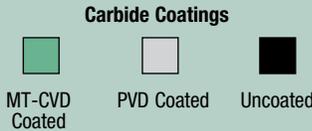


80° Diamond Inserts

Flat Top (CNMA)

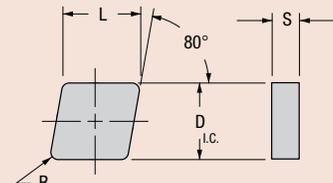


Shape: 80° Diamond	Part Number	Steel		Stainless Steel					Cast Iron	High-Temp Alloys					Part Number	Dimensions (millimeters)							
		P15	P25	P25	P35	M15	M15	M15	M15	M20	M35	K15	S					D.I.C.	L	S	D1	R	
		GA5025	GA5035	GA5125	GA5036	GA5026	G-925	G-920	G-9230	GA5023	G-915	GA5023	GA5026	G-925		G-920	G-9230	G-915	G-20M	ANSI	D.I.C.	L	S
	CNMA-120404	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	CNMA-431	12,70	12,88	4,75	5,16	0,38
	CNMA-120408	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	CNMA-432	12,70	12,88	4,75	5,16	0,79
	CNMA-120412	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	CNMA-433	12,70	12,88	4,75	5,16	1,19
	CNMA-120416	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	CNMA-434	12,70	12,88	4,75	5,16	1,57
	CNMA-160608	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	CNMA-542	15,88	16,13	6,35	6,35	0,79
	CNMA-160612	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	CNMA-543	15,88	16,13	6,35	6,35	1,19
	CNMA-190608	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	CNMA-642	19,05	19,33	6,35	7,92	0,79
	CNMA-190612	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	CNMA-643	19,05	19,33	6,35	7,92	1,19
	CNMA-190616	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	CNMA-644	19,05	19,33	6,35	7,92	1,57
	CNMA-250924	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	CNMA-866	25,40	25,78	9,53	9,12	2,39

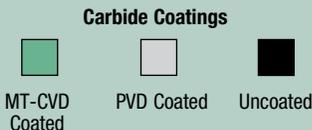


80° Diamond Inserts

Flat Top (CNGN)

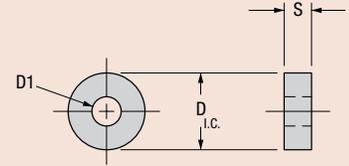


Shape: 80° Diamond	Part Number	Steel		Stainless Steel					Cast Iron	High-Temp Alloys					Part Number	Dimensions (millimeters)						
		P15	P25	P25	P35	M15	M15	M15	M15	M20	M35	K15	S					D.I.C.	L	S	R	
		GA5025	GA5035	GA5125	GA5036	GA5026	G-925	G-920	G-9230	GA5023	G-915	GA5023	GA5026	G-925		G-920	G-9230	G-915	G-20M	ANSI	D.I.C.	L
	CNGN-120308	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	CNGN-422	12,70	12,88	3,18	0,79
	CNGN-120408	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	CNGN-432	12,70	12,88	4,75	0,79
	CNGN-190408	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	CNGN-632	19,05	19,33	4,75	0,79
	CNGN-190412	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	CNGN-633	19,05	19,33	4,75	1,19
	CNGN-190416	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	CNGN-634	19,05	19,33	4,75	1,57
	CNGN-190612	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	CNGN-643	19,05	19,33	6,35	1,19
	CNGN-190616	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	CNGN-644	19,05	19,33	6,35	1,57





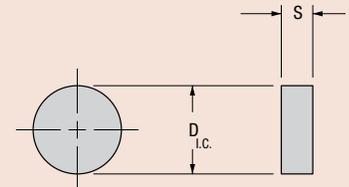
Round Inserts Flat Top (RNMA)



Shape: Round	Part Number	Material															Part Number	Dimensions (millimeters)					
		Steel					Stainless Steel					Cast Iron	High-Temp Alloys					D I.C.	S	D1			
		P15	P25	P25	P35	M15	M15	M15	M15	M20	M35	K15	S										
	ISO	GA5025	GA5035	GA5125	GA5036	GA5026	G-925	G-920	G-9230	GA5023	G-915	M35	GA5023	GA5026	G-925	G-920	G-9230	G-915	G-20M	ANSI			
	RNMA-090300	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	RNMA-32	9,53	3,18	3,81
	RNMA-090400	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	RNMA-33	9,53	4,75	3,81
	RNMA-120400	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	RNMA-43	12,70	4,75	5,16
	RNMA-150600	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	RNMA-54	15,88	6,35	6,35
	RNMA-190600	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	RNMA-64	19,05	6,35	7,92
	RNMA-250900	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	RNMA-86	25,40	9,53	9,12
	RNMA-310900	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	RNMA-106	31,75	9,53	12,70

Carbide Coatings																	
MT-CVD Coated	PVD Coated	Uncoated															
GA5025	GA5035	GA5125	GA5036	GA5026	G-925	G-920	G-9230	GA5023	G-915	M35	GA5023	GA5026	G-925	G-920	G-9230	G-915	G-20M
P15	P25	P25	P35	M15	M15	M15	M15	M20	GA5023	M35	K15	S					
Steel					Stainless Steel					Cast Iron	High-Temp Alloys						

Round Inserts Flat Top (RNGN)



Shape: Round	Part Number	Material															Part Number	Dimensions (millimeters)				
		Steel					Stainless Steel					Cast Iron	High-Temp Alloys					D I.C.	S			
		P15	P25	P25	P35	M15	M15	M15	M15	M20	M35	K15	S									
	ISO	GA5025	GA5035	GA5125	GA5036	GA5026	G-925	G-920	G-9230	GA5023	G-915	M35	GA5023	GA5026	G-925	G-920	G-9230	G-915	G-20M	ANSI		
	RNGN-090300	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	RNGN-32	9,53	3,81
	RNGN-120300	○	○	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	RNGN-42	12,70	3,81
	RNGN-120400	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	RNGN-43	12,70	4,75
	RNGN-120700	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	RNGN-45	12,70	7,92
	RNGN-150400	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	RNGN-53	15,88	4,75
	RNGN-190400	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	RNGN-63	19,05	4,75
	RNGN-250600	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	RNGN-84	25,40	6,35

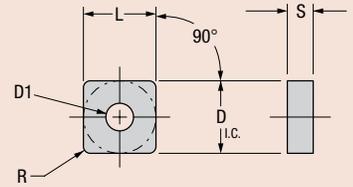
Carbide Coatings																	
MT-CVD Coated	PVD Coated	Uncoated															
GA5025	GA5035	GA5125	GA5036	GA5026	G-925	G-920	G-9230	GA5023	G-915	M35	GA5023	GA5026	G-925	G-920	G-9230	G-915	G-20M
P15	P25	P25	P35	M15	M15	M15	M15	M20	GA5023	M35	K15	S					
Steel					Stainless Steel					Cast Iron	High-Temp Alloys						

Not Recommended
 Stacked or Available Upon Request
 Stacked Standard

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Square Inserts

Flat Top (SNMA)



Shape: Square	Part Number ISO	Steel				Stainless Steel					Cast Iron	High-Temp Alloys					Part Number ANSI		
		P15	P25	P25	P35	M15	M15	M15	M15	M20	M35	K15	S						
		GA5025	GA5035	GA5125	GA5036	GA5026	G-925	G-920	G-9230	GA5023	G-915	GA5023	GA5026	G-925	G-920	G-9230	G-915	G-20M	
	SNMA-090304	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNMA-321
	SNMA-090308	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNMA-322
	SNMA-090312	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNMA-323
	SNMA-120404	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNMA-431
	SNMA-120408	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNMA-432
	SNMA-120412	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNMA-433
	SNMA-120416	○	○	○	○	○	○	○	○	○	●	○	○	●	○	○	○	○	SNMA-434
	SNMA-150608	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNMA-542
	SNMA-150612	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNMA-543
	SNMA-150616	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNMA-544
	SNMA-190612	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNMA-643
	SNMA-190616	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNMA-644
SNMA-250916	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNMA-864	
SNMA-250924	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNMA-866	

Carbide Coatings			GA5025	GA5035	GA5125	GA5036	GA5026	G-925	G-920	G-9230	GA5023	G-915	GA5023	GA5026	G-925	G-920	G-9230	G-915	G-20M
MT-CVD Coated	PVD Coated	Uncoated	P15	P25	P25	P35	M15	M15	M15	M15	M20	M35	K15	S					
			Steel	Stainless Steel					Cast Iron	High-Temp Alloys									

Not Recommended Stocked or Available Upon Request Stocked Standard

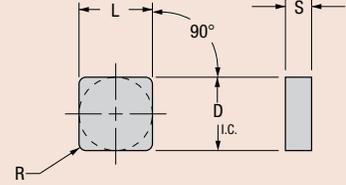
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90°



Square Inserts

Flat Top (SNGN)



Shape: Square	Part Number	Material															Part Number	Dimensions (millimeters)				
		Steel					Stainless Steel					Cast Iron	High-Temp Alloys					D I.C.	L	S	R	
		P15	P25	P25	P35	M15	M15	M15	M15	M20	M35	K15	S									
GA5025	GA5035	GA5125	GA5036	GA5026	G-925	G-920	G-9230	GA5023	G-915	GA5023	GA5026	G-925	G-920	G-9230	G-915	G-20M	ANSI	D I.C.	L	S	R	
	SNGN-090304	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-321	9,53	9,53	3,18	0,38
	SNGN-090308	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-322	9,53	9,53	3,18	0,79
	SNGN-120308	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-422	12,70	12,70	3,18	0,79
	SNGN-120312	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-423	12,70	12,70	3,18	1,19
	SNGN-120400	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-430	12,70	12,70	4,75	0,13
	SNGN-120404	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-431	12,70	12,70	4,75	0,38
	SNGN-120408	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-432	12,70	12,70	4,75	0,79
	SNGN-120412	○	○	●	●	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-433	12,70	12,70	4,75	1,19
	SNGN-120416	○	○	○	●	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-434	12,70	12,70	4,75	1,57
	SNGN-150412	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-533	15,88	15,88	4,75	1,19
	SNGN-150416	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-534	15,88	15,88	4,75	1,57
	SNGN-150612	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-543	15,88	15,88	6,35	1,19
	SNGN-190404	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-631	19,05	19,05	4,75	0,38
	SNGN-190408	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-632	19,05	19,05	4,75	0,79
	SNGN-190412	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-633	19,05	19,05	4,75	1,19
	SNGN-190416	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-634	19,05	19,05	4,75	1,57
	SNGN-190432	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-638	19,05	19,05	4,75	3,18
	SNGN-190612	○	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-643	19,05	19,05	6,35	1,19
	SNGN-190616	○	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-644	19,05	19,05	6,35	1,57
	SNGN-190624	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-646	19,05	19,05	6,35	2,39
	SNGN-250616	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-844	25,40	25,40	6,35	1,57
	SNGN-250716	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-854	25,40	25,40	7,92	1,57
	SNGN-310648	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-10412	31,75	31,75	6,35	4,75
	SNGN-310924	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-1066	31,75	31,75	9,53	2,39
	SNGN-310932	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-1068	31,75	31,75	9,53	3,18
	SNGN-381232	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	SNGN-1288	38,10	38,10	12,70	3,18

Carbide Coatings

MT-CVD Coated
 PVD Coated
 Uncoated

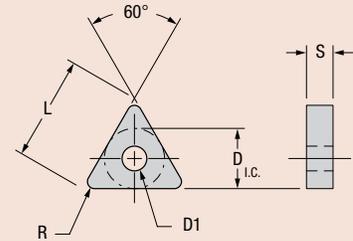
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Stocked Standard
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 Not Recommended



Triangle Inserts

Chip Control



Shape: Triangle	Part Number	Steel		Stainless Steel					Cast Iron	High-Temp Alloys					Part Number	Dimensions (millimeters)							
		P15	P25	P25	P35	M15	M15	M15	M20	M35	K15	S					D I.C.	L	S	D1	R		
		GA5025	GA5035	GA5125	GA5036	GA5026	G-925	G-920	G-9230	GA5023	G-915	GA5023	GA5026	G-925		G-920	G-9230	G-915	G-20M	ANSI	D I.C.	L	S
PRECISION FINISHING 	TNGG-160401.3-TF					○	○	○				○	○	○	○	○		TNGG-330.3-TF	9,53	16,51	4,75	3,81	0,13
	TNGG-160402.6-TF					○	○	○				○	○	○	○	○		TNGG-330.6-TF	9,53	16,51	4,75	3,81	0,25
	TNGG-160404-TF					○	○	○				○	○	○	○	○		TNGG-331-TF	9,53	16,51	4,75	3,81	0,38
	TNGG-160408-TF					●	○	○				●	○	○	○	○		TNGG-332-TF	9,53	16,51	4,75	3,81	0,79
	TNGG-220401.3-TF					○	○	○				○	○	○	○	○		TNGG-430.3-TF	12,70	22,00	4,75	5,16	0,13
	TNGG-220402.6-TF					○	○	○				○	○	○	○	○		TNGG-430.6-TF	12,70	22,00	4,75	5,16	0,25
	TNGG-220404-TF					○	○	○				○	○	○	○	○		TNGG-431-TF	12,70	22,00	4,75	5,16	0,38
	TNGG-220408-TF					●	●	○				●	●	○	○	○		TNGG-432-TF	12,70	22,00	4,75	5,16	0,79
FINISHING 	TNMG-160304-FF2					○	○	○				○	○	○	○	○		TNMG-321-FF2	9,53	16,51	3,18	3,81	0,38
	TNMG-160308-FF2	●	○	○	○	○	○	○				○	○	○	○	○		TNMG-322-FF2	9,53	16,51	3,18	3,81	0,79
	TNMG-160312-FF2	○	○	○	○	○	○	○				○	○	○	○	○		TNMG-323-FF2	9,53	16,51	3,18	3,81	1,19
	TNMG-160316-FF2	○	○	○	○	○	○	○				○	○	○	○	○		TNMG-324-FF2	9,53	16,51	3,18	3,81	1,57
	TNMG-160404-FF2					○	○	○				○	○	○	○	○		TNMG-331-FF2	9,53	16,51	4,75	3,81	0,38
	TNMG-160408-FF2	○	○	○	○	○	○	○				○	○	○	○	○		TNMG-332-FF2	9,53	16,51	4,75	3,81	0,79
	TNMG-160416-FF2	○	○	○	○	○	○	○				○	○	○	○	○		TNMG-334-FF2	9,53	16,51	4,75	3,81	1,19
	TNMG-220404-FF2	●	○	○	○	○	○	○				○	○	○	○	○		TNMG-431-FF2	9,53	16,51	4,75	3,81	1,57
	TNMG-220408-FF2	○	●	○	●	○	○	○				○	○	○	○	○		TNMG-432-FF2	12,70	22,00	4,75	5,16	0,38
	TNMG-220412-FF2	○	○	○	○	○	○	○				○	○	○	○	○		TNMG-433-FF2	12,70	22,00	4,75	5,16	0,79
	TNMG-220416-FF2	○	○	○	○	○	●	○				○	●	○	○	○		TNMG-434-FF2	12,70	22,00	4,75	5,16	1,19
	TNMG-270608-FF2	●	○	○	○	○	○	○				○	○	○	○	○		TNMG-542-FF2	12,70	22,00	4,75	5,16	1,57
TNMG-270612-FF2	○	○	○	○	○	○	○				○	○	○	○	○		TNMG-543-FF2	15,88	27,51	6,35	6,35	0,79	
GENERAL PURPOSE 	TNMG-160304-GP2	○	○	○	○	○	○				○	○	○	○	○		TNMG-321-GP2	15,88	27,51	6,35	6,35	1,19	
	TNMG-160308-GP2	●	○	○	○	○	○				○	○	○	○	○		TNMG-322-GP2	9,53	16,51	3,18	3,81	0,38	
	TNMG-160312-GP2	○	○	○	○	○	○				○	○	○	○	○		TNMG-323-GP2	9,53	16,51	3,18	3,81	0,79	
	TNMG-160316-GP2	○	○	○	○	○	○				○	○	○	○	○		TNMG-324-GP2	9,53	16,51	3,18	3,81	1,19	
	TNMG-160412-GP2	○	○	○	○	○	○				○	○	○	○	○		TNMG-333-GP2	9,53	16,51	3,18	3,81	1,57	
	TNMG-220408-GP2	●	●	○	●	○	○	○				○	○	○	○	○		TNMG-432-GP2	9,53	16,51	4,75	3,81	1,19
	TNMG-220412-GP2	○	○	○	○	○	○	○				○	○	○	○	○		TNMG-433-GP2	12,70	22,00	4,75	5,16	0,79
	TNMG-220416-GP2	○	○	○	○	○	○	○				○	○	○	○	○		TNMG-434-GP2	12,70	22,00	4,75	5,16	1,19
	TNMG-270608-GP2	●	○	○	○	○	○	○				○	○	○	○	○		TNMG-542-GP2	12,70	22,00	4,75	5,16	1,57
																			15,88	27,51	6,35	6,35	0,79
																		15,88	27,51	6,35	6,35	1,19	

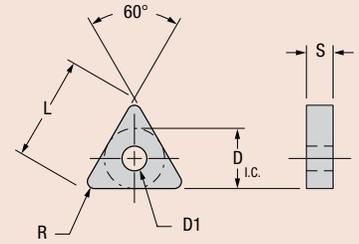
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Triangle Inserts

Chip Control *Continued*



Shape: Triangle	Part Number	Material															Part Number	Dimensions (millimeters)					
		Steel					Stainless Steel					Cast Iron	High-Temp Alloys					D I.C.	L	S	D1	R	
		P15	P25	P25	P35	M15	M15	M15	M15	M20	M35	K15	S										
ISO	GA5025	GA5035	GA5125	GA5036	GA5026	G-925	G-920	G-9230	GA5023	G-915	GA5023	GA5026	G-925	G-920	G-9230	G-915	G-20M	ANSI	D I.C.	L	S	D1	R
MEDIUM ROUGHING	MR2	TNMG-110308-MR2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNMG-222-MR2	6,35	11,00	3,18	2,36	0,79
		TNMG-220412-MR2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNMG-433-MR2	12,70	22,00	4,75	5,16	1,19
		TNMG-220416-MR2	○	○	○	○	●	○	○	○	○	○	○	○	○	○	○	TNMG-434-MR2	12,70	22,00	4,75	5,16	1,57
		TNMG-220432-MR2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNMG-438-MR2	12,70	22,00	4,75	5,16	3,18
		TNMG-270608-MR2	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNMG-542-MR2	15,88	27,51	6,35	6,35	0,79
		TNMG-270612-MR2	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	TNMG-543-MR2	15,88	27,51	6,35	6,35	1,19
		TNMG-270616-MR2	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	TNMG-544-MR2	15,88	27,51	6,35	6,35	1,57
		TNMG-270624-MR2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNMG-546-MR2	15,88	27,51	6,35	6,35	2,39
		TNMG-330924-MR	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	TNMG-666-MR	19,05	32,99	9,53	7,92	2,39
HEAVY ROUGHING	HR – single sided	TNMM-220412-HR	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNMM-433-HR	12,70	22,00	4,75	5,16	1,19
		TNMM-270616-HR	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNMM-544-HR	15,88	27,51	6,35	6,35	1,57
Carbide Coatings		GA5025	GA5035	GA5125	GA5036	GA5026	G-925	G-920	G-9230	GA5023	G-915	GA5023	GA5026	G-925	G-920	G-9230	G-915	G-20M					
MT-CVD Coated PVD Coated Uncoated		P15	P25	P25	P35	M15	M15	M15	M15	M20	M35	K15	S										
		Steel					Stainless Steel					Cast Iron	High-Temp Alloys										

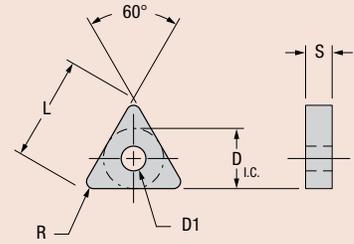
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Triangle Inserts

Flat Top (TNMA)



Shape: Triangle	Part Number	Material															Part Number	Dimensions (millimeters)						
		Steel					Stainless Steel					Cast Iron	High-Temp Alloys					D I.C.	L	S	D1	R		
		P15	P25	P25	P35	M15	M15	M15	M15	M20	M35	K15	S											
GA5025	GA5035	GA5125	GA5036	GA5026	G-925	G-920	G-9230	GA5023	G-915	GA5023	GA5026	G-925	G-920	G-9230	G-915	G-20M	ANSI							
TNMA-110308																			TNMA-222	6,35	11,00	3,18	2,36	0,79
TNMA-160304																			TNMA-321	9,53	16,51	3,18	3,81	0,38
TNMA-160308																			TNMA-322	9,53	16,51	3,18	3,81	0,79
TNMA-160312																			TNMA-323	9,53	16,51	3,18	3,81	1,19
TNMA-160316																			TNMA-324	9,53	16,51	3,18	3,81	1,57
TNMA-160408																			TNMA-332	9,53	16,51	4,75	3,81	0,79
TNMA-160412																			TNMA-333	9,53	16,51	4,75	3,81	1,19
TNMA-220404																			TNMA-431	12,70	22,00	4,75	5,16	0,38
TNMA-220408																			TNMA-432	12,70	22,00	4,75	5,16	0,79
TNMA-220412																			TNMA-433	12,70	22,00	4,75	5,16	1,19
TNMA-220416																			TNMA-434	12,70	22,00	4,75	5,16	1,57
TNMA-270608																			TNMA-542	15,88	27,51	6,35	6,35	0,79
TNMA-270612																			TNMA-543	15,88	27,51	6,35	6,35	1,19
TNMA-270616																			TNMA-544	15,88	27,51	6,35	6,35	1,57
TNMA-270632																			TNMA-548	15,88	27,51	6,35	6,35	3,18
TNMA-270724																			TNMA-556	15,88	27,51	7,92	6,35	2,39
TNMA-270924																			TNMA-566	15,88	27,51	9,53	6,35	2,39
TNMA-330608																			TNMA-642	19,05	32,99	6,35	7,92	0,79
TNMA-330612																			TNMA-643	19,05	32,99	6,35	7,92	1,19
TNMA-330616																			TNMA-644	19,05	32,99	6,35	7,92	1,57
TNMA-330916																			TNMA-664	19,05	32,99	9,53	7,92	1,57
TNMA-330924																			TNMA-666	19,05	32,99	9,53	7,92	2,39
TNMA-330932																			TNMA-668	19,05	32,99	9,53	7,92	3,18

Carbide Coatings



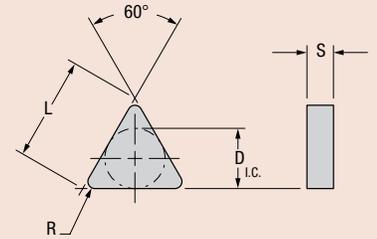
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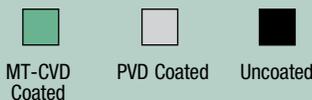
Triangle Inserts

Flat Top (TNGN)



Shape: Triangle	Part Number ISO	Steel				Stainless Steel					Cast Iron	High-Temp Alloys					Part Number ANSI	Dimensions (millimeters)					
		P15	P25	P25	P35	M15	M15	M15	M15	M20	M35	K15	S					D I.C.	L	S	R		
		GA5025	GA5035	GA5125	GA5036	GA5026	G-925	G-920	G-9230	GA5023	G-915	GA5023	GA5026	G-925	G-920	G-9230		G-915	G-20M				
	TNGN-110308	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-222	6,35	11,00	3,18	0,79
	TNGN-110312	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-223	6,35	11,00	3,18	1,19
	TNGN-160300	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-320	9,53	16,51	3,18	0,13
	TNGN-160304	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-321	9,53	16,51	3,18	0,38
	TNGN-160308	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-322	9,53	16,51	3,18	0,79
	TNGN-160312	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-323	9,53	16,51	3,18	1,19
	TNGN-160316	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-324	9,53	16,51	3,18	1,57
	TNGN-160404	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-331	9,53	16,51	4,75	0,38
	TNGN-160408	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-332	9,53	16,51	4,75	0,79
	TNGN-160412	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-333	9,53	16,51	4,75	1,19
	TNGN-160416	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-334	9,53	16,51	4,75	1,57
	TNGN-220404	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-431	12,70	22,00	4,75	0,38
	TNGN-220408	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-432	12,70	22,00	4,75	0,79
	TNGN-220412	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-433	12,70	22,00	4,75	1,19
	TNGN-220416	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-434	12,70	22,00	4,75	1,57
	TNGN-220432	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-438	12,70	22,00	4,75	3,18
	TNGN-220608	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-442	12,70	22,00	6,35	0,79
	TNGN-220612	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-443	12,70	22,00	6,35	1,19
	TNGN-220616	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-444	12,70	22,00	6,35	1,57
	TNGN-270408	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-532	15,88	27,51	4,75	0,79
	TNGN-270432	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-538	15,88	27,51	4,75	3,18
	TNGN-270604	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-541	15,88	27,51	6,35	0,38
	TNGN-270608	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-542	15,88	27,51	6,35	0,79
	TNGN-270612	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-543	15,88	27,51	6,35	1,19
	TNGN-270616	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-544	15,88	27,51	6,35	1,57
	TNGN-270716	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-554	15,88	27,51	7,92	1,57
	TNGN-270724	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-556	15,88	27,51	7,92	2,39
	TNGN-330716	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-654	19,05	32,99	7,92	1,57
	TNGN-330724	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-656	19,05	32,99	7,92	2,39
	TNGN-330916	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-664	19,05	32,99	9,53	1,57
	TNGN-330924	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-666	19,05	32,99	9,53	2,39
	TNGN-330932	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-668	19,05	32,99	9,53	3,18
	TNGN-381124	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-776	22,23	38,51	11,10	2,39
	TNGN-381132	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-778	22,23	38,51	11,10	3,18
	TNGN-381140	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-7710	22,23	38,51	11,10	3,96
	TNGN-441132	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TNGN-878	25,40	43,99	11,10	3,18

Carbide Coatings

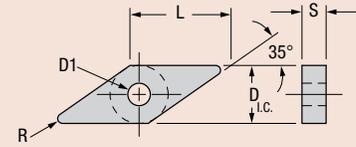


Not Recommended
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 Stacked Standard

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35° Diamond Inserts

Chip Control



Shape: 35° Diamond	Part Number	Material													Part Number	Dimensions (millimeters)						
		Steel				Stainless Steel					Cast Iron	High-Temp Alloys				D i.c.	L	S	D1	R		
		P15	P25	P25	P35	M15	M15	M15	M15	M20	M35	K15	S									
GA5025	GA5035	GA5125	GA5036	GA5026	G-925	G-920	G-9230	GA5023	G-915	GA5023	GA5026	G-925	G-920	G-9230	G-915	G-20M						
PRECISION FINISHING 	VNGG-160401.3-TF			○		○	●	●	○			○	●	●	○	○	VNGG-330.3-TF	9,53	16,61	4,75	3,81	0,13
	VNGG-160402.6-TF			○		○	○	●	○			○	○	●	○	○	VNGG-330.6-TF	9,53	16,61	4,75	3,81	0,25
	VNGG-160404-TF			○		●	●	●	●			●	●	●	●	●	VNGG-331-TF	9,53	16,61	4,75	3,81	0,38
	VNGG-160408-TF			○		●	●	●	○			●	●	○	○	●	VNGG-332-TF	9,53	16,61	4,75	3,81	0,79
	VNGG-160412-TF			○		●	●	○	○			●	●	○	○	○	VNGG-333-TF	9,53	16,61	4,75	3,81	1,19
FINISHING 	VNMG-160404-FF2	●	●	○	○	○	●	○	○	○	○	○	○	○	○	○	VNMG-331-FF2	9,53	16,61	4,75	3,81	0,38
	VNMG-160408-FF2	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	VNMG-332-FF2	9,53	16,61	4,75	3,81	0,79
	VNMG-160412-FF2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	VNMG-333-FF2	9,53	16,61	4,75	3,81	1,19
	VNMG-220408-FF2	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	VNMG-432-FF2	12,70	22,15	4,75	5,16	0,79
GENERAL PURPOSE 	VNMG-160408-GP2	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	VNMG-332-GP2	9,53	16,61	4,75	3,81	0,79
	VNMG-160412-GP2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	VNMG-333-GP2	9,53	16,61	4,75	3,81	1,19
	VNMG-220408-GP2	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	VNMG-432-GP2	12,70	22,15	4,75	5,16	0,79

Carbide Coatings

MT-CVD Coated
 PVD Coated
 Uncoated

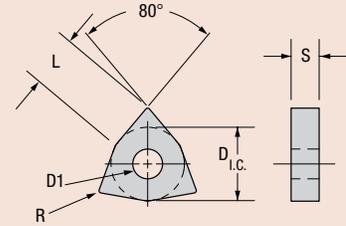
Not Recommended
Stocked or Available Upon Request
Stocked Standard

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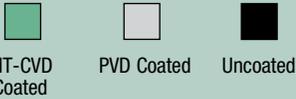
80° Trigon Inserts

Flat Top



Shape: 80° Trigon	Part Number	Material														Part Number	Dimensions (millimeters)							
		Steel				Stainless Steel					Cast Iron	High-Temp Alloys					D i.c.	L	S	D1	R			
		P15	P25	P25	P35	M15	M15	M15	M15	M20	M35	K15	S											
	ISO	GA5025	GA5035	GA5125	GA5036	GA5026	G-925	G-920	G-9230	GA5023	G-915	GA5023	GA5026	G-925	G-920	G-9230	G-915	G-20M	ANSI					
	WNMA-060404	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	WNMA-331	9,53	6,53	4,75	3,81	0,38
	WNMA-060408	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	WNMA-332	9,53	6,53	4,75	3,81	0,79
	WNMA-060412	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	WNMA-333	9,53	6,53	4,75	3,81	1,19
	WNMA-080404	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	WNMA-431	12,70	8,69	4,75	5,16	0,38
	WNMA-080408	○	○	○	○	○	○	○	○	●	○	●	○	○	○	○	○	○	WNMA-432	12,70	8,69	4,75	5,16	0,79
	WNMA-080412	○	○	○	○	○	○	○	○	●	○	●	○	○	○	○	○	○	WNMA-433	12,70	8,69	4,75	5,16	1,19
	WNMA-080416	○	○	○	○	○	○	○	○	●	○	●	○	○	○	○	○	○	WNMA-434	12,70	8,69	4,75	5,16	1,57

Carbide Coatings



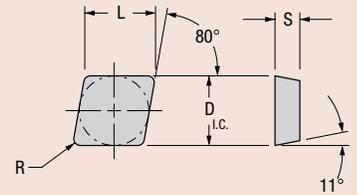
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● Stocked Standard
 ○ Stocked or Available Upon Request
 ◻ Not Recommended

80° Diamond Inserts

Positive Flat Top

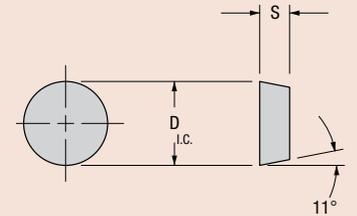


Shape: 80° Diamond	Part Number	Steel				Stainless Steel				Cast Iron	High-Temp Alloys					Part Number	Dimensions (millimeters)							
		P15	P25	P25	P35	M15	M15	M15	M15	M20	M35	K15	S	D i.c.	L		S	R						
	CPGN-120308	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	CPGN-422	12,70	12,88	3,18	0,79
	CPGN-120316	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	CPGN-424	12,70	12,88	3,18	1,57
	CPGN-120324	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	CPGN-426	12,70	12,88	3,18	2,39
	CPGN-120412	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	CPGN-433	12,70	12,88	4,75	1,19
	CPGN-120416	○	○	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	CPGN-434	12,70	12,88	4,75	1,57
	CPGN-190408	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	CPGN-632	19,05	19,33	4,75	0,79
	CPGN-190412	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	CPGN-633	19,05	19,33	4,75	1,19

Carbide Coatings		
MT-CVD Coated	PVD Coated	Uncoated

Round Inserts

Positive Flat Top



Shape: Round	Part Number	Steel				Stainless Steel				Cast Iron	High-Temp Alloys					Part Number	Dimensions (millimeters)				
		P15	P25	P25	P35	M15	M15	M15	M15	M20	M35	K15	S	D i.c.	S						
	ISO	GA5025	GA5035	GA5125	GA5036	GA5026	G-925	G-920	G-9230	GA5023	M35	GA5023	GA5026	G-925	G-920	G-9230	G-915	G-20M	RPGN-43	12,70	4,75
	RPGN-120400	○	○	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○			

Carbide Coatings		
MT-CVD Coated	PVD Coated	Uncoated

Not Recommended

Stocked or Available Upon Request

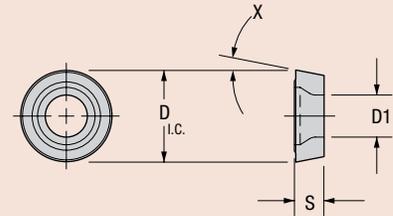
Stocked Standard

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Round Inserts

Positive Chip Control (RCGT/RPGT)



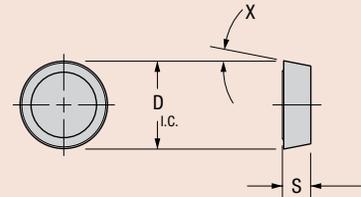
Shape: Round	Part Number ISO	Steel		Stainless Steel					Cast Iron	High-Temp Alloys					Part Number ANSI	Dimensions (millimeters)						
		P15	P25	P25	P35	M15	M15	M15	M20	M35	K15	S					D I.C.	S	D1	X		
		GA5025	GA5035	GA5125	GA5036	GA5026	G-925	G-920	G-9230	GA5023	G-915	GA5023	GA5026	G-925		G-920	G-9230	G-915	G-20M			
	RCGT-060300-TF			○		○	○	○				○	○	○	○	○	○	RCGT-22-TF	6,35	3,18	3,40	7°
	RCGT-09T300-TF			○		○	○	○				○	○	○	○	○	○	RCGT-32.5-TF	9,53	3,96	4,39	7°
	RCGT-120400-TF			○		○	●	○	○			○	●	○	○	○	○	RCGT-43-TF	12,70	4,75	5,51	7°
	RPGT-060300-TF			○		○	○	○	○			○	○	○	○	○	○	RPGT-22-TF	6,35	3,18	3,40	11°
	RPGT-09T300-TF			○		○	○	○	○			○	○	○	○	○	○	RPGT-32.5-TF	9,53	3,96	4,39	11°
RPGT-120400-TF			○		●	●	○	○			○	●	○	○	○	○	○	RPGT-43-TF	12,70	4,75	5,51	11°

Carbide Coatings

MT-CVD Coated
 PVD Coated
 Uncoated

Round Inserts

Positive Chip Control (RCGR/RPGR)



Shape: Round	Part Number ISO	Steel		Stainless Steel					Cast Iron	High-Temp Alloys					Part Number ANSI	Dimensions (millimeters)					
		P15	P25	P25	P35	M15	M15	M15	M20	M35	K15	S					D I.C.	S	X		
		GA5025	GA5035	GA5125	GA5036	GA5026	G-925	G-920	G-9230	GA5023	G-915	GA5023	GA5026	G-925		G-920	G-9230	G-915	G-20M		
	RCGR-060300-TF			○		○	○	○				○	○	○	○	○	○	RCGR-22-TF	6,35	3,18	7°
	RCGR-09T300-TF			○		○	○	○				○	○	○	○	○	○	RCGR-32.5-TF	9,53	3,96	7°
	RCGR-120400-TF			○		○	○	○				○	○	○	○	○	○	RCGR-43-TF	12,70	4,75	7°
	RPGR-060300-TF			○		○	○	○				○	○	○	○	○	○	RPGR-22-TF	6,35	3,18	11°
	RPGR-09T300-TF			○		○	○	○				○	○	○	○	○	○	RPGR-32.5-TF	9,53	3,96	11°
RPGR-120400-TF			○		○	○	○				○	○	○	○	○	○	RPGR-43-TF	12,70	4,75	11°	

Carbide Coatings

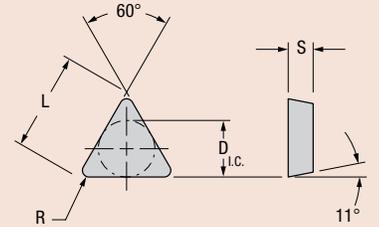
MT-CVD Coated
 PVD Coated
 Uncoated

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Stocked Standard
 Stocked or Available Upon Request
 Not Recommended

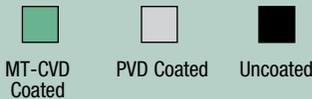
Triangle Inserts

Positive Flat Top (TPUN)



Shape: Triangle	Part Number	Steel				Stainless Steel					Cast Iron	High-Temp Alloys					Part Number	Dimensions (millimeters)					
		P15	P25	P25	P35	M15	M15	M15	M15	M20	M35	K15	S					D I.C.	L	S	R		
		GA5025	GA5035	GA5125	GA5036	GA5026	G-925	G-920	G-9230	GA5023	G-915	GA5023	GA5026	G-925	G-920	G-9230		G-915	G-20M	ANSI	D I.C.	L	S
	TPUN-160304	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TPUN-321	9,53	16,51	3,18	0,38
	TPUN-160308	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TPUN-322	9,53	16,51	3,18	0,79
	TPUN-160312	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TPUN-323	9,53	16,51	3,18	1,19
	TPUN-220404	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TPUN-431	12,70	22,00	4,75	0,38
	TPUN-220408	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TPUN-432	12,70	22,00	4,75	0,79
	TPUN-220412	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	●	○	TPUN-433	12,70	22,00	4,75	1,19
	TPUN-220416	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TPUN-434	12,70	22,00	4,75	1,57
	TPUN-270608	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TPUN-542	15,88	27,51	6,35	0,79
	TPUN-270612	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TPUN-543	15,88	27,51	6,35	1,19
	TPUN-270616	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TPUN-544	15,88	27,51	6,35	1,57
	TPUN-270708	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TPUN-552	15,88	27,51	7,92	0,79
	TPUN-270712	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TPUN-553	15,88	27,51	7,92	1,19
	TPUN-270716	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TPUN-554	15,88	27,51	7,92	1,57
	TPUN-270724	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TPUN-556	15,88	27,51	7,92	2,39
	TPUN-330916	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TPUN-664	19,05	32,99	9,53	1,57
TPUN-330924	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	TPUN-666	19,05	32,99	9,53	2,39	

Carbide Coatings

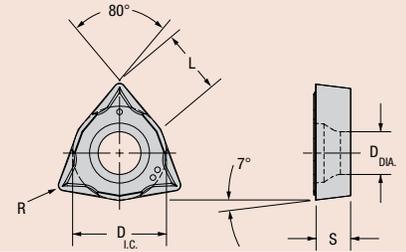


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80° Trigon Inserts

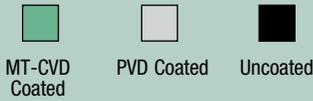
Chip Control: Screw On



Shape: 80° Trigon	Part Number	Material												Part Number	Dimensions (millimeters)									
		Steel				Stainless Steel				Cast Iron	High-Temp Alloys				D I.C.	L	S	D1	R					
		P15	P25	P25	P35	M15	M15	M15	M15	M20	M35	K15	S											
	ISO	GA5025	GA5035	GA5125	GA5036	GA5026	G-925	G-920	G-9230	GA5023	G-915	GA5023	GA5026	G-925	G-920	G-9230	G-915	G-20M	ANSI					
	WCMT-060202-X3	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	WCMT-21.55-X3	6,35	4,34	2,36	2,79	0,20
	WCMT-060204-X3	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	WCMT-21.51-X3	6,35	4,34	2,36	2,79	0,38
	WCMT-09T304-X3	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	WCMT-32.51-X3	9,53	6,50	3,96	4,39	0,38
	WCMT-09T308-X3	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	WCMT-32.52-X3	9,53	6,50	3,96	4,39	0,79
		GA5025	GA5035	GA5125	GA5036	GA5026	G-925	G-920	G-9230	GA5023	G-915	GA5023	GA5026	G-925	G-920	G-9230	G-915	G-20M						
		P15	P25	P25	P35	M15	M15	M15	M15	M20	M35	K15	S											
		Steel				Stainless Steel				Cast Iron	High-Temp Alloys													



Carbide Coatings



Not Recommended Stocked or Available Upon Request Stocked Standard

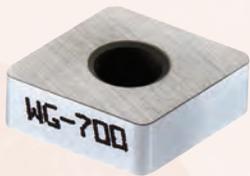
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Ceramic Inserts

Greenleaf is the industry leader in the development and manufacture of ceramic and coated ceramic inserts in ANSI standard and special geometries.



Greenleaf Corporation is continually upgrading its products. For the most current information, please visit our web site at:

www.greenleafglobalsupport.com

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Ceramic Insert Grade Description

CERAMIC

Greenleaf is the industry leader in the development and manufacture of ceramic and coated ceramic inserts in ANSI standard and special geometries. Some of the most prominent include:

WG-300[®] Whisker-reinforced ceramic with excellent wear and shock resistance at high surface speeds. WG-300 is very effective at machining nickel and cobalt based super-alloys, and other hard materials at metal removal rates up to 10 times higher than carbide.

WG-600[®] Coated whisker-reinforced ceramic offering longer tool life and better performance over uncoated ceramics due to outstanding thermal properties and shock-resistance at high cutting speeds. Application areas include rough and finish turning, as well as high-performance milling of high-strength alloys, hardened steels and select stainless steels. *U.S. Patent No. 6,447,896 B1.*

WG-700[™] New whisker-reinforced Al₂O₃ ceramic substrate featuring improved toughness and a unique high-speed coating. WG-700 is ideal for machining nickel- and cobalt-based super alloys and other difficult-to-machine materials. WG-700 exhibits high metal-removal rates with exceptional tool life. *U.S. Patent No. 6,447,896 B1.*

XSYTIN^{™-1} New phase-toughened ceramic capable of extreme feed rates. XSYTIN^{™-1} excels at machining a wide variety of materials including steels, cast and ductile irons, high-temperature alloys and other challenging metals. XSYTIN^{™-1} is ideal for use in interrupted cuts, scale, abrasive casting materials and milling.

GSN100[™] New engineered blend of silicon nitride and proprietary toughening agents that redefines productivity in the machining of cast iron. GSN100 delivers outstanding tool life at high cutting speeds in turning, grooving and milling applications.

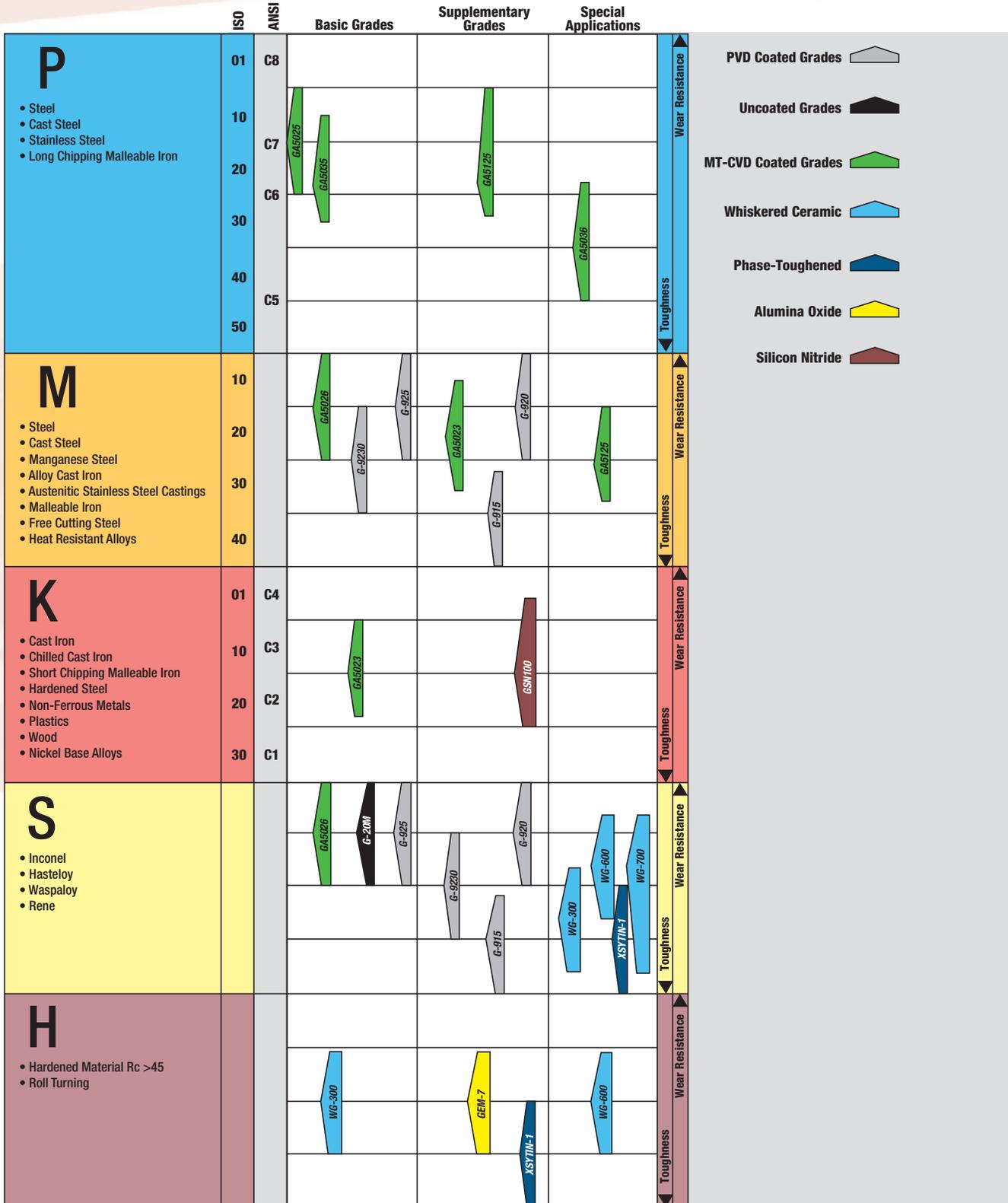
GEM-7[™] Al₂O₃ + TiC composite ceramic with a high degree of predictability in roll turning and hard alloy (up to 65 R/c) machining.

GEM-19[™] Cold pressed and sintered Al₂O₃ ceramic for economical roughing and finishing of cast iron grades application range on severe interruption or old machinery.

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Insert Grade Reference for Turning



CERAMIC INSERTS

Greenleaf Sales

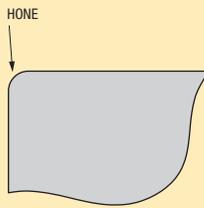
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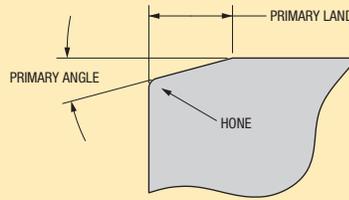
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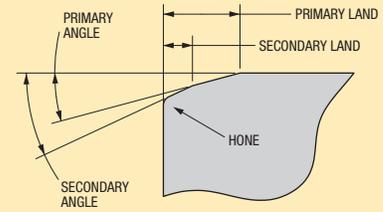
Edge Preparation and Application Guide



HONE



PRIMARY ANGLE



SECONDARY ANGLE

Edge Prep	Hone	Primary Land	Primary Angle	Application
A	0,015 R	–	–	For light finishing and grooving, also added to designated negative lands (i.e. T1, T2, T9).
T1	–	0,07	20°	General purpose for turning and light milling in clean high-temp. alloys and materials <50R/C.
T1A	0,015 R	0,07	20°	Used where more protection is needed than T1 such as in scale and light interruptions, hard turning.
T2	–	0,17	20°	General purpose chamfer for light to medium feed rates, cast-iron machining.
T2A	0,015 R	0,17	20°	Scale applications, light interruptions, weld overlays, finish turning and milling of hardened materials.

See page ATI 19 for other Greenleaf edge preps or call Greenleaf Technical Service for application concerns.

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I.S.O. Identification for Turning and Boring Inserts

CERAMIC INSERTS

A 85° parallelogram
B 82° parallelogram
C 80° diamond
D 55° diamond
H hexagon
K 55° parallelogram
L 90° rectangle
M 86° diamond
O octagon
P pentagon
R round
S square
T triangle
V 35° diamond
W 80° Trigon

Shape

	Dimensions		
	m	s	d
A	0,005 ⁽²⁾	0,025	0,025
B	0,005	0,025	0,013
C	0,013	0,025	0,025
D	0,013	0,025	0,013
E	0,025	0,025	0,025
G	0,025	0,130	0,025
J	0,005 ⁽²⁾	0,025	0,050-0,130
K	0,013	0,025	0,050-0,130
L	0,025	0,025	0,050-0,130
M	0,080-0,180 ⁽³⁾	0,130 ⁽³⁾	0,050-0,130
U	0,130-0,380 ⁽³⁾	0,130 ⁽³⁾	0,080-0,250

Tolerance Class (\pm mm)⁽¹⁾

T

N

M

G

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

Clearances

Type

⁽¹⁾ Tolerances given are plus and minus from nominal.
⁽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 shown in the standards for the corresponding shapes and sizes (see ANSI B94.25).
⁽⁴⁾ Shall only be used when required.
⁽⁵⁾ Dimensions are established prior to supplemental edge or coating modification.

Comparison cutting edge length in mm – IC in inches

△	06	09	11	16	22	27	33	44
□ ○				09	12	15	19	25
55°					15	19		
80°					12	16	19	25
35°				16	22			

Integers to be preceded by a 0.
Example: 9,52 mm indicated by 09.

Cutting Edge Length

Cutting Edge

22

04

08

E

01	s= 1,59
T1	s= 1,98
02	s= 2,38
03	s= 3,18
T3	s= 3,97
04	s= 4,76
05	s= 5,56
06	s= 6,35
07	s= 7,94
09	s= 9,52
10	s= 10,00
12	s= 12,00

Thickness

Radius in terms of 0.1 mm

00	Round insert sharp point
00	
02	0.2
04	0.4
05	0.5
08	0.8
10	1.0
12	1.2
15	1.5
16	1.6
24	2.4
32	3.2
40	4.0

Cutting Point Configuration

A.N.S.I. Identification for Turning and Boring Inserts

	Roll Dim. B	I.C. A	Thickness 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

Tolerance Class ⁽¹⁾

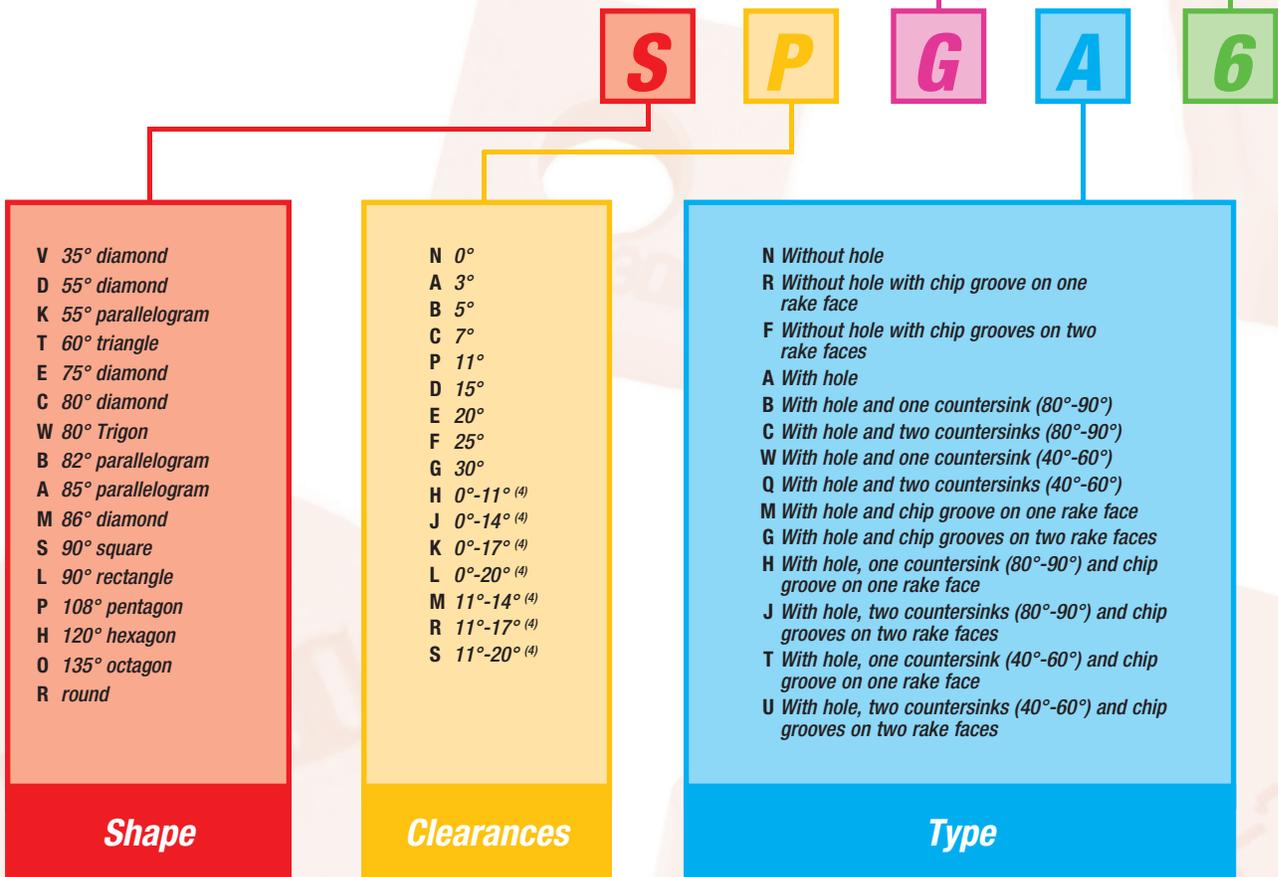
Regular polygons and diamonds
Number of 1/8ths of an inch in the inscribed circle as per table below:

Example:

5/32" I.C.	1.2
3/16" I.C.	1.5
7/32" I.C.	1.8
1/4" I.C.	2
5/16" I.C.	2.5
3/8" I.C.	3
1/2" I.C.	4
5/8" I.C.	5
3/4" I.C.	6
7/8" I.C.	7
1" I.C.	8
1-1/4" I.C.	10

Rectangles and parallelograms
Use two digits to size
1st digit: Number of 1/8ths of an inch in width
2nd digit: Number of 1/4ths of an inch in length

Size (I.C.)



- Shape**
- V 35° diamond
 - D 55° diamond
 - K 55° parallelogram
 - T 60° triangle
 - E 75° diamond
 - C 80° diamond
 - W 80° Trigon
 - B 82° parallelogram
 - A 85° parallelogram
 - M 86° diamond
 - S 90° square
 - L 90° rectangle
 - P 108° pentagon
 - H 120° hexagon
 - O 135° octagon
 - R round

- Clearances**
- N 0°
 - A 3°
 - B 5°
 - C 7°
 - P 11°
 - D 15°
 - E 20°
 - F 25°
 - G 30°
 - H 0°-11° ⁽⁴⁾
 - J 0°-14° ⁽⁴⁾
 - K 0°-17° ⁽⁴⁾
 - L 0°-20° ⁽⁴⁾
 - M 11°-14° ⁽⁴⁾
 - R 11°-17° ⁽⁴⁾
 - S 11°-20° ⁽⁴⁾

- Type**
- N Without hole
 - R Without hole with chip groove on one rake face
 - F Without hole with chip grooves on two rake faces
 - A With hole
 - B With hole and one countersink (80°-90°)
 - C With hole and two countersinks (80°-90°)
 - W With hole and one countersink (40°-60°)
 - Q With hole and two countersinks (40°-60°)
 - M With hole and chip groove on one rake face
 - G With hole and chip grooves on two rake faces
 - H With hole, one countersink (80°-90°) and chip groove on one rake face
 - J With hole, two countersinks (80°-90°) and chip grooves on two rake faces
 - T With hole, one countersink (40°-60°) and chip groove on one rake face
 - U With hole, two countersinks (40°-60°) and chip grooves on two rake faces

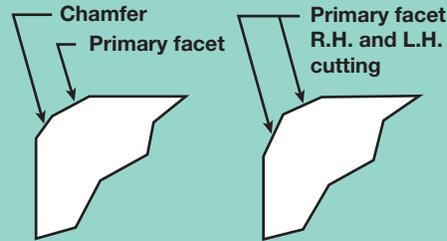
Regular polygons, diamonds, rectangles and parallelograms:
Number of 1/16ths of an inch in thickness as per table below:

Example:

3/32"	1.5
1/8"	2
5/32"	2.5
3/16"	3
7/32"	3.5
1/4"	4
5/16"	5
3/8"	6
7/16"	7
1/2"	8

Thickness

Only used following a letter in the seventh position.
Number of 1/64ths of an inch in the primary facet length.



Special Cutting Point Definition

R Right
L Left

Hand

3

3

A

- 0 Sharp Corner
- 1 1/64" radius
- 2 1/32" radius
- 3 3/64" radius
- 4 1/16" radius
- 5 5/64" radius
- 6 3/32" radius
- 7 7/64" radius
- 8 1/8" radius

- A Square insert with 45° chamfer
- D Square insert with 30° chamfer
- E Square insert with 15° chamfer
- F Square insert with 3° chamfer
- K Square insert with 30° double chamfer
- L Square insert with 15° double chamfer
- M Square insert with 3° double chamfer
- N Truncated triangular insert
- P Flatted corner triangle – 90°

Cutting Point Configuration

- A Honed (0.0005 to less than 0.001")
- B Honed (0.001 to less than 0.002")
- C Honed (0.005 to less than 0.007")
- D Honed (0.007" and over)
- J Polished to 4 microinch AA (rake face only)
- T Chamfered – manufacturer's standard (negative land – rake face only)

Other Conditions

- (1) Tolerances given are plus and minus from nominal.
- (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 shown in the standards for the corresponding shapes and sizes (see ANSI B94.25).
- (4) Secondary facet angle may vary by +1°.
- (5) Shall only be used when required.
- (6) Dimensions are established prior to supplemental edge or coating modification.

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Ceramic Insert Usage Reference Guide

CERAMIC INSERTS

Insert Type

Geometry

Insert Geometry

Stacking

80° Diamond Inserts Negative (CNGA)

Shape: 80° Diamond	Part Number	Edge Prep	Whisker	Part Number	Edge Prep	Dimensions (millimeters)	
			W1 W2 W3 W4 W5 W6 W7 W8 W9 W10 W11 W12 W13 W14 W15 W16 W17 W18 W19 W20 W21 W22 W23 W24 W25 W26 W27 W28 W29 W30 W31 W32 W33 W34 W35 W36 W37 W38 W39 W40 W41 W42 W43 W44 W45 W46 W47 W48 W49 W50 W51 W52 W53 W54 W55 W56 W57 W58 W59 W60 W61 W62 W63 W64 W65 W66 W67 W68 W69 W70 W71 W72 W73 W74 W75 W76 W77 W78 W79 W80 W81 W82 W83 W84 W85 W86 W87 W88 W89 W90 W91 W92 W93 W94 W95 W96 W97 W98 W99 W100			L L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12 L13 L14 L15 L16 L17 L18 L19 L20 L21 L22 L23 L24 L25 L26 L27 L28 L29 L30 L31 L32 L33 L34 L35 L36 L37 L38 L39 L40 L41 L42 L43 L44 L45 L46 L47 L48 L49 L50 L51 L52 L53 L54 L55 L56 L57 L58 L59 L60 L61 L62 L63 L64 L65 L66 L67 L68 L69 L70 L71 L72 L73 L74 L75 L76 L77 L78 L79 L80 L81 L82 L83 L84 L85 L86 L87 L88 L89 L90 L91 L92 L93 L94 L95 L96 L97 L98 L99 L100	R
CNGA	CNGA-120404	T1	[W1] [W2] [W3] [W4] [W5] [W6] [W7] [W8] [W9] [W10] [W11] [W12] [W13] [W14] [W15] [W16] [W17] [W18] [W19] [W20] [W21] [W22] [W23] [W24] [W25] [W26] [W27] [W28] [W29] [W30] [W31] [W32] [W33] [W34] [W35] [W36] [W37] [W38] [W39] [W40] [W41] [W42] [W43] [W44] [W45] [W46] [W47] [W48] [W49] [W50] [W51] [W52] [W53] [W54] [W55] [W56] [W57] [W58] [W59] [W60] [W61] [W62] [W63] [W64] [W65] [W66] [W67] [W68] [W69] [W70] [W71] [W72] [W73] [W74] [W75] [W76] [W77] [W78] [W79] [W80] [W81] [W82] [W83] [W84] [W85] [W86] [W87] [W88] [W89] [W90] [W91] [W92] [W93] [W94] [W95] [W96] [W97] [W98] [W99] [W100]	CNGA-431	T1	12.70 12.90 4.75 5.16 0.38	
	T1A	T1		T1A	T1	12.70 12.90 4.75 5.16 0.38	
	T2	T2		T2	T2	12.70 12.90 4.75 5.16 0.38	
	T2A	T2A		T2A	T2A	12.70 12.90 4.75 5.16 0.38	
	A	A		A	A	12.70 12.90 4.75 5.16 0.38	

80° Diamond Inserts Negative (CNGN)

Shape: 80° Diamond	Part Number	Edge Prep	Whisker	Part Number	Edge Prep	Dimensions (millimeters)
			W1 W2 W3 W4 W5 W6 W7 W8 W9 W10 W11 W12 W13 W14 W15 W16 W17 W18 W19 W20 W21 W22 W23 W24 W25 W26 W27 W28 W29 W30 W31 W32 W33 W34 W35 W36 W37 W38 W39 W40 W41 W42 W43 W44 W45 W46 W47 W48 W49 W50 W51 W52 W53 W54 W55 W56 W57 W58 W59 W60 W61 W62 W63 W64 W65 W66 W67 W68 W69 W70 W71 W72 W73 W74 W75 W76 W77 W78 W79 W80 W81 W82 W83 W84 W85 W86 W87 W88 W89 W90 W91 W92 W93 W94 W95 W96 W97 W98 W99 W100	R		
CNGN	CNGN-120404	T1	[W1] [W2] [W3] [W4] [W5] [W6] [W7] [W8] [W9] [W10] [W11] [W12] [W13] [W14] [W15] [W16] [W17] [W18] [W19] [W20] [W21] [W22] [W23] [W24] [W25] [W26] [W27] [W28] [W29] [W30] [W31] [W32] [W33] [W34] [W35] [W36] [W37] [W38] [W39] [W40] [W41] [W42] [W43] [W44] [W45] [W46] [W47] [W48] [W49] [W50] [W51] [W52] [W53] [W54] [W55] [W56] [W57] [W58] [W59] [W60] [W61] [W62] [W63] [W64] [W65] [W66] [W67] [W68] [W69] [W70] [W71] [W72] [W73] [W74] [W75] [W76] [W77] [W78] [W79] [W80] [W81] [W82] [W83] [W84] [W85] [W86] [W87] [W88] [W89] [W90] [W91] [W92] [W93] [W94] [W95] [W96] [W97] [W98] [W99] [W100]	CNGN-431	T1	12.70 12.90 4.75 5.16 0.38
	T1A	T1A		T1A	T1A	12.70 12.90 4.75 5.16 0.38
	T2	T2		T2	T2	12.70 12.90 4.75 5.16 0.38
	T2A	T2A		T2A	T2A	12.70 12.90 4.75 5.16 0.38
	A	A		A	A	12.70 12.90 4.75 5.16 0.38

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Part Number (with edge condition)

Stacking Status

Edge Conditions

Dimensions

Insert Model

Grade Categories

Negative Inserts



80° Diamond
page: T 52



80° Diamond
page: T 53



80° Diamond
Rough Stuff®
page: T 54



55° Diamond
page: T 55



55° Diamond
page: T 56



Round
page: T 57



Round
page: T 58

Negative Inserts *continued*



Square
page: T 59



Square
page: T 60



Square
Rough Stuff®
page: T 61



Triangle
page: T 62



Triangle
page: T 63



35° Diamond
page: T 64



Trigon
page: T 65

Positive Inserts



80° Diamond
Positive Flat Top
page: T 66



Round
Positive Flat Top
page: T 66



Round
V-Bottom
page: T 67



Square
Positive Flat Top
page: T 68



Triangle
Positive Flat Top
page: T 69

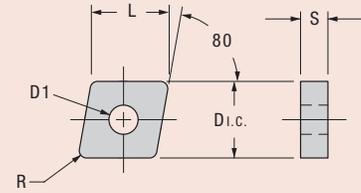


Triangle
page: T 70

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80° Diamond Inserts Negative (CNGA)



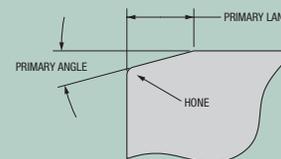
Shape: 80° Diamond	Part Number ISO	Edge Prep	Whisker						Part Number ANSI	Edge Prep	Dimensions (millimeters)				
			WG-300	WG-600	WG-700	XSYTIN-1	GSN100	GEM-7			GEM-19	D.I.C.	L	S	D1
CNGA	CNGA-120404	T1	●	○	●	○	○	○	CNGA-431	T1	12,70	12,90	4,75	5,16	0,38
		T1A	●	○	●	○	○	○		T1A	12,70	12,90	4,75	5,16	0,38
		T2	●	○	●	○	○	○		T2	12,70	12,90	4,75	5,16	0,38
		T2A	●	○	●	○	○	●		T2A	12,70	12,90	4,75	5,16	0,38
		A	○	○	○	○	○	○		A	12,70	12,90	4,75	5,16	0,38
	CNGA-120408	T1	●	●	●	○	○	○	CNGA-432	T1	12,70	12,90	4,75	5,16	0,79
		T1A	●	●	●	○	○	○		T1A	12,70	12,90	4,75	5,16	0,79
		T2	●	●	●	○	○	○		T2	12,70	12,90	4,75	5,16	0,79
		T2A	●	○	●	○	○	○		T2A	12,70	12,90	4,75	5,16	0,79
		A	○	○	○	○	○	○		A	12,70	12,90	4,75	5,16	0,79
	CNGA-120412	T1	●	○	●	○	○	○	CNGA-433	T1	12,70	12,90	4,75	5,16	1,19
		T1A	●	●	●	○	○	○		T1A	12,70	12,90	4,75	5,16	1,19
		T2	●	○	●	○	○	○		T2	12,70	12,90	4,75	5,16	1,19
		T2A	●	○	●	○	○	○		T2A	12,70	12,90	4,75	5,16	1,19
		A	○	○	○	●	○	○		A	12,70	12,90	4,75	5,16	1,19
	CNGA-120416	T1	●	○	●	○	○	○	CNGA-434	T1	12,70	12,90	4,75	5,16	1,57
		T1A	●	●	●	○	○	○		T1A	12,70	12,90	4,75	5,16	1,57
		T2	●	○	●	○	○	○		T2	12,70	12,90	4,75	5,16	1,57
		T2A	●	○	●	○	○	○		T2A	12,70	12,90	4,75	5,16	1,57
		T3A	○	○	○	○	○	○		T3A	12,70	12,90	4,75	5,16	1,57
CNGA-120712	T1	●	○	●	○	○	○	CNGA-453	T1	12,70	12,90	7,92	5,16	1,19	
	T2	○	○	○	○	○	○		T2	12,70	12,90	7,92	5,16	1,19	
CNGA-120716	T2	○	○	○	○	○	○	CNGA-454	T2	12,70	12,90	7,92	5,16	1,57	
CNGA-160608	T2A	●	○	●	○	○	○	CNGA-542	T2A	15,88	16,13	6,35	6,35	0,79	
CNGA-160612	T1	●	○	●	○	○	○	CNGA-543	T1	15,88	16,13	6,35	6,35	1,19	
CNGA-160616	T2A	●	○	●	○	○	○	CNGA-544	T2A	15,88	16,13	6,35	6,35	1,57	
CNGA-190612	T2A	●	●	●	○	○	○	CNGA-643	T2A	19,05	19,35	6,35	7,92	1,19	
CNGA-190616	T2A	○	○	○	○	○	○	CNGA-644	T2A	19,05	19,35	6,35	7,92	1,57	
CNGA-190708	T2A	○	○	○	○	○	○	CNGA-652	T2A	19,05	19,35	7,92	7,92	0,79	
CNGA-190712	T2A	○	○	○	○	○	○	CNGA-653	T2A	19,05	19,35	7,92	7,92	1,19	
CNGA-190716	T2A	○	○	○	○	○	○	CNGA-654	T2A	19,05	19,35	7,92	7,92	1,57	

Ceramic Classification

Whisker Ceramic	Phase Toughened	Silicon Nitride	Alumina TIC	Al ₂ O ₃

WG-300	WG-600	WG-700	XSYTIN-1	GSN100	GEM-7	GEM-19
Whisker	Phase Toughened	Si ₃ N ₄	Al ₂ O ₃ -TIC	Al ₂ O ₃		

Additional Edge Preps – page T 45



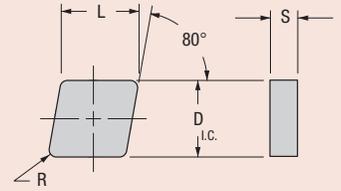
Page T 42 – grade description

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	Stocked Standard		Stocked or Available Upon Request		Not Recommended
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80° Diamond Inserts Negative (CNGN)



Shape: 80° Diamond	Part Number ISO	Edge Prep	Whisker						Part Number ANSI	Edge Prep	Dimensions (millimeters)			
			WG-300	WG-600	WG-700	XSYTIN-1	GSN100	SiAlN			AlO ₂ -TiC	AlO ₂	D L.C.	L
CNGN	CNGN-120404	T1	●	●	●	○	○	○	CNGN-431	T1	12,70	12,90	4,75	0,38
	CNGN-120408	T1	●	●	●	○	○	○	CNGN-432	T1	12,70	12,90	4,75	0,79
		T1A	●	●	○	○	○	○		T1A	12,70	12,90	4,75	0,79
		T2	●	●	○	○	○	○		T2	12,70	12,90	4,75	0,79
		T2A	●	●	○	○	○	○		T2A	12,70	12,90	4,75	0,79
		A	○	○	○	○	○	○		A	12,70	12,90	4,75	0,79
	CNGN-120412	T1	●	●	○	○	○	○	CNGN-433	T1	12,70	12,90	4,75	1,19
		T1A	●	●	○	○	○	○		T1A	12,70	12,90	4,75	1,19
		T2	○	○	○	○	●	○		T2	12,70	12,90	4,75	1,19
		T2A	●	○	○	○	○	○		T2A	12,70	12,90	4,75	1,19
		T9	○	○	○	○	○	○		T9	12,70	12,90	4,75	1,19
		A	○	○	○	○	○	○	CNGN-434	T1	12,70	12,90	4,75	1,57
	CNGN-120416	T1	●	●	○	○	○	○		T2	12,70	12,90	4,75	1,57
		T1A	○	○	○	○	○	○		T2A	12,70	12,90	4,75	1,57
		T2	●	○	○	○	○	○	CNGN-451	T1	12,70	12,90	7,92	0,38
		T2A	●	○	○	○	○	○	CNGN-452	T1	12,70	12,90	7,92	0,79
		A	○	○	○	○	○	○		T2	12,70	12,90	7,92	0,79
	CNGN-120704	T1	○	○	○	○	○	○		T2A	12,70	12,90	7,92	0,79
	CNGN-120708	T1	●	○	○	○	○	○	CNGN-453	T1	12,70	12,90	7,92	1,19
		T2	○	○	○	○	○	○		T1A	12,70	12,90	7,92	1,19
		T2A	●	○	○	○	○	○		T2	12,70	12,90	7,92	1,19
	CNGN-120712	T1	●	●	○	○	○	○		T2A	12,70	12,90	7,92	1,19
		T1A	○	○	○	○	○	○	CNGN-454	T1	12,70	12,90	7,92	1,57
		T2	○	○	○	○	○	○		T1A	12,70	12,90	7,92	1,57
		T2A	●	○	○	○	○	○		T2	12,70	12,90	7,92	1,57
		A	○	○	○	○	○	○		T2A	12,70	12,90	7,92	1,57
	CNGN-120716	T1	●	●	○	○	○	○	CNGN-542	T1	15,88	16,13	6,35	0,79
		T1A	○	○	○	○	○	○	CNGN-543	T1	15,88	16,13	6,35	1,19
		T2	○	○	○	○	○	○		T2A	15,88	16,13	6,35	1,19
		T2A	●	○	○	○	○	○	CNGN-642	T1	19,05	19,35	6,35	0,79
	A	○	○	○	○	○	○	CNGN-643	T1	19,05	19,35	6,35	1,19	
CNGN-160608	T1	●	○	○	○	○	○		T2	19,05	19,35	6,35	1,19	
CNGN-160612	T1	●	○	○	○	○	○		T2A	19,05	19,35	6,35	1,19	
	T2A	○	○	○	○	○	○	CNGN-644	T2A	19,05	19,35	6,35	1,57	
CNGN-190608	T1	○	○	○	○	○	○	CNGN-658	T2A	19,05	19,35	7,92	3,18	
CNGN-190612	T1	●	●	○	○	○	○							
	T2	○	○	○	○	○	○							
	T2A	●	●	○	○	○	○							
CNGN-190616	T2A	○	○	○	○	○	○							
CNGN-190732	T2A	○	○	○	○	○	○							

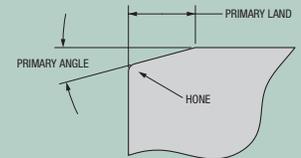
CERAMIC INSERTS

Ceramic Classification

Whisker Ceramic	Phase Toughened	Silicon Nitride	Alumina TiC	Al ₂ O ₃

WG-300	WG-600	WG-700	XSYTIN-1	GSN100	GEM-7	GEM-19
Whisker			Phase Toughened	SiAlN	AlO ₂ -TiC	AlO ₂

Additional Edge Preps – page T 45



Page T 42 – grade description

Not Recommended		Stocked or Available Upon Request		Stocked Standard	
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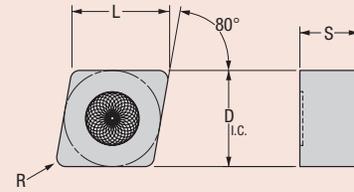
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80°



80° Diamond Inserts

Rough Stuff®



CERAMIC INSERTS

Shape: 80° Diamond	Part Number ISO	Edge Prep	Whisker				Part Number ANSI	Edge Prep	Dimensions (millimeters)			
			WG-300	WG-600	WG-700	GSN100			D I.C.	L	S	R
	CNGX-120708-RS	T2	○	○	○	○	CNGX-452-RS	T2	12,70	12,90	7,92	0,79
		T2A	○	○	○	○			T2A	12,70	12,90	7,92
	CNGX-120712-RS	T2	○	○	○	○	CNGX-453-RS	T2	12,70	12,90	7,92	1,19
		T2A	○	○	○	○			T2A	12,70	12,90	7,92
	CNGX-120716-RS	T2	○	○	○	○	CNGX-454-RS	T2	12,70	12,90	7,92	1,57
		T2A	○	○	○	○			T2A	12,70	12,90	7,92

Ceramic Classification		WG-300	WG-600	WG-700	GSN100
Whisker Ceramic	Silicon Nitride	○	○	○	○
		Whisker			SiAlN

Additional Edge Preps – page T 45

Page T 42 – grade description

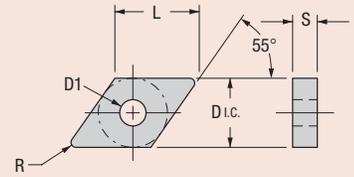
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Stocked Standard
 Stocked or Available Upon Request
 Not Recommended

55° Diamond Inserts

Negative (DNGA)



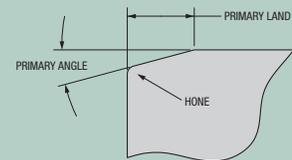
Shape: 55° Diamond	Part Number ISO	Edge Prep	Whisker					Part Number ANSI	Edge Prep	Dimensions (millimeters)						
			WG-300	WG-600	WG-700	XSYTIN-1	GSN100			GEM-7	GEM-19	D.I.C.	L	S	D1	R
DNGA	DNGA-110308	T1	○	○	○	○	○	○	DNGA-322	T1	9,53	11,63	3,18	3,81	0,79	
	DNGA-110312	T1	○	○	○	○	○	○	DNGA-323	T1	9,53	11,63	3,18	3,81	1,19	
	DNGA-110316	T1	○	○	○	○	○	○	DNGA-324	T1	9,53	11,63	3,18	3,81	1,57	
	DNGA-110408	T1	○	○	○	○	○	○	DNGA-332	T1	9,53	11,63	4,75	3,81	0,79	
	DNGA-150404	T1	●	○	○	○	○	○	○	DNGA-431	T1	12,70	15,49	4,75	5,16	0,38
		T2	●	○	○	○	○	○	○		T2	12,70	15,49	4,75	5,16	0,38
	DNGA-150408	T1	●	○	○	○	○	○	○	DNGA-432	T1	12,70	15,49	4,75	5,16	0,79
		T1A	●	○	○	○	○	○	○		T1A	12,70	15,49	4,75	5,16	0,79
		T2	●	○	○	○	●	○	○		T2	12,70	15,49	4,75	5,16	0,79
		T2A	●	○	○	○	○	●	○		T2A	12,70	15,49	4,75	5,16	0,79
	DNGA-150412	T1	●	○	○	○	○	○	○	DNGA-433	T1	12,70	15,49	4,75	5,16	1,19
		T1A	●	○	○	○	○	○	○		T1A	12,70	15,49	4,75	5,16	1,19
		T2	●	○	○	○	●	○	○		T2	12,70	15,49	4,75	5,16	1,19
		T2A	●	○	○	○	○	●	○		T2A	12,70	15,49	4,75	5,16	1,19
	DNGA-150416	T1	●	○	○	○	○	○	○	DNGA-434	T1	12,70	15,49	4,75	5,16	1,57
		T1A	●	○	○	○	○	○	○		T1A	12,70	15,49	4,75	5,16	1,57
	T2A	●	○	○	○	○	○	○	T2A	12,70	15,49	4,75	5,16	1,57		
	DNGA-150612	T1	○	○	○	○	○	○	○	DNGA-443	T1	12,70	15,49	6,35	5,16	1,19
DNGA-190612	T2A	●	○	○	○	○	○	○	DNGA-543	T2A	15,88	19,38	6,35	6,35	1,19	

Ceramic Classification

Whisker Ceramic	Phase Toughened	Silicon Nitride	Alumina TiC	Al ₂ O ₃

Page T 42 – grade description

WG-300	WG-600	WG-700	XSYTIN-1	GSN100	GEM-7	GEM-19
Whisker	Phase Toughened	SiN ₄	Al ₂ O ₃ -TiC	Al ₂ O ₃		

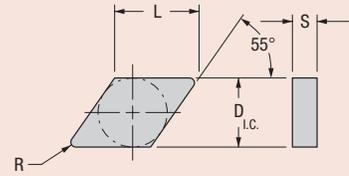
Additional Edge Preps – page T 45


CERAMIC INSERTS

Not Recommended		Stocked or Available Upon Request		Stocked Standard	
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55° Diamond Inserts Negative (DNGN)



Shape: 55° Diamond	Part Number ISO	Edge Prep	Whisker					Phase Toughened	Si ₃ N ₄	Al ₂ O ₃ -TiC	Al ₂ O ₃	Part Number ANSI	Edge Prep	Dimensions (millimeters)			
			WG-300	WG-600	WG-700	XSYTIN-1	GSN100							GEM-7	GEM-19	D I.C.	L
	DNGN-110308	T1	○	○	○	○	○	○	○	○	DNGN-322	T1	9,53	11,63	3,18	0,79	
	DNGN-110312	T1	○	○	○	○	○	○	○	○	DNGN-323	T1	9,53	11,63	3,18	1,19	
	DNGN-110316	T1	○	○	○	○	○	○	○	○	DNGN-324	T1	9,53	11,63	3,18	1,57	
	DNGN-150408	T1	●	○	●	○	○	○	○	○	DNGN-432	T1	12,70	15,49	4,75	0,79	
		T2A	○	○	○	○	○	○	○	○		T2A	12,70	15,49	4,75	0,79	
	DNGN-150412	T1	●	○	●	○	○	○	○	○	DNGN-433	T1	12,70	15,49	4,75	1,19	
	DNGN-150416	T1	●	○	○	○	○	○	○	○	DNGN-434	T1	12,70	15,49	4,75	1,57	
		T2A	○	○	○	○	○	○	○	○		T2A	12,70	15,49	4,75	1,57	

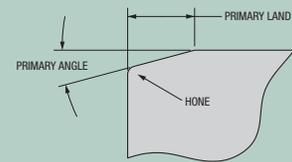
Ceramic Classification

■ Whisker Ceramic
■ Phase Toughened
■ Silicon Nitride
■ Alumina TiC
■ Al₂O₃

Page T 42 – grade description

WG-300	WG-600	WG-700	XSYTIN-1	GSN100	GEM-7	GEM-19
Whisker	Phase Toughened	Si ₃ N ₄	Al ₂ O ₃ -TiC	Al ₂ O ₃		

Additional Edge Preps – page T 45



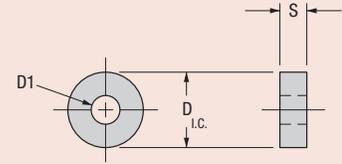
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● Stocked Standard
 ○ Stocked or Available Upon Request
 Not Recommended



Round Inserts Negative (RNGA)



Shape: Round	Part Number ISO	Edge Prep	Whisker						Part Number ANSI	Edge Prep	Dimensions (millimeters)		
			WG-300	WG-600	WG-700	XSYTIN-1 <small>Phase Toughened</small>	GSN100 <small>SiN₄</small>	GEM-7 <small>AlO₂-TiC</small>			GEM-19 <small>AlO₂</small>	D I.C.	S
	RNGA-090300	T1	○	○	○	○	○	○	RNGA-32	T1	9,53	3,18	3,81
	RNGA-090400	T1	○	○	○	○	○	○	RNGA-33	T1	9,53	4,75	3,81
	RNGA-120400	T1	○	○	○	○	○	○	RNGA-43	T1	12,70	4,75	5,16
	RNGA-120700	T1	○	○	○	○	○	○	RNGA-45	T1	12,70	7,92	5,16
	RNGA-150700	T2A	○	○	○	○	○	○	RNGA-55	T2A	15,88	7,92	6,35
	RNGA-190700	T2A	○	○	○	○	○	○	RNGA-65	T2A	19,05	7,92	7,92
	RNGA-250700	T2A	○	○	○	○	○	○	RNGA-85	T2A	25,40	7,92	9,12

Ceramic Classification Whisker Ceramic Phase Toughened Silicon Nitride Alumina TiC Al ₂ O ₃					<table border="1"> <tr> <td>WG-300</td> <td>WG-600</td> <td>WG-700</td> <td>XSYTIN-1 <small>Phase Toughened</small></td> <td>GSN100 <small>SiN₄</small></td> <td>GEM-7 <small>AlO₂-TiC</small></td> <td>GEM-19 <small>AlO₂</small></td> </tr> <tr> <td>Whisker</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	WG-300	WG-600	WG-700	XSYTIN-1 <small>Phase Toughened</small>	GSN100 <small>SiN₄</small>	GEM-7 <small>AlO₂-TiC</small>	GEM-19 <small>AlO₂</small>	Whisker							Additional Edge Preps – page T 45
WG-300	WG-600	WG-700	XSYTIN-1 <small>Phase Toughened</small>	GSN100 <small>SiN₄</small>	GEM-7 <small>AlO₂-TiC</small>	GEM-19 <small>AlO₂</small>														
Whisker																				

Page T 42 – grade description

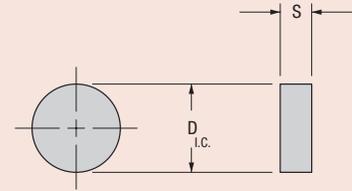
CERAMIC INSERTS

Not Recommended | Stocked or Available Upon Request | Stocked Standard

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Round Inserts Negative (RNGN)



Shape: Round	Part Number ISO	Edge Prep	Whisker						Part Number ANSI	Edge Prep	Dimensions (millimeters)		
			WG-300	WG-600	WG-700	XSYTIN-1	GSN100	GEM-7			GEM-19	D I.C.	S
	RNGN-090300	T1	●	○	○	○	○	○	RNGN-32	T1	9,53	3,18	
		T1A	●	●	●	●	○	○	○	T1A	9,53	3,18	
		T2A	●	○	○	○	○	○	○	T2A	9,53	3,18	
		A	○	○	○	●	○	○	○	A	9,53	3,18	
	RNGN-090400	T1	●	○	○	○	○	○	○	RNGN-33	T1	9,53	4,75
		T1A	●	○	●	○	○	○	○	T1A	9,53	4,75	
		T2A	●	○	●	○	○	○	○	T2A	9,53	4,75	
	RNGN-120300	T1A	●	○	○	●	○	○	○	RNGN-42	T1A	12,70	3,18
		T2A	○	○	○	○	○	○	○	T2A	12,70	3,18	
		A	○	○	○	●	○	○	○	T2A	12,70	3,18	
	RNGN-120400	T1	●	○	●	●	○	○	○		A	12,70	4,75
		T1A	●	●	●	○	○	○	○		T1A	12,70	4,75
		T2	●	○	●	●	○	○	○		T2	12,70	4,75
		T2A	●	●	●	○	○	○	○		T2A	12,70	4,75
		A	○	○	○	○	○	○	○		A	12,70	4,75
	RNGN-120700	T1	●	●	●	●	○	○	○	RNGN-45	T1	12,70	7,92
		T1A	●	●	●	○	○	○	○	T1A	12,70	7,92	
		T2	●	●	●	●	○	○	○	T2	12,70	7,92	
		T2A	●	●	●	○	○	○	○	T2A	12,70	7,92	
		T5A	○	○	○	○	○	○	○	T5A	12,70	7,92	
A		●	○	○	●	○	○	○	A	12,70	7,92		
RNGN-150700	T1	●	○	○	○	○	○	○	RNGN-55	T1	15,88	7,92	
	T2A	○	○	○	○	○	○	○	T2A	15,88	7,92		
RNGN-190600	T2A	○	○	○	○	○	○	○	RNGN-64	T2A	19,05	6,35	
RNGN-190700	T1	●	○	○	●	○	○	○	RNGN-65	T1	19,05	7,92	
	T1A	○	○	○	○	○	○	○	T1A	19,05	7,92		
	T2A	●	○	●	○	○	○	○	T2A	19,05	7,92		
	A	○	○	○	●	○	○	○	A	19,05	7,92		
RNGN-250600	T2A	○	○	○	○	○	○	○	RNGN-84	T2A	25,40	6,35	
RNGN-250700	T2A	○	○	○	○	○	○	○	RNGN-85	T2A	25,40	7,92	
RNGN-250900	T2A	○	○	○	○	○	○	○	RNGN-86	T2A	25,40	9,53	
RNGN-310900	T2A	○	○	○	○	○	○	○	RNGN-106	T2A	31,75	9,53	

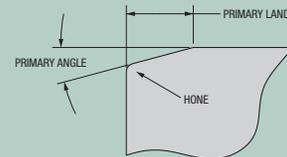
Ceramic Classification

Whisker Ceramic	Phase Toughened	Silicon Nitride	Alumina TIC	Al ₂ O ₃

Page T 42 – grade description

WG-300	WG-600	WG-700	XSYTIN-1	GSN100	GEM-7	GEM-19
Whisker	Phase Toughened	Si ₃ N ₄	Al ₂ O ₃ -TIC	Al ₂ O ₃		

Additional Edge Preps – page T 45

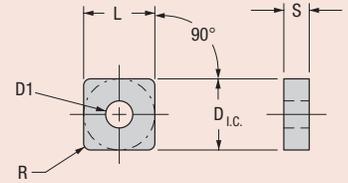


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	Stocked Standard		Stocked or Available Upon Request		Not Recommended
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Square Inserts Negative (SNGA)



SNGA



Shape: Square	Part Number ISO	Edge Prep	Whisker						Part Number ANSI	Edge Prep	Dimensions (millimeters)				
			WG-300	WG-600	WG-700	XSYTIN-1	GSN100	GEM-7			GEM-19	D I.C.	L	S	D1
	SNGA-120408	T2	●	○	○	○	○	○	SNGA-432	T2	12,70	12,70	4,75	5,16	0,79
	SNGA-120412	T1	●	○	○	○	○	○	SNGA-433	T1	12,70	12,70	4,75	5,16	1,19
		T2	○	○	○	○	●	○		T2	12,70	12,70	4,75	5,16	1,19
		T2A	○	○	○	○	○	○		T2A	12,70	12,70	4,75	5,16	1,19
	SNGA-120416	T1	○	○	○	○	○	○	SNGA-434	T1	12,70	12,70	4,75	5,16	1,57
		T2	○	○	○	○	●	○		T2	12,70	12,70	4,75	5,16	1,57
	SNGA-120708	T1	○	○	○	○	○	○	SNGA-452	T1	12,70	12,70	7,92	5,16	0,79
	SNGA-120712	T1	○	○	○	○	○	○	SNGA-453	T1	12,70	12,70	7,92	5,16	1,19
		T2	○	○	○	○	●	○		T2	12,70	12,70	7,92	5,16	1,19
	SNGA-120716	T1	○	○	○	○	○	○	SNGA-454	T1	12,70	12,70	7,92	5,16	1,57
		T2	○	○	○	○	●	○		T2	12,70	12,70	7,92	5,16	1,57
	SNGA-150608	T2A	○	○	○	○	○	○	SNGA-542	T2A	15,88	15,88	6,35	6,35	0,79
	SNGA-150612	T2A	○	○	○	○	○	○	SNGA-543	T2A	15,88	15,88	6,35	6,35	1,19
	SNGA-150616	T2A	○	○	○	○	○	○	SNGA-544	T2A	15,88	15,88	6,35	6,35	1,57
	SNGA-190608	T2A	○	○	○	○	○	○	SNGA-642	T2A	19,05	19,05	6,35	7,92	0,79
	SNGA-190612	T2A	○	○	○	○	○	○	SNGA-643	T2A	19,05	19,05	6,35	7,92	1,19
SNGA-190616	T2A	○	○	○	○	○	○	SNGA-644	T2A	19,05	19,05	6,35	7,92	1,57	

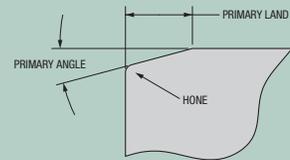
Ceramic Classification

■ Whisker Ceramic
■ Phase Toughened
■ Silicon Nitride
■ Alumina TiC
■ Al₂O₃

Page T 42 – grade description

WG-300	WG-600	WG-700	XSYTIN-1	GSN100	GEM-7	GEM-19
Whisker	Phase Toughened	Si ₃ N ₄	Al ₂ O ₃ -TiC	Al ₂ O ₃		

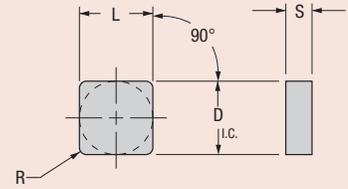
Additional Edge Preps – page T 45



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Square Inserts Negative (SNGN)



Shape: Square	Part Number ISO	Edge Prep	Whisker						Part Number ANSI	Edge Prep	Dimensions (millimeters)			
			WG-300	WG-600	WG-700	XSYTIN-1	GSN100	GEM-7			GEM-19	D I.C.	L	S
	SNGN-090308	T2A	○	○	○	○	○	○	SNGN-322	T2A	9,53	9,53	3,18	0,79
	SNGN-090412	T2	○	○	○	○	○	○	SNGN-333	T2	9,53	9,53	4,75	1,19
	SNGN-120408	T1	●	○	○	○	○	○	SNGN-432	T1	12,70	12,70	4,75	0,79
		T1A	●	○	○	○	○	○		T1A	12,70	12,70	4,75	0,79
		T2	○	○	○	○	○	○		T2	12,70	12,70	4,75	0,79
		T2A	●	○	○	○	○	○		T2A	12,70	12,70	4,75	0,79
		A	○	○	○	○	○	○		A	12,70	12,70	4,75	0,79
	SNGN-120412	T1	●	○	●	○	○	○	SNGN-433	T1	12,70	12,70	4,75	1,19
		T1A	○	○	○	●	●	○		T1A	12,70	12,70	4,75	1,19
		T2	●	○	●	●	●	○		T2	12,70	12,70	4,75	1,19
		T2A	●	○	●	●	●	○		T2A	12,70	12,70	4,75	1,19
		A	○	○	○	●	○	○		A	12,70	12,70	4,75	1,19
	SNGN-120416	T1	●	○	○	○	○	○	SNGN-434	T1	12,70	12,70	4,75	1,57
		T1A	○	○	○	●	●	○		T1A	12,70	12,70	4,75	1,57
		T2	●	○	○	●	●	○		T2	12,70	12,70	4,75	1,57
		T2A	●	○	○	○	○	●		T2A	12,70	12,70	4,75	1,57
		A	○	○	○	●	○	○		A	12,70	12,70	4,75	1,57
	SNGN-120708	T1	●	○	●	○	○	○	SNGN-452	T1	12,70	12,70	7,92	0,79
		T2	●	○	○	○	○	○		T2	12,70	12,70	7,92	0,79
	SNGN-120712	T1	●	○	●	○	○	○	SNGN-453	T1	12,70	12,70	7,92	1,19
		T1A	○	○	○	●	○	○		T1A	12,70	12,70	7,92	1,19
		T2	●	○	○	●	●	○		T2	12,70	12,70	7,92	1,19
		T2A	●	○	○	○	○	○		T2A	12,70	12,70	7,92	1,19
		A	○	○	○	●	○	○		A	12,70	12,70	7,92	1,19
	SNGN-120716	T1	●	○	○	○	○	○	SNGN-454	T1	12,70	12,70	7,92	1,57
		T1A	○	○	○	●	○	○		T1A	12,70	12,70	7,92	1,57
		T2	○	○	○	●	●	○		T2	12,70	12,70	7,92	1,57
		T2A	●	○	○	○	○	○		T2A	12,70	12,70	7,92	1,57
		A	○	○	○	●	○	○		A	12,70	12,70	7,92	1,57
	SNGN-150608	T2A	○	○	○	○	○	○	SNGN-542	T2A	15,88	15,88	6,35	0,79
SNGN-150612	T1	●	○	●	○	○	○	SNGN-543	T1	15,88	15,88	6,35	1,19	
	T2A	○	○	○	○	○	○		T2A	15,88	15,88	6,35	1,19	
SNGN-150616	T1	○	○	○	○	○	○	SNGN-544	T1	15,88	15,88	6,35	1,57	
SNGN-190663	T2A	○	○	○	○	○	○	SNGN-6416	T2A	19,05	19,05	6,35	6,35	
SNGN-190608	T2A	○	○	○	○	○	○	SNGN-642	T2A	19,05	19,05	6,35	0,79	
SNGN-190612	T1	●	○	●	○	○	○	SNGN-643	T1	19,05	19,05	6,35	1,19	
	T2A	●	○	○	○	○	○		T2A	19,05	19,05	6,35	1,19	
	A	○	○	○	●	○	○		A	19,05	19,05	6,35	1,19	

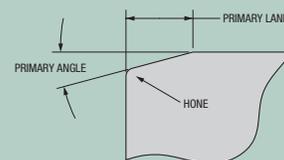
Ceramic Classification

■ Whisker Ceramic
■ Phase Toughened
■ Silicon Nitride
■ Alumina TiC
■ Al₂O₃

Page T 42 – grade description

■ WG-300 Whisker
■ WG-600 Phase Toughened
■ WG-700 Silicon Nitride
■ XSYTIN-1 Alumina TiC
■ GSN100 Al₂O₃
■ GEM-7
■ GEM-19

Additional Edge Preps – page T 45



Continued on next page.

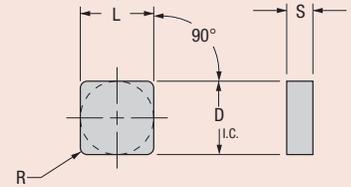
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● Stocked Standard
○ Stocked or Available Upon Request
■ Not Recommended

Square Inserts

Negative (SNGN) *(continued)*



Shape: Square	Part Number ISO	Edge Prep	Whisker					Part Number ANSI	Edge Prep	Dimensions (millimeters)			
			WG-300	WG-600	WG-700	XSYTIN-1 Phase Toughened	GSN100 SiN _x			GEM-7 Al ₂ O ₃ -TiC	GEM-19 Al ₂ O ₃	D I.C.	L
	SNGN-190616	T1	●	○	●	○	○	SNGN-644	T1	19,05	19,05	6,35	1,57
		T1A	●	○	○	○	○		T1A	19,05	19,05	6,35	1,57
		T2A	●	○	○	○	○		T2A	19,05	19,05	6,35	1,57
		A	○	○	○	●	○		A	19,05	19,05	6,35	1,57
	SNGN-190708	T2A	○	○	●	○	○	SNGN-652	T2A	19,05	19,05	7,92	0,79
		SNGN-190712	T2A	○	○	○	○		SNGN-653	T2A	19,05	19,05	7,92
	SNGN-190716	T1	●	○	●	○	○	SNGN-654	T1	19,05	19,05	7,92	1,57
		T2A	○	○	○	○	○		T2A	19,05	19,05	7,92	1,57
		A	○	○	○	●	○		A	19,05	19,05	7,92	1,57
	SNGN-190720	T2A	○	○	○	○	○	SNGN-655	T2A	19,05	19,05	7,92	1,98
	SNGN-190723	A	○	○	○	●	○	SNGN-656	A	19,05	19,05	7,92	2,39
	SNGN-250923	T2A	○	○	○	○	○	SNGN-866	T2A	25,40	25,40	9,53	2,39

Ceramic Classification

■
Whisker Ceramic

■
Phase Toughened

■
Silicon Nitride

■
Alumina TiC

■
Al₂O₃

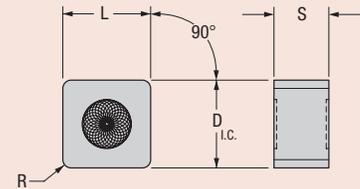
Page T 42 – grade description

WG-300	WG-600	WG-700	XSYTIN-1	GSN100	GEM-7	GEM-19
Whisker			Phase Toughened	SiN _x	Al ₂ O ₃ -TiC	Al ₂ O ₃

Additional Edge Preps – page T 45

Square Inserts

Rough Stuff®



Shape: Square	Part Number ISO	Edge Prep	Whisker			Part Number ANSI	Edge Prep	Dimensions (millimeters)			
			WG-300	WG-600	WG-700			GSN100 SiN _x	D I.C.	L	S
	SNGX-120708-RS	T2	○	○	○	SNGX-452-RS	T2	12,70	12,70	7,92	0,79
		T2A	○	○	○		T2A	12,70	12,70	7,92	0,79
	SNGX-120712-RS	T2	○	○	○	SNGX-453-RS	T2	12,70	12,70	7,92	1,19
		T2A	○	○	○		T2A	12,70	12,70	7,92	1,19
	SNGX-120716-RS	T2	○	○	○	SNGX-454-RS	T2	12,70	12,70	7,92	1,57
		T2A	○	○	○		T2A	12,70	12,70	7,92	1,57

Ceramic Classification

■
Whisker Ceramic

■
Silicon Nitride

Page T 42 – grade description

WG-300	WG-600	WG-700	GSN100
Whisker			SiN _x

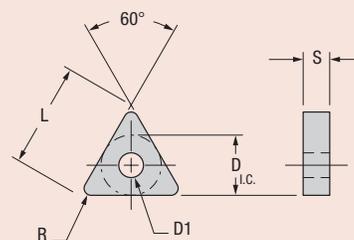
Additional Edge Preps - Page T 45

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Triangle Inserts Negative (TNGA)



Shape: Triangle	Part Number ISO	Edge Prep	Whisker					Al ₂ O ₃ -TiC	Al ₂ O ₃	Part Number ANSI	Edge Prep	Dimensions (millimeters)				
			WG-300	WG-600	WG-700	XSYTIN-1	GSN100					GEM-7	GEM-19	D I.C.	L	S
 <p>TNGA</p>	TNGA-160404	T1	○	○	○	○	○	○	TNGA-331	T1	9,53	16,51	4,75	3,81	0,38	
	TNGA-160408	T1	●	○	○	○	○	○	TNGA-332	T1	9,53	16,51	4,75	3,81	0,38	
		T2A	○	○	○	○	○	○		T2A	9,53	16,51	4,75	3,81	0,38	
	TNGA-160412	T1	○	○	○	○	○	○	TNGA-333	T1	9,53	16,51	4,75	3,81	1,19	
	TNGA-160416	T1	○	○	○	○	○	○	TNGA-334	T1	9,53	16,51	4,75	3,81	1,57	
	TNGA-220408	T1	●	○	●	○	○	○	TNGA-432	T1	12,70	22,00	4,75	5,16	0,38	
		T1A	●	○	○	○	○	○		T1A	12,70	22,00	4,75	5,16	0,38	
		T2A	●	○	○	○	○	●		T2A	12,70	22,00	4,75	5,16	0,38	
	TNGA-220412	T2A	○	○	○	○	○	○	TNGA-433	T2A	12,70	22,00	4,75	5,16	1,19	
	TNGA-220416	T1	●	○	○	○	○	○	TNGA-434	T1	12,70	22,00	4,75	5,16	1,57	
	A	○	○	○	○	○	○		A	12,70	22,00	4,75	5,16	1,57		
TNGA-220716	T1	○	○	○	○	○	○	TNGA-454	T1	12,70	22,00	7,92	5,16	1,57		

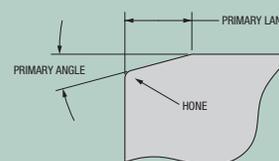
Ceramic Classification

				
Whisker Ceramic	Phase Toughened	Silicon Nitride	Alumina TiC	Al ₂ O ₃

Page T 42 – grade description

WG-300	WG-600	WG-700	XSYTIN-1	GSN100	GEM-7	GEM-19
Whisker	Phase Toughened	Si ₃ N ₄	Al ₂ O ₃ -TiC	Al ₂ O ₃	Al ₂ O ₃	Al ₂ O ₃

Additional Edge Preps – page T 45

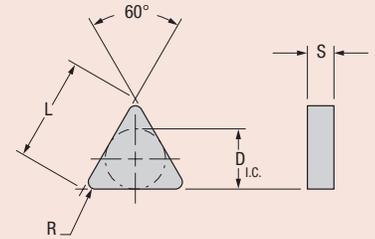


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	Stocked Standard		Stocked or Available Upon Request		Not Recommended
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Triangle Inserts Negative (TNGN)



Shape: Triangle	Part Number ISO	Edge Prep	Whisker						Part Number ANSI	Edge Prep	Dimensions (millimeters)			
			WG-300	WG-600	WG-700	XSYTIN-1	GSN100	GEM-7			GEM-19	D I.C.	L	S
TNGN	TNGN-110308	T2A	○	○	○	○	○	○	TNGN-222	T2A	6,35	11,00	3,18	0,79
		A	○	○	○	○	○	○		A	6,35	11,00	3,18	0,79
	TNGN-160304	T1	○	○	○	○	○	○	TNGN-321	T1	9,53	16,51	3,18	0,38
	TNGN-160308	T1	○	○	○	○	○	○	TNGN-322	T1	9,53	16,51	3,18	0,79
		T2	○	○	○	○	○	○		T2	9,53	16,51	3,18	0,79
		T2A	○	○	○	○	○	○		T2A	9,53	16,51	3,18	0,79
	TNGN-160404	T1	○	○	○	○	○	○	TNGN-331	T1	9,53	16,51	4,75	0,38
		T2	○	○	○	○	○	○		T2	9,53	16,51	4,75	0,38
	TNGN-160408	T1	○	○	○	○	○	○	TNGN-332	T1	9,53	16,51	4,75	0,79
		T2	○	○	○	○	○	○		T2	9,53	16,51	4,75	0,79
		T2A	●	○	○	○	○	○		T2A	9,53	16,51	4,75	0,79
	TNGN-160412	T1	○	○	○	○	○	○	TNGN-333	T1	9,53	16,51	4,75	1,19
		T2A	●	○	○	○	○	○		T2A	9,53	16,51	4,75	1,19
	TNGN-160416	T1	○	○	○	○	○	○	TNGN-334	T1	9,53	16,51	4,75	1,57
	TNGN-220404	T1	●	○	○	○	○	○	TNGN-431	T1	12,70	22,00	4,75	0,38
	TNGN-220408	T1	●	○	○	○	○	○	TNGN-432	T1	12,70	22,00	4,75	0,79
		T2A	●	○	○	○	○	●		T2A	12,70	22,00	4,75	0,79
		A	○	○	○	○	○	○		A	12,70	22,00	4,75	0,79
	TNGN-220412	T1	●	○	●	○	○	○	TNGN-433	T1	12,70	22,00	4,75	1,19
	TNGN-220416	T1	●	○	●	○	○	○	TNGN-434	T1	12,70	22,00	4,75	1,57
	TNGN-220432	T2A	○	○	○	○	○	○	TNGN-438	T2A	12,70	22,00	4,75	3,18
	TNGN-220708	T2A	○	○	○	○	○	○	TNGN-452	T2A	12,70	22,00	7,92	0,79
	TNGN-220712	T1	●	○	○	○	○	○	TNGN-453	T1	12,70	22,00	7,92	1,19
		T2A	○	○	○	○	○	○		T2A	12,70	22,00	7,92	1,19
	TNGN-220716	T1	●	○	○	○	○	○	TNGN-454	T1	12,70	22,00	7,92	1,57
		T2A	○	○	○	○	○	○		T2A	12,70	22,00	7,92	1,57
	TNGN-270612	T2A	○	○	○	○	○	○	TNGN-543	T2A	15,88	27,51	6,35	1,19
	TNGN-270616	T1	○	○	○	○	○	○	TNGN-544	T1	15,88	27,51	6,35	1,57
	T2	○	○	○	○	○	○		T2	15,88	27,51	6,35	1,57	
TNGN-270632	T2	○	○	○	○	○	○	TNGN-548	T2	15,88	27,51	6,35	3,18	
TNGN-330924	T2A	○	○	○	○	○	○	TNGN-666	T2A	19,05	32,99	9,53	2,39	
TNGN-440932	T2A	○	○	○	○	○	○	TNGN-868	T2A	25,40	43,99	9,53	3,18	

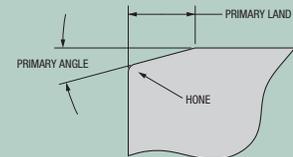
Ceramic Classification

Whisker Ceramic	Phase Toughened	Silicon Nitride	Alumina TiC	Al ₂ O ₃

Page T 42 – grade description

WG-300	WG-600	WG-700	XSYTIN-1	GSN100	GEM-7	GEM-19
Whisker	Whisker	Whisker	Phase Toughened	Si ₃ N ₄	Al ₂ O ₃ -TiC	Al ₂ O ₃

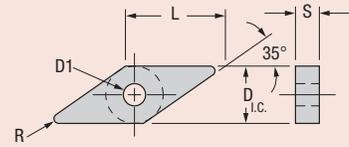
Additional Edge Preps – page T 45



Not Recommended		Stocked or Available Upon Request		Stocked Standard	
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35° Diamond Inserts Negative



Shape: 35° Diamond	Part Number ISO	Edge Prep	Whisker					Phase Toughened Si3N4	Al2O3-TiC	Al2O3	Part Number ANSI	Edge Prep	Dimensions (millimeters)					
			WG-300	WG-600	WG-700	XSYTIN-1	GSN100						GEM-7	GEM-19	D I.C.	L	S	D1
	VNGA-160408	T1	●	○	●	○	○				VNGA-332	T1	9,53	16,61	4,75	3,81	0,79	
		T2A	○	○	○	○	○	●	○			VNGA-332	T2A	9,53	16,61	4,75	3,81	0,79
	VNGA-160412	T1	●	○	●	○	○					VNGA-333	T1	9,53	16,61	4,75	3,81	1,19
		T2A	●	○	●	○	○					VNGA-432	T2A	12,70	22,15	4,75	5,16	0,79
VNGA-220408	T1	●	○	●	○	○					VNGA-436	T1	12,70	22,15	4,75	5,16	2,39	
	T2A	○	○	○	○	○	●	○										

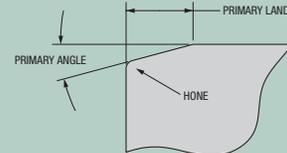
Ceramic Classification

■ Whisker Ceramic
■ Phase Toughened
■ Silicon Nitride
■ Alumina TiC
■ Al₂O₃

Page T 42 – grade description

WG-300	WG-600	WG-700	XSYTIN-1	GSN100	GEM-7	GEM-19
Whisker	Phase Toughened	Si ₃ N ₄	Al ₂ O ₃ -TiC	Al ₂ O ₃		

Additional Edge Preps – page T 45

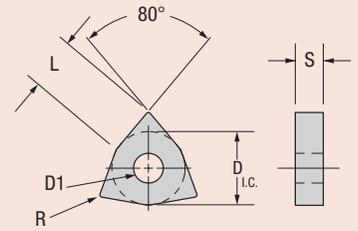


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● Stocked Standard
 ○ Stocked or Available Upon Request
 Not Recommended

Trigon Inserts Negative



Shape: Trigon	Part Number ISO	Edge Prep	Whisker					Phase Toughened	SiN _x	Al ₂ O ₃ -TiC	Al ₂ O ₃	Part Number ANSI	Edge Prep	Dimensions (millimeters)				
			WG-300	WG-600	WG-700	XSYTIN-1	GSN100							GEM-7	GEM-19	D I.C.	L	S
	WNGA-060404	T1	○	○	○	○	○	○			○	WNGA-331	T1	9,53	6,53	4,75	3,86	0,38
	WNGA-060408	T1	●	●	●	○	○			○	WNGA-332	T1	9,53	6,53	4,75	3,86	0,79	
	WNGA-060412	T1	○	○	○	○	○			○	WNGA-333	T1	9,53	6,53	4,75	3,86	1,19	
	WNGA-080404	T1	●	○	○	○	○			○	WNGA-431	T1	12,70	8,69	4,75	5,16	0,38	
		T1A	○	○	○	○	○			○		T1A	12,70	8,69	4,75	5,16	0,38	
	WNGA-080408	T1	●	○	●	○	○			○	WNGA-432	T1	12,70	8,69	4,75	5,16	0,79	
		T1A	●	○	○	○	○			○		T1A	12,70	8,69	4,75	5,16	0,79	
		T2A	●	○	○	○	○			○		T2A	12,70	8,69	4,75	5,16	0,79	
	WNGA-080412	T2	○	○	○	○	○	●			○	WNGA-433	T2	12,70	8,69	4,75	5,16	1,19
		T2A	○	○	○	○	○			○		T2A	12,70	8,69	4,75	5,16	1,19	

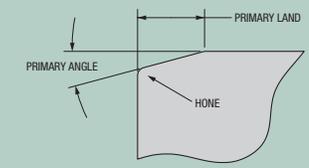
Ceramic Classification

■ Whisker Ceramic
■ Phase Toughened
■ Silicon Nitride
■ Alumina TiC
■ Al₂O₃

Page T 42 – grade description

■ WG-300
■ WG-600
■ WG-700
■ XSYTIN-1
■ GSN100
■ GEM-7
■ GEM-19

Additional Edge Preps – page T 45



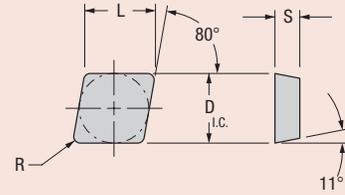
Not Recommended □ □
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 Stocked Standard ● ●

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80° Diamond Inserts

Positive Flat Top



Shape: 80° Diamond	Part Number ISO	Edge Prep	Whisker					Phase Toughened	SiM	Al ₂ O ₃ -TiC	Al ₂ O ₃	Part Number ANSI	Edge Prep	Dimensions (millimeters)			
			WG-300	WG-600	WG-700	XSYTIM-1	GSN100							GEM-7	GEM-19	D I.C.	L
CPGN	CPGN-090304	T1	●	○	●	○	○	○	○	○	○	CPGN-321	T1	9,53	9,65	3,18	0,38
	CPGN-090308	T1	●	○	●	○	○	○	○	○	○	CPGN-322	T1	9,53	9,65	3,18	0,79
	CPGN-090312	T1	○	○	○	○	○	○	○	○	○	CPGN-323	T1	9,53	9,65	3,18	1,19
	CPGN-120308	T1	○	○	○	○	○	○	○	○	○	CPGN-422	T1	12,70	12,90	3,18	0,79
	CPGN-120316	T2A	○	○	○	○	○	○	○	○	○	CPGN-424	T2A	12,70	12,90	3,18	1,57
	CPGN-120408	T1	●	○	●	○	○	○	○	○	○	CPGN-432	T1	12,70	12,90	4,75	0,79
	CPGN-120412	T1	●	○	●	○	○	○	○	○	○	CPGN-433	T1	12,70	12,90	4,75	1,19
		T1A	○	○	○	●	○	○	○	○	○		T1A	12,70	12,90	4,75	1,19
		T2	○	○	○	○	○	○	○	○	○		T2	12,70	12,90	4,75	1,19
		T2A	○	○	○	○	○	○	○	○	○		T2A	12,70	12,90	4,75	1,19
	A	○	○	○	●	○	○	○	○	○		A	12,70	12,90	4,75	1,19	
	CPGN-120416	T1	●	○	●	○	○	○	○	○	CPGN-434	T1	12,70	12,90	4,75	1,57	

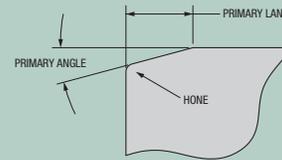
Ceramic Classification

■ Whisker Ceramic
■ Phase Toughened
■ Silicon Nitride
■ Alumina TiC
■ Al₂O₃

Page T 42 – grade description

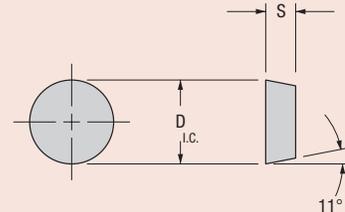
■ Whisker
■ Phase Toughened
■ SiM
■ Al₂O₃-TiC
■ Al₂O₃

Additional Edge Preps – page T 45



Round Inserts

Positive Flat Top



Shape: Round	Part Number ISO	Edge Prep	Whisker					Phase Toughened	SiM	Al ₂ O ₃ -TiC	Al ₂ O ₃	Part Number ANSI	Edge Prep	Dimensions (millimeters)	
			WG-300	WG-600	WG-700	XSYTIM-1	GSN100							GEM-7	GEM-19
RPGN	RPGN-090300	T1	●	●	●	○	○	○	○	○	○	RPGN-32	T1	9,53	3,18
		T1A	●	●	●	○	○	○	○	○	○		T1A	9,53	3,18
		T2A	○	○	○	○	○	○	○	○	○		T2A	9,53	3,18
		A	○	○	○	●	○	○	○	○	○		A	9,53	3,18
	RPGN-120400	T1	●	○	●	○	○	○	○	○	○	RPGN-43	T1	12,70	4,75
		T1A	●	○	●	○	○	○	○	○	○		T1A	12,70	4,75
		T2	○	○	○	○	○	○	○	○	○		T2	12,70	4,75
	T2A	●	○	○	○	○	○	○	○	○	T2A	12,70	4,75		
	A	○	○	○	●	○	○	○	○	○	A	12,70	4,75		

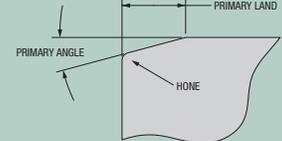
Ceramic Classification

■ Whisker Ceramic
■ Phase Toughened
■ Silicon Nitride
■ Alumina TiC
■ Al₂O₃

Page T 42 – grade description

■ Whisker
■ Phase Toughened
■ SiM
■ Al₂O₃-TiC
■ Al₂O₃

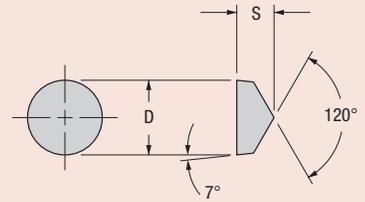
Additional Edge Preps – page T 45



● Stocked Standard
○ Stocked or Available Upon Request
 Not Recommended



Round V-Bottom Inserts Positive (RCGN-V)



Shape: Round V-Bottom	Part Number ISO	Edge Prep	Whisker					Al ₂ O ₃ -TiC	Al ₂ O ₃	Part Number ANSI	Edge Prep	Dimensions (millimeters)	
			WG-300	WG-600	WG-700	XSYTIN-1	GSN100					GEM-7	GEM-19
	RCGX-060400	T1	●	●	●	○	○	○	○	RCGN-2V	T1	6,35	4,75
		T2A	●	●	●	○	○	○	○		T2A	6,35	4,75
		A	○	○	○	○	○	○	○		A	6,35	4,75
	RCGX-090700	T1	●	●	●	○	○	○	○	RCGN-3V	T1	9,53	7,92
		T1A	○	○	○	○	○	○	○		T1A	9,53	7,92
		T2A	●	●	●	○	○	○	○		T2A	9,53	7,92
	RCGX-120700	T1	●	●	●	○	○	○	○	RCGN-4V	T1	12,70	7,92
		T1A	○	○	○	○	○	○	○		T1A	12,70	7,92
		T2	●	●	●	○	○	○	○		T2	12,70	7,92
	RCGX-191200	T2A	●	●	●	○	○	○	○	RCGN-6V	T2A	12,70	7,92
		A	○	○	○	○	○	○	○		A	12,70	7,92
		T2A	○	○	○	○	○	○	○		T2A	19,05	12,70

Ceramic Classification

■
Whisker Ceramic

■
Phase Toughened

■
Silicon Nitride

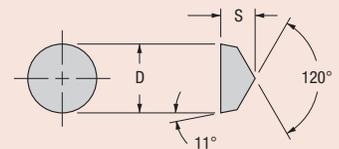
■
Alumina TiC

■
Al₂O₃

Additional Edge Preps – page T 45

Page T 42 – grade description

Round V-Bottom Inserts Positive (RPGN-V)



Shape: Round V-Bottom	Part Number ISO	Edge Prep	Whisker					Al ₂ O ₃ -TiC	Al ₂ O ₃	Part Number ANSI	Edge Prep	Dimensions (millimeters)	
			WG-300	WG-600	WG-700	XSYTIN-1	GSN100					GEM-7	GEM-19
	RPGX-060400	T1	●	●	●	○	○	○	○	RPGN-2V	T1	6,35	4,75
		T2	○	○	○	○	○	○	○		T2	6,35	4,75
		T2A	●	●	●	○	○	○	○		T2A	6,35	4,75
		A	○	○	○	○	○	○	○		A	6,35	4,75
	RPGX-090700	T1	●	●	●	○	○	○	○	RPGN-3V	T1	9,53	7,92
		T1A	○	○	○	○	○	○	○		T1A	9,53	7,92
		T2	○	○	○	○	○	○	○		T2	9,53	7,92
		T2A	●	●	●	○	○	○	○		T2A	9,53	7,92
	RPGX-120700	T1	○	○	○	○	○	○	○	RPGN-4V	T1	12,70	7,92
		T1A	●	●	●	○	○	○	○		T1A	12,70	7,92
		T2	○	○	○	○	○	○	○		T2	12,70	7,92
		T2A	●	●	●	○	○	○	○		T2A	12,70	7,92
RPGX-191200	T2A	○	○	○	○	○	○	○	RPGN-6V	T2A	12,70	7,92	
	A	○	○	○	○	○	○	○		A	12,70	7,92	
	T2A	○	○	○	○	○	○	○		T2A	19,05	12,70	
	A	○	○	○	○	○	○	○		A	19,05	12,70	

Ceramic Classification

■
Whisker Ceramic

■
Phase Toughened

■
Silicon Nitride

■
Alumina TiC

■
Al₂O₃

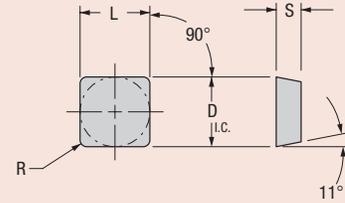
Additional Edge Preps – page T 45

Page T 42 – grade description

Not Recommended Stocked or Available Upon Request Stocked Standard

Square Inserts

Positive Flat Top



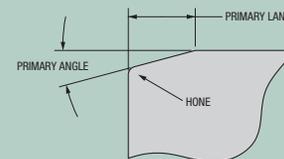
Shape: Square	Part Number ISO	Edge Prep	Whisker							Part Number ANSI	Edge Prep	Dimensions (millimeters)			
			WG-300	WG-600	WG-700	XSYTIN-1	GSM100	GEM-7	GEM-19			D I.C.	L	S	R
	SPGN-090308	T1	●	○	○	○	○	○	○	SPGN-322	T1	9,53	9,53	3,18	0,79
		T1A	○	○	○	●	●	○	○		T1A	9,53	9,53	3,18	0,79
		A	○	○	○	●	○	○	○		A	9,53	9,53	3,18	0,79
	SPGN-120308	T1	●	○	○	○	○	○	○	SPGN-422	T1	12,70	12,70	3,18	0,79
		T2A	○	○	○	○	○	○	○		T2A	12,70	12,70	3,18	0,79
	SPGN-120312	T1	○	○	○	○	○	○	○	SPGN-423	T1	12,70	12,70	3,18	1,19
		A	○	○	○	○	○	○	○		A	12,70	12,70	3,18	1,19
	SPGN-120408	T1	●	○	●	○	○	○	○	SPGN-432	T1	12,70	12,70	4,75	0,79
		T1A	○	○	●	●	○	○	○		T1A	12,70	12,70	4,75	0,79
		T2	○	○	○	●	○	○	○		T2	12,70	12,70	4,75	0,79
		T2A	●	○	○	○	○	○	○		T2A	12,70	12,70	4,75	0,79
		A	○	○	○	●	○	○	○		A	12,70	12,70	4,75	0,79
	SPGN-120412	T1	●	○	●	○	○	○	○	SPGN-433	T1	12,70	12,70	4,75	1,19
		T1A	○	○	●	●	○	○	○		T1A	12,70	12,70	4,75	1,19
		T2	○	○	○	●	○	○	○		T2	12,70	12,70	4,75	1,19
		T2A	○	○	○	○	○	○	○		T2A	12,70	12,70	4,75	1,19
		A	○	○	○	●	○	○	○		A	12,70	12,70	4,75	1,19
	SPGN-120416	T1	●	○	●	○	○	○	○	SPGN-434	T1	12,70	12,70	4,75	1,57
T2		○	○	○	○	○	○	○	T2		12,70	12,70	4,75	1,57	
T2A		●	○	○	○	●	○	○	T2A		12,70	12,70	4,75	1,57	
SPGN-190408	T2A	○	○	○	○	○	○	○	SPGN-632	T2A	19,05	19,05	4,75	0,79	
SPGN-190412	T2A	○	○	○	○	○	○	○	SPGN-633	T2A	19,05	19,05	4,75	1,19	
SPGN-190416	T2A	○	○	○	○	○	○	○	SPGN-634	T2A	19,05	19,05	4,75	1,57	
SPGN-190608	T1A	○	○	○	○	○	○	○	SPGN-642	T1A	19,05	19,05	6,35	0,79	

Ceramic Classification

■ Whisker Ceramic
■ Phase Toughened
■ Silicon Nitride
■ Alumina TiC
■ Al₂O₃

■ WG-300
■ WG-600
■ WG-700
■ XSYTIN-1
■ GSM100
■ GEM-7
■ GEM-19
■ Whisker
■ Phase Toughened
■ Si₃N₄
■ Al₂O₃-TiC
■ Al₂O₃

Additional Edge Preps – page T 45



Page T 42 – grade description

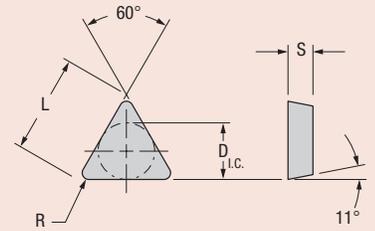
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■ Stocked Standard
○ Stocked or Available Upon Request
■ Not Recommended

Triangle Inserts

Positive Flat Top



Shape: Triangle	Part Number ISO	Edge Prep	Whisker						Part Number ANSI	Edge Prep	Dimensions (millimeters)			
			WG-300	WG-600	WG-700	XSYTIN-1	GSN100	GEM-7			GEM-19	D.I.C.	L	S
	TPGN-110304	T1	●	○	○	○	○	○	TPGN-221	T1	6,35	11,00	3,18	0,38
	TPGN-110308	T1	●	○	○	○	○	○	TPGN-222	T1	6,35	11,00	3,18	0,79
		T1A	●	○	○	○	○	○		T1A	6,35	11,00	3,18	0,79
		T2A	●	○	○	○	○	○		T2A	6,35	11,00	3,18	0,79
	TPGN-160304	T1	●	○	○	○	○	○	TPGN-321	T1	9,53	16,51	3,18	0,38
		T2A	○	○	○	○	○	○		T2A	9,53	16,51	3,18	0,38
	TPGN-160308	T1	●	○	○	○	○	○	TPGN-322	T1	9,53	16,51	3,18	0,79
		T1A	○	○	○	○	○	○		T1A	9,53	16,51	3,18	0,79
		T2A	●	○	○	○	●	●	○	T2A	9,53	16,51	3,18	0,79
		A	○	○	○	○	○	○	○	A	9,53	16,51	3,18	0,79
	TPGN-160312	T1	●	○	○	○	○	○	TPGN-323	T1	9,53	16,51	3,18	1,19
		T1A	○	○	○	○	○	●	○	T1A	9,53	16,51	3,18	1,19
		A	○	○	○	○	○	○	○	A	9,53	16,51	3,18	1,19
	TPGN-160316	T1	●	○	○	○	○	○	TPGN-324	T1	9,53	16,51	3,18	1,57
	TPGN-220404	T1	●	○	○	○	○	○	TPGN-431	T1	12,70	22,00	4,75	0,38
TPGN-220408	T1	●	○	○	○	○	○	TPGN-432	T1	12,70	22,00	4,75	0,79	
	T2A	○	○	○	○	○	○		T2A	12,70	22,00	4,75	0,79	
TPGN-220412	T1	●	○	○	○	○	○	TPGN-433	T1	12,70	22,00	4,75	1,19	
TPGN-220416	T1	●	○	○	○	○	○	TPGN-434	T1	12,70	22,00	4,75	1,57	

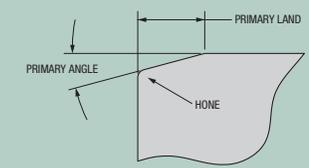
Ceramic Classification

Whisker Ceramic	Phase Toughened	Silicon Nitride	Alumina TiC	Al ₂ O ₃

Page T 42 – grade description

WG-300	WG-600	WG-700	XSYTIN-1	GSN100	GEM-7	GEM-19
Whisker	Whisker	Whisker	Phase Toughened	SiN ₄	Al ₂ O ₃ -TiC	Al ₂ O ₃

Additional Edge Preps – page T 45



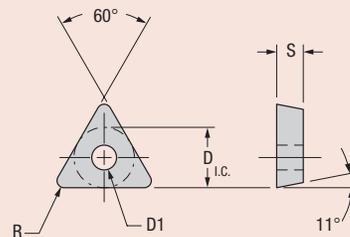
Not Recommended		Stocked or Available Upon Request		Stocked Standard	
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CERAMIC INSERTS

Triangle Inserts Positive (TP)



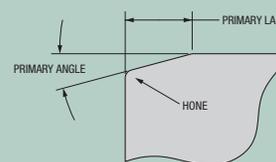
Shape: Triangle TP	Part Number ISO	Edge Prep	Whisker					Phase Toughened	SiAlN	Al ₂ O ₃ -TiC	Al ₂ O ₃	Part Number ANSI	Edge Prep	Dimensions (millimeters)			
			WG-300	WG-600	WG-700	XSYTIN-1	GSN100							GEM-7	GEM-19	D I.C.	S
	TP-41	A	●	○	○	○	○	○	○	○	TP-41	A	6,35	2,36	3,48	0,38	
	TP-42	A	○	○	○	○	○	○	○	○	TP-42	A	6,35	2,36	3,48	0,79	
	TP-62	A	○	○	○	○	○	○	○	○	TP-62	A	9,53	3,18	4,14	0,79	
	TP-64	A	○	○	○	○	○	○	○	○	TP-64	A	9,53	3,18	4,14	1,57	
	TP-82	A	○	○	○	○	○	○	○	○	TP-82	A	12,70	4,75	5,16	0,79	

Ceramic Classification

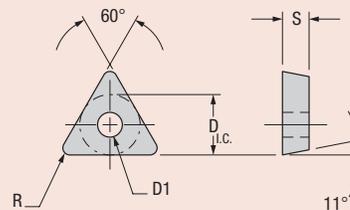
■ Whisker Ceramic
■ Phase Toughened
■ Silicon Nitride
■ Alumina TiC
■ Al₂O₃

Page T 42 – grade description

Additional Edge Preps – page T 45



Triangle Inserts Positive (TPGA)



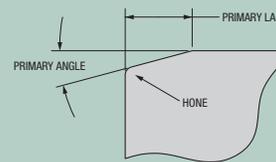
Shape: Triangle TPGA	Part Number ISO	Edge Prep	Whisker					Phase Toughened	SiAlN	Al ₂ O ₃ -TiC	Al ₂ O ₃	Part Number ANSI	Edge Prep	Dimensions (millimeters)			
			WG-300	WG-600	WG-700	XSYTIN-1	GSN100							GEM-7	GEM-19	D	S
	TPGA-160304	T1	○	○	○	○	○	○	○	○	TPGA-321	T1	9,53	3,18	3,81	0,38	
		T1A	○	○	○	○	○	○	○	○	TPGA-321	T1A	9,53	3,18	3,81	0,38	
	TPGA-160308	T1A	○	○	○	○	○	○	○	○	TPGA-322	T1A	9,53	3,18	3,81	0,38	

Ceramic Classification

■ Whisker Ceramic
■ Phase Toughened
■ Silicon Nitride
■ Alumina TiC
■ Al₂O₃

Page T 42 – grade description

Additional Edge Preps – page T 45



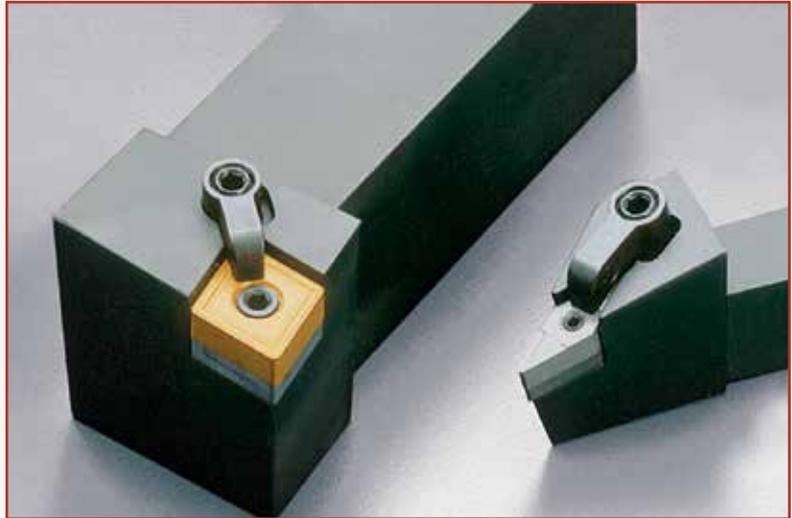
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● Stocked Standard
 ○ Stocked or Available Upon Request
 □ Not Recommended

Industry-Standard Toolholders

Greenleaf manufactures a complete line of industry-standard toolholders in conformance with ANSI specifications in 4140 and 4150 alloy steel, hardened up to 42 Rc and oxide coated.



Greenleaf Tune-Up Kits

A Tune-Up Kit consists of all the standard hardware to refurbish a particular toolholder, boring bar, or milling cutter. A toolholder will have a readily visible, laser-inscribed Tune-Up Kit number on it for ease in ordering. This number will prevent any confusion created by searching a catalog for hardware, and it will help reduce downtime.

Greenleaf Corporation is continually upgrading its products. For the most current information, please visit our web site at:

www.greenleafglobalsupport.com

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Toolholder Identification System

TOOLHOLDERS



G = Industry Standard Toolholder
C = Ceramic Insert Toolholder for heat-resistant alloys
H = Ceramic Insert toolholder for hardened materials

Toolholder Style Prefix †

A Straight shank with 90° side cutting edge angle
B Straight shank with 75° side cutting edge angle
C Straight shank with 90° end cutting edge angle
D Straight shank with 45° side cutting edge angle
E Straight shank with 60° side cutting edge angle
F Offset shank with 90° end cutting edge angle
G Offset shank with 90° side cutting edge angle
†H Offset shank for I.D. threading and shallow grooving
†I Offset shank with 62.5° end cutting edge angle
J Offset shank with negative 93° side cutting edge angle
K Offset shank with 75° end or side cutting edge angle
L Offset shank with negative 95° end or side cutting edge angle

M Straight shank with 40° side cutting edge angle
N Straight shank with 63° side cutting edge angle
†O Straight shank with centrally located round insert
P Straight shank with 62.5° side cutting edge angle
R Offset shank with 75° side cutting edge angle
S Offset shank with 45° side cutting edge angle
†T Offset shank with negative 62.5° side or end cutting edge angle
†U Offset shank for deep grooving
†V Offset shank with negative 72.5° side or end cutting edge angle
W Offset shank with 80° side cutting edge angle

Toolholder Style

† Greenleaf standard.

Integers to be preceded by 0.
Example: 8mm = 08

**Toolholder
Shank Width**

Cutting Edge Length

32 **32** **P** = **12**

Integers to be preceded by 0.
Example: 8mm = 08

**Toolholder
Shank Height**

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

Toolholder Length

NOTE:
All toolholders are qualified to $\pm 0,07$ over gage insert radius on the "C" and "F" dimensions as standard. Some toolholders are qualifiable on the "C" length dimension only.

Industry-Standard Toolholder Usage Reference Guide

TOOLHOLDERS

Toolholder Style

Insert Geometry

Toolholder Dimensions

Insert Type

Toolholder Application

G-MCFNR/L

Style F
80° Diamond
Negative Rake
90° Lead Angle

Part Number	Right	Left	Insert	R	A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Tune-Up Kit	Optional Components
G-MCFNR-2020M12	G-MCFNR-2020M12	G-MCFNR-2020M12	CMG-120408	1	20	100	30	25	326-433	MLM-46	CLM-20	ST10M-20	TK-02718	S-48M	-	-
G-MCFNR-2020P12	G-MCFNR-2020P12	G-MCFNR-2020P12	CMG-120408	1	25	100	30	32	326-433	MLM-46	CLM-20	ST10M-20	TK-02718	S-48M	-	-
G-MCFNR-2020P12	G-MCFNR-2020P12	G-MCFNR-2020P12	CMG-120408	1	25	100	30	32	326-433	MLM-46	CLM-20	ST10M-20	TK-02718	S-48M	-	-
G-MCFNR-2020P12	G-MCFNR-2020P12	G-MCFNR-2020P12	CMG-120408	1	32	100	30	40	326-433	MLM-46	CLM-20	ST10M-20	TK-02718	S-48M	-	-
G-MCFNR-2020P16	G-MCFNR-2020P16	G-MCFNR-2020P16	CMG-106012	1	25	150	35	32	326-533	MLM-58	CLM-12	ST10M-8	TK-02728	S-48M	CSN-543	
G-MCFNR-2020P16	G-MCFNR-2020P16	G-MCFNR-2020P16	CMG-106012	1	32	150	35	40	326-533	MLM-58	CLM-12	ST10M-8	TK-02728	S-48M	CSN-543	
G-MCFNR-2020P16	G-MCFNR-2020P16	G-MCFNR-2020P16	CMG-106012	1	32	175	35	40	326-533	MLM-58	CLM-12	ST10M-8	TK-02728	S-48M	CSN-543	
G-MCFNR-2020P16	G-MCFNR-2020P16	G-MCFNR-2020P16	CMG-106012	1	40	200	38	50	326-533	MLM-58	CLM-12	ST10M-8	TK-02728	S-48M	CSN-543	
G-MCFNR-2020P19	G-MCFNR-2020P19	G-MCFNR-2020P19	CMG-106012	1	25	150	39	32	326-633	MLM-68	CLM-12	ST10M-8	TK-02722	S-48M	CSN-643	
G-MCFNR-2020P19	G-MCFNR-2020P19	G-MCFNR-2020P19	CMG-106012	1	32	170	39	40	326-633	MLM-68	CLM-12	ST10M-8	TK-02722	S-48M	CSN-643	
G-MCFNR-2020P19	G-MCFNR-2020P19	G-MCFNR-2020P19	CMG-106012	1	40	200	38	50	326-633	MLM-68	CLM-12	ST10M-8	TK-02722	S-48M	CSN-643	
G-MCFNR-4048M25	G-MCFNR-4048M25	G-MCFNR-4048M25	CMG-220254	1	40	400	38	50	326-846	MLM-810	CLM-24	ST10M-19	TK-02723	S-48M	CSN-810	

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

G-MCKNR/L

Style K
80° Diamond
(Using 100° Corner)
75° Lead Angle

Part Number	Right	Left	Insert	R	A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Tune-Up Kit	Optional Components
G-MCKNR-2020M12	G-MCKNR-2020M12	G-MCKNR-2020M12	CMG-120408	1	20	100	30	25	326-433	MLM-46	CLM-20	ST10M-20	TK-02718	S-48M	-	-
G-MCKNR-2020P12	G-MCKNR-2020P12	G-MCKNR-2020P12	CMG-120408	1	25	100	30	32	326-433	MLM-46	CLM-20	ST10M-20	TK-02718	S-48M	-	-
G-MCKNR-2020P12	G-MCKNR-2020P12	G-MCKNR-2020P12	CMG-120408	1	25	100	30	32	326-433	MLM-46	CLM-20	ST10M-20	TK-02718	S-48M	-	-
G-MCKNR-2020P12	G-MCKNR-2020P12	G-MCKNR-2020P12	CMG-120408	1	32	100	30	40	326-433	MLM-46	CLM-20	ST10M-20	TK-02718	S-48M	-	-
G-MCKNR-2020P16	G-MCKNR-2020P16	G-MCKNR-2020P16	CMG-106012	1	25	150	37	32	326-533	MLM-58	CLM-12	ST10M-8	TK-02728	S-48M	CSN-543	
G-MCKNR-2020P16	G-MCKNR-2020P16	G-MCKNR-2020P16	CMG-106012	1	32	170	37	40	326-533	MLM-58	CLM-12	ST10M-8	TK-02728	S-48M	CSN-543	
G-MCKNR-2020P16	G-MCKNR-2020P16	G-MCKNR-2020P16	CMG-106012	1	32	175	37	40	326-533	MLM-58	CLM-12	ST10M-8	TK-02728	S-48M	CSN-543	
G-MCKNR-2020P16	G-MCKNR-2020P16	G-MCKNR-2020P16	CMG-106012	1	40	200	38	50	326-533	MLM-58	CLM-12	ST10M-8	TK-02728	S-48M	CSN-543	
G-MCKNR-2020P19	G-MCKNR-2020P19	G-MCKNR-2020P19	CMG-106012	1	25	150	39	32	326-633	MLM-68	CLM-12	ST10M-8	TK-02722	S-48M	CSN-643	
G-MCKNR-2020P19	G-MCKNR-2020P19	G-MCKNR-2020P19	CMG-106012	1	32	170	39	40	326-633	MLM-68	CLM-12	ST10M-8	TK-02722	S-48M	CSN-643	
G-MCKNR-2020P19	G-MCKNR-2020P19	G-MCKNR-2020P19	CMG-106012	1	40	200	37	50	326-633	MLM-68	CLM-12	ST10M-8	TK-02722	S-48M	CSN-643	
G-MCKNR-4048M25	G-MCKNR-4048M25	G-MCKNR-4048M25	CMG-220254	1	40	400	38	50	326-846	MLM-810	CLM-24	ST10M-19	TK-02723	S-48M	CSN-810	

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

G-MCGNR/L

Style G
80° Diamond
Negative Rake
90° Lead Angle

Part Number	Right	Left	Insert	R	A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Tune-Up Kit	Optional Components
G-MCGNR-2020M12	G-MCGNR-2020M12	G-MCGNR-2020M12	CMG-120408	1	20	100	30	25	326-433	MLM-46	CLM-20	ST10M-20	TK-02718	S-48M	-	-
G-MCGNR-2020P12	G-MCGNR-2020P12	G-MCGNR-2020P12	CMG-120408	1	25	100	30	32	326-433	MLM-46	CLM-20	ST10M-20	TK-02718	S-48M	-	-
G-MCGNR-2020P12	G-MCGNR-2020P12	G-MCGNR-2020P12	CMG-120408	1	25	100	30	32	326-433	MLM-46	CLM-20	ST10M-20	TK-02718	S-48M	-	-
G-MCGNR-2020P12	G-MCGNR-2020P12	G-MCGNR-2020P12	CMG-120408	1	32	100	30	40	326-433	MLM-46	CLM-20	ST10M-20	TK-02718	S-48M	-	-
G-MCGNR-2020P16	G-MCGNR-2020P16	G-MCGNR-2020P16	CMG-106012	1	25	150	38	32	326-533	MLM-58	CLM-12	ST10M-8	TK-02728	S-48M	CSN-543	
G-MCGNR-2020P16	G-MCGNR-2020P16	G-MCGNR-2020P16	CMG-106012	1	32	170	38	40	326-533	MLM-58	CLM-12	ST10M-8	TK-02728	S-48M	CSN-543	
G-MCGNR-2020P16	G-MCGNR-2020P16	G-MCGNR-2020P16	CMG-106012	1	32	175	38	40	326-533	MLM-58	CLM-12	ST10M-8	TK-02728	S-48M	CSN-543	
G-MCGNR-2020P16	G-MCGNR-2020P16	G-MCGNR-2020P16	CMG-106012	1	40	200	38	50	326-533	MLM-58	CLM-12	ST10M-8	TK-02728	S-48M	CSN-543	
G-MCGNR-2020P19	G-MCGNR-2020P19	G-MCGNR-2020P19	CMG-106012	1	25	150	41	32	326-633	MLM-68	CLM-12	ST10M-8	TK-02722	S-48M	CSN-643	
G-MCGNR-2020P19	G-MCGNR-2020P19	G-MCGNR-2020P19	CMG-106012	1	32	170	41	40	326-633	MLM-68	CLM-12	ST10M-8	TK-02722	S-48M	CSN-643	
G-MCGNR-2020P19	G-MCGNR-2020P19	G-MCGNR-2020P19	CMG-106012	1	40	200	41	50	326-633	MLM-68	CLM-12	ST10M-8	TK-02722	S-48M	CSN-643	
G-MCGNR-4048M25	G-MCGNR-4048M25	G-MCGNR-4048M25	CMG-220254	1	40	400	41	50	326-846	MLM-810	CLM-24	ST10M-19	TK-02723	S-48M	CSN-810	

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

G-MCLNR/L

Style L
80° Diamond
Negative Rake
95° Lead Angle

Part Number	Right	Left	Insert	R	A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Tune-Up Kit	Optional Components
G-MCLNR-2020M12	G-MCLNR-2020M12	G-MCLNR-2020M12	CMG-120408	1	20	100	30	25	326-433	MLM-46	CLM-20	ST10M-20	TK-02645	S-48M	-	-
G-MCLNR-2020P12	G-MCLNR-2020P12	G-MCLNR-2020P12	CMG-120408	1	25	100	30	32	326-433	MLM-46	CLM-20	ST10M-20	TK-02645	S-48M	-	-
G-MCLNR-2020P12	G-MCLNR-2020P12	G-MCLNR-2020P12	CMG-120408	1	25	100	30	32	326-433	MLM-46	CLM-20	ST10M-20	TK-02645	S-48M	-	-
G-MCLNR-2020P12	G-MCLNR-2020P12	G-MCLNR-2020P12	CMG-120408	1	32	100	30	40	326-433	MLM-46	CLM-20	ST10M-20	TK-02645	S-48M	-	-
G-MCLNR-2020P16	G-MCLNR-2020P16	G-MCLNR-2020P16	CMG-106012	1	25	150	35	32	326-533	MLM-58	CLM-12	ST10M-8	TK-02647	S-48M	CSN-543	
G-MCLNR-2020P16	G-MCLNR-2020P16	G-MCLNR-2020P16	CMG-106012	1	32	170	35	40	326-533	MLM-58	CLM-12	ST10M-8	TK-02647	S-48M	CSN-543	
G-MCLNR-2020P16	G-MCLNR-2020P16	G-MCLNR-2020P16	CMG-106012	1	32	175	35	40	326-533	MLM-58	CLM-12	ST10M-8	TK-02647	S-48M	CSN-543	
G-MCLNR-2020P16	G-MCLNR-2020P16	G-MCLNR-2020P16	CMG-106012	1	40	200	35	50	326-533	MLM-58	CLM-12	ST10M-8	TK-02647	S-48M	CSN-543	
G-MCLNR-2020P19	G-MCLNR-2020P19	G-MCLNR-2020P19	CMG-106012	1	25	150	39	32	326-633	MLM-68	CLM-12	ST10M-8	TK-02648	S-48M	CSN-643	
G-MCLNR-2020P19	G-MCLNR-2020P19	G-MCLNR-2020P19	CMG-106012	1	32	170	39	40	326-633	MLM-68	CLM-12	ST10M-8	TK-02648	S-48M	CSN-643	
G-MCLNR-2020P19	G-MCLNR-2020P19	G-MCLNR-2020P19	CMG-106012	1	40	200	39	50	326-633	MLM-68	CLM-12	ST10M-8	TK-02648	S-48M	CSN-643	
G-MCLNR-4048M25	G-MCLNR-4048M25	G-MCLNR-4048M25	CMG-220254	1	40	400	38	50	326-846	MLM-810	CLM-24	ST10M-19	TK-02673	S-48M	CSN-810	

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

Part Number

Optional Components

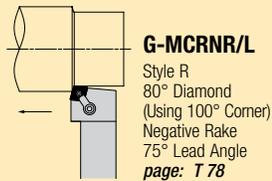
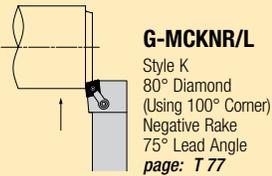
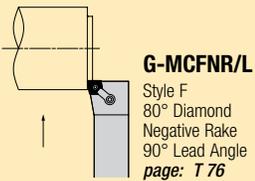
Stocking Program

Tune-up Kits

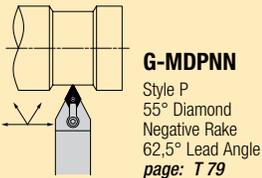
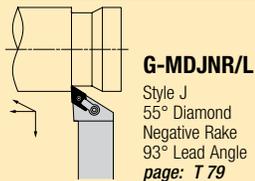
Standard Components

Dimensions

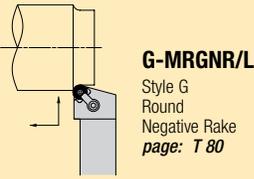
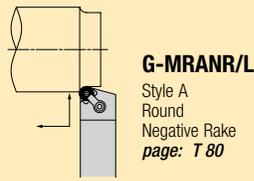
80° Diamond – Negative



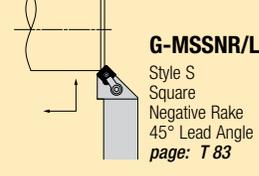
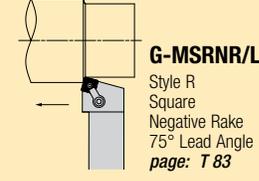
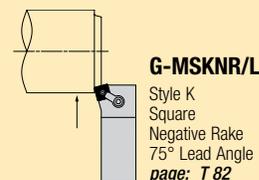
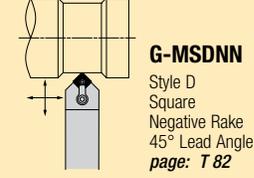
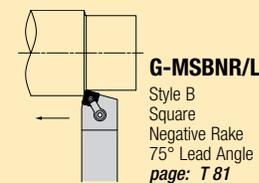
55° Diamond – Negative



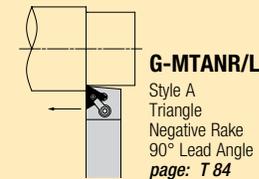
Round – Negative



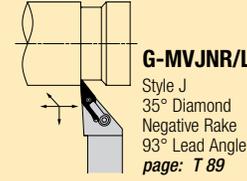
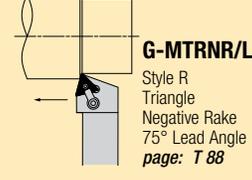
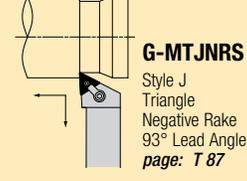
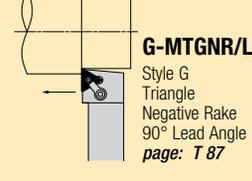
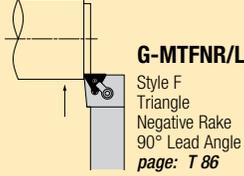
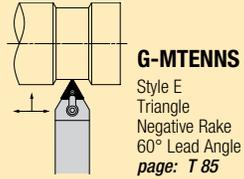
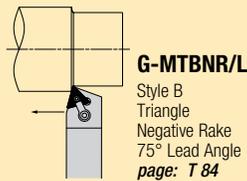
Square – Negative



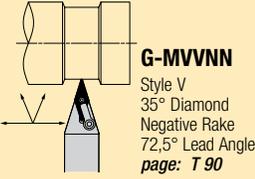
Triangle – Negative



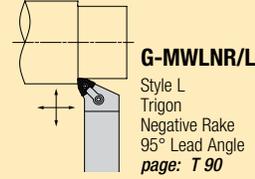
Triangle – Negative contd.



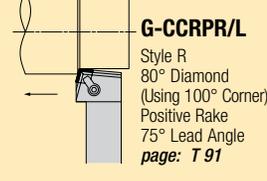
35° Diamond – Negative



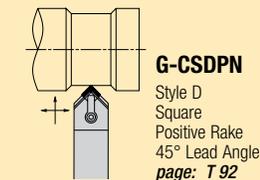
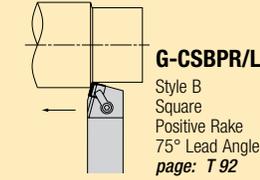
Trigon – Negative



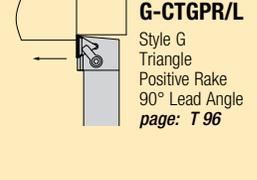
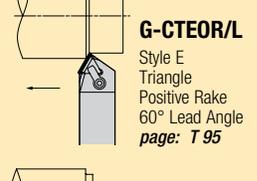
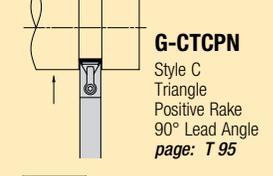
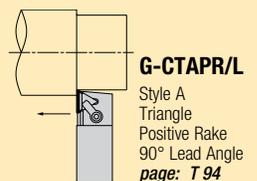
80° Diamond – Positive



Square – Positive



Triangle – Positive



Greenleaf Sales

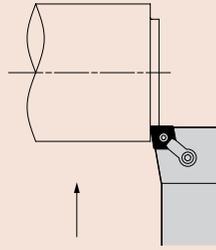
US +814-763-2915 • sales@greenleafcorporation.com
EU +31-45-404-1774 • eurooffice@greenleafcorporation.com
CN +86-731-89954796 • info@greenleafcorporation.com.cn
www.greenleafglobalsupport.com • www.greenleafcorporation.com

80°

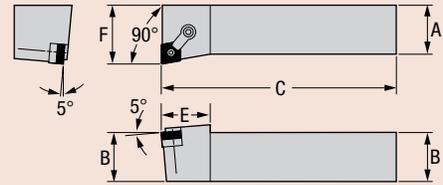


G-MCFNR/L

Style F
80° Diamond
Negative Rake
90° Lead Angle



Right-Hand
Toolholder Shown



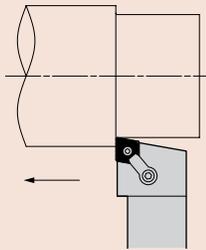
TOOLHOLDERS

Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components	
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Seat Screw	Seat
G-MCFNR-2020M12	G-MCFNL-2020M12	CNMG-120408	○	○	20	20	150	32	25	CSN-433	NLM-46	CLM-20	STCM-20	TK-02718	S-46M	-
G-MCFNR-2525M12	G-MCFNL-2525M12	CNMG-120408	○	○	25	25	150	32	32	CSN-433	NLM-46	CLM-20	STCM-20	TK-02718	S-46M	-
G-MCFNR-3225P12	G-MCFNL-3225P12	CNMG-120408	○	○	25	32	170	32	32	CSN-433	NLM-46	CLM-20	STCM-20	TK-02718	S-46M	-
G-MCFNR-3232P12	G-MCFNL-3232P12	CNMG-120408	○	○	32	32	170	32	40	CSN-433	NLM-46	CLM-20	STCM-20	TK-02718	S-46M	-
G-MCFNR-2525M16	G-MCFNL-2525M16	CNMG-160612	○	○	25	25	150	35	32	CSN-533	NLM-58	CLM-12	STCM-8	TK-02728	S-58M	CSN-543
G-MCFNR-3225P16	G-MCFNL-3225P16	CNMG-160612	○	○	25	32	170	35	32	CSN-533	NLM-58	CLM-12	STCM-8	TK-02728	S-58M	CSN-543
G-MCFNR-3232P16	G-MCFNL-3232P16	CNMG-160612	○	○	32	32	170	35	40	CSN-533	NLM-58	CLM-12	STCM-8	TK-02728	S-58M	CSN-543
G-MCFNR-4040R16	G-MCFNL-4040R16	CNMG-160612	○	○	40	40	200	35	50	CSN-533	NLM-58	CLM-12	STCM-8	TK-02728	S-58M	CSN-543
G-MCFNR-2525M19	G-MCFNL-2525M19	CNMG-190612	○	○	25	25	150	39	32	CSN-633	NLM-68	CLM-12	STCM-8	TK-02722	S-68M	CSN-643
G-MCFNR-3225P19	G-MCFNL-3225P19	CNMG-190612	○	○	25	32	170	39	32	CSN-633	NLM-68	CLM-12	STCM-8	TK-02722	S-68M	CSN-643
G-MCFNR-3232P19	G-MCFNL-3232P19	CNMG-190612	○	○	32	32	170	39	40	CSN-633	NLM-68	CLM-12	STCM-8	TK-02722	S-68M	CSN-643
G-MCFNR-4040R19	G-MCFNL-4040R19	CNMG-190612	○	○	40	40	200	39	50	CSN-633	NLM-68	CLM-12	STCM-8	TK-02722	S-68M	CSN-643
G-MCFNR-4040R25	G-MCFNL-4040R25	CNMG-250924	○	○	40	40	200	39	50	CSN-846	NLM-810	CLM-24	STCM-19	TK-02723	S-810M	-

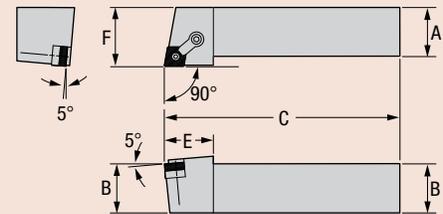
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

G-MCGNR/L

Style G
80° Diamond
Negative Rake
90° Lead Angle



Right-Hand
Toolholder Shown



Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components	
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Seat Screw	Seat
G-MCGNR-2020M12	G-MCGNL-2020M12	CNMG-120408	○	○	20	20	150	32	25	CSN-433	NLM-46	CLM-20	STCM-20	TK-02718	S-46M	-
G-MCGNR-2525M12	G-MCGNL-2525M12	CNMG-120408	●	●	25	25	150	32	32	CSN-433	NLM-46	CLM-20	STCM-20	TK-02718	S-46M	-
G-MCGNR-3225P12	G-MCGNL-3225P12	CNMG-120408	○	○	25	32	170	32	32	CSN-433	NLM-46	CLM-20	STCM-20	TK-02718	S-46M	-
G-MCGNR-3232P12	G-MCGNL-3232P12	CNMG-120408	●	●	32	32	170	32	40	CSN-433	NLM-46	CLM-20	STCM-20	TK-02718	S-46M	-
G-MCGNR-2525M16	G-MCGNL-2525M16	CNMG-160612	○	○	25	25	150	38	32	CSN-533	NLM-58	CLM-12	STCM-8	TK-02728	S-58M	CSN-543
G-MCGNR-3225P16	G-MCGNL-3225P16	CNMG-160612	○	○	25	32	170	38	32	CSN-533	NLM-58	CLM-12	STCM-8	TK-02728	S-58M	CSN-543
G-MCGNR-3232P16	G-MCGNL-3232P16	CNMG-160612	○	○	32	32	170	38	40	CSN-533	NLM-58	CLM-12	STCM-8	TK-02728	S-58M	CSN-543
G-MCGNR-4040R16	G-MCGNL-4040R16	CNMG-160612	○	○	40	40	200	38	50	CSN-533	NLM-58	CLM-12	STCM-8	TK-02728	S-58M	CSN-543
G-MCGNR-2525M19	G-MCGNL-2525M19	CNMG-190612	○	○	25	25	150	41	32	CSN-633	NLM-68	CLM-12	STCM-8	TK-02722	S-68M	CSN-643
G-MCGNR-3225P19	G-MCGNL-3225P19	CNMG-190612	○	○	25	32	170	41	32	CSN-633	NLM-68	CLM-12	STCM-8	TK-02722	S-68M	CSN-643
G-MCGNR-3232P19	G-MCGNL-3232P19	CNMG-190612	○	○	32	32	170	41	40	CSN-633	NLM-68	CLM-12	STCM-8	TK-02722	S-68M	CSN-643
G-MCGNR-4040R19	G-MCGNL-4040R19	CNMG-190612	○	○	40	40	200	41	50	CSN-633	NLM-68	CLM-12	STCM-8	TK-02722	S-68M	CSN-643
G-MCGNR-4040R25	G-MCGNL-4040R25	CNMG-250924	○	○	40	40	200	41	50	CSN-846	NLM-810	CLM-24	STCM-19	TK-02723	S-810M	-

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

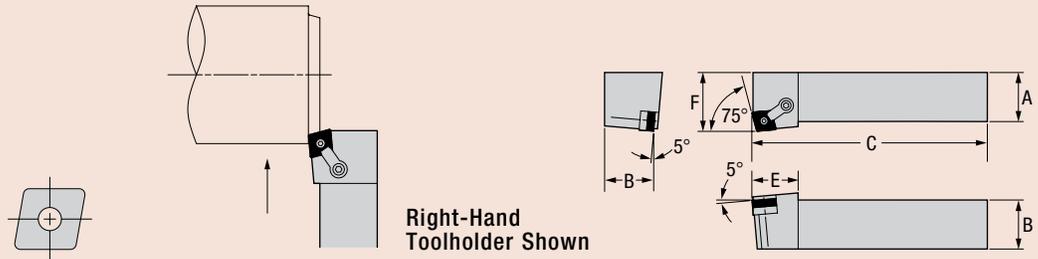
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G-MCKNR/L

Style K
80° Diamond
(Using 100° Corner)
75° Lead Angle

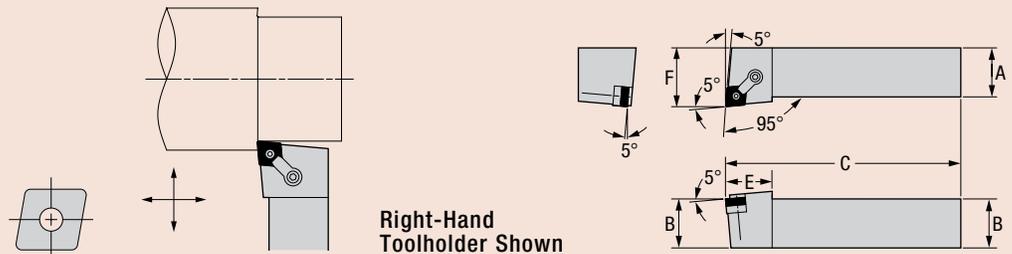


Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components	
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Seat Screw	Seat
G-MCKNR-2020M12	G-MCKNL-2020M12	CNMG-120408	○	○	20	20	150	30	25	CSN-433	NLM-46	CLM-20	STCM-20	TK-02718	S-46M	-
G-MCKNR-2525M12	G-MCKNL-2525M12	CNMG-120408	●	●	25	25	150	30	32	CSN-433	NLM-46	CLM-20	STCM-20	TK-02718	S-46M	-
G-MCKNR-3232P12	G-MCKNL-3232P12	CNMG-120408	●	●	32	32	170	30	40	CSN-433	NLM-46	CLM-20	STCM-20	TK-02718	S-46M	-
G-MCKNR-4040R12	G-MCKNL-4040R12	CNMG-120408	○	○	40	40	200	30	50	CSN-433	NLM-46	CLM-20	STCM-20	TK-02718	S-46M	-
G-MCKNR-2525M16	G-MCKNL-2525M16	CNMG-160612	○	○	25	25	150	37	32	CSN-533	NLM-58	CLM-9	STCM-4	TK-02720	S-58M	CSN-543
G-MCKNR-3225P16	G-MCKNL-3225P16	CNMG-160612	○	○	25	32	170	37	32	CSN-533	NLM-58	CLM-9	STCM-4	TK-02720	S-58M	CSN-543
G-MCKNR-3232P16	G-MCKNL-3232P16	CNMG-160612	○	○	32	32	170	37	40	CSN-533	NLM-58	CLM-9	STCM-4	TK-02720	S-58M	CSN-543
G-MCKNR-2525M19	G-MCKNL-2525M19	CNMG-190612	○	○	25	25	150	37	32	CSN-633	NLM-68	CLM-12	STCM-8	TK-02722	S-68M	CSN-643
G-MCKNR-3225P19	G-MCKNL-3225P19	CNMG-190612	○	○	25	32	170	37	32	CSN-633	NLM-68	CLM-12	STCM-8	TK-02722	S-68M	CSN-643
G-MCKNR-3232P19	G-MCKNL-3232P19	CNMG-190612	○	○	32	32	170	37	40	CSN-633	NLM-68	CLM-12	STCM-8	TK-02722	S-68M	CSN-643
G-MCKNR-4040R19	G-MCKNL-4040R19	CNMG-190612	○	○	40	40	200	37	50	CSN-633	NLM-68	CLM-12	STCM-8	TK-02722	S-68M	CSN-643
G-MCKNR-4040R25	G-MCKNL-4040R25	CNMG-250924	○	○	40	40	200	50	50	CSN-846	NLM-810	CLM-24	STCM-19	TK-02723	S-810M	-

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

G-MCLNR/L

Style L
80° Diamond
Negative Rake
95° Lead Angle



Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components	
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Seat Screw	Seat
G-MCLNR-2020M12	G-MCLNL-2020M12	CNMG-120408	○	○	20	20	150	30	25	CSN-433	NLM-46	CLM-20	STCM-20	TK-02718	S-46M	-
G-MCLNR-2525M12	G-MCLNL-2525M12	CNMG-120408	●	●	25	25	150	30	32	CSN-433	NLM-46	CLM-20	STCM-20	TK-02718	S-46M	-
G-MCLNR-3225P12	G-MCLNL-3225P12	CNMG-120408	○	○	25	32	170	30	32	CSN-433	NLM-46	CLM-20	STCM-20	TK-02718	S-46M	-
G-MCLNR-3232P12	G-MCLNL-3232P12	CNMG-120408	●	●	32	32	170	30	40	CSN-433	NLM-46	CLM-20	STCM-20	TK-02718	S-46M	-
G-MCLNR-4040R12	G-MCLNL-4040R12	CNMG-120408	○	○	40	40	200	30	50	CSN-433	NLM-46	CLM-20	STCM-20	TK-02718	S-46M	-
G-MCLNR-2525M16	G-MCLNL-2525M16	CNMG-160612	○	○	25	25	150	35	32	CSN-533	NLM-58	CLM-12	STCM-8	TK-02728	S-58M	CSN-543
G-MCLNR-3225P16	G-MCLNL-3225P16	CNMG-160612	○	○	25	32	170	35	32	CSN-533	NLM-58	CLM-12	STCM-8	TK-02728	S-58M	CSN-543
G-MCLNR-3232P16	G-MCLNL-3232P16	CNMG-160612	○	○	32	32	170	35	40	CSN-533	NLM-58	CLM-12	STCM-8	TK-02728	S-58M	CSN-543
G-MCLNR-4040R16	G-MCLNL-4040R16	CNMG-160612	○	○	40	40	200	35	50	CSN-533	NLM-58	CLM-12	STCM-8	TK-02728	S-58M	CSN-543
G-MCLNR-2525M19	G-MCLNL-2525M19	CNMG-190612	○	○	25	25	150	35	32	CSN-633	NLM-68	CLM-12	STCM-8	TK-02722	S-68M	CSN-643
G-MCLNR-3225P19	G-MCLNL-3225P19	CNMG-190612	○	○	25	32	170	35	32	CSN-633	NLM-68	CLM-12	STCM-8	TK-02722	S-68M	CSN-643
G-MCLNR-3232P19	G-MCLNL-3232P19	CNMG-190612	○	○	32	32	170	35	40	CSN-633	NLM-68	CLM-12	STCM-8	TK-02722	S-68M	CSN-643
G-MCLNR-4040R19	G-MCLNL-4040R19	CNMG-190612	○	○	40	40	200	35	50	CSN-633	NLM-68	CLM-12	STCM-8	TK-02722	S-68M	CSN-643
G-MCLNR-4040R25	G-MCLNL-4040R25	CNMG-250924	○	○	40	40	200	38	50	CSN-846	NLM-810	CLM-24	STCM-19	TK-02723	S-810M	-

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

10 Business Days or Less

Stocked Standard

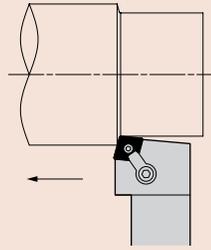
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80°

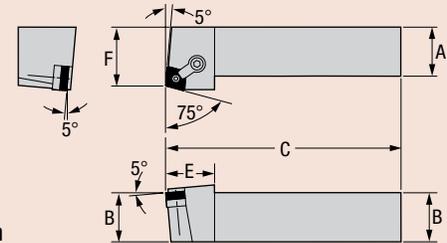


G-MCRNR/L

Style R, 80° Diamond
 (Using 100° Corner)
 Negative Rake
 75° Lead Angle



Right-Hand
 Toolholder Shown



TOOLHOLDERS

Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components	
Right	Left	 Insert	R	L	A	B	C	E	F					Includes All Standard Components		
G-MCRNR-2020M12	G-MCRNL-2020M12	CNMG-120708	○	○	20	20	150	32	25	CSN-433	NLM-46	CLM-9	STCM-4	TK-02719	S-46M	–
G-MCRNR-2525M12	G-MCRNL-2525M12	CNMG-120708	●	●	25	25	150	32	32	CSN-433	NLM-46	CLM-9	STCM-4	TK-02719	S-46M	–
G-MCRNR-3232P12	G-MCRNL-3232P12	CNMG-120708	●	●	32	32	170	32	40	CSN-433	NLM-46	CLM-9	STCM-4	TK-02719	S-46M	–
G-MCRNR-4040R12	G-MCRNL-4040R12	CNMG-120708	○	○	40	40	200	32	50	CSN-433	NLM-46	CLM-9	STCM-4	TK-02719	S-46M	–
G-MCRNR-2525M16	G-MCRNL-2525M16	CNMG-160612	○	○	25	25	150	34	32	CSN-533	NLM-58	CLM-9	STCM-4	TK-02720	S-58M	CSN-543
G-MCRNR-3225P16	G-MCRNL-3225P16	CNMG-160612	○	○	25	32	170	34	32	CSN-533	NLM-58	CLM-9	STCM-4	TK-02720	S-58M	CSN-543
G-MCRNR-3232P16	G-MCRNL-3232P16	CNMG-160612	○	○	32	32	170	34	40	CSN-533	NLM-58	CLM-9	STCM-4	TK-02720	S-58M	CSN-543
G-MCRNR-3225M19	G-MCRNL-3225M19	CNMG-196012	○	○	25	32	150	38	32	CSN-633	NLM-68	CLM-12	STCM-4	TK-02721	S-68M	CSN-643
G-MCRNR-3232P19	G-MCRNL-3232P19	CNMG-196012	○	○	32	32	170	38	40	CSN-633	NLM-68	CLM-12	STCM-4	TK-02721	S-68M	CSN-643
G-MCRNR-4040R19	G-MCRNL-4040R19	CNMG-196012	○	○	40	40	200	38	50	CSN-633	NLM-68	CLM-12	STCM-4	TK-02721	S-68M	CSN-643
G-MCRNR-4040R25	G-MCRNL-4040R25	CNMG-250923	○	○	40	40	200	42	50	CSN-846	NLM-810	CLM-24	STCM-19	TK-02723	S-810M	–

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

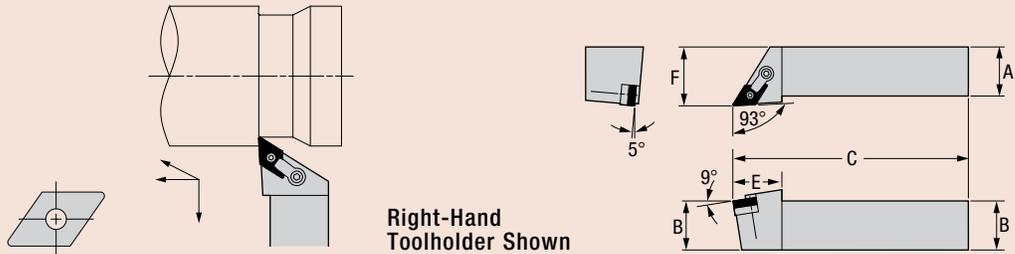
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G-MDJNR/L

Style J
55° Diamond
Negative Rake
93° Lead Angle



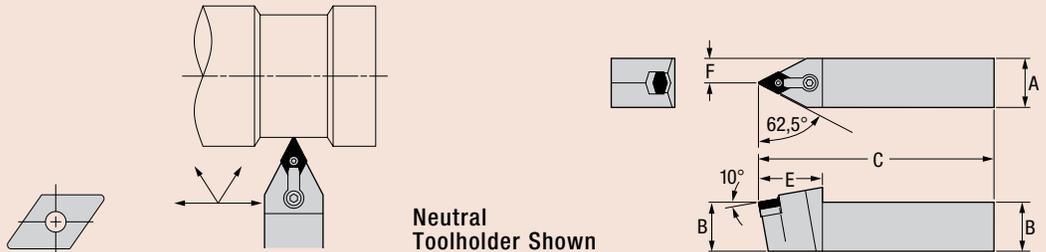
Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components	
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Seat Screw	Seat
G-MDJNR-2020M15	G-MDJNL-2020M15	DNMG-150408	○	○	20	20	150	35	25	DSN-433	NLM-46	CLM-20	STCM-26	TK-02724	S-46M	DSN-423**
G-MDJNR-2525M15	G-MDJNL-2525M15	DNMG-150408	●	●	25	25	150	35	32	DSN-433	NLM-46	CLM-20	STCM-26	TK-02724	S-46M	DSN-423**
G-MDJNR-3225P15	G-MDJNL-3225P15	DNMG-150408	○	○	25	32	170	35	32	DSN-433	NLM-46	CLM-20	STCM-26	TK-02724	S-46M	DSN-423**
G-MDJNR-3232P15	G-MDJNL-3232P15	DNMG-150408	●	●	32	32	170	35	40	DSN-433	NLM-46	CLM-20	STCM-26	TK-02724	S-46M	DSN-423**
G-MDJNR-4040R15	G-MDJNL-4040R15	DNMG-150408	○	○	40	40	200	35	50	DSN-433	NLM-46	CLM-20	STCM-26	TK-02724	S-46M	DSN-423**
G-MDJNR-2525M19	G-MDJNL-2525M19	DNMG-190612	○	○	25	25	150	38	32	DSN-533	NLM-58	CLM-12	STCM-4	TK-02726	S-58M	DSN-543
G-MDJNR-3225P19	G-MDJNL-3225P19	DNMG-190612	○	○	25	32	170	38	32	DSN-533	NLM-58	CLM-12	STCM-4	TK-02726	S-58M	DSN-543
G-MDJNR-3232P19	G-MDJNL-3232P19	DNMG-190612	○	○	32	32	170	38	40	DSN-533	NLM-58	CLM-12	STCM-4	TK-02726	S-58M	DSN-543
G-MDJNR-4040R19	G-MDJNL-4040R19	DNMG-190612	○	○	40	40	200	38	50	DSN-533	NLM-58	CLM-12	STCM-4	TK-02726	S-58M	DSN-543

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

** Cannot be used with lock pin.

G-MDPNN

Style P
55° Diamond
Negative Rake
62,5° Lead Angle



Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components	
Neutral		Insert	N		A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Seat Screw	Seat
G-MDPNN-2020M15		DNMG-150408	○		20	20	150	42	10	DSN-433	NLM-46	CLM-12	STCM-4	TK-02725	S-46M	DSN-423**
G-MDPNN-2525M15		DNMG-150408	●		25	25	150	42	12,5	DSN-433	NLM-46	CLM-12	STCM-4	TK-02725	S-46M	DSN-423**
G-MDPNN-3225P15		DNMG-150408	○		25	32	170	42	12,5	DSN-433	NLM-46	CLM-12	STCM-4	TK-02725	S-46M	DSN-423**
G-MDPNN-3232P15		DNMG-150408	●		32	32	170	42	16	DSN-433	NLM-46	CLM-12	STCM-4	TK-02725	S-46M	DSN-423**
G-MDPNN-4040R15		DNMG-150408	○		40	40	200	42	20	DSN-433	NLM-46	CLM-12	STCM-4	TK-02725	S-46M	DSN-423**
G-MDPNN-2525M19		DNMG-190612	○		25	25	150	49	12,5	DSN-533	NLM-58	CLM-12	STCM-4	TK-02726	S-58M	DSN-543
G-MDPNN-3225P19		DNMG-190612	○		25	32	170	49	12,5	DSN-533	NLM-58	CLM-12	STCM-4	TK-02726	S-58M	DSN-543
G-MDPNN-3232P19		DNMG-190612	○		32	32	170	49	16	DSN-533	NLM-58	CLM-12	STCM-4	TK-02726	S-58M	DSN-543
G-MDPNN-4040R19		DNMG-190612	○		40	40	200	49	20	DSN-533	NLM-58	CLM-12	STCM-4	TK-02726	S-58M	DSN-543

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

** Cannot be used with lock pin.

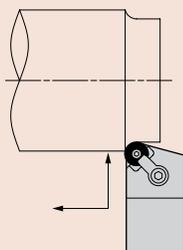
10 Business Days or Less

Stocked Standard

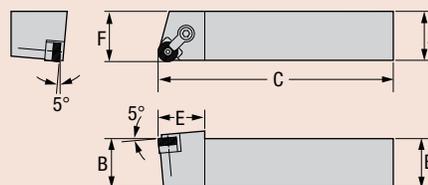


G-MRANR/L

Style A
Round
Negative Rake



Right-Hand
Toolholder Shown



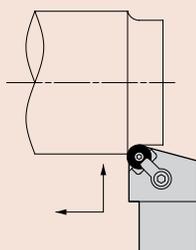
TOOL HOLDERS

Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components	
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Seat Screw	Seat
G-MRANR-2525M12	G-MRANL-2525M12	RNMG-120400	○	○	25	25	150	30	26	IRSN-43	NLM-46	CLM-9	STCM-4	TK-02705	S-46M	IRSN-44
G-MRANR-3225P12	G-MRANL-3225P12	RNMG-120400	○	○	25	32	170	30	26	IRSN-43	NLM-46	CLM-9	STCM-4	TK-02705	S-46M	IRSN-44
G-MRANR-3232P12	G-MRANL-3232P12	RNMG-120400	○	○	32	32	170	30	33	IRSN-43	NLM-46	CLM-9	STCM-4	TK-02705	S-46M	IRSN-44
G-MRANR-2525M15	G-MRANL-2525M15	RNMG-150600	○	○	25	25	150	33	26	RSN-53	NLM-58	CLM-9	STCM-4	TK-02706	S-58M	-
G-MRANR-3225P15	G-MRANL-3225P15	RNMG-150600	○	○	25	32	170	33	26	RSN-53	NLM-58	CLM-9	STCM-4	TK-02706	S-58M	-
G-MRANR-3232P15	G-MRANL-3232P15	RNMG-150600	○	○	32	32	170	33	33	RSN-53	NLM-58	CLM-9	STCM-4	TK-02706	S-58M	-
G-MRANR-2525M19	G-MRANL-2525M19	RNMG-190600	○	○	25	25	150	40	26	RSN-63	NLM-68	CLM-12	STCM-4	TK-02707	S-68M	-
G-MRANR-3225P19	G-MRANL-3225P19	RNMG-190600	○	○	25	32	170	40	26	RSN-63	NLM-68	CLM-12	STCM-4	TK-02707	S-68M	-
G-MRANR-3232P19	G-MRANL-3232P19	RNMG-190600	○	○	32	32	170	40	33	RSN-63	NLM-68	CLM-12	STCM-4	TK-02707	S-68M	-
G-MRANR-4040R25	G-MRANL-4040R25	RNMG-250900	○	○	40	40	200	43	41	RSN-84	NLM-810	CLM-24	STCM-20	TK-02708	S-810M	-

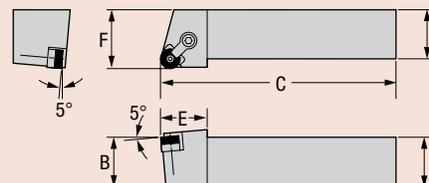
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

G-MRGNR/L

Style G
Round
Negative Rake



Right-Hand
Toolholder Shown



Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components	
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Seat Screw	Seat
G-MRGNR-2020M09	G-MRGNL-2020M09	RNMG-090300	○	○	20	20	150	25	25	-	NLM-33	CLM-6	STCM-25	TK-02727	-	-
G-MRGNR-2020M12	G-MRGNL-2020M12	RNMG-120400	○	○	20	20	150	30	25	IRSN-43	NLM-46	CLM-9	STCM-4	TK-02705	S-46M	IRSN-44
G-MRGNR-2525M12	G-MRGNL-2525M12	RNMG-120400	●	●	25	25	150	30	32	IRSN-43	NLM-46	CLM-9	STCM-4	TK-02705	S-46M	IRSN-44
G-MRGNR-3225P12	G-MRGNL-3225P12	RNMG-120400	○	○	25	32	170	30	32	IRSN-43	NLM-46	CLM-9	STCM-4	TK-02705	S-46M	IRSN-44
G-MRGNR-3232P12	G-MRGNL-3232P12	RNMG-120400	●	●	32	32	170	30	40	IRSN-43	NLM-46	CLM-9	STCM-4	TK-02705	S-46M	IRSN-44
G-MRGNR-2525M15	G-MRGNL-2525M15	RNMG-150600	○	○	25	25	150	35	32	RSN-53	NLM-58	CLM-9	STCM-4	TK-02706	S-58M	-
G-MRGNR-3225P15	G-MRGNL-3225P15	RNMG-150600	○	○	25	32	170	35	32	RSN-53	NLM-58	CLM-9	STCM-4	TK-02706	S-58M	-
G-MRGNR-3232P15	G-MRGNL-3232P15	RNMG-150600	○	○	32	32	170	35	40	RSN-53	NLM-58	CLM-9	STCM-4	TK-02706	S-58M	-
G-MRGNR-2525M19	G-MRGNL-2525M19	RNMG-190600	○	○	25	25	150	39	32	RSN-63	NLM-68	CLM-12	STCM-4	TK-02707	S-68M	-
G-MRGNR-3225P19	G-MRGNL-3225P19	RNMG-190600	○	○	25	32	170	39	32	RSN-63	NLM-68	CLM-12	STCM-4	TK-02707	S-68M	-
G-MRGNR-3232P19	G-MRGNL-3232P19	RNMG-190600	○	○	32	32	170	39	40	RSN-63	NLM-68	CLM-12	STCM-4	TK-02707	S-68M	-
G-MRGNR-4040R25	G-MRGNL-4040R25	RNMG-250900	○	○	40	40	200	43	50	RSN-84	NLM-810	CLM-24	STCM-20	TK-02708	S-810M	-

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

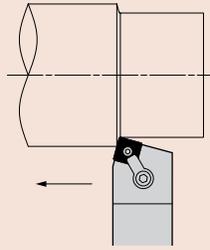
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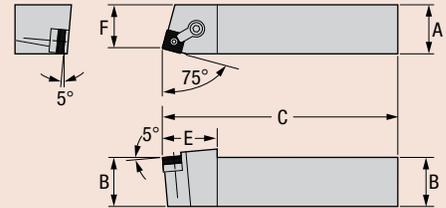


G-MSBNR/L

Style B
Square
Negative Rake
75° Lead Angle



Right-Hand
Toolholder Shown



Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components	
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Seat Screw	Seat
G-MSBNR-1616M09	G-MSBNL-1616M09	SNMG-090308	○	○	16	16	150	27	12	ISSN-322	NLM-34	CLM-6	STCM-25	TK-02710	S-34M	-
G-MSBNR-2020M09	G-MSBNL-2020M09	SNMG-090308	○	○	20	20	150	27	16	ISSN-322	NLM-34	CLM-6	STCM-25	TK-02710	S-34M	-
G-MSBNR-2525M09	G-MSBNL-2525M09	SNMG-090308	○	○	25	25	150	27	22	ISSN-322	NLM-34	CLM-6	STCM-25	TK-02710	S-34M	-
G-MSBNR-2020M12	G-MSBNL-2020M12	SNMG-120408	○	○	20	20	150	36	20	ISSN-433	NLM-46	CLM-9	STCM-4	TK-02712	S-46M	ISSN-443
G-MSBNR-2525M12	G-MSBNL-2525M12	SNMG-120408	●	●	25	25	150	36	22	ISSN-433	NLM-46	CLM-9	STCM-4	TK-02712	S-46M	ISSN-443
G-MSBNR-3225P12	G-MSBNL-3225P12	SNMG-120408	○	○	25	32	170	36	22	ISSN-433	NLM-46	CLM-9	STCM-4	TK-02712	S-46M	ISSN-443
G-MSBNR-3232P12	G-MSBNL-3232P12	SNMG-120408	●	●	32	32	170	36	28	ISSN-433	NLM-46	CLM-9	STCM-4	TK-02712	S-46M	ISSN-443
G-MSBNR-2525M15	G-MSBNL-2525M15	SNMG-150612	○	○	25	25	150	40	21	SSN-533	NLM-58	CLM-12	STCM-4	TK-02713	S-58M	ISSN-543
G-MSBNR-3225P15	G-MSBNL-3225P15	SNMG-150612	○	○	25	32	170	40	21	SSN-533	NLM-58	CLM-12	STCM-4	TK-02713	S-58M	ISSN-543
G-MSBNR-3232P15	G-MSBNL-3232P15	SNMG-150612	○	○	32	32	170	40	28	SSN-533	NLM-58	CLM-12	STCM-4	TK-02713	S-58M	ISSN-543
G-MSBNR-4040R15	G-MSBNL-4040R15	SNMG-150612	○	○	40	40	200	40	34	SSN-533	NLM-58	CLM-12	STCM-4	TK-02713	S-58M	ISSN-543
G-MSBNR-3232P19	G-MSBNL-3232P19	SNMG-190612	○	○	32	32	170	40	26	ISSN-633	NLM-68	CLM-12	STCM-4	TK-02714	S-68M	ISSN-643
G-MSBNR-4040R19	G-MSBNL-4040R19	SNMG-190612	○	○	40	40	200	40	33	ISSN-633	NLM-68	CLM-12	STCM-4	TK-02714	S-68M	ISSN-643
G-MSBNR-4040R25	G-MSBNL-4040R25	SNMG-250924	○	○	40	40	200	50	32	SSN-844	NLM-810	CLM-24	STCM-19	TK-02647	S-810M	-

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

10 Business Days or Less

Stocked Standard

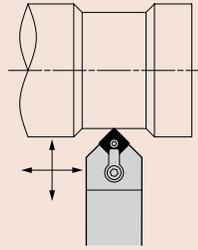
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90°

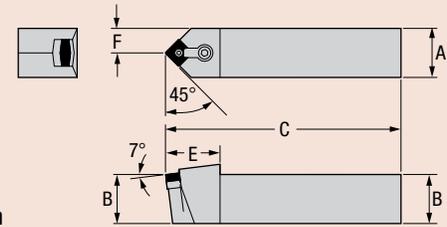


G-MSDNN

Style D
Square
Negative Rake
45° Lead Angle



Neutral
Toolholder Shown

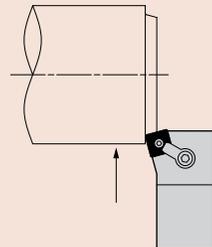


Part Number	Gage	Stock	Dimensions (millimeters)						Standard Components				* Tune-Up Kit	Optional Components	
	Insert		N	A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Seat Screw	Seat
Neutral															
G-MSDNN-1616M09	SNMG-090308	○	16	16	150	29	8	ISSN-322	NLM-34	CLM-6	STCM-25	TK-02710	S-34M	-	
G-MSDNN-2020M09	SNMG-090308	○	20	20	150	29	10	ISSN-322	NLM-34L	CLM-6	STCM-25	TK-02711	S-34M	-	
G-MSDNN-2020M12	SNMG-120408	○	20	20	150	35	10	ISSN-433	NLM-46	CLM-9	STCM-4	TK-02712	S-46M	ISSN-443	
G-MSDNN-2525M12	SNMG-120408	●	25	25	150	35	12,5	ISSN-433	NLM-46	CLM-9	STCM-4	TK-02712	S-46M	ISSN-443	
G-MSDNN-3225P12	SNMG-120408	○	25	32	170	35	12,5	ISSN-433	NLM-46	CLM-9	STCM-4	TK-02712	S-46M	ISSN-443	
G-MSDNN-3232P12	SNMG-120408	●	32	32	170	35	16	ISSN-433	NLM-46	CLM-9	STCM-4	TK-02712	S-46M	ISSN-443	
G-MSDNN-2525M15	SNMG-150612	○	25	25	150	41	12,5	SSN-533	NLM-58	CLM-12	STCM-4	TK-02713	S-58M	ISSN-543	
G-MSDNN-3225P15	SNMG-150612	○	25	32	170	41	12,5	SSN-533	NLM-58	CLM-12	STCM-4	TK-02713	S-58M	ISSN-543	
G-MSDNN-3232P15	SNMG-150612	○	32	32	170	41	16	SSN-533	NLM-58	CLM-12	STCM-4	TK-02713	S-58M	ISSN-543	
G-MSDNN-4040R15	SNMG-150612	○	40	40	200	41	20	SSN-533	NLM-58	CLM-12	STCM-4	TK-02713	S-58M	ISSN-543	
G-MSDNN-3225P19	SNMG-190612	○	25	32	170	44	12,5	ISSN-633	NLM-68	CLM-12	STCM-4	TK-02714	S-68M	ISSN-643	
G-MSDNN-3232P19	SNMG-190612	○	32	32	170	44	16	ISSN-633	NLM-68	CLM-12	STCM-4	TK-02714	S-68M	ISSN-643	
G-MSDNN-4040R19	SNMG-190612	○	40	40	200	44	20	ISSN-633	NLM-68	CLM-12	STCM-4	TK-02714	S-68M	ISSN-643	
G-MSDNN-4040R25	SNMG-250924	○	40	40	200	57	20	SSN-844	NLM-810	CLM-24	STCM-19	TK-02647	S-810M	-	

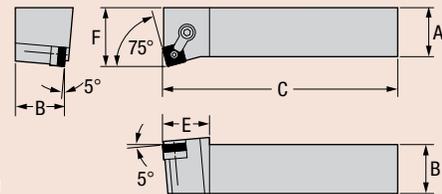
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

G-MSKNR/L

Style K
Square
Negative Rake
75° Lead Angle



Right-Hand
Toolholder Shown



Part Number		Gage	Stock	Dimensions (millimeters)						Standard Components				* Tune-Up Kit	Optional Components	
Right	Left	Insert		R	L	A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Seat Screw
G-MSKNR-1616M09	G-MSKNL-1616M09	SNMG-090308	○	○	16	16	150	25	20	ISSN-322	NLM-34	CLM-6	STCM-25	TK-02710	S-34M	-
G-MSKNR-2020M09	G-MSKNL-2020M09	SNMG-090308	○	○	20	20	150	25	25	ISSN-322	NLM-34	CLM-6	STCM-25	TK-02710	S-34M	-
G-MSKNR-2525M09	G-MSKNL-2525M09	SNMG-090308	○	○	25	25	150	25	32	ISSN-322	NLM-34	CLM-6	STCM-25	TK-02710	S-34M	-
G-MSKNR-2020M12	G-MSKNL-2020M12	SNMG-120408	○	○	20	20	150	31	25	ISSN-433	NLM-46	CLM-9	STCM-4	TK-02712	S-46M	ISSN-443
G-MSKNR-2525M12	G-MSKNL-2525M12	SNMG-120408	○	○	25	25	150	31	32	ISSN-433	NLM-46	CLM-9	STCM-4	TK-02712	S-46M	ISSN-443
G-MSKNR-3225P12	G-MSKNL-3225P12	SNMG-120408	○	○	25	32	170	31	32	ISSN-433	NLM-46	CLM-9	STCM-4	TK-02712	S-46M	ISSN-443
G-MSKNR-3232P12	G-MSKNL-3232P12	SNMG-120408	○	○	32	32	170	31	40	ISSN-433	NLM-46	CLM-9	STCM-4	TK-02712	S-46M	ISSN-443
G-MSKNR-2525M15	G-MSKNL-2525M15	SNMG-150612	○	○	25	25	150	37	32	SSN-533	NLM-58	CLM-12	STCM-4	TK-02713	S-58M	ISSN-543
G-MSKNR-3225P15	G-MSKNL-3225P15	SNMG-150612	○	○	25	32	170	37	32	SSN-533	NLM-58	CLM-12	STCM-4	TK-02713	S-58M	ISSN-543
G-MSKNR-3232P15	G-MSKNL-3232P15	SNMG-150612	○	○	32	32	170	37	40	SSN-533	NLM-58	CLM-12	STCM-4	TK-02713	S-58M	ISSN-543
G-MSKNR-3225P19	G-MSKNL-3225P19	SNMG-190612	○	○	25	32	170	40	32	ISSN-633	NLM-68	CLM-12	STCM-4	TK-02714	S-68M	ISSN-643
G-MSKNR-3232P19	G-MSKNL-3232P19	SNMG-190612	○	○	32	32	170	40	40	ISSN-633	NLM-68	CLM-12	STCM-4	TK-02714	S-68M	ISSN-643
G-MSKNR-4040R19	G-MSKNL-4040R19	SNMG-190612	○	○	40	40	200	40	50	ISSN-633	NLM-68	CLM-12	STCM-4	TK-02714	S-68M	ISSN-643
G-MSKNR-4040R25	G-MSKNL-4040R25	SNMG-250924	○	○	40	40	200	50	50	SSN-844	NLM-810	CLM-24	STCM-19	TK-02647	S-810M	-

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

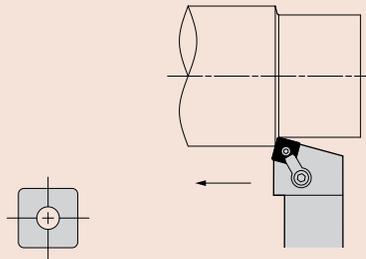
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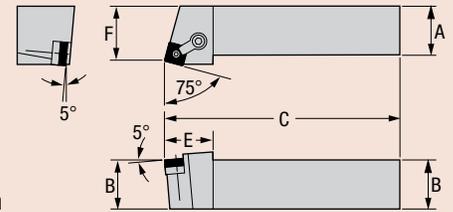


G-MSRNR/L

Style R
Square
Negative Rake
75° Lead Angle



Right-Hand
Toolholder Shown

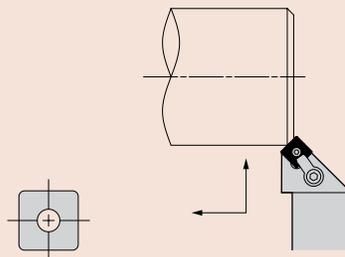


Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components	
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Seat Screw	Seat
G-MSRNR-1616M09	G-MSRNL-1616M09	SNMG-090308	○	○	16	16	150	27	20	ISSN-322	NLM-34	CLM-6	STCM-25	TK-02710	S-34M	-
G-MSRNR-2020M09	G-MSRNL-2020M09	SNMG-090308	○	○	20	20	150	27	23	ISSN-322	NLM-34L	CLM-6	STCM-25	TK-02711	S-34M	-
G-MSRNR-2020M12	G-MSRNL-2020M12	SNMG-120408	○	○	20	20	150	31	22	ISSN-433	NLM-46	CLM-9	STCM-4	TK-02712	S-46M	ISSN-443
G-MSRNR-2525M12	G-MSRNL-2525M12	SNMG-120408	●	●	25	25	150	31	29	ISSN-433	NLM-46	CLM-9	STCM-4	TK-02712	S-46M	ISSN-443
G-MSRNR-3225P12	G-MSRNL-3225P12	SNMG-120408	○	○	25	32	170	31	29	ISSN-433	NLM-46	CLM-9	STCM-4	TK-02712	S-46M	ISSN-443
G-MSRNR-3232P12	G-MSRNL-3232P12	SNMG-120408	●	●	32	32	170	31	35	ISSN-433	NLM-46	CLM-9	STCM-4	TK-02712	S-46M	ISSN-443
G-MSRNR-2525M15	G-MSRNL-2525M15	SNMG-150612	○	○	25	25	150	37	28	SSN-533	NLM-58	CLM-12	STCM-4	TK-02713	S-58M	ISSN-543
G-MSRNR-3225P15	G-MSRNL-3225P15	SNMG-150612	○	○	25	32	170	37	28	SSN-533	NLM-58	CLM-12	STCM-4	TK-02713	S-58M	ISSN-543
G-MSRNR-3232P15	G-MSRNL-3232P15	SNMG-150612	○	○	32	32	170	37	34	SSN-533	NLM-58	CLM-12	STCM-4	TK-02713	S-58M	ISSN-543
G-MSRNR-4040R15	G-MSRNL-4040R15	SNMG-150612	○	○	40	40	200	37	47	SSN-533	NLM-58	CLM-12	STCM-4	TK-02713	S-58M	ISSN-543
G-MSRNR-3225P19	G-MSRNL-3225P19	SNMG-190612	○	○	25	32	170	38	27	ISSN-633	NLM-68	CLM-12	STCM-4	TK-02714	S-68M	ISSN-643
G-MSRNR-3232P19	G-MSRNL-3232P19	SNMG-190612	○	○	32	32	170	38	33	ISSN-633	NLM-68	CLM-12	STCM-4	TK-02714	S-68M	ISSN-643
G-MSRNR-4040R19	G-MSRNL-4040R19	SNMG-190612	○	○	40	40	200	38	46	ISSN-633	NLM-68	CLM-12	STCM-4	TK-02714	S-68M	ISSN-643
G-MSRNR-4040R25	G-MSRNL-4040R25	SNMG-250924	○	○	40	40	200	41	45	SSN-844	NLM-810	CLM-24	STCM-19	TK-02647	S-810M	-

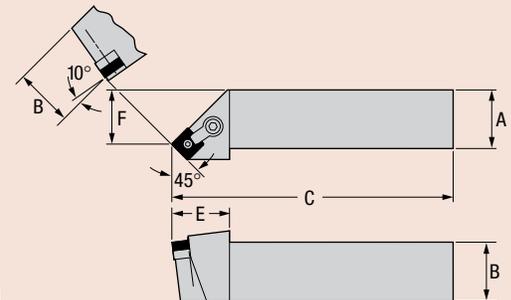
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

G-MSSNR/L

Style S
Square
Negative Rake
45° Lead Angle



Right-Hand
Toolholder Shown



Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components	
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Seat Screw	Seat
G-MSSNR-2020M12	G-MSSNL-2020M12	SNMG-120408	○	○	20	20	150	31	17	ISSN-433	NLM-46	CLM-9	STCM-4	TK-02712	S-46M	ISSN-443
G-MSSNR-2525M12	G-MSSNL-2525M12	SNMG-120408	●	●	25	25	150	31	23	ISSN-433	NLM-46	CLM-9	STCM-4	TK-02712	S-46M	ISSN-443
G-MSSNR-3225P12	G-MSSNL-3225P12	SNMG-120408	○	○	25	32	170	31	23	ISSN-433	NLM-46	CLM-9	STCM-4	TK-02712	S-46M	ISSN-443
G-MSSNR-3232P12	G-MSSNL-3232P12	SNMG-120408	●	●	32	32	170	31	30	ISSN-433	NLM-46	CLM-9	STCM-4	TK-02712	S-46M	ISSN-443
G-MSSNR-2525M15	G-MSSNL-2525M15	SNMG-150612	○	○	25	25	150	35	21	SSN-533	NLM-58	CLM-9	STCM-4	TK-02688	S-58M	ISSN-543
G-MSSNR-3225P15	G-MSSNL-3225P15	SNMG-150612	○	○	25	32	170	35	21	SSN-533	NLM-58	CLM-9	STCM-4	TK-02688	S-58M	ISSN-543
G-MSSNR-3232P15	G-MSSNL-3232P15	SNMG-150612	○	○	32	32	170	35	27	SSN-533	NLM-58	CLM-9	STCM-4	TK-02688	S-58M	ISSN-543
G-MSSNR-4040R15	G-MSSNL-4040R15	SNMG-150612	○	○	40	40	200	35	34	SSN-533	NLM-58	CLM-9	STCM-4	TK-02688	S-58M	ISSN-543
G-MSSNR-3225P19	G-MSSNL-3225P19	SNMG-190612	○	○	25	32	170	38	20	ISSN-633	NLM-68	CLM-9	STCM-4	TK-02735	S-68M	ISSN-643
G-MSSNR-3232P19	G-MSSNL-3232P19	SNMG-190612	○	○	32	32	170	38	25	ISSN-633	NLM-68	CLM-9	STCM-4	TK-02735	S-68M	ISSN-643
G-MSSNR-4040R19	G-MSSNL-4040R19	SNMG-190612	○	○	40	40	200	38	40	ISSN-633	NLM-68	CLM-9	STCM-4	TK-02735	S-68M	ISSN-643

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

10 Business Days or Less

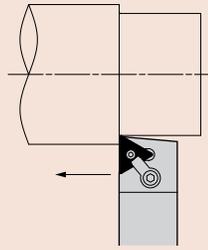
Stocked Standard

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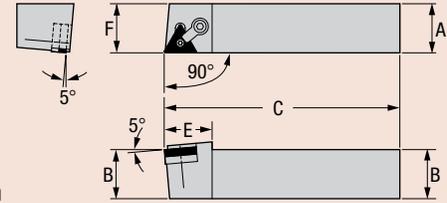


G-MTANR/L

Style A
Triangle
Negative Rake
90° Lead Angle



Right-Hand
Toolholder Shown



TOOL HOLDERS

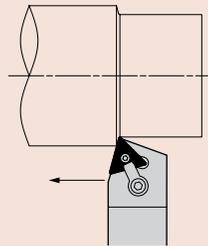
Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components	
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Seat Screw	Seat
G-MTANR-1616M11	G-MTANL-1616M11	TNMG-110304	○	○	16	16	150	25	16	-	NLM-23	CLM-19	STCM-25	TK-02762	-	-
G-MTANR-1616M16	G-MTANL-1616M16	TNMG-160308	○	○	16	16	150	29	16	ITSN-333	NLM-34L	CLM-6	STCM-25	TK-02753	S-34M	ITSN-323
G-MTANR-2020M16	G-MTANL-2020M16	TNMG-160308	○	○	20	20	150	29	20	ITSN-333	NLM-34L	CLM-6	STCM-25	TK-02753	S-34M	ITSN-323
G-MTANR-2525M16	G-MTANL-2525M16	TNMG-160308	○	○	25	25	150	29	25	ITSN-333	NLM-34L	CLM-6	STCM-25	TK-02753	S-34M	ITSN-323
G-MTANR-3225P16	G-MTANL-3225P16	TNMG-160308	○	○	25	32	170	29	25	ITSN-333	NLM-34L	CLM-6	STCM-25	TK-02753	S-34M	ITSN-323
G-MTANR-2525M22	G-MTANL-2525M22	TNMG-220408	●	●	25	25	150	29	25	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02763	S-46M	ITSN-424
G-MTANR-3225P22	G-MTANL-3225P22	TNMG-220408	○	○	25	32	170	29	25	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02763	S-46M	ITSN-424
G-MTANR-3232P22	G-MTANL-3232P22	TNMG-220408	●	●	32	32	170	29	32	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02763	S-46M	ITSN-424
G-MTANR-4040R22	G-MTANL-4040R22	TNMG-220408	○	○	40	40	200	29	40	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02763	S-46M	ITSN-424
G-MTANR-2525M27	G-MTANL-2525M27	TNMG-270612	○	○	25	25	150	37	25	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	ITSN-543
G-MTANR-3225P27	G-MTANL-3225P27	TNMG-270612	○	○	25	32	170	37	25	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	ITSN-543
G-MTANR-3232P27	G-MTANL-3232P27	TNMG-270612	○	○	32	32	170	37	32	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	ITSN-543
G-MTANR-4040R27	G-MTANL-4040R27	TNMG-270612	○	○	40	40	200	37	40	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	ITSN-543
G-MTANR-4040R33	G-MTANL-4040R33	TNMG-330912	○	○	40	40	200	50	40	TSN-637	NLM-68L	CLM-12	STCM-4	TK-02756	S-68M	TSN-657

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

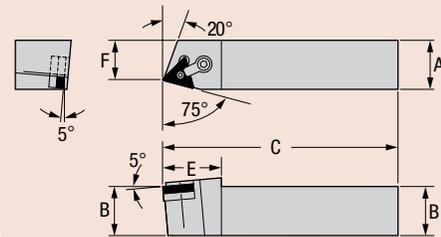
** Cannot be used with lock pin.

G-MTBNR/L

Style B
Triangle
Negative Rake
75° Lead Angle



Right-Hand
Toolholder Shown



Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components	
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Seat Screw	Seat
G-MTBNR-1616M11	G-MTBNL-1616M11	TNMG-110304	○	○	16	16	150	23	13	-	NLM-23	CLM-6	STCM-25	TK-02764	-	-
G-MTBNR-1616M16	G-MTBNL-1616M16	TNMG-160308	○	○	16	16	150	34	11	ITSN-333	NLM-34L	CLM-20	STCM-32	TK-02765	S-34M	ITSN-323
G-MTBNR-2020M16	G-MTBNL-2020M16	TNMG-160308	○	○	20	20	150	34	15	ITSN-333	NLM-34L	CLM-20	STCM-32	TK-02765	S-34M	ITSN-323
G-MTBNR-2525M16	G-MTBNL-2525M16	TNMG-160308	○	○	25	25	150	34	21	ITSN-333	NLM-34L	CLM-20	STCM-32	TK-02765	S-34M	ITSN-323
G-MTBNR-3225P16	G-MTBNL-3225P16	TNMG-160308	○	○	25	32	170	34	21	ITSN-333	NLM-34L	CLM-20	STCM-32	TK-02765	S-34M	ITSN-323
G-MTBNR-2525M22	G-MTBNL-2525M22	TNMG-220408	○	○	25	25	150	38	20	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	ITSN-424
G-MTBNR-3225P22	G-MTBNL-3225P22	TNMG-220408	○	○	25	32	170	38	20	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	ITSN-424
G-MTBNR-3232P22	G-MTBNL-3232P22	TNMG-220408	○	○	32	32	170	38	26	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	ITSN-424
G-MTBNR-4040R22	G-MTBNL-4040R22	TNMG-220408	○	○	40	40	200	38	32	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	ITSN-424
G-MTBNR-2525M27	G-MTBNL-2525M27	TNMG-270612	○	○	25	25	150	43	18	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	ITSN-543
G-MTBNR-3225P27	G-MTBNL-3225P27	TNMG-270612	○	○	25	32	170	43	18	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	ITSN-543
G-MTBNR-3232P27	G-MTBNL-3232P27	TNMG-270612	○	○	32	32	170	43	25	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	ITSN-543
G-MTBNR-4040R27	G-MTBNL-4040R27	TNMG-270612	○	○	40	40	200	43	31	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	ITSN-543
G-MTBNR-4040R33	G-MTBNL-4040R33	TNMG-330912	○	○	40	40	200	45	30	TSN-637	NLM-68L	CLM-12	STCM-4	TK-02756	S-68M	TSN-657

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

** Cannot be used with lock pin.

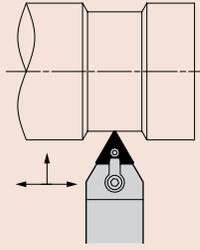
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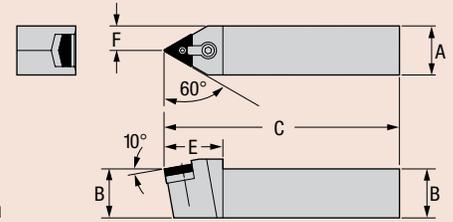


G-MTENNS

Style E
Triangle
Negative Rake
60° Lead Angle



Neutral
Toolholder Shown



Part Number	Gage	Stock	Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components	
			N	A	B	C	E	F					Includes All Standard Components	
G-MTENNS-1616M11	TNMG-110304	○	16	16	150	25	8	-	NLM-23	CLM-6	STCM-25	TK-02752	-	-
G-MTENNS-1616M16	TNMG-060308	○	16	16	150	30	8	ITSN-333	NLM-34L	CLM-6	STCM-25	TK-02753	S-34M	ITSN-323
G-MTENNS-2020M16	TNMG-060308	○	20	20	150	30	10	ITSN-333	NLM-34L	CLM-6	STCM-25	TK-02753	S-34M	ITSN-323
G-MTENNS-2525M16	TNMG-060308	○	25	25	150	30	12,5	ITSN-333	NLM-34L	CLM-6	STCM-25	TK-02753	S-34M	ITSN-323
G-MTENNS-3225P16	TNMG-060308	○	25	32	170	30	12,5	ITSN-333	NLM-34L	CLM-6	STCM-25	TK-02753	S-34M	ITSN-323
G-MTENNS-2020M22	TNMG-220408	○	20	20	150	38	10	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	-
G-MTENNS-2525M22	TNMG-220408	●	25	25	150	38	12,5	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	-
G-MTENNS-3225P22	TNMG-220408	○	25	32	170	38	12,5	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	-
G-MTENNS-3232P22	TNMG-220408	●	32	32	170	38	16	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	-
G-MTENNS-3232P27	TNMG-270612	○	32	32	170	42	16	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	-
G-MTENNS-4040R27	TNMG-270612	○	40	40	200	42	20	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	-
G-MTENNS-4040R33	TNMG-330912	○	40	40	200	50	20	TSN-637	NLM-68L	CLM-12	STCM-4	TK-02756	S-68M	-

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

10 Business Days or Less

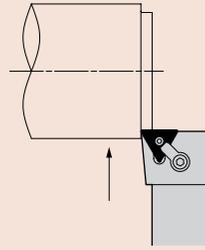
Stocked Standard

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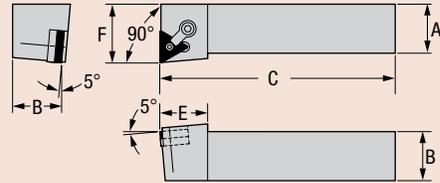


G-MTFNR/L

Style F
Triangle
Negative Rake
90° Lead Angle



Right-Hand
Toolholder Shown



TOOLHOLDERS

Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components	
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Seat Screw	Seat
G-MTFNR-1616M11	G-MTFNL-1616M11	TNMG-110304	○	○	16	16	150	20	22	–	NLM-23	CLM-19	STCM-25	TK-02762	–	–
G-MTFNR-1616M16	G-MTFNL-1616M16	TNMG-160308	○	○	16	16	150	24	22	ITSN-333	NLM-34L	CLM-6	STCM-25	TK-02753	S-34M	ITSN-323
G-MTFNR-2020M16	G-MTFNL-2020M16	TNMG-160308	○	○	20	20	150	24	25	ITSN-333	NLM-34L	CLM-6	STCM-25	TK-02753	S-34M	ITSN-323
G-MTFNR-2525M16	G-MTFNL-2525M16	TNMG-160308	○	○	25	25	150	24	32	ITSN-333	NLM-34L	CLM-6	STCM-25	TK-02753	S-34M	ITSN-323
G-MTFNR-3225P16	G-MTFNL-3225P16	TNMG-160308	○	○	25	32	170	24	32	ITSN-333	NLM-34L	CLM-6	STCM-25	TK-02753	S-34M	ITSN-323
G-MTFNR-3232P16	G-MTFNL-3232P16	TNMG-160308	○	○	32	32	170	24	40	ITSN-333	NLM-34L	CLM-6	STCM-25	TK-02753	S-34M	ITSN-323
G-MTFNR-2525M22	G-MTFNL-2525M22	TNMG-220408	●	●	25	25	150	31	32	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	ITSN-424
G-MTFNR-3225P22	G-MTFNL-3225P22	TNMG-220408	○	○	25	32	170	31	32	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	ITSN-424
G-MTFNR-3232P22	G-MTFNL-3232P22	TNMG-220408	●	●	32	32	170	31	40	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	ITSN-424
G-MTFNR-4040R22	G-MTFNL-4040R22	TNMG-220408	○	○	40	40	200	31	50	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	ITSN-424
G-MTFNR-2525M27	G-MTFNL-2525M27	TNMG-270612	○	○	25	25	150	36	32	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	ITSN-543
G-MTFNR-3225P27	G-MTFNL-3225P27	TNMG-270612	○	○	25	32	170	36	32	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	ITSN-543
G-MTFNR-3232P27	G-MTFNL-3232P27	TNMG-270612	○	○	32	32	170	36	40	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	ITSN-543
G-MTFNR-4040R27	G-MTFNL-4040R27	TNMG-270612	○	○	40	40	200	36	50	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	ITSN-543
G-MTFNR-4040R33	G-MTFNL-4040R33	TNMG-330912	○	○	40	40	200	38	50	TSN-637	NLM-68L	CLM-12	STCM-4	TK-02756	S-68M	TSN-657

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

** Cannot be used with lock pin.

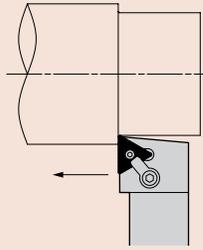
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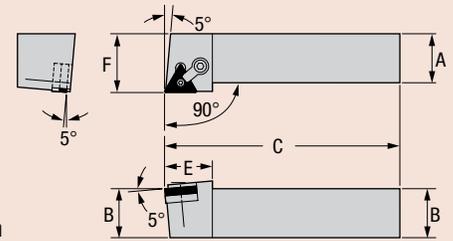


G-MTGNR/L

Style G
Triangle
Negative Rake
90° Lead Angle



Right-Hand
Toolholder Shown

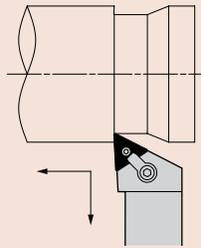


Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components	
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Seat Screw	Seat
G-MTGNR-1616M11	G-MTGNL-1616M11	TNMG-110304	○	○	16	16	150	25	20	-	NLM-23	CLM-19	STCM-25	TK-02639	-	-
G-MTGNR-1616M16	G-MTGNL-1616M16	TNMG-160308	○	○	16	16	150	28	22	ITSN-333	NLM-34L	CLM-6	STCM-25	TK-02753	S-34M	ITSN-323
G-MTGNR-2020M16	G-MTGNL-2020M16	TNMG-160308	○	○	20	20	150	28	25	ITSN-333	NLM-34L	CLM-6	STCM-25	TK-02753	S-34M	ITSN-323
G-MTGNR-2525M16	G-MTGNL-2525M16	TNMG-160308	○	○	25	25	150	28	32	ITSN-333	NLM-34L	CLM-6	STCM-25	TK-02753	S-34M	ITSN-323
G-MTGNR-3225P16	G-MTGNL-3225P16	TNMG-160308	○	○	25	32	170	28	32	ITSN-333	NLM-34L	CLM-6	STCM-25	TK-02753	S-34M	ITSN-323
G-MTGNR-3232P16	G-MTGNL-3232P16	TNMG-160308	○	○	32	32	170	28	40	ITSN-333	NLM-34L	CLM-6	STCM-25	TK-02753	S-34M	ITSN-323
G-MTGNR-2020M22	G-MTGNL-2020M22	TNMG-220408	○	○	20	20	150	31	25	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	ITSN-424
G-MTGNR-2525M22	G-MTGNL-2525M22	TNMG-220408	●	●	25	25	150	31	32	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	ITSN-424
G-MTGNR-3225P22	G-MTGNL-3225P22	TNMG-220408	○	○	25	32	170	31	32	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	ITSN-424
G-MTGNR-3232P22	G-MTGNL-3232P22	TNMG-220408	●	●	32	32	170	31	40	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	ITSN-424
G-MTGNR-4040R22	G-MTGNL-4040R22	TNMG-220408	○	○	40	40	200	31	50	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	ITSN-424
G-MTGNR-2525M27	G-MTGNL-2525M27	TNMG-270612	○	○	25	25	150	37	32	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	ITSN-543
G-MTGNR-3225P27	G-MTGNL-3225P27	TNMG-270612	○	○	25	32	170	37	32	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	ITSN-543
G-MTGNR-3232P27	G-MTGNL-3232P27	TNMG-270612	○	○	32	32	170	37	40	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	ITSN-543
G-MTGNR-4040R27	G-MTGNL-4040R27	TNMG-270612	○	○	40	40	200	37	50	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	ITSN-543
G-MTGNR-4040R33	G-MTGNL-4040R33	TNMG-330912	○	○	40	40	200	38	50	TSN-637	NLM-68L	CLM-12	STCM-4	TK-02756	S-68M	TSN-657

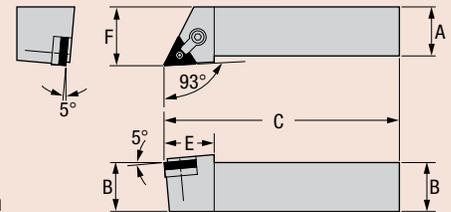
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

G-MTJNRS

Style J
Triangle
Negative Rake
93° Lead Angle



Right-Hand
Toolholder Shown



Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Component	
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Seat Screw	Seat
G-MTJNRS-2020M16	G-MTJNLS-2020M16	TNMG-160308	○	○	20	20	150	28	25	ITSN-333	NLM-34L	CLM-6	STCM-25	TK-02753	S-34M	ITSN-323
G-MTJNRS-2525M16	G-MTJNLS-2525M16	TNMG-160308	○	○	25	25	150	28	32	ITSN-333	NLM-34L	CLM-6	STCM-25	TK-02753	S-34M	ITSN-323
G-MTJNRS-2525M22	G-MTJNLS-2525M22	TNMG-220408	●	●	25	25	150	30	25	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	-
G-MTJNRS-3225P22	G-MTJNLS-3225P22	TNMG-220408	○	○	25	32	170	30	25	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	-
G-MTJNRS-3232P22	G-MTJNLS-3232P22	TNMG-220408	●	●	32	32	170	30	40	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	-
G-MTJNRS-3232P27	G-MTJNLS-3232P27	TNMG-270612	○	○	32	32	170	36	40	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	-
G-MTJNRS-4040R27	G-MTJNLS-4040R27	TNMG-270612	○	○	40	40	200	36	50	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	-
G-MTJNRS-4040R33	G-MTJNLS-4040R33	TNMG-330912	○	○	40	40	200	42	50	TSN-637	NLM-68L	CLM-12	STCM-4	TK-02756	S-68M	-

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

10 Business Days or Less

Stocked Standard

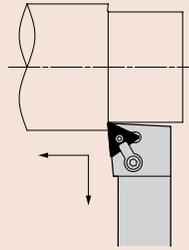
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TOOLHOLDERS

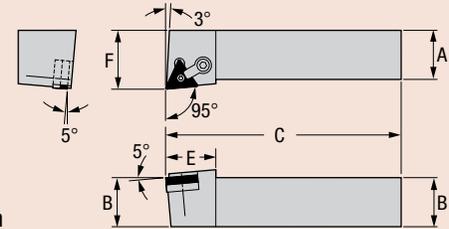


G-MTLNR/L

Style L
Triangle
Negative Rake
95° Lead Angle



Right-Hand
Toolholder Shown



TOOLHOLDERS

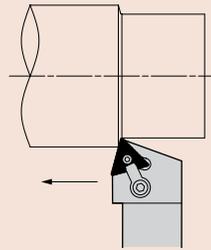
Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components	
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Seat Screw	Seat
G-MTLNR-2525M22	G-MTLNL-2525M22	TNMG-220408	○	○	25	25	150	32	25	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	TS-424**
G-MTLNR-3225P22	G-MTLNL-3225P22	TNMG-220408	○	○	25	32	170	32	32	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	TS-424**
G-MTLNR-3232P22	G-MTLNL-3232P22	TNMG-220408	○	○	32	32	170	32	40	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	TS-424**
G-MTLNR-3232P27	G-MTLNL-3232P27	TNMG-270612	○	○	32	32	170	36	40	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	ITSN-543
G-MTLNR-4040R27	G-MTLNL-4040R27	TNMG-270612	○	○	40	40	200	36	50	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	ITSN-543
G-MTLNR-4040R33	G-MTLNL-4040R33	TNMG-330912	○	○	40	40	200	39	50	TSN-637	NLM-68L	CLM-12	STCM-4	TK-02756	S-68M	TSN-657

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

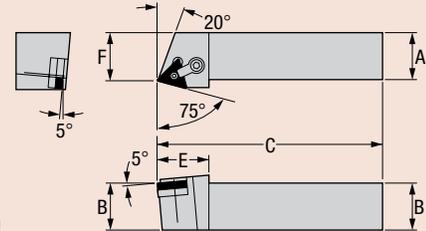
** Cannot be used with lock pin.

G-MTRNR/L

Style R
Triangle
Negative Rake
75° Lead Angle



Right-Hand
Toolholder Shown



Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components	
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Seat Screw	Seat
G-MTRNR-1616M11	G-MTRNL-1616M11	TNMG-110304	○	○	16	16	150	26	20	-	NLM-23	CLM-19	STCM-25	TK-02762	-	-
G-MTRNR-1616M16	G-MTRNL-1616M16	TNMG-160308	○	○	16	16	150	31	20	ITSN-333	NLM-34L	CLM-20	STCM-32	TK-02765	S-34M	ITSN-323
G-MTRNR-2020M16	G-MTRNL-2020M16	TNMG-160308	○	○	20	20	150	31	22	ITSN-333	NLM-34L	CLM-20	STCM-32	TK-02765	S-34M	ITSN-323
G-MTRNR-2525M16	G-MTRNL-2525M16	TNMG-160308	○	○	25	25	150	31	28	ITSN-333	NLM-34L	CLM-20	STCM-32	TK-02765	S-34M	ITSN-323
G-MTRNR-3225P16	G-MTRNL-3225P16	TNMG-160308	○	○	25	32	170	31	28	ITSN-333	NLM-34L	CLM-20	STCM-32	TK-02765	S-34M	ITSN-323
G-MTRNR-2525M22	G-MTRNL-2525M22	TNMG-220408	○	○	25	25	150	35	26	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	TS-424**
G-MTRNR-3225P22	G-MTRNL-3225P22	TNMG-220408	○	○	25	32	170	35	26	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	TS-424**
G-MTRNR-3232P22	G-MTRNL-3232P22	TNMG-220408	○	○	32	32	170	35	32	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	TS-424**
G-MTRNR-4040R22	G-MTRNL-4040R22	TNMG-220408	○	○	40	40	200	35	45	ITSN-433	NLM-46	CLM-9	STCM-4	TK-02754	S-46M	TS-424**
G-MTRNR-2525M27	G-MTRNL-2525M27	TNMG-270612	○	○	25	25	150	41	25	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	ITSN-543
G-MTRNR-3225P27	G-MTRNL-3225P27	TNMG-270612	○	○	25	32	170	41	25	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	ITSN-543
G-MTRNR-3232P27	G-MTRNL-3232P27	TNMG-270612	○	○	32	32	170	41	32	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	ITSN-543
G-MTRNR-4040R27	G-MTRNL-4040R27	TNMG-270612	○	○	40	40	200	41	45	ITSN-533	NLM-58	CLM-9	STCM-4	TK-02755	S-58M	ITSN-543
G-MTRNR-4040R33	G-MTRNL-4040R33	TNMG-330912	○	○	40	40	200	45	43	TSN-637	NLM-68L	CLM-12	STCM-4	TK-02756	S-68M	TSN-657

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

** Cannot be used with lock pin.

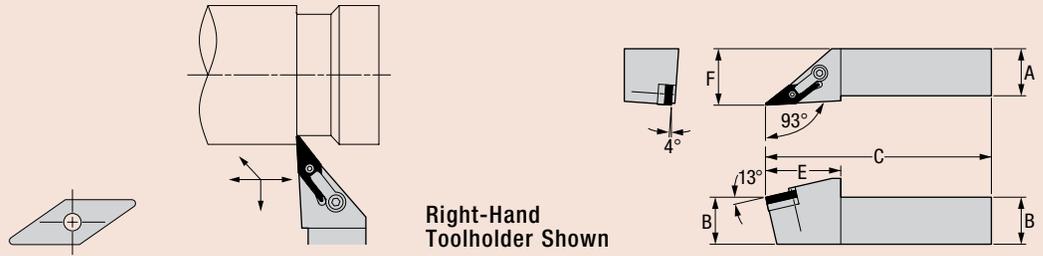
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G-MVJNR/L

Style J
35° Diamond
Negative Rake
93° Lead Angle



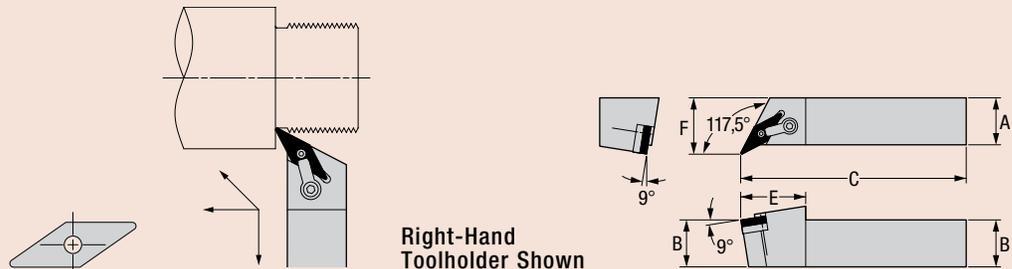
Right-Hand
Toolholder Shown

Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Component
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Seat Screw
G-MVJNR-2020M16	G-MVJNL-2020M16	VNMG-160408	○	○	20	20	150	43	25	IVSN-322	NLM-34L	CLM-30	STCM-4	TK-02758	S-34M
G-MVJNR-2525M16	G-MVJNL-2525M16	VNMG-160408	●	●	25	25	150	43	32	IVSN-322	NLM-34L	CLM-30	STCM-4	TK-02758	S-34M
G-MVJNR-3225P16	G-MVJNL-3225P16	VNMG-160408	○	○	25	32	170	43	32	IVSN-322	NLM-34L	CLM-30	STCM-4	TK-02758	S-34M
G-MVJNR-3232P16	G-MVJNL-3232P16	VNMG-160408	●	●	32	32	170	43	40	IVSN-322	NLM-34L	CLM-30	STCM-4	TK-02758	S-34M
G-MVJNR-4040R16	G-MVJNL-4040R16	VNMG-160408	○	○	40	40	200	43	50	IVSN-322	NLM-34L	CLM-30	STCM-4	TK-02758	S-34M
G-MVJNR-2525M22	G-MVJNL-2525M22	VNMG-220408	●	●	25	25	150	50	32	IVSN-433	NLM-46	CLM-30	STCM-4	TK-02759	S-46M
G-MVJNR-3232P22	G-MVJNL-3232P22	VNMG-220408	●	●	32	32	170	50	40	IVSN-433	NLM-46	CLM-30	STCM-4	TK-02759	S-46M
G-MVJNR-4040R22	G-MVJNL-4040R22	VNMG-220408	○	○	40	40	200	50	50	IVSN-433	NLM-46	CLM-30	STCM-4	TK-02759	S-46M

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

G-MVTNR/L

Style T
35° Diamond
Negative Rake
117,5° Lead Angle



Right-Hand
Toolholder Shown

Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Component
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Seat Screw
G-MVTNR-2020M16	G-MVTNL-2020M16	VNMG-160408	○	○	20	20	150	44	25	IVSN-322	NLM-34L	CLM-30	STCM-4	TK-02758	S-34M
G-MVTNR-2525M16	G-MVTNL-2525M16	VNMG-160408	●	●	25	25	150	44	32	IVSN-322	NLM-34L	CLM-30	STCM-4	TK-02758	S-34M
G-MVTNR-3225P16	G-MVTNL-3225P16	VNMG-160408	○	○	25	32	170	44	32	IVSN-322	NLM-34L	CLM-30	STCM-4	TK-02758	S-34M
G-MVTNR-3232P16	G-MVTNL-3232P16	VNMG-160408	●	●	32	32	170	44	40	IVSN-322	NLM-34L	CLM-30	STCM-4	TK-02758	S-34M
G-MVTNR-4040R16	G-MVTNL-4040R16	VNMG-160408	○	○	40	40	200	44	45	IVSN-322	NLM-34L	CLM-30	STCM-4	TK-02758	S-34M

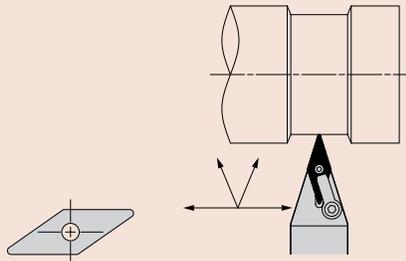
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

10 Business Days or Less

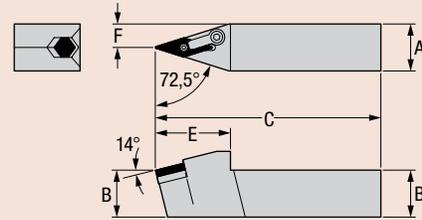
Stocked Standard

G-MVVNN

Style V
35° Diamond
Negative Rake
72,5° Lead Angle



Neutral Toolholder Shown



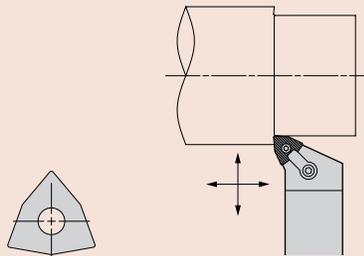
TOOLHOLDERS

Part Number	Gage	Stock	Dimensions (millimeters)						Standard Components				* Tune-Up Kit	Optional Component	
			Insert	N	A	B	C	E	F					Includes All Standard Components	
Neutral															
G-MVVNN-2020M16	VNMG-160408	○	20	20	150	45	10	IVSN-322	NLM-34L	CLM-30	STCM-4	TK-02758	S-34M		
G-MVVNN-2525M16	VNMG-160408	●	25	25	150	45	12,5	IVSN-322	NLM-34L	CLM-30	STCM-4	TK-02758	S-34M		
G-MVVNN-3225P16	VNMG-160408	○	25	32	170	45	12,5	IVSN-322	NLM-34L	CLM-30	STCM-4	TK-02758	S-34M		
G-MVVNN-3232P16	VNMG-160408	●	32	32	170	45	16	IVSN-322	NLM-34L	CLM-30	STCM-4	TK-02758	S-34M		
G-MVVNN-4040R16	VNMG-160408	○	40	40	200	45	20	IVSN-322	NLM-34L	CLM-30	STCM-4	TK-02758	S-34M		
G-MVVNN-2525M22	VNMG-220408	●	25	25	150	54	12,5	IVSN-433	NLM-46	CLM-30	STCM-4	TK-02759	S-46M		
G-MVVNN-3232P22	VNMG-220408	●	32	32	170	54	16	IVSN-433	NLM-46	CLM-30	STCM-4	TK-02759	S-46M		
G-MVVNN-4040R22	VNMG-220408	○	40	40	200	54	20	IVSN-433	NLM-46	CLM-30	STCM-4	TK-02759	S-46M		

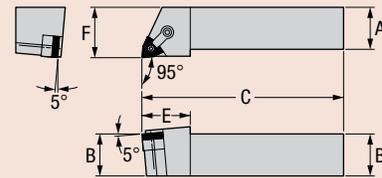
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

G-MWLNR/L

Style L
Trigon
Negative Rake
95° Lead Angle



Right-Hand Toolholder Shown



Part Number		Gage	Stock		Dimensions (millimeters)						Standard Components				* Tune-Up Kit	Optional Component
Right	Left		R	L	A	B	C	E	F					Includes All Standard Components		
G-MWLNR-2020M06	G-MWLNL-2020M06	WNMG-060408	○	○	20	20	150	25	25	IWSN-323	NLM-34L	CLM-6	STCM-25	TK-02807	IWSN-332	
G-MWLNR-2525M06	G-MWLNL-2525M06	WNMG-060408	○	○	25	25	150	25	32	IWSN-323	NLM-34L	CLM-6	STCM-25	TK-02807	IWSN-332	
G-MWLNR-3232P06	G-MWLNL-3232P06	WNMG-060408	○	○	32	32	170	25	40	IWSN-323	NLM-34L	CLM-6	STCM-25	TK-02807	IWSN-332	
G-MWLNR-4040R06	G-MWLNL-4040R06	WNMG-060408	○	○	40	40	200	25	50	IWSN-323	NLM-34L	CLM-6	STCM-25	TK-02807	IWSN-332	
G-MWLNR-2020M08	G-MWLNL-2020M08	WNMG-080408	○	○	20	20	150	30	25	IWSN-433	NLM-46	CLM-20	STCM-26	TK-02808	-	
G-MWLNR-2525M08	G-MWLNL-2525M08	WNMG-080408	●	●	25	25	150	30	32	IWSN-433	NLM-46	CLM-20	STCM-26	TK-02808	-	
G-MWLNR-3232P08	G-MWLNL-3232P08	WNMG-080408	●	●	32	32	170	30	40	IWSN-433	NLM-46	CLM-20	STCM-26	TK-02808	-	
G-MWLNR-4040R08	G-MWLNL-4040R08	WNMG-080408	○	○	40	40	200	30	50	IWSN-433	NLM-46	CLM-20	STCM-26	TK-02808	-	

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

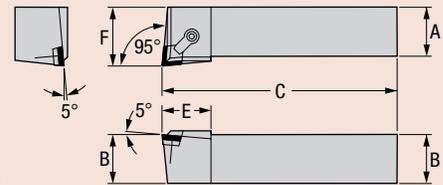
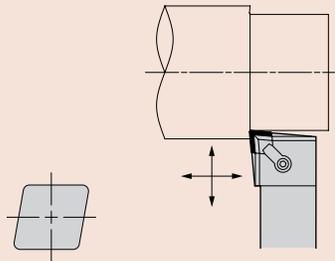
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G-CCLPR/L

Style L
80° Diamond
Positive Rake
95° Lead Angle



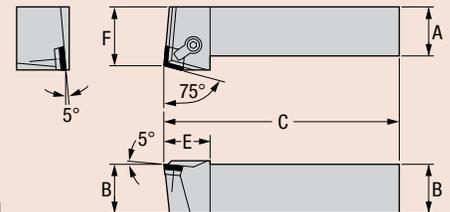
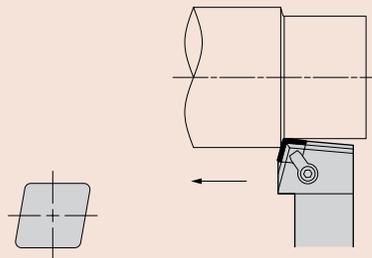
Right-Hand
Toolholder Shown

Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components					* Tune-Up Kit
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Seat Screw	Clamp	Clamp Screw	Chip Breaker	Includes All Standard Components
G-CCLPR-2020M12	G-CCLPL-2020M12	CPGN-120308	○	○	20	20	150	32	25	CSP-422	TFHCS M3-0.5x10mm	CLM-20	STCM-11	CBDC-4L	TK-02781
G-CCLPR-2525M12	G-CCLPL-2525M12	CPGN-120308	○	○	25	25	150	32	32	CSP-422	TFHCS M3-0.5x10mm	CLM-20	STCM-11	CBDC-4L	TK-02781
G-CCLPR-3225P12	G-CCLPL-3225P12	CPGN-120308	○	○	25	32	170	32	32	CSP-422	TFHCS M3-0.5x10mm	CLM-20	STCM-11	CBDC-4L	TK-02781
G-CCLPR-3232P12	G-CCLPL-3232P12	CPGN-120308	○	○	32	32	170	32	40	CSP-422	TFHCS M3-0.5x10mm	CLM-20	STCM-11	CBDC-4L	TK-02781
G-CCLPR-4040R12	G-CCLPL-4040R12	CPGN-120308	○	○	40	40	200	32	50	CSP-422	TFHCS M3-0.5x10mm	CLM-20	STCM-11	CBDC-4L	TK-02781
G-CCLPR-2525M19	G-CCLPL-2525M19	CPGN-190412	○	○	25	25	150	40	32	CSP-632	TFHCS M3-0.5x10mm	CLM-30	STCM-4	CBDC-6G	TK-02784
G-CCLPR-3225P19	G-CCLPL-3225P19	CPGN-190412	○	○	25	32	170	40	32	CSP-632	TFHCS M3-0.5x10mm	CLM-30	STCM-4	CBDC-6G	TK-02784
G-CCLPR-3232P19	G-CCLPL-3232P19	CPGN-190412	○	○	32	32	170	40	40	CSP-632	TFHCS M3-0.5x10mm	CLM-30	STCM-4	CBDC-6G	TK-02784
G-CCLPR-4040R19	G-CCLPL-4040R19	CPGN-190412	○	○	40	40	200	40	50	CSP-632	TFHCS M3-0.5x10mm	CLM-30	STCM-4	CBDC-6G	TK-02784

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

G-CCRPR/L

Style R
80° Diamond
(Using 100° Corner)
75° Lead Angle



Right-Hand
Toolholder Shown

Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components					* Tune-Up Kit
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Seat Screw	Clamp	Clamp Screw	Chip Breaker	Includes All Standard Components
G-CCRPR-2020M12	G-CCRPL-2020M12	CPGN-120308	○	○	20	20	150	31	25	CSP-422	TFHCS M3-0.5x10mm	CLM-9	STCM-4	CBDC-415L	TK-02737
G-CCRPR-2525M12	G-CCRPL-2525M12	CPGN-120308	○	○	25	25	150	31	32	CSP-422	TFHCS M3-0.5x10mm	CLM-9	STCM-4	CBDC-415L	TK-02737
G-CCRPR-3225P12	G-CCRPL-3225P12	CPGN-120308	○	○	25	32	170	31	32	CSP-422	TFHCS M3-0.5x10mm	CLM-9	STCM-4	CBDC-415L	TK-02737
G-CCRPR-3232P12	G-CCRPL-3232P12	CPGN-120308	○	○	32	32	170	31	40	CSP-422	TFHCS M3-0.5x10mm	CLM-9	STCM-4	CBDC-415L	TK-02737
G-CCRPR-4040R12	G-CCRPL-4040R12	CPGN-120308	○	○	40	40	200	31	50	CSP-422	TFHCS M3-0.5x10mm	CLM-9	STCM-4	CBDC-415L	TK-02737
G-CCRPR-2525M19	G-CCRPL-2525M19	CPGN-190412	○	○	25	25	150	33	32	CSP-632	TFHCS M3-0.5x10mm	CLM-12	STCM-4	CBDC-615G	TK-02742
G-CCRPR-3225P19	G-CCRPL-3225P19	CPGN-190412	○	○	25	32	170	33	32	CSP-632	TFHCS M3-0.5x10mm	CLM-12	STCM-4	CBDC-615G	TK-02742
G-CCRPR-3232P19	G-CCRPL-3232P19	CPGN-190412	○	○	32	32	170	33	40	CSP-632	TFHCS M3-0.5x10mm	CLM-12	STCM-4	CBDC-615G	TK-02742
G-CCRPR-4040R19	G-CCRPL-4040R19	CPGN-190412	○	○	40	40	200	33	50	CSP-632	TFHCS M3-0.5x10mm	CLM-12	STCM-4	CBDC-615G	TK-02742

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

10 Business Days or Less

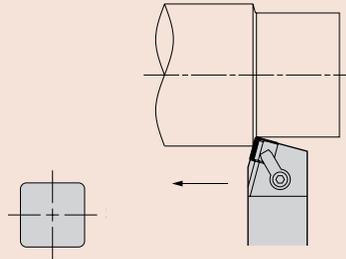
Stocked Standard

90°

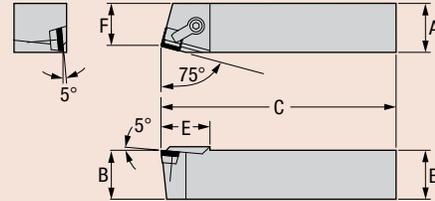


G-CSBPR/L

Style B
Square
Positive Rake
75° Lead Angle



Right-Hand
Toolholder Shown

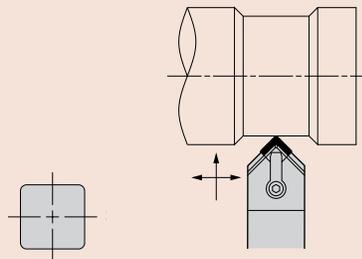


Part Number		Gage	Stock	Dimensions (millimeters)					Standard Components					* Tune-Up Kit	
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Seat Screw	Clamp	Clamp Screw	Chip Breaker	Includes All Standard Components
G-CSBPR-2020M12	G-CSBPL-2020M12	SPGN-120308	○	○	20	20	150	32	15	SP-40	TFHCS M3-0.5x12mm	CLM-12	STCM-8	CBS-4G	TK-02766
G-CSBPR-2525M12	G-CSBPL-2525M12	SPGN-120308	○	○	25	25	150	32	21	SP-40	TFHCS M3-0.5x12mm	CLM-12	STCM-8	CBS-4G	TK-02766
G-CSBPR-3232P12	G-CSBPL-3232P12	SPGN-120308	○	○	32	32	170	32	28	SP-40	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBS-4G	TK-02767
G-CSBPR-4040R12	G-CSBPL-4040R12	SPGN-120308	○	○	40	40	200	32	34	SP-40	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBS-4G	TK-02767
G-CSBPR-2525M19	G-CSBPL-2525M19	SPGN-190412	○	○	25	25	150	37	20	SP-60M	TFHCS M5-0.8x12mm	CLM-30	STCM-4	CBS-6G	TK-02768
G-CSBPR-3232P19	G-CSBPL-3232P19	SPGN-190412	○	○	32	32	170	37	26	SP-60M	TFHCS M5-0.8x12mm	CLM-30	STCM-4	CBS-6G	TK-02768
G-CSBPR-4040R19	G-CSBPL-4040R19	SPGN-190412	○	○	40	40	200	37	32	SP-60M	TFHCS M5-0.8x12mm	CLM-30	STCM-4	CBS-6G	TK-02768

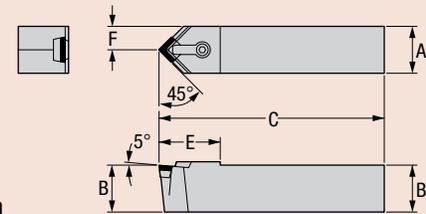
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

G-CSDPN

Style D
Square
Positive Rake
45° Lead



Neutral
Toolholder Shown



Part Number		Gage	Stock	Dimensions (millimeters)					Standard Components					* Tune-Up Kit
Neutral	Insert	N	A	B	C	E	F	Seat	Seat Screw	Clamp	Clamp Screw	Chip Breaker	Includes All Standard Components	
G-CSDPN-2020M12	SPGN-120308	○	20	20	150	41	10	SP-40	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBS-4E	TK-02769	
G-CSDPN-2525M12	SPGN-120308	○	25	25	150	41	12,5	SP-40	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBS-4E	TK-02769	
G-CSDPN-3232P12	SPGN-120308	○	32	32	170	41	16	SP-40	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBS-4E	TK-02769	
G-CSDPN-4040R12	SPGN-120308	○	40	40	200	41	20	SP-40	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBS-4E	TK-02769	
G-CSDPN-2525M19	SPGN-190412	○	25	25	150	45	12,5	SP-60M	TFHCS M5-0.8x12mm	CLM-30	STCM-4	CBS-6E	TK-02770	
G-CSDPN-3232P19	SPGN-190412	○	32	32	170	45	16	SP-60M	TFHCS M5-0.8x12mm	CLM-30	STCM-4	CBS-6E	TK-02770	
G-CSDPN-4040R19	SPGN-190412	○	40	40	200	45	20	SP-60M	TFHCS M5-0.8x12mm	CLM-30	STCM-4	CBS-6E	TK-02770	

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

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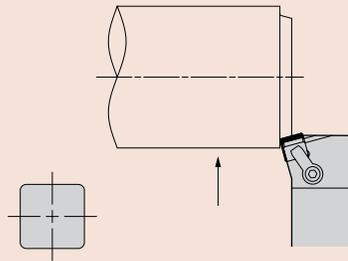
Stocked Standard



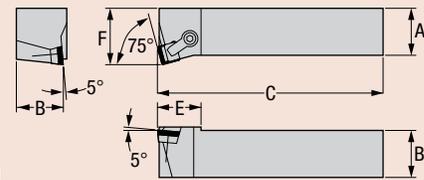
10 Business Days or Less

G-CSKPR/L

Style K
Square
Positive Rake
75° Lead Angle



Right-Hand
Toolholder Shown



Part Number		Gage	Stock		Dimensions (millimeters)					Seat	Standard Components				* Tune-Up Kit
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Seat Screw	Clamp	Clamp Screw	Chip Breaker	Includes All Standard Components
G-CSKPR-2020M12	G-CSKPL-2020M12	SPGN-120308	○	○	20	20	150	29	25	SP-40	TFHCS M3-0.5x12mm	CLM-12	STCM-8	CBS-4G	TK-02771
G-CSKPR-2525M12	G-CSKPL-2525M12	SPGN-120308	○	○	25	25	150	29	32	SP-40	TFHCS M3-0.5x12mm	CLM-12	STCM-8	CBS-4G	TK-02771
G-CSKPR-3225P12	G-CSKPL-3225P12	SPGN-120308	○	○	25	32	170	29	32	SP-40	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBS-4G	TK-02772
G-CSKPR-3232P12	G-CSKPL-3232P12	SPGN-120308	○	○	32	32	170	29	40	SP-40	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBS-4G	TK-02772
G-CSKPR-4040R12	G-CSKPL-4040R12	SPGN-120308	○	○	40	40	200	29	50	SP-40	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBS-4G	TK-02772
G-CSKPR-2525M19	G-CSKPL-2525M19	SPGN 190412	○	○	25	25	150	38	32	SP-60M	TFHCS M5-0.8x12mm	CLM-30	STCM-4	CBS-6G	TK-02768
G-CSKPR-3225P19	G-CSKPL-3225P19	SPGN 190412	○	○	25	32	170	38	32	SP-60M	TFHCS M5-0.8x12mm	CLM-30	STCM-4	CBS-6G	TK-02768
G-CSKPR-3232P19	G-CSKPL-3232P19	SPGN 190412	○	○	32	32	170	38	40	SP-60M	TFHCS M5-0.8x12mm	CLM-30	STCM-4	CBS-6G	TK-02768
G-CSKPR-4040R19	G-CSKPL-4040R19	SPGN 190412	○	○	40	40	200	38	50	SP-60M	TFHCS M5-0.8x12mm	CLM-30	STCM-4	CBS-6G	TK-02768

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

10 Business Days or Less

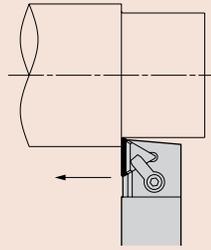
Stocked Standard

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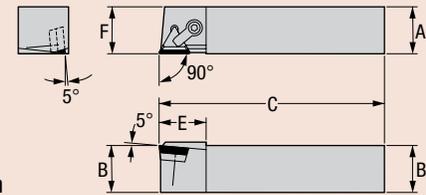


G-CTAPR/L

Style A
Triangle
Positive Rake
90° Lead Angle



Right-Hand
Toolholder Shown



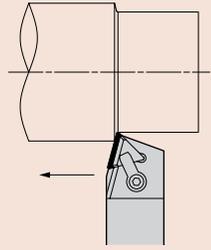
TOOLHOLDERS

Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components					* Tune-Up Kit
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Seat Screw	Clamp	Clamp Screw	Chip Breaker	Includes All Standard Components
G-CTAPR-2020M16	G-CTAPL-2020M16	TPGN-160308	○	○	20	20	150	25	20	TSP-321	TFHCS M3-0.5x10mm	CLM-7	STCM-25	CBT-3G	TK-02773
G-CTAPR-2525M16	G-CTAPL-2525M16	TPGN-160308	○	○	25	25	150	25	25	TSP-321	TFHCS M3-0.5x10mm	CLM-7	STCM-25	CBT-3G	TK-02773
G-CTAPR-3225P16	G-CTAPL-3225P16	TPGN-160308	○	○	25	32	170	25	25	TSP-321	TFHCS M3-0.5x10mm	CLM-7	STCM-25	CBT-3G	TK-02773
G-CTAPR-2525M22	G-CTAPL-2525M22	TPGN-220408	○	○	25	25	150	32	25	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBT-4G	TK-02774
G-CTAPR-3225P22	G-CTAPL-3225P22	TPGN-220408	○	○	25	32	170	32	25	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBT-4G	TK-02774
G-CTAPR-3232P22	G-CTAPL-3232P22	TPGN-220408	○	○	32	32	170	32	32	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBT-4G	TK-02774
G-CTAPR-4040R22	G-CTAPL-4040R22	TPGN-220408	○	○	40	40	200	32	40	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBT-4G	TK-02774
G-CTAPR-2525M27	G-CTAPL-2525M27	TPGN-270612	○	○	25	25	150	35	25	SP-5	TFHCS M4-0.7x12mm	CLM-12	STCM-4	CBT-5G	TK-02775
G-CTAPR-3232P27	G-CTAPL-3232P27	TPGN-270612	○	○	32	32	170	35	32	SP-5	TFHCS M4-0.7x12mm	CLM-12	STCM-4	CBT-5G	TK-02775
G-CTAPR-4040R27	G-CTAPL-4040R27	TPGN-270612	○	○	40	40	200	35	40	SP-5	TFHCS M4-0.7x12mm	CLM-12	STCM-4	CBT-5G	TK-02775
G-CTAPR-4040R33	G-CTAPL-4040R33	TPGN-330924	○	○	40	40	200	40	40	SP-6	TFHCS M5-0.8x12mm	CLM-12	STCM-4	CBT-6G	TK-02776

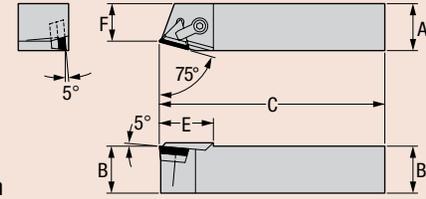
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

G-CTBPR/L

Style B
Triangle
Positive Rake
75° Lead Angle



Right-Hand
Toolholder Shown



Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components					* Tune-Up Kit
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Seat Screw	Clamp	Clamp Screw	Chip Breaker	Includes All Standard Components
G-CTBPR-2020M16	G-CTBPL-2020M16	TPGN-160308	○	○	20	20	150	25	15	TSP-321	TFHCS M3-0.5x10mm	CLM-7	STCM-25	CBT-3G	TK-02773
G-CTBPR-2525M16	G-CTBPL-2525M16	TPGN-160308	○	○	25	25	150	25	21	TSP-321	TFHCS M3-0.5x10mm	CLM-7	STCM-25	CBT-3G	TK-02773
G-CTBPR-3225P16	G-CTBPL-3225P16	TPGN-160308	○	○	25	32	170	25	27	TSP-321	TFHCS M3-0.5x10mm	CLM-7	STCM-25	CBT-3G	TK-02773
G-CTBPR-2525M22	G-CTBPL-2525M22	TPGN-220408	○	○	25	25	150	32	19	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBT-4G	TK-02774
G-CTBPR-3225P22	G-CTBPL-3225P22	TPGN-220408	○	○	25	32	170	32	19	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBT-4G	TK-02774
G-CTBPR-3232P22	G-CTBPL-3232P22	TPGN-220408	○	○	32	32	170	32	26	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBT-4G	TK-02774
G-CTBPR-4040R22	G-CTBPL-4040R22	TPGN-220408	○	○	40	40	200	32	32	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBT-4G	TK-02774
G-CTBPR-2525M27	G-CTBPL-2525M27	TPGN-270612	○	○	25	25	150	40	18	SP-5	TFHCS M4-0.7x12mm	CLM-12	STCM-4	CBT-5G	TK-02775
G-CTBPR-3225P27	G-CTBPL-3225P27	TPGN-270612	○	○	25	32	170	40	18	SP-5	TFHCS M4-0.7x12mm	CLM-12	STCM-4	CBT-5G	TK-02775
G-CTBPR-3232P27	G-CTBPL-3232P27	TPGN-270612	○	○	32	32	170	40	25	SP-5	TFHCS M4-0.7x12mm	CLM-12	STCM-4	CBT-5G	TK-02775
G-CTBPR-4040R27	G-CTBPL-4040R27	TPGN-270612	○	○	40	40	200	40	31	SP-5	TFHCS M4-0.7x12mm	CLM-12	STCM-4	CBT-5G	TK-02775
G-CTBPR-4040R33	G-CTBPL-4040R33	TPGN-330924	○	○	40	40	200	40	30	SP-6	TFHCS M5-0.8x12mm	CLM-12	STCM-4	CBT-6G	TK-02776

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

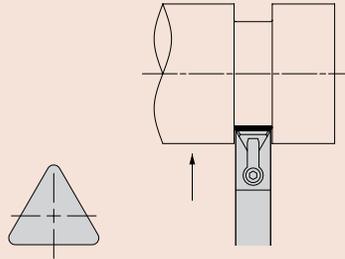
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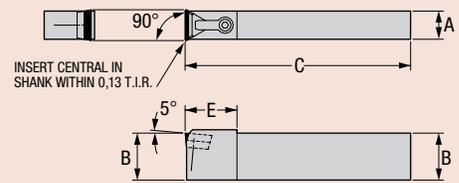


G-CTCPN

Style C
Triangle
Positive Rake
90° Lead Angle



Neutral
Toolholder Shown

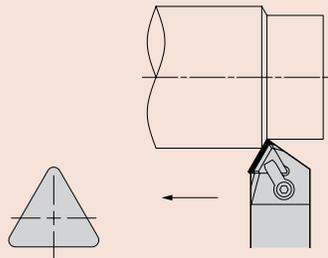


Part Number	Gage	Stock	Dimensions (millimeters)				Standard Components					* Tune-Up Kit
	Insert		N	A	B	C	E	Seat	Seat Screw	Clamp	Clamp Screw	Chip Breaker
G-CTCPN-2512M16	TPGN-160308	○	12	25	150	32	TSP-321	TFHCS M3-0.5x10mm	CLM-22	STCM-26	CBT-3G	TK-02830
G-CTCPN-2520M22	TPGN-220408	●	20	25	150	35	SP-4	TFHCS M3-0.5x12mm	CLM-30	STCM-4	CBT-4G	TK-02831
G-CTCPN-3220P22	TPGN-220408	●	20	32	170	35	SP-4	TFHCS M3-0.5x12mm	CLM-30	STCM-4	CBT-4G	TK-02831
G-CTCPN-4020R22	TPGN-220408	○	20	40	200	35	SP-4	TFHCS M3-0.5x12mm	CLM-30	STCM-4	CBT-4G	TK-02831
G-CTCPN-4025R27	TPGN-270612	○	22	40	200	40	SP-5	TFHCS M5-0.8x12mm	CLM-30	STCM-4	CBT-5G	TK-02832

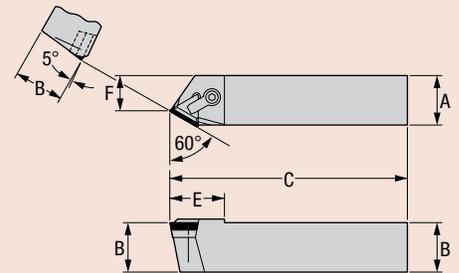
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

G-CTEOR/L

Style E
Triangle
Positive Rake
60° Lead Angle



Right-Hand
Toolholder Shown



Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components					* Tune-Up Kit
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Seat Screw	Clamp	Clamp Screw	Chip Breaker	Includes All Standard Components
G-CTEOR-1616M16	G-CTEOL-1616M16	TPGN-160308	○	○	16	16	150	27	10	TSP-321	TFHCS M3-0.5x10mm	CLM-7	STCM-25	CBT-3G	TK-02773
G-CTEOR-2020M16	G-CTEOL-2020M16	TPGN-160308	○	○	20	20	150	27	13	TSP-321	TFHCS M3-0.5x10mm	CLM-7	STCM-25	CBT-3G	TK-02773
G-CTEOR-2525M16	G-CTEOL-2525M16	TPGN-160308	○	○	25	25	150	27	19	TSP-321	TFHCS M3-0.5x10mm	CLM-7	STCM-25	CBT-3G	TK-02773
G-CTEOR-3225P16	G-CTEOL-3225P16	TPGN-160308	○	○	25	32	170	27	19	TSP-321	TFHCS M3-0.5x10mm	CLM-7	STCM-25	CBT-3G	TK-02773
G-CTEOR-2525M22	G-CTEOL-2525M22	TPGN-220408	○	○	25	25	150	35	16	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBT-4G	TK-02774
G-CTEOR-3225P22	G-CTEOL-3225P22	TPGN-220408	○	○	25	32	170	35	16	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBT-4G	TK-02774
G-CTEOR-3232P22	G-CTEOL-3232P22	TPGN-220408	○	○	32	32	170	35	22	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBT-4G	TK-02774
G-CTEOR-4040R22	G-CTEOL-4040R22	TPGN-220408	○	○	40	40	200	35	29	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBT-4G	TK-02774
G-CTEOR-3232P27	G-CTEOL-3232P27	TPGN-270612	○	○	32	32	170	39	20	SP-5	TFHCS M4-0.7x12mm	CLM-12	STCM-4	CBT-5G	TK-02775
G-CTEOR-4040R27	G-CTEOL-4040R27	TPGN-270612	○	○	40	40	200	39	27	SP-5	TFHCS M4-0.7x12mm	CLM-12	STCM-4	CBT-5G	TK-02775
G-CTEOR-4040R33	G-CTEOL-4040R33	TPGN-330924	○	○	40	40	200	45	24	SP-6	TFHCS M5-0.8x12mm	CLM-12	STCM-4	CBT-6G	TK-02776

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

10 Business Days or Less

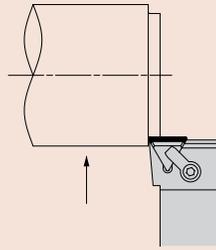
Stocked Standard

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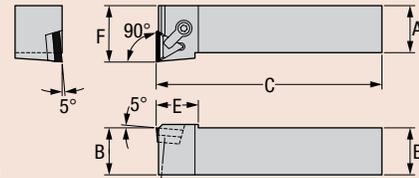


G-CTFPR/L

Style F
Triangle
Positive Rake
90° Lead Angle



Right-Hand
Toolholder Shown



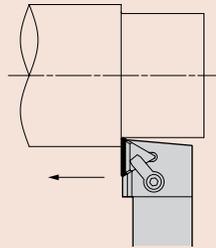
TOOLHOLDERS

Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components					* Tune-Up Kit
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Seat Screw	Clamp	Clamp Screw	Chip Breaker	Includes All Standard Components
G-CTFPR-1616M16	G-CTFPL-1616M16	TPGN-160308	○	○	16	16	150	25	22	TSP-321	TFHCS M3-0.5x10mm	CLM-6	STCM-25	CBT-3G	TK-02787
G-CTFPR-2020M16	G-CTFPL-2020M16	TPGN-160308	○	○	20	20	150	25	25	TSP-321	TFHCS M3-0.5x10mm	CLM-6	STCM-25	CBT-3G	TK-02787
G-CTFPR-2525M16	G-CTFPL-2525M16	TPGN-160308	○	○	25	25	150	25	32	TSP-321	TFHCS M3-0.5x10mm	CLM-6	STCM-25	CBT-3G	TK-02787
G-CTFPR-3225P16	G-CTFPL-3225P16	TPGN-160308	○	○	25	32	170	25	32	TSP-321	TFHCS M3-0.5x10mm	CLM-6	STCM-25	CBT-3G	TK-02787
G-CTFPR-2525M22	G-CTFPL-2525M22	TPGN-220408	○	○	25	25	150	28	32	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBT-4G	TK-02774
G-CTFPR-3225P22	G-CTFPL-3225P22	TPGN-220408	○	○	25	32	170	28	32	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBT-4G	TK-02774
G-CTFPR-3232P22	G-CTFPL-3232P22	TPGN-220408	○	○	32	32	170	28	40	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBT-4G	TK-02774
G-CTFPR-4040R22	G-CTFPL-4040R22	TPGN-220408	○	○	40	40	200	28	50	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBT-4G	TK-02774
G-CTFPR-2525M27	G-CTFPL-2525M27	TPGN-270612	○	○	25	25	150	40	32	SP-5	TFHCS M4-0.7x12mm	CLM-30	STCM-4	CBT-5G	TK-02800
G-CTFPR-3225P27	G-CTFPL-3225P27	TPGN-270612	○	○	25	32	170	40	32	SP-5	TFHCS M4-0.7x12mm	CLM-30	STCM-4	CBT-5G	TK-02800
G-CTFPR-3232P27	G-CTFPL-3232P27	TPGN-270612	○	○	32	32	170	40	40	SP-5	TFHCS M4-0.7x12mm	CLM-30	STCM-4	CBT-5G	TK-02800
G-CTFPR-4040R27	G-CTFPL-4040R27	TPGN-270612	○	○	40	40	200	40	50	SP-5	TFHCS M4-0.7x12mm	CLM-30	STCM-4	CBT-5G	TK-02800
G-CTFPR-4040R33	G-CTFPL-4040R33	TPGN-330924	-	-	40	40	200	40	50	SP-6	TFHCS M5-0.8x12mm	CLM-12	STCM-4	CBT-6G	TK-02776

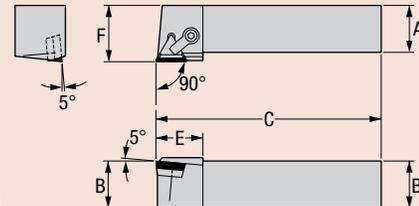
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

G-CTGPR/L

Style G
Triangle
Positive Rake
90° Lead Angle



Right-Hand
Toolholder Shown



Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components					* Tune-Up Kit
Right	Left	Insert	R	L	A	B	C	E	F	Seat	Seat Screw	Clamp	Clamp Screw	Chip Breaker	Includes All Standard Components
G-CTGPR-1616M16	G-CTGPL-1616M16	TPGN-160308	○	○	16	16	150	25	22	TSP-321	TFHCS M3-0.5x10mm	CLM-7	STCM-25	CBT-3G	TK-02773
G-CTGPR-2020M16	G-CTGPL-2020M16	TPGN-160308	○	○	20	20	150	25	25	TSP-321	TFHCS M3-0.5x10mm	CLM-7	STCM-25	CBT-3G	TK-02773
G-CTGPR-2525M16	G-CTGPL-2525M16	TPGN-160308	○	○	25	25	150	25	32	TSP-321	TFHCS M3-0.5x10mm	CLM-7	STCM-25	CBT-3G	TK-02773
G-CTGPR-3225P16	G-CTGPL-3225P16	TPGN-160308	○	○	25	32	170	25	32	TSP-321	TFHCS M3-0.5x10mm	CLM-7	STCM-25	CBT-3G	TK-02773
G-CTGPR-2525M22	G-CTGPL-2525M22	TPGN-220408	○	○	25	25	150	32	32	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBT-4G	TK-02774
G-CTGPR-3225P22	G-CTGPL-3225P22	TPGN-220408	○	○	25	32	170	32	32	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBT-4G	TK-02774
G-CTGPR-3232P22	G-CTGPL-3232P22	TPGN-220408	○	○	32	32	170	32	40	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBT-4G	TK-02774
G-CTGPR-4040R22	G-CTGPL-4040R22	TPGN-220408	○	○	40	40	200	32	50	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	CBT-4G	TK-02774
G-CTGPR-2525M27	G-CTGPL-2525M27	TPGN-270612	○	○	25	25	150	35	32	SP-5	TFHCS M4-0.7x12mm	CLM-12	STCM-4	CBT-5G	TK-02775
G-CTGPR-3225P27	G-CTGPL-3225P27	TPGN-270612	○	○	25	32	170	35	32	SP-5	TFHCS M4-0.7x12mm	CLM-12	STCM-4	CBT-5G	TK-02775
G-CTGPR-3232P27	G-CTGPL-3232P27	TPGN-270612	○	○	32	32	170	35	40	SP-5	TFHCS M4-0.7x12mm	CLM-12	STCM-4	CBT-5G	TK-02775
G-CTGPR-4040R27	G-CTGPL-4040R27	TPGN-270612	○	○	40	40	200	35	50	SP-5	TFHCS M4-0.7x12mm	CLM-12	STCM-4	CBT-5G	TK-02775
G-CTGPR-4040R33	G-CTGPL-4040R33	TPGN-330924	○	○	40	40	200	40	50	SP-6	TFHCS M5-0.8x12mm	CLM-12	STCM-4	CBT-6G	TK-02776

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

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Advanced Ceramic Toolholders

Greenleaf toolholder systems for use with ceramic inserts are based upon industry standard hardware. However, geometry and pocket depth are designed to maximize ceramic performance. Negative tools have a 10° negative side rake rather than the 5° usually found in tools for carbide inserts. This will increase clearance and, in turn, tool life. The additional pocket depth allows for thicker inserts with shims available to adjust the thickness stack-up for thinner tools if necessary.

The standard clamp is the long series to secure the inserts without a hole which is a stronger set-up. (Short clamps are an optional item.) All tools are fully heat-treated alloy steel and are qualified to $\pm 0,07$ on the "F" and "C" dimensions.

Greenleaf has designated a "C" prefix for a ceramic insert toolholder and an "H" prefix for ceramic insert toolholder for hard material machining.

Rough Stuff® Surface Treatment

Greatly improved insert-gripping power for greater accuracy, speed and pocket retention. Available on WG-300®, WG-600®, WG-700™, and GSN100™ ceramics.

U.S. Patent No. 6,712,564 B1

Greenleaf Tune-Up Kits

A Tune-Up Kit consists of all the standard hardware to refurbish a particular toolholder, boring bar, or milling cutter. A toolholder will have a readily visible, laser-inscribed Tune-Up Kit number on it for ease in ordering. This number will prevent any confusion created by searching a catalog for hardware, and it will help reduce downtime.



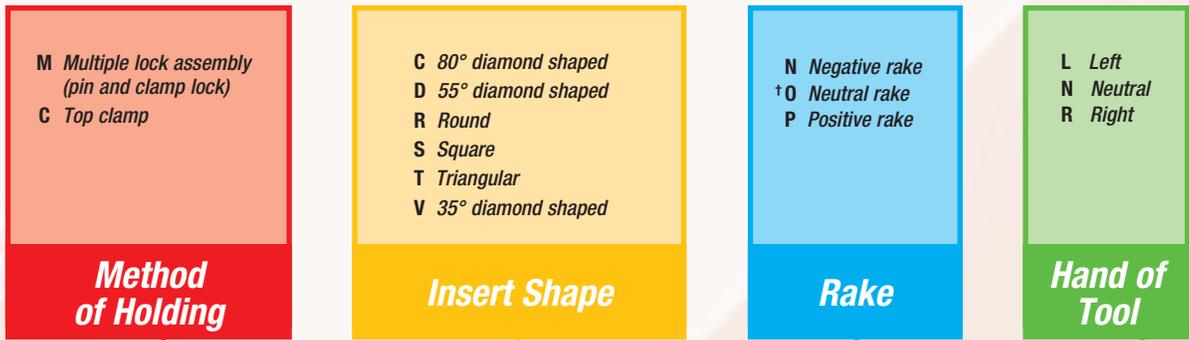
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Toolholder Identification System



G = Industry Standard Toolholder
C = Ceramic Insert Toolholder for heat-resistant alloys
H = Ceramic Insert toolholder for hardened materials

Toolholder Style Prefix †

A Straight shank with 90° side cutting edge angle
B Straight shank with 75° side cutting edge angle
C Straight shank with 90° end cutting edge angle
D Straight shank with 45° side cutting edge angle
E Straight shank with 60° side cutting edge angle
F Offset shank with 90° end cutting edge angle
G Offset shank with 90° side cutting edge angle
†H Offset shank for I.D. threading and shallow grooving
†I Offset shank with 62.5° end cutting edge angle
J Offset shank with negative 93° side cutting edge angle
K Offset shank with 75° end or side cutting edge angle
L Offset shank with negative 95° end or side cutting edge angle

M Straight shank with 40° side cutting edge angle
N Straight shank with 63° side cutting edge angle
†O Straight shank with centrally located round insert
P Straight shank with 62.5° side cutting edge angle
R Offset shank with 75° side cutting edge angle
S Offset shank with 45° side cutting edge angle
†T Offset shank with negative 62.5° side or end cutting edge angle
†U Offset shank for deep grooving
†V Offset shank with negative 72.5° side or end cutting edge angle
W Offset shank with 80° side cutting edge angle

Toolholder Style

† Greenleaf standard.

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Integers to be preceded by 0.
Example: 8mm = 08

**Toolholder
Shank Width**

Cutting Edge Length

32 32 P = 12

Integers to be preceded by 0.
Example: 8mm = 08

**Toolholder
Shank Height**

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

Toolholder Length

NOTE:
All toolholders are qualified to $\pm 0,07$ over gage insert radius on the "C" and "F" dimensions as standard. Some toolholders are qualifiable on the "C" length dimension only.

Advanced Ceramic Toolholder Usage Reference Guide

Toolholder Style

Geometry

Toolholder Application

Insert Geometry

Insert

Tune-Up Kits

C-MCKNR/L
Style K
80° Diamond
(Using 100° Corner)
Negative Rake, 15° Lead

Part Number	Gage	Stock	Dimensions (millimeters)	Standard Components	Tune-Up Kit	Optional Components
Right	Left	Insert	R L A B C E F	Shim Seat Clamp Lock Pin	Includes All Standard Components	Shim Seat
C-MCKNR-2525M12	C-MCKNR-2525M12	CNDR-120428	25 25 150 32 32	C26-433 S-40M CLM-12 ST2M-4	TK-02750	NLM-46L CLM-9 C26-433
C-MCKNR-2525P12	C-MCKNR-2525P12	CNDR-120428	25 25 170 38 32	C26-433 S-40M CLM-12 ST2M-4	TK-02750	NLM-46L CLM-9 C26-433
C-MCKNR-2525F12	C-MCKNR-2525F12	CNDR-120428	32 32 170 38 48	C26-443 S-40M CLM-30 ST2M-4	TK-02750	NLM-46L CLM-9 C26-433
C-MCKNR-2525P19	C-MCKNR-2525P19	CNDR-190612	32 32 170 38 48	C26-443 S-40M CLM-30 ST2M-4	TK-02751	NLM-46L CLM-12 C26-433
C-MCKNR-4040F19	C-MCKNR-4040F19	CNDR-190612	40 40 200 38 52	C26-443 S-40M CLM-30 ST2M-4	TK-02751	NLM-46L CLM-12 C26-433

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

C-MCRNR/L
Style R
80° Diamond
(Using 100° Corner)
Negative Rake, 15° Lead

Part Number	Gage	Stock	Dimensions (millimeters)	Standard Components	Tune-Up Kit	Optional Components
Right	Left	Insert	R L A B C E F	Shim Seat Clamp Lock Pin	Includes All Standard Components	Shim Seat
C-MCRNR-2525M12	C-MCRNR-2525M12	CNDR-120428	25 25 150 32 32	C26-433 S-40M CLM-12 ST2M-4	TK-02750	NLM-46L CLM-9 C26-433
C-MCRNR-2525P12	C-MCRNR-2525P12	CNDR-120428	25 25 170 38 32	C26-433 S-40M CLM-12 ST2M-4	TK-02750	NLM-46L CLM-9 C26-433
C-MCRNR-2525F12	C-MCRNR-2525F12	CNDR-120428	32 32 170 38 48	C26-443 S-40M CLM-30 ST2M-4	TK-02750	NLM-46L CLM-9 C26-433
C-MCRNR-2525P19	C-MCRNR-2525P19	CNDR-190612	32 32 170 38 48	C26-443 S-40M CLM-30 ST2M-4	TK-02751	NLM-46L CLM-12 C26-433
C-MCRNR-4040F19	C-MCRNR-4040F19	CNDR-190612	40 40 200 38 52	C26-443 S-40M CLM-30 ST2M-4	TK-02751	NLM-46L CLM-12 C26-433

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

C-MCLNR/L
Style L
80° Diamond
Negative Rake
Reverse Lead

Part Number	Gage	Stock	Dimensions (millimeters)	Standard Components	Tune-Up Kit	Optional Components
Right	Left	Insert	R L A B C E F	Shim Seat Clamp Lock Pin	Includes All Standard Components	Shim Seat
C-MCLNR-2525M12	C-MCLNR-2525M12	CNDR-120428	25 25 150 32 32	C26-433 S-40M CLM-12 ST2M-4	TK-02750	NLM-46L CLM-9 C26-433
C-MCLNR-2525P12	C-MCLNR-2525P12	CNDR-120428	25 25 170 38 32	C26-433 S-40M CLM-12 ST2M-4	TK-02750	NLM-46L CLM-9 C26-433
C-MCLNR-2525F12	C-MCLNR-2525F12	CNDR-120428	32 32 170 38 48	C26-443 S-40M CLM-30 ST2M-4	TK-02750	NLM-46L CLM-9 C26-433
C-MCLNR-2525P19	C-MCLNR-2525P19	CNDR-190612	32 32 170 38 48	C26-443 S-40M CLM-30 ST2M-4	TK-02751	NLM-46L CLM-12 C26-433
C-MCLNR-4040F19	C-MCLNR-4040F19	CNDR-190612	40 40 200 38 52	C26-443 S-40M CLM-30 ST2M-4	TK-02751	NLM-46L CLM-12 C26-433

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

C-MCSNR/L
Style S
80° Diamond
(Using 100° Corner)
Negative Rake, 45° Lead

Part Number	Gage	Stock	Dimensions (millimeters)	Standard Components	Tune-Up Kit	Optional Components
Right	Left	Insert	R L A B C E F	Shim Seat Clamp Lock Pin	Includes All Standard Components	Shim Seat
C-MCSNR-2525M12	C-MCSNR-2525M12	CNDR-120428	25 25 150 32 32	C26-433 S-40M CLM-12 ST2M-4	TK-02750	NLM-46L CLM-9 C26-433
C-MCSNR-2525P12	C-MCSNR-2525P12	CNDR-120428	25 25 170 38 32	C26-433 S-40M CLM-12 ST2M-4	TK-02750	NLM-46L CLM-9 C26-433
C-MCSNR-2525F12	C-MCSNR-2525F12	CNDR-120428	32 32 170 38 48	C26-443 S-40M CLM-30 ST2M-4	TK-02750	NLM-46L CLM-9 C26-433
C-MCSNR-2525P19	C-MCSNR-2525P19	CNDR-190612	32 32 170 38 48	C26-443 S-40M CLM-30 ST2M-4	TK-02751	NLM-46L CLM-12 C26-433
C-MCSNR-4040F19	C-MCSNR-4040F19	CNDR-190612	40 40 200 38 52	C26-443 S-40M CLM-30 ST2M-4	TK-02751	NLM-46L CLM-12 C26-433

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

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Part Number

Dimensions

Optional Components

Standard Components

Stocking Program

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80°/100° Diamond – Negative

C-MCKNR/L
Style K
80° Diamond
(Using 100° Corner)
Negative Rake
75° Lead Angle
page: T 104

C-MCLNR/L
Style L
80° Diamond
Negative Rake
95° Lead Angle
page: T 104

C-MCRNR/L
Style R
80° Diamond
(Using 100° Corner)
Negative Rake
75° Lead Angle
page: T 105

C-MCSNR/L
Style S
80° Diamond
(Using 100° Corner)
Negative Rake
45° Lead Angle
page: T 105

55° Diamond – Negative

C-MDJNR/L
Style J
55° Diamond
Negative Rake
93° Lead Angle
page: T 106

C-MDPNN
Style P
55° Diamond
Negative Rake
72.5° Lead Angle
page: T 106

Round – Negative

C-MRGNR/L
Style G
Round
Negative Rake
page: T 107

C-MRDNN
Style D
Round
Negative Rake
page: T 107

Square – Negative

C-MSKNR/L
Style K
Square
Negative Rake
75° Lead Angle
page: T 108

C-MSRNR/L
Style R
Square
Negative Rake
75° Lead Angle
page: T 108

C-MSSNR/L
Style S
Square
Negative Rake
45° Lead Angle
page: T 109

Triangle – Negative

C-MTFNR/L
Style F
Triangle
Negative Rake
90° Lead Angle
page: T 110

C-MTGNR/L
Style G
Triangle
Negative Rake
90° Lead Angle
page: T 110

C-MTLNR/L
Style L
Triangle
Negative Rake
95° Lead Angle
page: T 111

Trigon – Negative

C-MWLNR/L
Style L
Trigon
Negative Rake
95° Lead Angle
page: T 111

Hard-Turning – Negative

H-MCLNR/L
Style L
80° Diamond
Negative Rake
95° Lead Angle
page: T 112

H-MRGNR/L
Style G
Round
Negative Rake
page: T 112

H-MSRNR/L
Style R
Square
Negative Rake
75° Lead Angle
page: T 113

H-MWLNR/L
Style L
Trigon
Negative Rake
95° Lead Angle
page: T 113

80°/100° Diamond – Positive

C-CCKPR/L
Style K
80° Diamond
(Using 100° Corner)
Positive Rake
75° Lead Angle
page: T 114

C-CCLPR/L
Style L
80° Diamond
Positive Rake
95° Lead Angle
page: T 114

C-CCRPR/L
Style R
80° Diamond
(Using 100° Corner)
Positive Rake
75° Lead Angle
page: T 114

80°/100° Diamond – Positive *continued*

C-CCSPR/L
Style S
80° Diamond
(Using 100° Corner)
Positive Rake
45° Lead Angle
page: T 115

Round – Positive

C-CRGPRL
Style G
Round
Positive Rake
page: T 115

Square – Positive

C-CSDPN
Style D
Square
Positive Rake
45° Lead Angle
page: T 116

C-CSKPR/L
Style K
Square
Positive Rake
75° Lead Angle
page: T 116

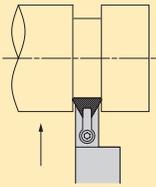
C-CSRPR/L
Style R
Square
Positive Rake
75° Lead Angle
page: T 117

C-CSSPR/L
Style S
Square
Positive Rake
45° Lead Angle
page: T 117

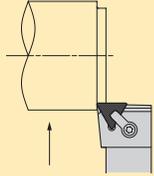
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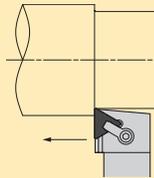
Triangle – Positive



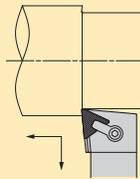
C-CTCPR/L
 Style C
 Triangle
 Positive Rake
 90° Lead Angle
page: T 118



C-CTFPR/L
 Style F
 Triangle
 Positive Rake
 90° Lead Angle
page: T 118



C-CTGPR/L
 Style G
 Triangle
 Positive Rake
 90° Lead Angle
page: T 119



C-CTLPR/L
 Style L
 Triangle
 Positive Rake
 95° Lead Angle
page: T 119

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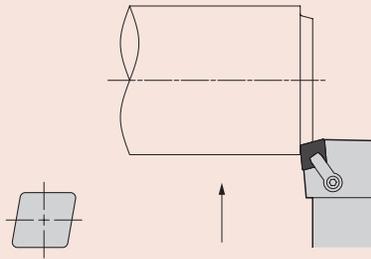
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80°

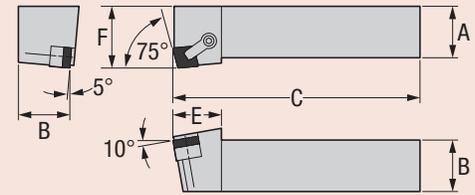


C-MCKNR/L

Style K, 80° Diamond
(Using 100° Corner)
Negative Rake
75° Lead Angle



Right-Hand
Toolholder Shown

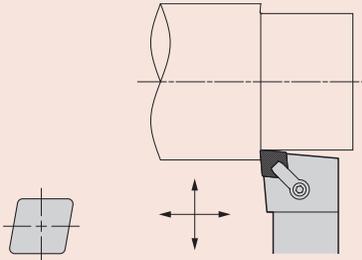


Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components		
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components	Lock Pin	Clamp	7.92 Insert Shim Seat
C-MCKNR-2525M12	C-MCKNL-2525M12	CNGN-120408	○	○	25	25	150	30	32	CSN-453	S-46M	CLM-12	STCM-4	TK-02750	NLM-46L	CLM-9	CSN-433
C-MCKNR-2525P12	C-MCKNL-2525P12	CNGN-120408	●	●	25	25	170	30	32	CSN-453	S-46M	CLM-12	STCM-4	TK-02750	NLM-46L	CLM-9	CSN-433
C-MCKNR-3232P12	C-MCKNL-3232P12	CNGN-120408	●	●	32	32	170	30	40	CSN-453	S-46M	CLM-12	STCM-4	TK-02750	NLM-46L	CLM-9	CSN-433
C-MCKNR-3232P19	C-MCKNL-3232P19	CNGN-190612	○	○	32	32	170	36	40	CSN-643	S-68M	CLM-30	STCM-4	TK-02751	NLM-68L	CLM-12	CSN-633
C-MCKNR-4040R19	C-MCKNL-4040R19	CNGN-190612	○	○	40	40	200	36	50	CSN-643	S-68M	CLM-30	STCM-4	TK-02751	NLM-68L	CLM-12	CSN-633

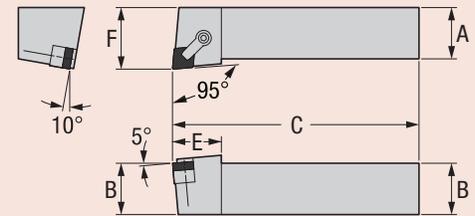
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

C-MCLNR/L

Style L
80° Diamond
Negative Rake
95° Lead Angle



Right-Hand
Toolholder Shown

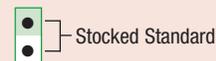


Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components		
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components	Lock Pin	Clamp	7.92 Insert Shim Seat
C-MCLNR-2525M12	C-MCLNL-2525M12	CNGN-120408	○	○	25	25	150	30	32	CSN-453	S-46M	CLM-12	STCM-4	TK-02750	NLM-46L	CLM-9	CSN-433
C-MCLNR-2525P12	C-MCLNL-2525P12	CNGN-120408	●	●	25	25	170	30	32	CSN-453	S-46M	CLM-12	STCM-4	TK-02750	NLM-46L	CLM-9	CSN-433
C-MCLNR-3232P12	C-MCLNL-3232P12	CNGN-120408	●	●	32	32	170	30	40	CSN-453	S-46M	CLM-12	STCM-4	TK-02750	NLM-46L	CLM-9	CSN-433
C-MCLNR-3232P19	C-MCLNL-3232P19	CNGN-190612	○	○	32	32	170	40	40	CSN-643	S-68M	CLM-30	STCM-4	TK-02751	NLM-68L	CLM-12	CSN-633
C-MCLNR-4040R19	C-MCLNL-4040R19	CNGN-190612	○	○	40	40	200	40	50	CSN-643	S-68M	CLM-30	STCM-4	TK-02751	NLM-68L	CLM-12	CSN-633

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

Greenleaf Sales

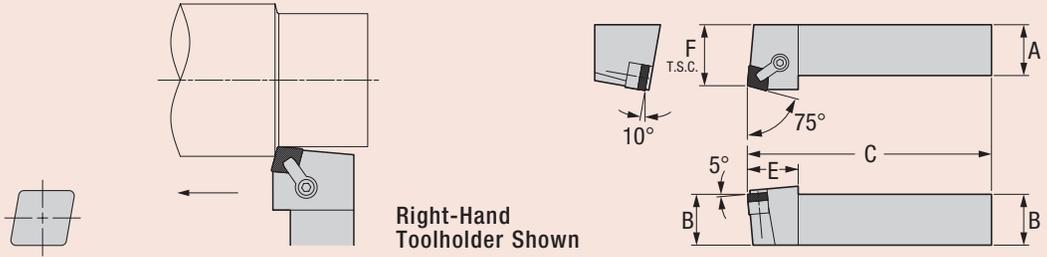
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CERAMIC TOOLHOLDERS

C-MCRNR/L

Style R, 80° Diamond
(Using 100° Corner)
Negative Rake
75° Lead Angle

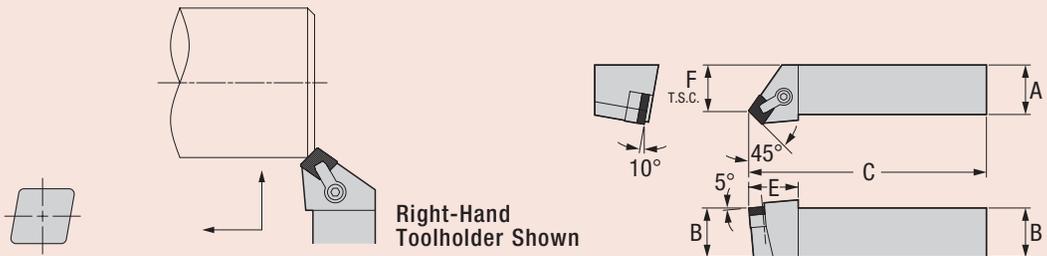


Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components		
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components	Lock Pin	Clamp	7.92 Insert Shim Seat
C-MCRNR-2525M12	C-MCRNL-2525M12	CNGN-120408	○	○	25	25	150	32	32	CSN-453	S-46M	CLM-12	STCM-4	TK-02750	NLM-46L	CLM-9	CSN-433
C-MCRNR-2525P12	C-MCRNL-2525P12	CNGN-120408	●	●	25	25	170	32	32	CSN-453	S-46M	CLM-12	STCM-4	TK-02750	NLM-46L	CLM-9	CSN-433
C-MCRNR-3232P12	C-MCRNL-3232P12	CNGN-120408	●	●	32	32	170	32	40	CSN-453	S-46M	CLM-12	STCM-4	TK-02750	NLM-46L	CLM-9	CSN-433
C-MCRNR-3232P19	C-MCRNL-3232P19	CNGN-190612	○	○	32	32	170	38	40	CSN-643	S-68M	CLM-30	STCM-4	TK-02751	NLM-68L	CLM-12	CSN-633
C-MCRNR-4040R19	C-MCRNL-4040R19	CNGN-190612	○	○	40	40	200	38	50	CSN-643	S-68M	CLM-30	STCM-4	TK-02751	NLM-68L	CLM-12	CSN-633

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

C-MCSNR/L

Style S, 80° Diamond
(Using 100° Corner)
Negative Rake
45° Lead Angle



Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components		
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components	Lock Pin	Clamp	7.92 Insert Shim Seat
C-MCSNR-2525M12	C-MCSNL-2525M12	CNGN-120408	○	○	25	25	150	32	23	CSN-453	S-46M	CLM-12	STCM-4	TK-02750	NLM-46L	CLM-9	CSN-433
C-MCSNR-2525P12	C-MCSNL-2525P12	CNGN-120408	○	○	25	25	170	32	23	CSN-453	S-46M	CLM-12	STCM-4	TK-02750	NLM-46L	CLM-9	CSN-433
C-MCSNR-3232P12	C-MCSNL-3232P12	CNGN-120408	○	○	32	32	170	32	29	CSN-453	S-46M	CLM-12	STCM-4	TK-02750	NLM-46L	CLM-9	CSN-433
C-MCSNR-3232P19	C-MCSNL-3232P19	CNGN-190612	○	○	32	32	170	38	25	CSN-643	S-68M	CLM-30	STCM-4	TK-02751	NLM-68L	CLM-12	CSN-633
C-MCSNR-4040R19	C-MCSNL-4040R19	CNGN-190612	○	○	40	40	200	38	38	CSN-643	S-68M	CLM-30	STCM-4	TK-02751	NLM-68L	CLM-12	CSN-633

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

10 Business Days or Less

Stocked Standard

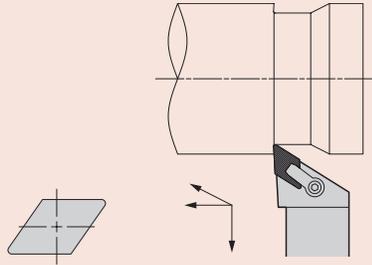
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55°

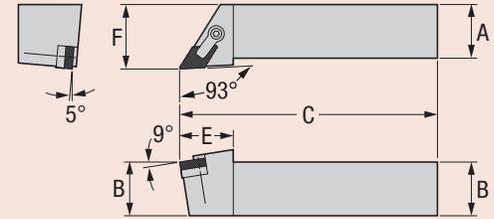


C-MDJNR/L

Style J
55° Diamond
Negative Rake
93° Lead Angle



Right-Hand
Toolholder Shown

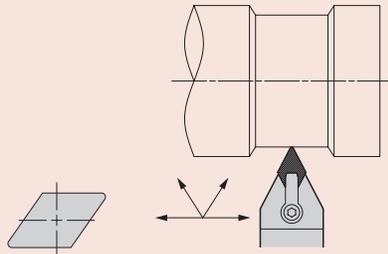


Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components	
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components	Lock Pin	Clamp
C-MDJNR-2525M11	C-MDJNL-2525M11	DNGN-110308	○	○	25	25	150	25	32	DSN-333	S-34M	CLM-7	STCM-25	TK-02788	NLM-34L	CLM-6
C-MDJNR-2525P11	C-MDJNL-2525P11	DNGN-110308	○	○	25	25	170	25	32	DSN-333	S-34M	CLM-7	STCM-25	TK-02788	NLM-34L	CLM-6
C-MDJNR-3232P11	C-MDJNL-3232P11	DNGN-110308	○	○	32	32	170	25	40	DSN-333	S-34M	CLM-7	STCM-25	TK-02788	NLM-34L	CLM-6
C-MDJNR-2525M15	C-MDJNL-2525M15	DNGN-150408	○	○	25	25	150	32	32	DSN-433	S-46M	CLM-22	STCM-26	TK-02789	NLM-46	CLM-20
C-MDJNR-2525P15	C-MDJNL-2525P15	DNGN-150408	●	●	25	25	170	32	32	DSN-433	S-46M	CLM-22	STCM-26	TK-02789	NLM-46	CLM-20
C-MDJNR-3232P15	C-MDJNL-3232P15	DNGN-150408	●	●	32	32	170	32	40	DSN-433	S-46M	CLM-22	STCM-26	TK-02789	NLM-46	CLM-20
C-MDJNR-4040R15	C-MDJNL-4040R15	DNGN-150408	○	○	40	40	200	32	50	DSN-433	S-46M	CLM-22	STCM-26	TK-02789	NLM-46	CLM-20

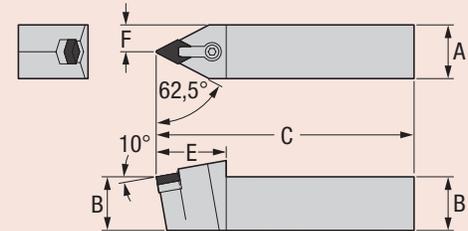
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

C-MDPNN

Style P
55° Diamond
Negative Rake
62,5° Lead Angle



Neutral
Toolholder Shown



Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components	
Neutral		Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components	Lock Pin	Clamp
C-MDPNN-2525M11		DNGN-110308	○		25	25	150	40	12,5	DSN-333	S-34M	CLM-12	STCM-4	TK-02785	NLM-34L	CLM-9
C-MDPNN-2525P11		DNGN-110308	○		25	25	170	40	12,5	DSN-333	S-34M	CLM-12	STCM-4	TK-02785	NLM-34L	CLM-9
C-MDPNN-3232P11		DNGN-110308	○		32	32	170	40	16	DSN-333	S-34M	CLM-12	STCM-4	TK-02785	NLM-34L	CLM-9
C-MDPNN-2525M15		DNGN-150408	○		25	25	150	41	12,5	DSN-433	S-46M	CLM-30	STCM-4	TK-02786	NLM-46L	CLM-12
C-MDPNN-2525P15		DNGN-150408	●		25	25	170	41	12,5	DSN-433	S-46M	CLM-30	STCM-4	TK-02786	NLM-46L	CLM-12
C-MDPNN-3232P15		DNGN-150408	●		32	32	170	41	16	DSN-433	S-46M	CLM-30	STCM-4	TK-02786	NLM-46L	CLM-12
C-MDPNN-4040R15		DNGN-150408	○		40	40	200	41	20	DSN-433	S-46M	CLM-30	STCM-4	TK-02786	NLM-46L	CLM-12

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

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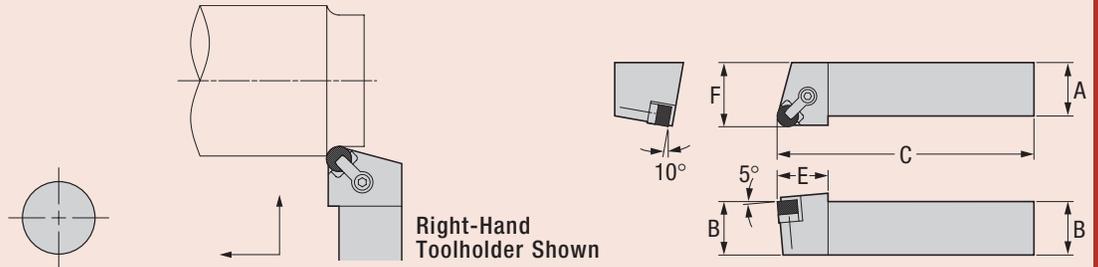
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C-MRGNR/L

Style G
Round
Negative Rake

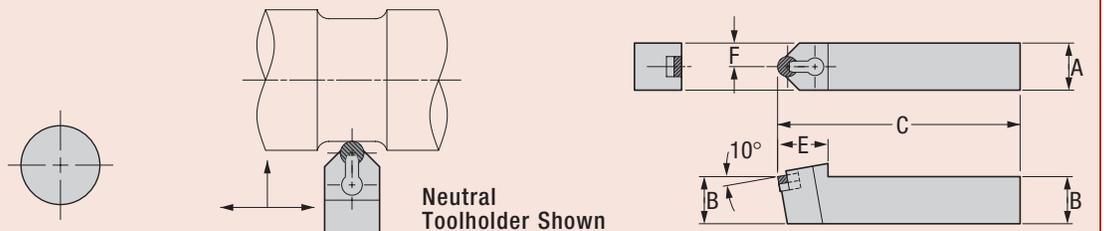


Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit Includes All Std. Components	Optional Components #1		Optional Components #2	
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw		Lock Pin	Clamp	Ins. Thk.	Shim Seat
C-MRGNR-2525M09	C-MRGNL-2525M09	RNGN-090400	○	○	25	25	150	25	32	RSN-32	S-34M	CLM-7	STCM-25	TK-02790	NLM-34L	CLM-6	3,18	RSN-33
C-MRGNR-2525P09	C-MRGNL-2525P09	RNGN-090400	○	○	25	25	170	25	32	RSN-32	S-34M	CLM-7	STCM-25	TK-02790	NLM-34L	CLM-6	3,18	RSN-33
C-MRGNR-3232P09	C-MRGNL-3232P09	RNGN-090400	○	○	32	32	170	25	40	RSN-32	S-34M	CLM-7	STCM-25	TK-02790	NLM-34L	CLM-6	3,18	RSN-33
C-MRGNR-2525M12	C-MRGNL-2525M12	RNGN-120700	○	○	25	25	150	30	32	IRSN-43	S-46M	CLM-12	STCM-4	TK-02791	NLM-46L	CLM-9	4,75	IRSN-45
C-MRGNR-2525P12	C-MRGNL-2525P12	RNGN-120700	●	●	25	25	170	30	32	IRSN-43	S-46M	CLM-12	STCM-4	TK-02791	NLM-46L	CLM-9	4,75	IRSN-45
C-MRGNR-3232P12	C-MRGNL-3232P12	RNGN-120700	●	●	32	32	170	30	40	IRSN-43	S-46M	CLM-12	STCM-4	TK-02791	NLM-46L	CLM-9	4,75	IRSN-45
C-MRGNR-4040R12	C-MRGNL-4040R12	RNGN-120700	○	○	40	40	200	30	50	IRSN-43	S-46M	CLM-12	STCM-4	TK-02791	NLM-46L	CLM-9	4,75	IRSN-45
C-MRGNR-2525M19	C-MRGNL-2525M19	RNGN-190700	○	○	25	25	150	38	32	RSN-63	S-68M	CLM-30	STCM-4	TK-02792	NLM-68L	CLM-12	-	-
C-MRGNR-2525P19	C-MRGNL-2525P19	RNGN-190700	○	○	25	25	170	38	32	RSN-63	S-68M	CLM-30	STCM-4	TK-02792	NLM-68L	CLM-12	-	-
C-MRGNR-3232P19	C-MRGNL-3232P19	RNGN-190700	○	○	32	32	170	38	40	RSN-63	S-68M	CLM-30	STCM-4	TK-02792	NLM-68L	CLM-12	-	-
C-MRGNR-4040R19	C-MRGNL-4040R19	RNGN-190700	○	○	40	40	200	38	50	RSN-63	S-68M	CLM-30	STCM-4	TK-02792	NLM-68L	CLM-12	-	-

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

C-MRDNN

Style D
Round
Negative Rake



Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit Includes All Standard Components	Optional Components #1		Optional Components #2	
Neutral	Insert	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw		Lock Pin	Clamp	Insert Thcknss	Shim Seat
C-MRDNN-2525M09	RNGN-090400	RNGN-090400	○	○	25	25	150	25	12,5	RSN-32	S-34M	CLM-7	STCM-25	TK-02790	NLM-34L	CLM-6	3,18	RSN-33
C-MRDNN-2525P09	RNGN-090400	RNGN-090400	○	○	25	25	170	25	12,5	RSN-32	S-34M	CLM-7	STCM-25	TK-02790	NLM-34L	CLM-6	3,18	RSN-33
C-MRDNN-3232P09	RNGN-090400	RNGN-090400	○	○	32	32	170	25	16	RSN-32	S-34M	CLM-7	STCM-25	TK-02790	NLM-34L	CLM-6	3,18	RSN-33
C-MRDNN-2525M12	RNGN-120700	RNGN-120700	○	○	25	25	150	35	12,5	IRSN-43	S-46M	CLM-12	STCM-4	TK-02791	NLM-46L	CLM-9	4,75	IRSN-45
C-MRDNN-2525P12	RNGN-120700	RNGN-120700	●	●	25	25	170	35	12,5	IRSN-43	S-46M	CLM-12	STCM-4	TK-02791	NLM-46L	CLM-9	4,75	IRSN-45
C-MRDNN-3232P12	RNGN-120700	RNGN-120700	●	●	32	32	170	35	16	IRSN-43	S-46M	CLM-12	STCM-4	TK-02791	NLM-46L	CLM-9	4,75	IRSN-45
C-MRDNN-4040R12	RNGN-120700	RNGN-120700	○	○	40	40	200	35	20	IRSN-43	S-46M	CLM-12	STCM-4	TK-02791	NLM-46L	CLM-9	4,75	IRSN-45
C-MRDNN-2525M19	RNGN-190700	RNGN-190700	○	○	25	25	150	40	12,5	RSN-63	S-68M	CLM-30	STCM-4	TK-02792	NLM-68L	CLM-12	-	-
C-MRDNN-2525P19	RNGN-190700	RNGN-190700	○	○	25	25	170	40	12,5	RSN-63	S-68M	CLM-30	STCM-4	TK-02792	NLM-68L	CLM-12	-	-
C-MRDNN-3232P19	RNGN-190700	RNGN-190700	○	○	32	32	170	40	16	RSN-63	S-68M	CLM-30	STCM-4	TK-02792	NLM-68L	CLM-12	-	-
C-MRDNN-4040R19	RNGN-190700	RNGN-190700	○	○	40	40	200	40	20	RSN-63	S-68M	CLM-30	STCM-4	TK-02792	NLM-68L	CLM-12	-	-

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

10 Business Days or Less

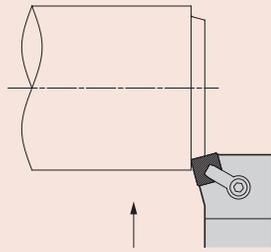
Stocked Standard

90°

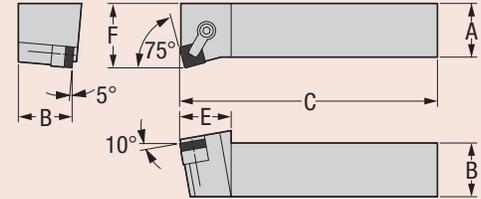


C-MSKNR/L

Style K
Square
Negative Rake
75° Lead Angle



Right-Hand
Toolholder Shown



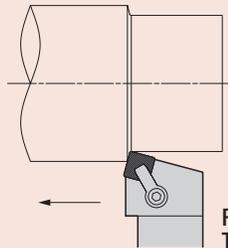
Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components		
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components	Lock Pin	Clamp	7,92 Insert Shim Seat
C-MSKNR-2525M12	C-MSKNL-2525M12	SNGN-120408	○	○	25	25	150	31	32	ISSN-453	S-46M	CLM-12	STCM-4	TK-02793	NLM-46L	CLM-9	ISSN-433
C-MSKNR-2525P12	C-MSKNL-2525P12	SNGN-120408	●	●	25	25	170	31	32	ISSN-453	S-46M	CLM-12	STCM-4	TK-02793	NLM-46L	CLM-9	ISSN-433
C-MSKNR-3232P12	C-MSKNL-3232P12	SNGN-120408	●	●	32	32	170	31	40	ISSN-453	S-46M	CLM-12	STCM-4	TK-02793	NLM-46L	CLM-9	ISSN-433
C-MSKNR-3232P15	C-MSKNL-3232P15	SNGN-150612	○	○	32	32	170	36	40	SSN-533	S-58M	CLM-12	STCM-4	TK-02794	NLM-58	CLM-9	-
C-MSKNR-4040R15	C-MSKNL-4040R15	SNGN-150612	○	○	40	40	200	36	50	SSN-533	S-58M	CLM-12	STCM-4	TK-02794	NLM-58	CLM-9	-
C-MSKNR-3232P19	C-MSKNL-3232P19	SNGN-190612	○	○	32	32	170	40	40	ISSN-633	S-68M	CLM-30	STCM-4	TK-02795	NLM-68	CLM-12	**ISSN-623
C-MSKNR-4040R19	C-MSKNL-4040R19	SNGN-190612	○	○	40	40	200	40	50	ISSN-633	S-68M	CLM-30	STCM-4	TK-02795	NLM-68	CLM-12	**ISSN-623

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

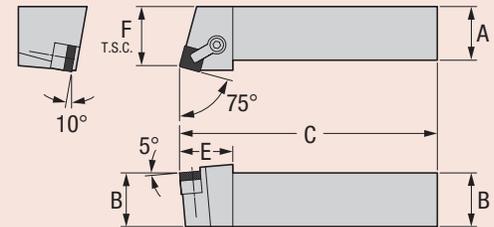
** The lock pin option can NOT be used with this shim.

C-MSRNR/L

Style R
Square
Negative Rake
75° Lead Angle



Right-Hand
Toolholder Shown



Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components		
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components	Lock Pin	Clamp	7,92 Insert Shim Seat
C-MSRNR-2525M12	C-MSRNL-2525M12	SNGN-120408	○	○	25	25	150	31	28	ISSN-453	S-46M	CLM-12	STCM-4	TK-02793	NLM-46L	CLM-9	ISSN-433
C-MSRNR-2525P12	C-MSRNL-2525P12	SNGN-120408	○	○	25	25	170	31	28	ISSN-453	S-46M	CLM-12	STCM-4	TK-02793	NLM-46L	CLM-9	ISSN-433
C-MSRNR-3232P12	C-MSRNL-3232P12	SNGN-120408	○	○	32	32	170	31	39	ISSN-453	S-46M	CLM-12	STCM-4	TK-02793	NLM-46L	CLM-9	ISSN-433
C-MSRNR-3232P15	C-MSRNL-3232P15	SNGN-150612	○	○	32	32	170	37	34	SSN-533	S-58M	CLM-12	STCM-4	TK-02794	NLM-58	CLM-9	-
C-MSRNR-4040R15	C-MSRNL-4040R15	SNGN-150612	○	○	40	40	200	37	47	SSN-533	S-58M	CLM-12	STCM-4	TK-02794	NLM-58	CLM-9	-
C-MSRNR-3232P19	C-MSRNL-3232P19	SNGN-190612	○	○	32	32	170	40	33	ISSN-633	S-68M	CLM-30	STCM-4	TK-02795	NLM-68	CLM-12	**ISSN-623
C-MSRNR-4040R19	C-MSRNL-4040R19	SNGN-190612	○	○	40	40	200	40	46	ISSN-633	S-68M	CLM-30	STCM-4	TK-02795	NLM-68	CLM-12	**ISSN-623

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

** The lock pin option can NOT be used with this shim.

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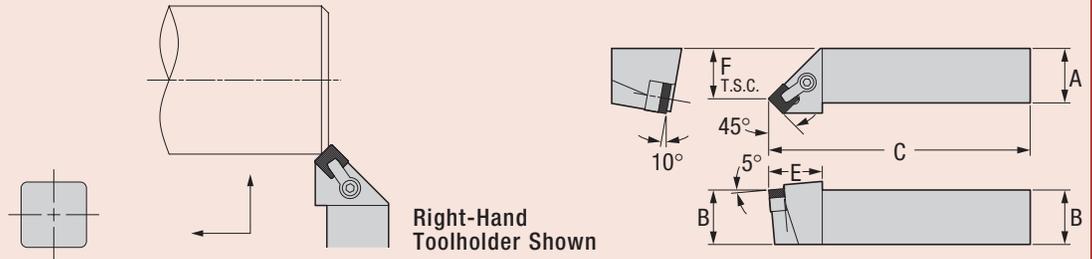
Stocked Standard



10 Business Days or Less

C-MSSNR/L

Style S
Square
Negative Rake
45° Lead Angle



Right-Hand Toolholder Shown

Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components		
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components	Lock Pin	Clamp	7,92 Insert Shim Seat
C-MSSNR-2525M12	C-MSSNL-2525M12	SNGN-120408	○	○	25	25	150	31	23	ISSN-453	S-46M	CLM-12	STCM-4	TK-02793	NLM-46L	CLM-9	ISSN-433
C-MSSNR-2525P12	C-MSSNL-2525P12	SNGN-120408	●	●	25	25	170	31	23	ISSN-453	S-46M	CLM-12	STCM-4	TK-02793	NLM-46L	CLM-9	ISSN-433
C-MSSNR-3232P12	C-MSSNL-3232P12	SNGN-120408	●	●	32	32	170	31	29	ISSN-453	S-46M	CLM-12	STCM-4	TK-02793	NLM-46L	CLM-9	ISSN-433
C-MSSNR-3232P15	C-MSSNL-3232P15	SNGN-150612	○	○	32	32	170	35	27	SSN-533	S-58M	CLM-12	STCM-4	TK-02794	NLM-58	CLM-9	-
C-MSSNR-4040R15	C-MSSNL-4040R15	SNGN-150612	○	○	40	40	200	35	40	SSN-533	S-58M	CLM-12	STCM-4	TK-02794	NLM-58	CLM-9	-
C-MSSNR-3232P19	C-MSSNL-3232P19	SNGN-190612	○	○	32	32	170	38	25	ISSN-633	S-68M	CLM-30	STCM-4	TK-02795	NLM-68	CLM-12	**ISSN-623
C-MSSNR-4040R19	C-MSSNL-4040R19	SNGN-190612	○	○	40	40	200	38	40	ISSN-633	S-68M	CLM-30	STCM-4	TK-02795	NLM-68	CLM-12	**ISSN-623

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

** The lock pin option can NOT be used with this shim.

10 Business Days or Less

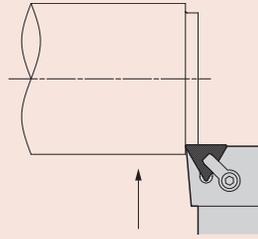
Stocked Standard

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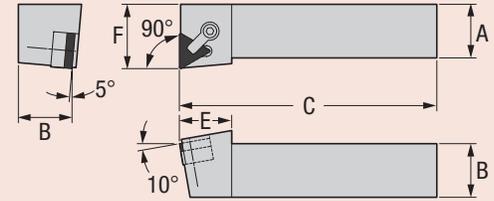


C-MTFNR/L

Style F
Triangle
Negative Rake
90° Lead Angle



Right-Hand
Toolholder Shown

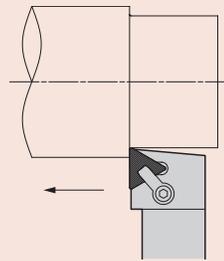


Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components		
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components	Lock Pin	Clamp	7,92 Insert Shim Seat
C-MTFNR-2525M16	C-MTFNL-2525M16	TNGN-160408	○	○	25	25	150	24	32	ITSN-322	S-34M	CLM-7	STCM-25	TK-02809	NLM-34L	CLM-6	-
C-MTFNR-2525P16	C-MTFNL-2525P16	TNGN-160408	○	○	25	25	170	24	32	ITSN-322	S-34M	CLM-7	STCM-25	TK-02809	NLM-34L	CLM-6	-
C-MTFNR-3232P16	C-MTFNL-3232P16	TNGN-160408	○	○	32	32	170	24	40	ITSN-322	S-34M	CLM-7	STCM-25	TK-02809	NLM-34L	CLM-6	-
C-MTFNR-2525M22	C-MTFNL-2525M22	TNGN-220408	○	○	25	25	150	30	32	ITSN-453	S-46M	CLM-12	STCM-4	TK-02810	NLM-46L	CLM-9	ITSN-433
C-MTFNR-2525P22	C-MTFNL-2525P22	TNGN-220408	○	○	25	25	170	30	32	ITSN-453	S-46M	CLM-12	STCM-4	TK-02810	NLM-46L	CLM-9	ITSN-433
C-MTFNR-3232P22	C-MTFNL-3232P22	TNGN-220408	○	○	32	32	170	30	40	ITSN-453	S-46M	CLM-12	STCM-4	TK-02810	NLM-46L	CLM-9	ITSN-433
C-MTFNR-4040R22	C-MTFNL-4040R22	TNGN-220408	○	○	40	40	200	30	50	ITSN-453	S-46M	CLM-12	STCM-4	TK-02810	NLM-46L	CLM-9	ITSN-433

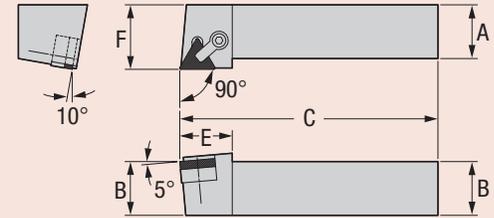
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

C-MTGNR/L

Style G
Triangle
Negative Rake
90° Lead Angle



Right-Hand
Toolholder Shown



Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components		
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components	Lock Pin	Clamp	7,92 Insert Shim Seat
C-MTGNR-2525M16	C-MTGNL-2525M16	TNGN-160408	○	○	25	25	150	28	32	ITSN-322	S-34M	CLM-7	STCM-25	TK-02809	NLM-34L	CLM-6	-
C-MTGNR-2525P16	C-MTGNL-2525P16	TNGN-160408	○	○	25	25	170	28	32	ITSN-322	S-34M	CLM-7	STCM-25	TK-02809	NLM-34L	CLM-6	-
C-MTGNR-3232P16	C-MTGNL-3232P16	TNGN-160408	○	○	32	32	170	28	40	ITSN-322	S-34M	CLM-7	STCM-25	TK-02809	NLM-34L	CLM-6	-
C-MTGNR-2525M22	C-MTGNL-2525M22	TNGN-220408	○	○	25	25	150	30	32	ITSN-453	S-46M	CLM-12	STCM-4	TK-02810	NLM-46L	CLM-9	ITSN-433
C-MTGNR-2525P22	C-MTGNL-2525P22	TNGN-220408	○	○	25	25	170	30	32	ITSN-453	S-46M	CLM-12	STCM-4	TK-02810	NLM-46L	CLM-9	ITSN-433
C-MTGNR-3232P22	C-MTGNL-3232P22	TNGN-220408	○	○	32	32	170	30	40	ITSN-453	S-46M	CLM-12	STCM-4	TK-02810	NLM-46L	CLM-9	ITSN-433
C-MTGNR-4040R22	C-MTGNL-4040R22	TNGN-220408	○	○	40	40	200	30	50	ITSN-453	S-46M	CLM-12	STCM-4	TK-02810	NLM-46L	CLM-9	ITSN-433

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

** The lock pin option can NOT be used with this shim.

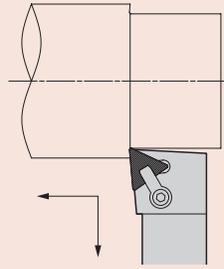
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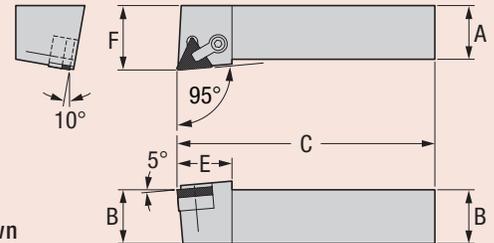


C-MTLNR/L

Style L
Triangle
Negative Rake
95° Lead Angle



Right-Hand
Toolholder Shown

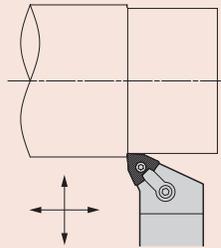


Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components		
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components	Lock Pin	Clamp	7,92 Insert Shim Seat
C-MTLNR-2525M16	C-MTLNL-2525M16	TNGN-160408	○	○	25	25	150	28	32	ITSN-322	S-34M	CLM-7	STCM-25	TK-02809	NLM-34L	CLM-6	-
C-MTLNR-2525P16	C-MTLNL-2525P16	TNGN-160408	○	○	25	25	170	28	32	ITSN-322	S-34M	CLM-7	STCM-25	TK-02809	NLM-34L	CLM-6	-
C-MTLNR-3232P16	C-MTLNL-3232P16	TNGN-160408	○	○	32	32	170	28	40	ITSN-322	S-34M	CLM-7	STCM-25	TK-02809	NLM-34L	CLM-6	-
C-MTLNR-2525M22	C-MTLNL-2525M22	TNGN-220408	○	○	25	25	150	30	32	ITSN-453	S-46M	CLM-12	STCM-4	TK-02810	NLM-46L	CLM-9	ITSN-433
C-MTLNR-2525P22	C-MTLNL-2525P22	TNGN-220408	○	○	25	25	170	30	32	ITSN-453	S-46M	CLM-12	STCM-4	TK-02810	NLM-46L	CLM-9	ITSN-433
C-MTLNR-3232P22	C-MTLNL-3232P22	TNGN-220408	○	○	32	32	170	30	40	ITSN-453	S-46M	CLM-12	STCM-4	TK-02810	NLM-46L	CLM-9	ITSN-433
C-MTLNR-4040R22	C-MTLNL-4040R22	TNGN-220408	○	○	40	40	200	30	50	ITSN-453	S-46M	CLM-12	STCM-4	TK-02810	NLM-46L	CLM-9	ITSN-433

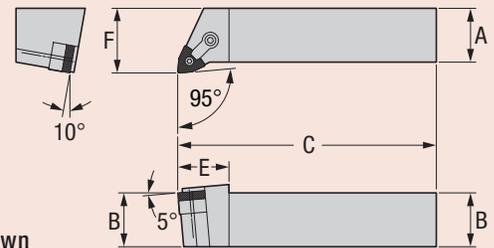
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

C-MWLNR/L

Style L
Trigon
Negative Rake
95° Lead Angle



Right-Hand
Toolholder Shown



Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components
C-MWLNR-2020M06	C-MWLNL-2020M06	WNGA-060408	○	○	20	20	150	25	25	IWSN-322	NLM-34L	CLM-6	STCM-25	TK-02811
C-MWLNR-2525M06	C-MWLNL-2525M06	WNGA-060408	○	○	25	25	150	25	32	IWSN-322	NLM-34L	CLM-6	STCM-25	TK-02811
C-MWLNR-3232P06	C-MWLNL-3232P06	WNGA-060408	○	○	32	32	170	25	40	IWSN-322	NLM-34L	CLM-6	STCM-25	TK-02811
C-MWLNR-4040R06	C-MWLNL-4040R06	WNGA-060408	○	○	40	40	200	25	50	IWSN-322	NLM-34L	CLM-6	STCM-25	TK-02811
C-MWLNR-2020M08	C-MWLNL-2020M08	WNGA-080408	○	○	20	20	150	27	25	IWSN-453	NLM-46L	CLM-20	STCM-26	TK-02812
C-MWLNR-2525M08	C-MWLNL-2525M08	WNGA-080408	○	○	25	25	150	27	32	IWSN-453	NLM-46L	CLM-20	STCM-26	TK-02812
C-MWLNR-3232P08	C-MWLNL-3232P08	WNGA-080408	○	○	32	32	170	27	40	IWSN-453	NLM-46L	CLM-20	STCM-26	TK-02812
C-MWLNR-4040R08	C-MWLNL-4040R08	WNGA-080408	○	○	40	40	200	27	50	IWSN-453	NLM-46L	CLM-20	STCM-26	TK-02812

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

10 Business Days or Less

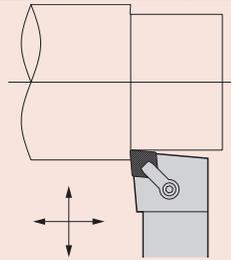
Stocked Standard

80°

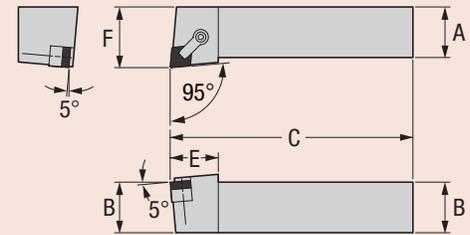


H-MCLNR/L

Style L
80° Diamond
Negative Rake
95° Lead Angle



Right-Hand
Toolholder Shown

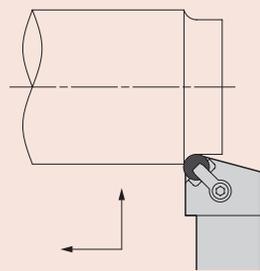


Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components		
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components	Lock Pin	Clamp	7,92 Insert Shim Seat
H-MCLNR-2525M12	H-MCLNL-2525M12	CNGN-120408	○	○	25	25	150	30	32	CSN-453	S-46M	CLM-12	STCM-4	TK-02750	NLM-46L	CLM-9	CSN-433
H-MCLNR-2525P12	H-MCLNL-2525P12	CNGN-120408	●	●	25	25	170	30	32	CSN-453	S-46M	CLM-12	STCM-4	TK-02750	NLM-46L	CLM-9	CSN-433
H-MCLNR-3232P12	H-MCLNL-3232P12	CNGN-120408	●	●	32	32	170	30	40	CSN-453	S-46M	CLM-12	STCM-4	TK-02750	NLM-46L	CLM-9	CSN-433

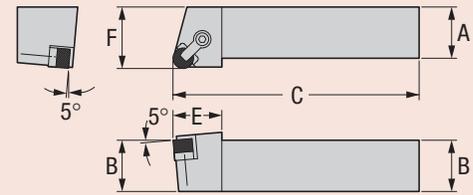
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

H-MRGNR/L

Style G
Round
Negative Rake



Right-Hand
Toolholder Shown



Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components		
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components	Lock Pin	Clamp	4,75 Insert Shim Seat
H-MRGNR-2525M12	H-MRGNL-2525M12	RNGN-120700	○	○	25	25	150	30	32	IRSN-43	S-46M	CLM-12	STCM-4	TK-02791	NLM-46L	CLM-9	IRSN-45
H-MRGNR-2525P12	H-MRGNL-2525P12	RNGN-120700	●	●	25	25	170	30	32	IRSN-43	S-46M	CLM-12	STCM-4	TK-02791	NLM-46L	CLM-9	IRSN-45
H-MRGNR-3232P12	H-MRGNL-3232P12	RNGN-120700	●	●	32	32	170	30	40	IRSN-43	S-46M	CLM-12	STCM-4	TK-02791	NLM-46L	CLM-9	IRSN-45
H-MRGNR-3232R12	H-MRGNL-3232R12	RNGN-120700	○	○	40	40	200	30	50	IRSN-43	S-46M	CLM-12	STCM-4	TK-02791	NLM-46L	CLM-9	IRSN-45

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

*These toolholders are for hard turning
with ceramic inserts
using industry standard components.*

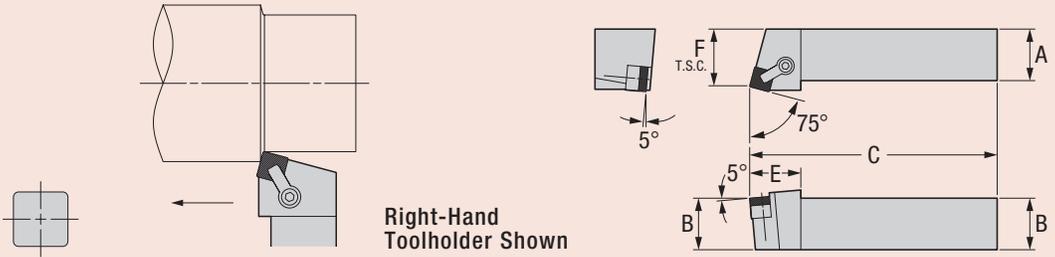
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H-MSRNR/L

Style R
Square
Negative Rake
75° Lead Angle



Right-Hand Toolholder Shown

Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit	Optional Components		
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components	Lock Pin	Clamp	7,92 Insert Shim Seat
H-MSRNR-2525M12	H-MSRNL-2525M12	SNGN-120408	○	○	25	25	150	31	28	ISSN-453	S-46M	CLM-12	STCM-4	TK-02793	NLM-46L	CLM-9	ISSN-433
H-MSRNR-2525P12	H-MSRNL-2525P12	SNGN-120408	○	○	25	25	170	31	28	ISSN-453	S-46M	CLM-12	STCM-4	TK-02793	NLM-46L	CLM-9	ISSN-433
H-MSRNR-3232P12	H-MSRNL-3232P12	SNGN-120408	○	○	32	32	170	31	35	ISSN-453	S-46M	CLM-12	STCM-4	TK-02793	NLM-46L	CLM-9	ISSN-433

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

H-MWLNR/L

Style L
Trigon
Negative Rake
95° Lead Angle



Right-Hand Toolholder Shown

Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components
H-MWLNR-2020M06	H-MWLNL-2020M06	WNGA-060408	○	○	20	20	150	25	25	IWSN-322	NLM-34L	CLM-6	STCM-25	TK-02811
H-MWLNR-2525M06	H-MWLNL-2525M06	WNGA-060408	○	○	25	25	150	25	32	IWSN-322	NLM-34L	CLM-6	STCM-25	TK-02811
H-MWLNR-3232P06	H-MWLNL-3232P06	WNGA-060408	○	○	32	32	170	25	40	IWSN-322	NLM-34L	CLM-6	STCM-25	TK-02811
H-MWLNR-4040R06	H-MWLNL-4040R06	WNGA-060408	○	○	40	40	200	25	50	IWSN-322	NLM-34L	CLM-6	STCM-25	TK-02811
H-MWLNR-2020M08	H-MWLNL-2020M08	WNGA-080408	○	○	20	20	150	27	25	IWSN-453	NLM-46L	CLM-20	STCM-26	TK-02812
H-MWLNR-2525M08	H-MWLNL-2525M08	WNGA-080408	○	○	25	25	150	27	32	IWSN-453	NLM-46L	CLM-20	STCM-26	TK-02812
H-MWLNR-3232P08	H-MWLNL-3232P08	WNGA-080408	○	○	32	32	170	27	40	IWSN-453	NLM-46L	CLM-20	STCM-26	TK-02812
H-MWLNR-4040R08	H-MWLNL-4040R08	WNGA-080408	○	○	40	40	200	27	50	IWSN-453	NLM-46L	CLM-20	STCM-26	TK-02812

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

These toolholders are for hard turning with ceramic inserts using industry standard components.

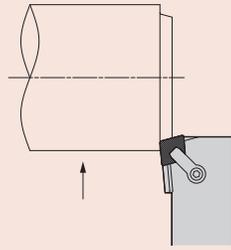
10 Business Days or Less

Stocked Standard

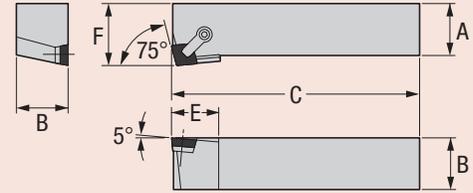
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C-CCKPR/L

Style K
80° Diamond (Using 100° Corner)
Positive Rake
75° Lead Angle



Right-Hand
Toolholder Shown

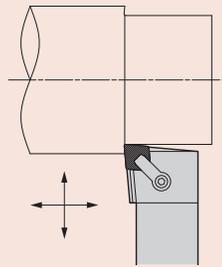


Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components
C-CCKPR-2525M12	C-CCKPL-2525M12	CPGN-120408	○	○	25	25	150	30	32	SP-49	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02779
C-CCKPR-2525P12	C-CCKPL-2525P12	CPGN-120408	○	○	25	25	170	30	32	SP-49	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02779
C-CCKPR-3232P12	C-CCKPL-3232P12	CPGN-120408	○	○	32	32	170	30	40	SP-49	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02779

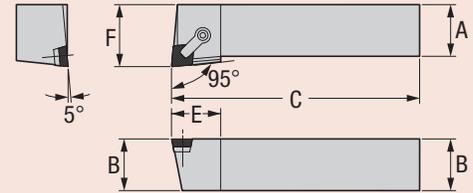
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

C-CCLPR/L

Style L
80° Diamond
Positive Rake
95° Lead Angle



Right-Hand
Toolholder Shown

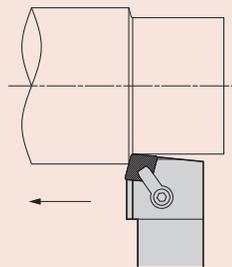


Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components
C-CCLPR-2525M12	C-CCLPL-2525M12	CPGN-120408	○	○	25	25	150	30	32	SP-49	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02779
C-CCLPR-2525P12	C-CCLPL-2525P12	CPGN-120408	○	○	25	25	170	30	32	SP-49	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02779
C-CCLPR-3232P12	C-CCLPL-3232P12	CPGN-120408	○	○	32	32	170	30	40	SP-49	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02779

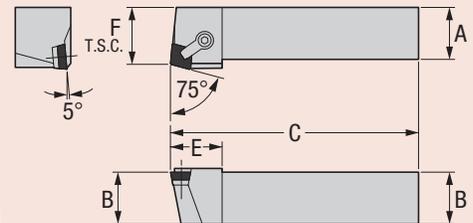
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

C-CCRPR/L

Style R
80° Diamond (Using 100° Corner)
Positive Rake
75° Lead Angle



Right-Hand
Toolholder Shown



Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components
C-CCRPR-2525M12	C-CCRPL-2525M12	CPGN-120408	○	○	25	25	150	32	32	SP-49	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02779
C-CCRPR-2525P12	C-CCRPL-2525P12	CPGN-120408	○	○	25	25	170	32	32	SP-49	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02779
C-CCRPR-3232P12	C-CCRPL-3232P12	CPGN-120408	○	○	32	32	170	32	40	SP-49	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02779

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

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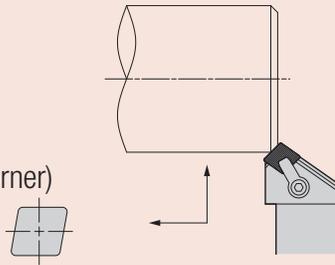
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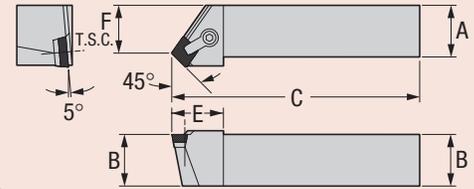


C-CCSPR/L

Style S
80° Diamond (Using 100° Corner)
Positive Rake
45° Lead Angle



Right-Hand Toolholder Shown

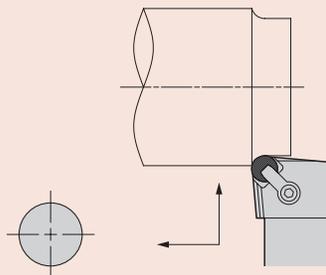


Part Number		Gage	Stock		Dimensions (millimeters)					Shim Seat	Standard Components			* Tune-Up Kit
Right	Left	Insert	R	L	A	B	C	E	F		Seat Screw	Clamp	Clamp Screw	Includes All Standard Components
C-CCSPR-2525M12	C-CCSPL-2525M12	CPGN-120408	○	○	25	25	150	32	32	SP-49	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02779
C-CCSPR-2525P12	C-CCSPL-2525P12	CPGN-120408	○	○	25	25	170	32	32	SP-49	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02779
C-CCSPR-3232P12	C-CCSPL-3232P12	CPGN-120408	○	○	32	32	170	32	40	SP-49	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02779

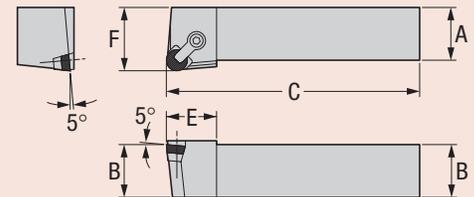
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

C-CRGPR/L

Style G
Round
Positive Rake



Right-Hand Toolholder Shown



Part Number		Gage	Stock		Dimensions (millimeters)					Shim Seat	Standard Components			* Tune-Up Kit
Right	Left	Insert	R	L	A	B	C	E	F		Seat Screw	Clamp	Clamp Screw	Includes All Standard Components
C-CRGPR-2525M09	C-CRGPL-2525M09	RPGN-090300	○	○	25	25	150	25	32	SP-34	TSHCS M2-0.4x6mm	CLM-7	STCM-25	TK-02813
C-CRGPR-2525P09	C-CRGPL-2525P09	RPGN-090300	○	○	25	25	170	25	32	SP-34	TSHCS M2-0.4x6mm	CLM-7	STCM-25	TK-02813
C-CRGPR-3232P09	C-CRGPL-3232P09	RPGN-090300	○	○	32	32	170	25	40	SP-34	TSHCS M2-0.4x6mm	CLM-7	STCM-25	TK-02813
C-CRGPR-2525M12	C-CRGPL-2525M12	RPGN-120400	○	○	25	25	150	30	32	SP-44	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02814
C-CRGPR-2525P12	C-CRGPL-2525P12	RPGN-120400	●	●	25	25	170	30	32	SP-44	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02814
C-CRGPR-3232P12	C-CRGPL-3232P12	RPGN-120400	●	●	32	32	170	30	40	SP-44	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02814
C-CRGPR-4040R12	C-CRGPL-4040R12	RPGN-120400	○	○	40	40	200	30	50	SP-44	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02814

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

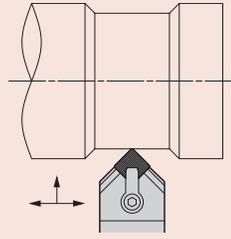
10 Business Days or Less

Stocked Standard

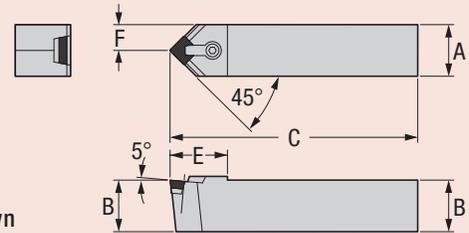
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C-CSDPN

Style D
Square
Positive Rake
45° Lead Angle



Neutral
Toolholder Shown

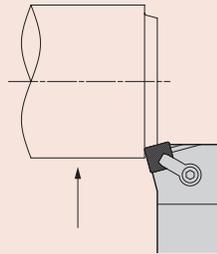


Part Number	Gage Insert	Stock	Dimensions (millimeters)					Shim Seat	Standard Components			* Tune-Up Kit Includes All Standard Components
			A	B	C	E	F		Seat Screw	Clamp	Clamp Screw	
C-CSDPN-2525M12	SPGN-120408	○	25	25	150	35	12,5	SP-41	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02780
C-CSDPN-2525P12	SPGN-120408	●	25	25	170	35	12,5	SP-41	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02780
C-CSDPN-3232P12	SPGN-120408	●	32	32	170	35	16	SP-41	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02780

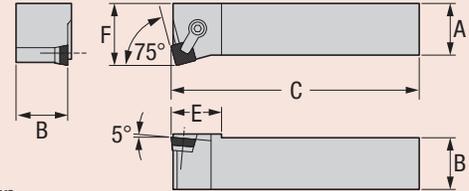
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

C-CSKPR/L

Style K
Square
Positive Rake
75° Lead Angle



Right-Hand
Toolholder Shown



Part Number		Gage Insert	Stock		Dimensions (millimeters)					Shim Seat	Standard Components			* Tune-Up Kit Includes All Standard Components
Right	Left		R	L	A	B	C	E	F		Seat Screw	Clamp	Clamp Screw	
C-CSKPR-2525M12	C-CSKPL-2525M12	SPGN-120408	○	○	25	25	150	31	32	SP-41	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02780
C-CSKPR-2525P12	C-CSKPL-2525P12	SPGN-120408	○	○	25	25	170	31	32	SP-41	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02780
C-CSKPR-3232P12	C-CSKPL-3232P12	SPGN-120408	○	○	32	32	170	31	40	SP-41	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02780

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

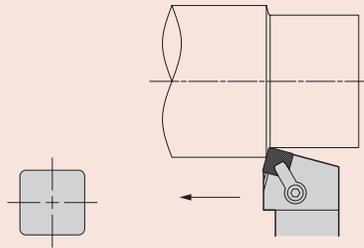
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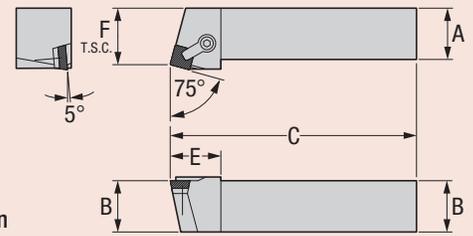


C-CSRPR/L

Style R
Square
Positive Rake
75° Lead Angle



Right-Hand
Toolholder Shown

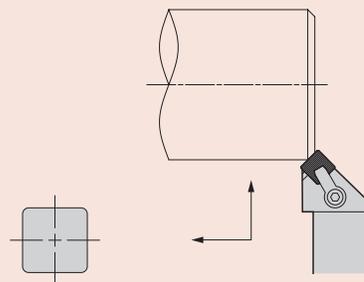


Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components
C-CSRPR-2525M12	C-CSRPL-2525M12	SPGN-120408	○	○	25	25	150	31	28	SP-41	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02780
C-CSRPR-2525P12	C-CSRPL-2525P12	SPGN-120408	○	○	25	25	170	31	28	SP-41	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02780
C-CSRPR-3232P12	C-CSRPL-3232P12	SPGN-120408	○	○	32	32	170	31	35	SP-41	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02780

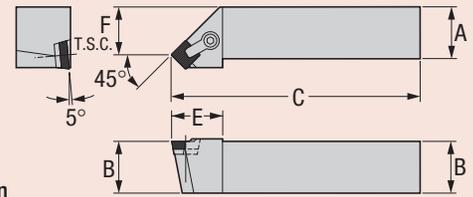
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

C-CSSPR/L

Style S
Square
Positive Rake
45° Lead



Right-Hand
Toolholder Shown



Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components
C-CSSPR-2525M12	C-CSSPL-2525M12	SPGN-120408	○	○	25	25	150	31	23	SP-41	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02780
C-CSSPR-2525P12	C-CSSPL-2525P12	SPGN-120408	○	○	25	25	170	31	23	SP-41	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02780
C-CSSPR-3232P12	C-CSSPL-3232P12	SPGN-120408	○	○	32	32	170	31	29	SP-41	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02780

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

CERAMIC TOOLHOLDERS

10 Business Days or Less

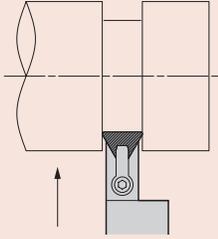
Stocked Standard

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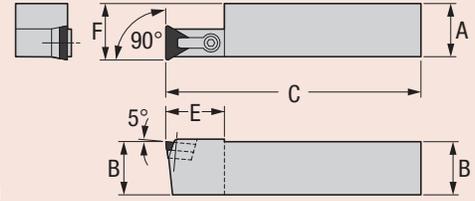


C-CTCPR/L

Style C
Triangle
Positive Rake
90° Lead Angle



Right-Hand
Toolholder Shown

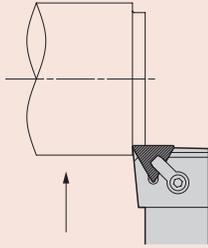


Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components
C-CTCPR-2525M16	C-CTCPL-2525M16	TPGN-160308	○	○	25	25	150	29	26,2	SP3A	TFHCS M3-0.5x10mm	CLM-22	STCM-26	TK-02815
C-CTCPR-2525P16	C-CTCPL-2525P16	TPGN-160308	○	○	25	25	170	29	26,2	SP3A	TFHCS M3-0.5x10mm	CLM-22	STCM-26	TK-02815
C-CTCPR-3232P16	C-CTCPL-3232P16	TPGN-160308	○	○	32	32	170	29	33,2	SP3A	TFHCS M3-0.5x10mm	CLM-22	STCM-26	TK-02815
C-CTCPR-2525M22	C-CTCPL-2525M22	TPGN-220408	○	○	25	25	150	35	27	SP-4	TFHCS M3-0.5x12mm	CLM-30	STCM-4	TK-02816
C-CTCPR-2525P22	C-CTCPL-2525P22	TPGN-220408	○	○	25	25	170	35	27	SP-4	TFHCS M3-0.5x12mm	CLM-30	STCM-4	TK-02816
C-CTCPR-3232P22	C-CTCPL-3232P22	TPGN-220408	○	○	32	32	170	35	34	SP-4	TFHCS M3-0.5x12mm	CLM-30	STCM-4	TK-02816
C-CTCPR-4040R22	C-CTCPL-4040R22	TPGN-220408	○	○	40	40	200	35	42	SP-4	TFHCS M3-0.5x12mm	CLM-30	STCM-4	TK-02816

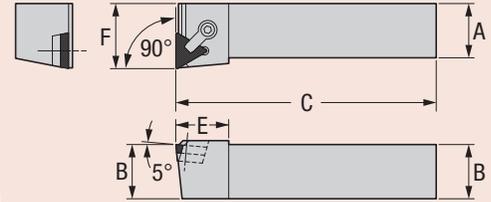
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

C-CTFPR/L

Style F
Triangle
Positive Rake
90° Lead Angle



Right-Hand
Toolholder Shown

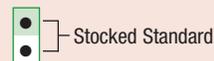


Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components
C-CTFPR-2525M16	C-CTFPL-2525M16	TPGN-160308	○	○	25	25	150	24	32	SP3A	TFHCS M3-0.5x10mm	CLM-7	STCM-25	TK-02817
C-CTFPR-2525P16	C-CTFPL-2525P16	TPGN-160308	○	○	25	25	170	24	32	SP3A	TFHCS M3-0.5x10mm	CLM-7	STCM-25	TK-02817
C-CTFPR-3232P16	C-CTFPL-3232P16	TPGN-160308	○	○	32	32	170	24	40	SP3A	TFHCS M3-0.5x10mm	CLM-7	STCM-25	TK-02817
C-CTFPR-2525M22	C-CTFPL-2525M22	TPGN-220408	○	○	25	25	150	31	32	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	TK-02818
C-CTFPR-2525P22	C-CTFPL-2525P22	TPGN-220408	○	○	25	25	170	31	32	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	TK-02818
C-CTFPR-3232P22	C-CTFPL-3232P22	TPGN-220408	○	○	32	32	170	31	40	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	TK-02818
C-CTFPR-4040R22	C-CTFPL-4040R22	TPGN-220408	○	○	40	40	200	31	50	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	TK-02818

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

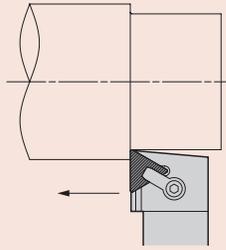
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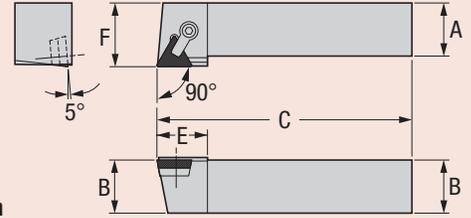


C-CTGPR/L

Style G
Triangle
Positive Rake
90° Lead Angle



Right-Hand Toolholder Shown

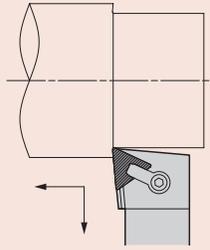


Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components
C-CTGPR-2525M16	C-CTGPL-2525M16	TPGN-160308	○	○	25	25	150	28	32	SP3A	TFHCS M3-0.5x10mm	CLM-7	STCM-25	TK-02817
C-CTGPR-2525P16	C-CTGPL-2525P16	TPGN-160308	○	○	25	25	170	28	32	SP3A	TFHCS M3-0.5x10mm	CLM-7	STCM-25	TK-02817
C-CTGPR-3232P16	C-CTGPL-3232P16	TPGN-160308	○	○	32	32	170	28	40	SP3A	TFHCS M3-0.5x10mm	CLM-7	STCM-25	TK-02817
C-CTGPR-2525M22	C-CTGPL-2525M22	TPGN-220408	○	○	25	25	150	30	32	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	TK-02818
C-CTGPR-2525P22	C-CTGPL-2525P22	TPGN-220408	○	○	25	25	170	30	32	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	TK-02818
C-CTGPR-3232P22	C-CTGPL-3232P22	TPGN-220408	○	○	32	32	170	30	40	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	TK-02818
C-CTGPR-4040R22	C-CTGPL-4040R22	TPGN-220408	○	○	40	40	200	30	50	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	TK-02818

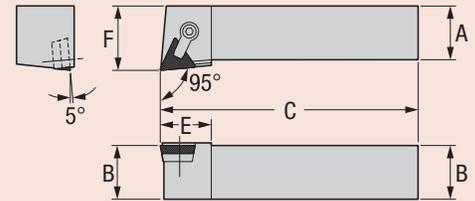
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

C-CTLPR/L

Style L
Triangle
Positive Rake
95° Lead Angle



Right-Hand Toolholder Shown



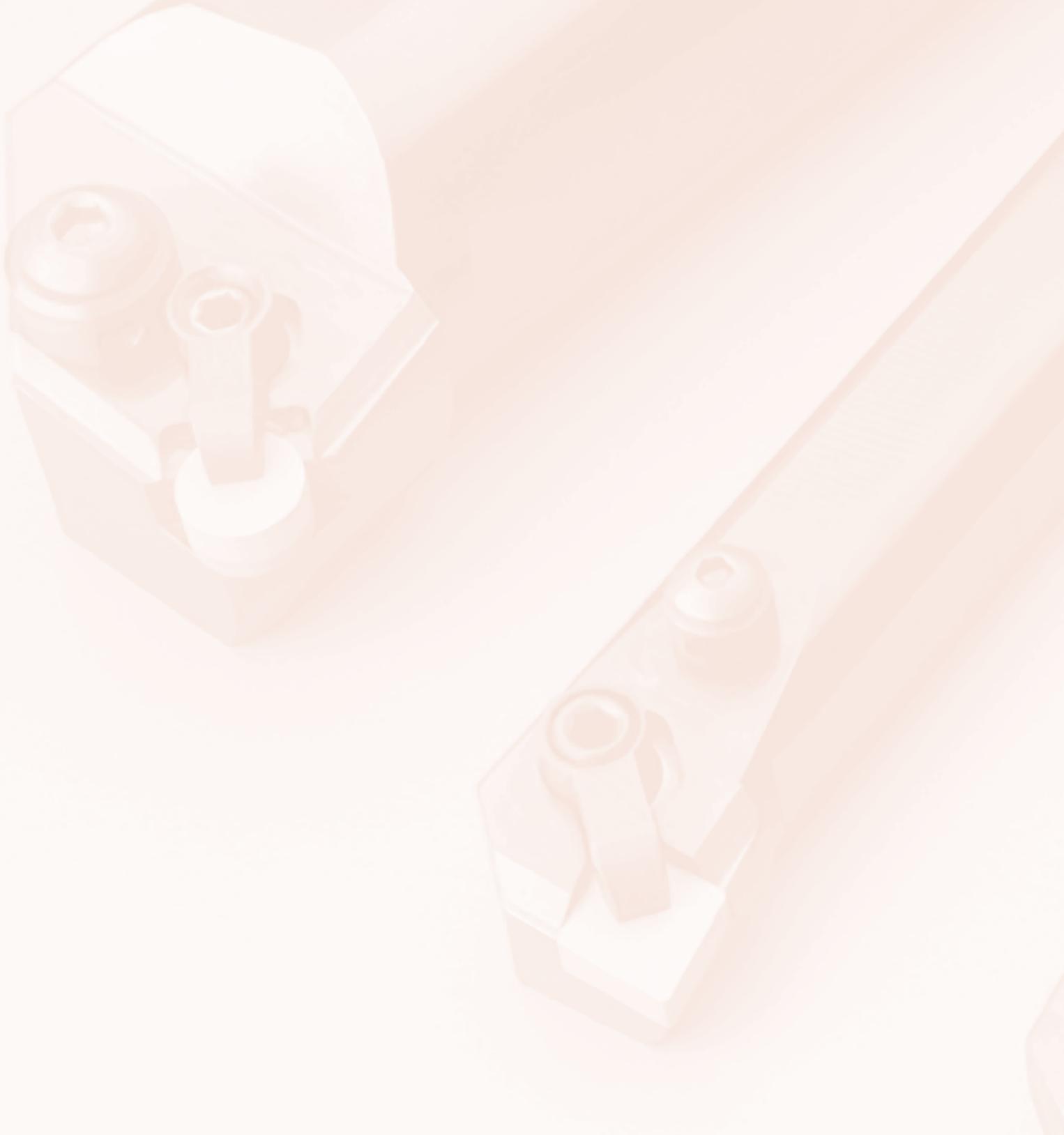
Part Number		Gage	Stock		Dimensions (millimeters)					Standard Components				* Tune-Up Kit
Right	Left	Insert	R	L	A	B	C	E	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components
C-CTLPR-2525M16	C-CTLPL-2525M16	TPGN-160308	○	○	25	25	150	28	32	SP3A	TFHCS M3-0.5x10mm	CLM-7	STCM-25	TK-02817
C-CTLPR-2525P16	C-CTLPL-2525P16	TPGN-160308	○	○	25	25	170	28	32	SP3A	TFHCS M3-0.5x10mm	CLM-7	STCM-25	TK-02817
C-CTLPR-3232P16	C-CTLPL-3232P16	TPGN-160308	○	○	32	32	170	28	40	SP3A	TFHCS M3-0.5x10mm	CLM-7	STCM-25	TK-02817
C-CTLPR-2525M22	C-CTLPL-2525M22	TPGN-220408	○	○	25	25	150	30	32	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	TK-02818
C-CTLPR-2525P22	C-CTLPL-2525P22	TPGN-220408	○	○	25	25	170	30	32	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	TK-02818
C-CTLPR-3232P22	C-CTLPL-3232P22	TPGN-220408	○	○	32	32	170	30	40	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	TK-02818
C-CTLPR-4040R22	C-CTLPL-4040R22	TPGN-220408	○	○	40	40	200	30	50	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	TK-02818

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

10 Business Days or Less

Stocked Standard

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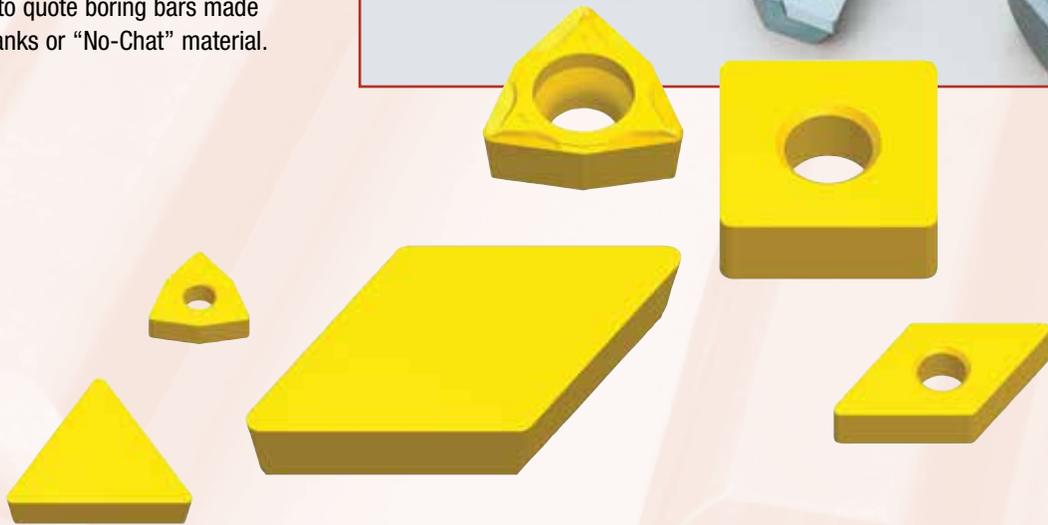
Industry-Standard Boring Bars for Carbide Inserts

The boring bar systems and cartridges in this catalog are designed around industry standard hardware. This gives complete interchangeability with other tooling components and minimizes spare parts inventories.

Most bars incorporate “through the bar” coolant feed with directable outlet nozzle.

Greenleaf uses heat treated alloy steel to insure a consistent high quality product for maximum life performance.

Custom engineered tooling is a Greenleaf specialty and we will be pleased to quote your special requirements for boring. Additionally, Greenleaf has the capability to quote boring bars made of heavy metal shanks or “No-Chat” material.



*Greenleaf Corporation is continually upgrading its products.
For the most current information, please visit our web site at:*

www.greenleafglobalsupport.com

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Boring Bar Identification System

M Clamp and locking pin
C Clamp only
S Screw on

Method of Holding

C 80° diamond shaped
D 55° diamond shaped
R Round
S Square
T Triangular
T Trigon

Insert Geometry



SB Steel bar
S Steel bar without coolant

Material

Integers to be preceded by 0.
Example:
8mm = 08
50mm = 50

Bar Diameter

Offset shank with:
F 90° end cutting edge angle
G 90° end cutting edge angle
K 75° end cutting edge angle
L 95° end cutting edge angle
S 45° end cutting edge angle

Boring Bar Style

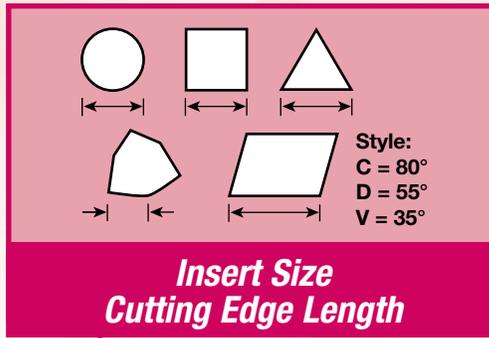
BORING BARS

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N Negative rake
P Positive rake

Holder Rake



N

R

19

-

V

L Left
R Right

Hand of Tool

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

Bar Length

Boring Bar Usage Reference Guide

Boring Bar Style
Boring Bar Geometry
Insert Type

Boring Bar Application
Part Number

SB-MCKNR/L
Style K
80° Diamond (Using 100° Corner)
Negative Rake
75° Lead Angle

SB-MDJNR/L
Style J
55° Diamond
Negative Rake
65° Lead Angle

SB-MCLNR/L
Style L
80° Diamond
Negative Rake
55° Lead Angle

SB-MSKNR/L
Style K
Square Rake
75° Lead Angle

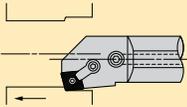
Insert Geometry
Optional Components
Dimensions
Stocking Program
Tune-Up Kits

Standard Components

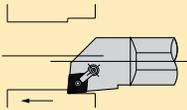
BORING BARS

BORING BARS

80° Diamond – Negative

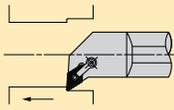


SB-MCKNR/L
 Style K
 80° Diamond
 (Using 100° Corner)
 Negative Rake
 75° Lead Angle
page: T 126



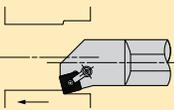
SB-MCLNR/L
 Style L
 80° Diamond
 Negative Rake
 95° Lead Angle
page: T 126

55° Diamond – Negative



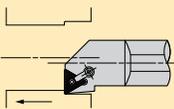
SB-MDJNR/L
 Style J
 55° Diamond
 Negative Rake
 93° Lead Angle
page: T 127

Square – Negative

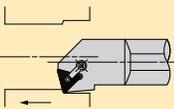


SB-MSKNR/L
 Style K
 Square
 Negative Rake
 75° Lead Angle
page: T 127

Triangle – Negative

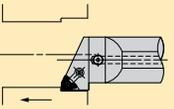


SB-MTFNR/L
 Style F
 Triangle
 Negative Rake
 90° Lead Angle
page: T 128



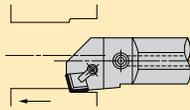
SB-MTKNR/L
 Style K
 Triangle
 Negative Rake
 75° Lead Angle
page: T 128

Trigon – Negative

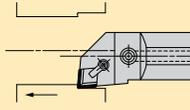


SB-MWLN/L
 Style L
 80° Trigon
 Negative Rake
 95° Lead Angle
page: T 129

80° Diamond – Positive

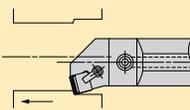


SB-CCKPR/L
 Style K
 80° Diamond
 (Using 100° Corner)
 Positive Rake
 75° Lead Angle
page: T 129



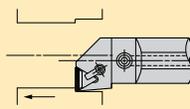
SB-CCLPR/L
 Style L
 80° Diamond
 Positive Rake
 95° Lead Angle
page: T 130

Square – Positive

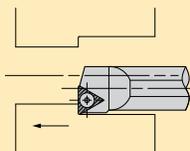


SB-CSKPR/L
 Style K
 Square
 Positive Rake
 75° Lead Angle
page: T 130

Triangle – Positive

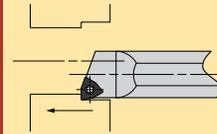


SB-CTFPR/L
 Style F
 Triangle
 Positive Rake
 90° Lead Angle
page: T 131

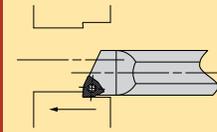


S-STFNR/L
 Style F
 Triangle
 Positive Rake
 90° Lead Angle
page: T 131

Screw-On Trigon



S-SWFCR/L
 Style F
 Screw-On Trigon
 Solid Steel
 90° Lead Angle
page: T 132



S-SWLCR/L
 Style L
 Screw-On Trigon
 Solid Steel
 95° Lead Angle
page: T 133

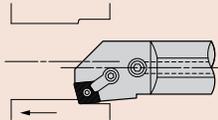
These Boring Bars do not follow the Boring Bar Identification System.

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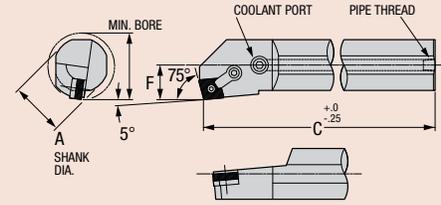
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SB-MCKNR/L

Style K
80° Diamond (Using 100° Corner)
Negative Rake
75° Lead Angle



Right-Hand Boring Bar Shown

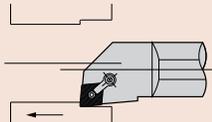


Part Number		Gage	Stock		Min. Bore	Dimensions (millimeters)			Standard Components				* Tune-Up Kit	Optional Components	
Right	Left	Insert	R	L		A	C	F	Clamp	Clamp Screw	Shim	Lock Pin	Includes All Standard Components	Shim Screw	Shim
SB25-MCKNR-12T	SB25-MCKNL-12T	CNGA-120408	○	○	32	25	300	17	CLM-20	STCM-11	-	NLM-44	TK-02796	-	-
SB32-MCKNR-12U	SB32-MCKNL-12U	CNGA-120408	●	●	38	32	350	20	CLM-20	STCM-11	CSNB-433	NLM-46S	TK-02797	S-46MS	-
SB40-MCKNR-12U	SB40-MCKNL-12U	CNGA-120408	●	●	44	40	350	23	CLM-20	STCM-11	CSN-432	NLM-46	TK-02798	S-46MS	-
SB50-MCKNR-19V	SB50-MCKNL-19V	CNGA-190612	○	○	63	50	400	33	CLM-12	STCM-4	CSN-633	NLM-68	TK-02721	S-68MS	CSN-642

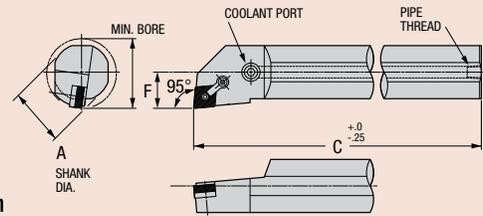
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

SB-MCLNR/L

Style L
80° Diamond
Negative Rake
95° Lead Angle



Right-Hand Boring Bar Shown



Part Number		Gage	Stock		Min. Bore	Dimensions (millimeters)			Standard Components				* Tune-Up Kit	Optional Components	
Right	Left	Insert	R	L		A	C	F	Clamp	Clamp Screw	Shim	Lock Pin	Includes All Standard Components	Shim Screw	Shim
SB25-MCLNR-12T	SB25-MCLNL-12T	CNGA-120408	●	●	32	25	300	17	CLM-20	STCM-11	-	NLM-44	TK-02796	-	-
SB32-MCLNR-12U	SB32-MCLNL-12U	CNGA-120408	●	●	38	32	350	20	CLM-20	STCM-11	CSNB-433	NLM-46S	TK-02797	S-46MS	-
SB40-MCLNR-12U	SB40-MCLNL-12U	CNGA-120408	●	●	44	40	350	23	CLM-20	STCM-11	CSN-432	NLM-46	TK-02798	S-46MS	-
SB50-MCLNR-19V	SB50-MCLNL-19V	CNGA-190612	○	○	63	50	400	33	CLM-12	STCM-4	CSN-633	NLM-68	TK-02721	S-68MS	CSN-642

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

BORING BARS

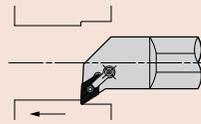
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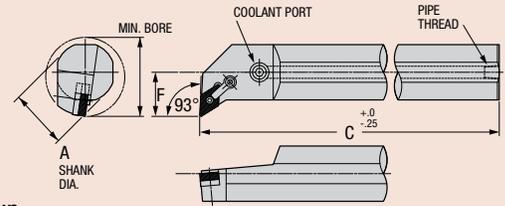


SB-MDJNR/L

Style J
55° Diamond
Negative Rake
93° Lead Angle



Right-Hand Boring Bar Shown

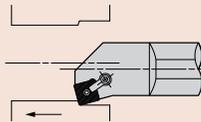


Part Number		Gage	Stock		Min. Bore	Dimensions (millimeters)			Standard Components				* Tune-Up Kit	Optional Component
Right	Left	Insert	R	L		A	C	F	Clamp	Clamp Screw	Shim	Lock Pin	Includes All Standard Components	Shim Screw
SB32-MDJNR-15U	SB32-MDJNL-15U	DNGA-150408	●	●	50	32	350	25	CLM-12	STCM-4	DSN-433	NLM-46	TK-02725	S-46MS
SB40-MDJNR-15U	SB40-MDJNL-15U	DNGA-150408	○	○	58	40	350	29	CLM-12	STCM-4	DSN-433	NLM-46	TK-02725	S-46MS
SB50-MDJNR-19V	SB50-MDJNL-19V	DNGA-190612	○	○	76	50	400	38	CLM-30	STCM-4	DSN-533	NLM-58	TK-02799	S-58MS

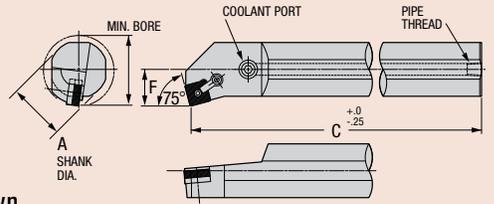
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

SB-MSKNR/L

Style K
Square
Negative Rake
75° Lead Angle



Right-Hand Boring Bar Shown



Part Number		Gage	Stock		Min. Bore	Dimensions (millimeters)			Standard Components				* Tune-Up Kit	Optional Components	
Right	Left	Insert	R	L		A	C	F	Clamp	Clamp Screw	Shim	Lock Pin	Includes All Standard Components	Shim Screw	Shim
SB25-MSKNR-12T	SB25-MSKNL-12T	SNGA-120408	●	●	32	25	300	16	CLM-6	STCM-25	-	NLM-44	TK-02801	-	-
SB32-MSKNR-12U	SB32-MSKNL-12U	SNGA-120408	●	●	38	32	350	19	CLM-9	STCM-4	ISSNB-433	NLM-46	TK-02802	S-46MS	-
SB40-MSKNR-12U	SB40-MSKNL-12U	SNGA-120408	●	●	44	40	350	22	CLM-9	STCM-4	ISSNB-433	NLM-46	TK-02802	S-46MS	-
SB40-MSKNR-15V	SB40-MSKNL-15V	SNGA-150612	○	○	63	50	400	32	CLM-12	STCM-4	SSN-533	NLM-58	TK-02713	S-58MS	ISSN-543
SB50-MSKNR-19V	SB50-MSKNL-19V	SNGA-190612	○	○	63	50	400	32	CLM-12	STCM-4	ISSN-633	NLM-68	TK-02714	S-68MS	ISSN-643

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

10 Business Days or Less

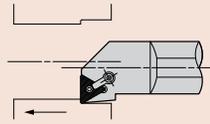
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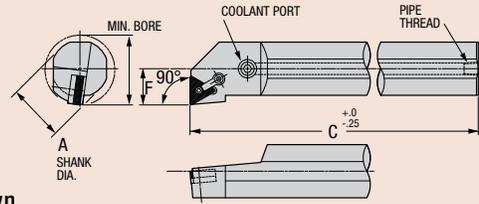


SB-MTFNR/L

Style F
Triangle
Negative Rake
90° Lead Angle



Right-Hand
Boring Bar Shown

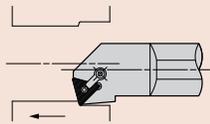


Part Number		Gage	Stock		Min. Bore	Dimensions (millimeters)			Standard Components				* Tune-Up Kit	Optional Components	
Right	Left	Insert	R	L		A	C	F	Clamp	Clamp Screw	Shim	Lock Pin	Includes All Standard Components	Shim Screw	Shim
SB25-MTFNR-16T	SB25-MTFNL-16T	TNGA-160408	○	○	32	25	300	16	CLM-6	STCM-25	-	NLM-33L	TK-02803	-	-
SB32-MTFNR-16U	SB32-MTFNL-16U	TNGA-160408	○	○	38	32	350	19	CLM-6	STCM-25	ITSN-322	NLM-34L	TK-02804	S-34MS	-
SB40-MTFNR-16U	SB40-MTFNL-16U	TNGA-160408	○	○	44	40	350	22	CLM-6	STCM-25	ITSN-322	NLM-34L	TK-02804	S-34MS	-
SB40-MTFNR-22U	SB40-MTFNL-22U	TNGA-220408	●	●	50	40	350	26	CLM-9	STCM-4	ITSN-432	NLM-46	TK-02805	S-46MS	TS-424
SB50-MTFNR-27V	SB50-MTFNL-27V	TNGA-270612	○	○	63	50	400	32	CLM-12	STCM-4	ITSN-533	NLM-58	TK-02806	S-58MS	-

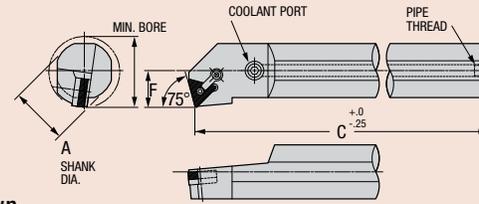
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

SB-MTKNR/L

Style K
Triangle
Negative Rake
75° Lead Angle



Right-Hand
Boring Bar Shown



Part Number		Gage	Stock		Min. Bore	Dimensions (millimeters)			Standard Components				* Tune-Up Kit	Optional Components	
Right	Left	Insert	R	L		A	C	F	Clamp	Clamp Screw	Shim	Lock Pin	Includes All Standard Components	Shim Screw	Shim
SB25-MTKNR-16T	SB25-MTKNL-16T	TNGA-160408	○	○	32	25	300	16	CLM-6	STCM-9	-	NLM-33L	TK-02777	-	-
SB32-MTKNR-16U	SB32-MTKNL-16U	TNGA-160408	○	○	38	32	350	19	CLM-6	STCM-9	ITSN-322	NLM-34L	TK-02828	S-34MS	-
SB40-MTKNR-16U	SB40-MTKNL-16U	TNGA-160408	○	○	44	40	350	22	CLM-6	STCM-9	ITSN-322	NLM-34L	TK-02828	S-34MS	-
SB40-MTKNR-22U	SB40-MTKNL-22U	TNGA-220408	●	●	50	40	350	26	CLM-9	STCM-4	ITSN-432	NLM-46	TK-02805	S-46MS	TS-424
SB50-MTKNR-27V	SB50-MTKNL-27V	TNGA-270612	○	○	63	50	400	32	CLM-12	STCM-4	ITSN-533	NLM-58	TK-02806	S-58MS	-

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

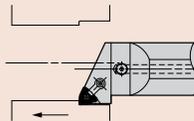
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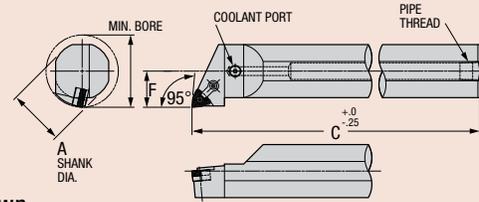


SB-MWLNR/L

Style L
80° Trigon
Negative Rake
95° Lead Angle



Right-Hand Boring Bar Shown

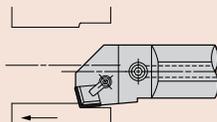


Part Number		Gage	Stock		Min. Bore	Dimensions (millimeters)			Standard Components				* Tune-Up Kit	Optional Component
Right	Left	Insert	R	L		A	C	F	Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components	Seat
†SB20-MWLNR-06S	†SB20-MWLNL-06S	WNMA-060408	○	○	24	20	250	13	–	NLM-33L	CLM-6	STCM-25	TK-02803	–
SB25-MWLNR-06T	SB25-MWLNL-06T	WNMA-060408	○	○	30	25	300	16	–	NLM-33L	CLM-6	STCM-25	TK-02803	–
SB32-MWLNR-06U	SB32-MWLNL-06U	WNMA-060408	○	○	38	32	350	19	IWSN-322	NLM-34L	CLM-6	STCM-25	TK-02811	IWSN-332
SB40-MWLNR-06U	SB40-MWLNL-06U	WNMA-060408	○	○	46	40	350	22	IWSN-322	NLM-34L	CLM-6	STCM-25	TK-02811	IWSN-332
SB25-MWLNR-08T	SB25-MWLNL-08T	WNMA-080408	●	○	33	25	300	16	–	NLM-44	CLM-20	STCM-11	TK-02796	–
SB32-MWLNR-08U	SB32-MWLNL-08U	WNMA-080408	●	●	39	32	350	19	IWSN-433	NLM-46	CLM-20	STCM-26	TK-02808	–
SB40-MWLNR-08U	SB40-MWLNL-08U	WNMA-080408	●	○	45	40	350	22	IWSN-433	NLM-46	CLM-20	STCM-26	TK-02808	–

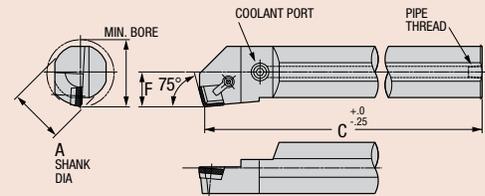
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.
† Coolant port not available.

SB-CCKPR/L

Style K
80° Diamond
(Using 100° Corner)
75° Lead Angle



Right-Hand Boring Bar Shown



Part Number		Gage	Stock		Min. Bore	Dimensions (millimeters)			Standard Components					* Tune-Up Kit
Right	Left	Insert	R	L		A	C	F	Clamp	Clamp Screw	Shim	Shim Screw	Chip-breaker	Includes All Standard Components
SB25-CCKPR-12T	SB25-CCKPL-12T	CPGN-120308	○	○	32	25	300	16	CLM-7	STCM-25	–	–	CBDC-415L	TK-02833
SB32-CCKPR-12U	SB32-CCKPL-12U	CPGN-120308	○	○	38	32	350	19	CLM-20	STCM-11	CSP-422	TFHCS M3-0.5x6mm	CBDC-415L	TK-02834
SB40-CCKPR-12U	SB40-CCKPL-12U	CPGN-120308	○	○	44	40	350	22	CLM-20	STCM-11	CSP-422	TFHCS M3-0.5x6mm	CBDC-415L	TK-02834
SB50-CCKPR-19V	SB50-CCKPL-19V	CPGN-190412	○	○	63	50	400	32	CLM-30	STCM-4	CSP-632	TFHCS M3-0.5x10mm	CBDC-615G	TK-02835

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

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10 Business Days or Less

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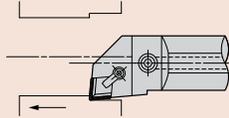
80°

90°

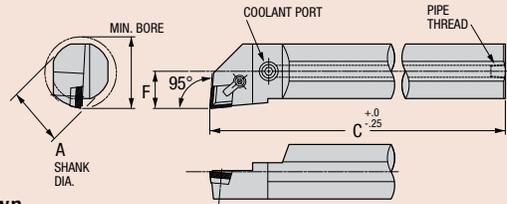


SB-CCLPR/L

Style L
80° Diamond
Positive Rake
95° Lead Angle



Right-Hand Boring Bar Shown

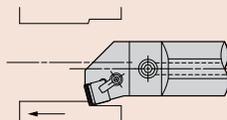


Part Number		Gage	Stock		Min. Bore	Dimensions (millimeters)			Standard Components					* Tune-Up Kit
Right	Left	Insert	R	L		A	C	F	Clamp	Clamp Screw	Shim	Shim Screw	Chip-breaker	Includes All Standard Components
SB25-CCLPR-12T	SB25-CCLPL-12T	CPGN-120308	○	○	32	25	300	16	CLM-7	STCM-25	-	-	CBDC-4L	TK-02782
SB32-CCLPR-12U	SB32-CCLPL-12U	CPGN-120308	○	○	38	32	350	19	CLM-20	STCM-11	CSP-422	TFHCS M3-0.5x6mm	CBDC-4L	TK-02836
SB40-CCLPR-12U	SB40-CCLPL-12U	CPGN-120308	○	○	44	40	350	22	CLM-20	STCM-11	CSP-422	TFHCS M3-0.5x6mm	CBDC-4L	TK-02836
SB50-CCLPR-19V	SB50-CCLPL-19V	CPGN-190412	○	○	63	50	400	32	CLM-30	STCM-4	CSP-632	TFHCS M3-0.5x10mm	CBDC-6G	TK-02784

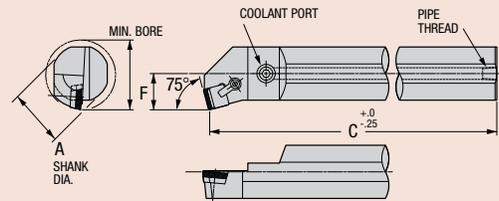
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

SB-CSKPR/L

Style K
Square
Positive Rake
75° Lead Angle



Right-Hand Boring Bar Shown



Part Number		Gage	Stock		Min. Bore	Dimensions (millimeters)			Standard Components					* Tune-Up Kit
Right	Left	Insert	R	L		A	C	F	Clamp	Clamp Screw	Shim	Shim Screw	Chip-breaker	Includes All Standard Components
SB25-CSKPR-12T	SB25-CSKPL-12T	SPGN-120308	○	○	32	25	300	16	CLM-7	STCM-25	-	-	CBS-4G	TK-02782
SB32-CSKPR-12U	SB32-CSKPL-12U	SPGN-120308	○	○	38	32	350	19	CLM-20	STCM-11	-	-	CBS-4G	TK-02868
SB40-CSKPR-12U	SB40-CSKPL-12U	SPGN-120308	○	○	44	40	350	22	CLM-20	STCM-11	SP-40	TFHCS M3-0.5x12mm	CBS-4G	TK-02869
SB50-CSKPR-19V	SB50-CSKPL-19V	SPGN-190412	○	○	63	50	400	32	CLM-30	STCM-4	SP-60	TFHCS M4-0.7x12mm	CBS-6G	TK-02870

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

BORING BARS

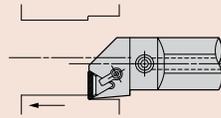
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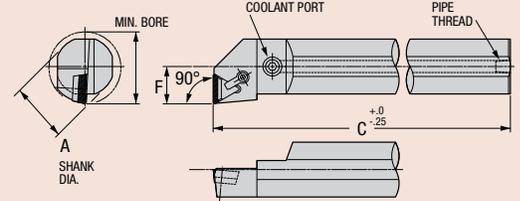


SB-CTFPR/L

Style F
Triangle
Positive Rake
90° Lead Angle



Right-Hand Boring Bar Shown

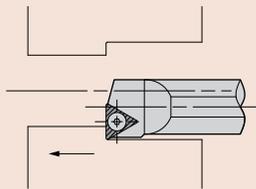


Part Number		Gage	Stock		Min. Bore	Dimensions (millimeters)			Standard Components					* Tune-Up Kit
Right	Left	Insert	R	L		A	C	F	Clamp	Clamp Screw	Shim	Shim Screw	Chip-breaker	Includes All Standard Components
SB25-CTFPR-16T	SB25-CTFPL-16T	TPGN-160308	○	○	32	25	300	16	CLM-7	STCM-25	-	-	CBT-3G	TK-02783
SB32-CTFPR-16U	SB32-CTFPL-16U	TPGN-160308	○	○	38	32	350	19	CLM-6	STCM-25	TSP-321	-	CBT-3G	TK-02840
SB40-CTFPR-16U	SB40-CTFPL-16U	TPGN-160308	○	○	44	40	350	22	CLM-6	STCM-25	TSP-321	TFHCS M3-0.5x10mm	CBT-3G	TK-02840
SB40-CTFPR-22U	SB40-CTFPL-22U	TPGN-220408	○	○	50	40	350	26	CLM-12	STCM-8	SP-4	TFHCS M3-0.5x12mm	CBT-4G	TK-02748
SB50-CTFPR-27V	SB50-CTFPL-27V	TPGN-270612	○	○	63	50	400	32	CLM-12	STCM-4	SP-5	TFHCS M3-0.5x12mm	CBT-5G	TK-02749

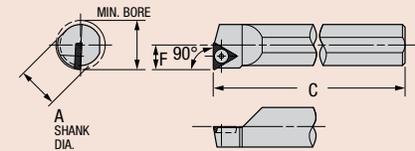
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

S-STFNR/L

Style F
Triangle
Positive Rake
90° Lead Angle



Right-Hand Boring Bar Shown



Part Number		Gage	Stock		Min. Bore	Dimensions (millimeters)			Standard Component	* Tune-Up Kit
Right	Left	Insert	R	L		A	C	F	Insert Screw	Includes All Standard Components
S10-STFNR-11M	S10-STFNL-11M	TP41	○	○	13	10	150	6	TBHCS M3-0.5x6mm	TK-02838
S12-STFNR-11R	S12-STFNL-11R	TP41	○	○	16	12	200	8	TBHCS M3-0.5x6mm	TK-02838
S16-STFNR-11S	S16-STFNL-11S	TP41	○	○	20	16	250	9	TBHCS M3-0.5x6mm	TK-02838

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

See page T 38 for carbide inserts.

10 Business Days or Less

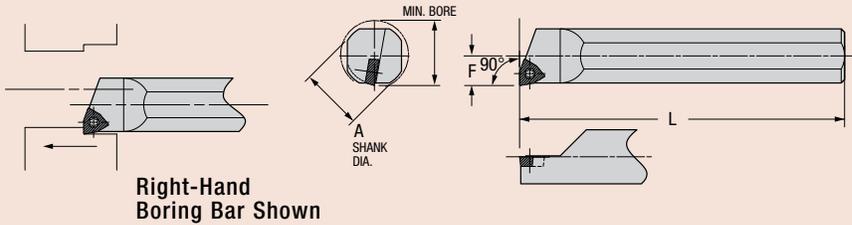
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S-SWFCR/L

Style F
Screw-On Trigon
Solid Steel
90° Lead Angle



Right-Hand Boring Bar Shown

Part Number		Gage	Stock		Min. Bore Dia.	Dimensions (millimeters)			Standard Component	* Tune-Up Kit
Right	Left	Insert	R	L		A	F	L	Insert Screw	Includes All Standard Components
S10-SWFCR-04K	S10-SWFCL-04K	WCMT-060204	○	○	11	10	5,5	125	PT-589T	TK-00804
S12-SWFCR-04M	S12-SWFCL-04M	WCMT-060204	○	○	14	12	7	150	PT-589T	TK-00804
S12-SWFCR-06D	S12-SWFCL-06D	WCMT-09T304	○	○	16	12	8	60	PT-559T	TK-00807
S12-SWFCR-06M	S12-SWFCL-06M	WCMT-09T304	○	○	16	12	8	150	PT-559T	TK-00807
S16-SWFCR-06H	S16-SWFCL-06H	WCMT-09T304	○	○	18	16	9	100	PT-559T	TK-00807
S16-SWFCR-06Q	S16-SWFCL-06Q	WCMT-09T304	○	○	18	16	9	180	PT-559T	TK-00807
S20-SWFCR-06H	S20-SWFCL-06H	WCMT-09T304	○	○	22	20	11	100	PT-559T	TK-00807
S20-SWFCR-06R	S20-SWFCL-06R	WCMT-09T304	○	○	22	20	11	200	PT-559T	TK-00807
S25-SWFCR-06K	S25-SWFCL-06K	WCMT-09T304	○	○	28	25	14	125	PT-559T	TK-00807
S25-SWFCR-06S	S25-SWFCL-06S	WCMT-09T304	○	○	28	25	14	250	PT-559T	TK-00807
S32-SWFCR-06T	S32-SWFCL-06T	WCMT-09T304	○	○	34	32	17	300	PT-559T	TK-00807

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

BORING BARS

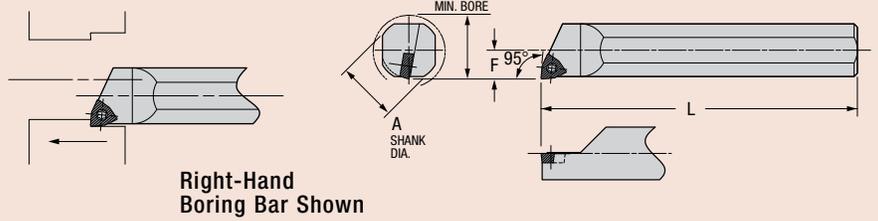
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S-SWLCR/L

Style L
Screw-On Trigon
Solid Steel
95° Lead Angle



Right-Hand Boring Bar Shown

Part Number		Gage	Stock		Min. Bore Dia.	Dimensions (millimeters)			Standard Component	* Tune-Up Kit
Right	Left	Insert	R	L		A	F	L	Insert Screw	Includes All Standard Components
S10-SWLCR-04K	S10-SWLCL-04K	WCMT-060204	○	○	11	10	5,5	125	PT-589T	TK-00804
S12-SWLCR-04M	S12-SWLCL-04M	WCMT-060204	○	○	14	12	7	150	PT-589T	TK-00804
S12-SWLCR-06D	S12-SWLCL-06D	WCMT-09T304	○	○	16	12	8	60	PT-559T	TK-00807
S12-SWLCR-06M	S12-SWLCL-06M	WCMT-09T304	○	○	16	12	8	150	PT-559T	TK-00807
S16-SWLCR-06H	S16-SWLCL-06H	WCMT-09T304	○	○	18	16	9	100	PT-559T	TK-00807
S16-SWLCR-06Q	S16-SWLCL-06Q	WCMT-09T304	○	○	18	16	9	180	PT-559T	TK-00807
S20-SWLCR-06H	S20-SWLCL-06H	WCMT-09T304	○	○	22	20	11	100	PT-559T	TK-00807
S20-SWLCR-06R	S20-SWLCL-06R	WCMT-09T304	○	○	22	20	11	200	PT-559T	TK-00807
S25-SWLCR-06K	S25-SWLCL-06K	WCMT-09T304	○	○	28	25	14	125	PT-559T	TK-00807
S25-SWLCR-06S	S25-SWLCL-06S	WCMT-09T304	○	○	28	25	14	250	PT-559T	TK-00807
S32-SWLCR-06T	S32-SWLCL-06T	WCMT-09T304	○	○	34	32	17	300	PT-559T	TK-00807

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

10 Business Days or Less

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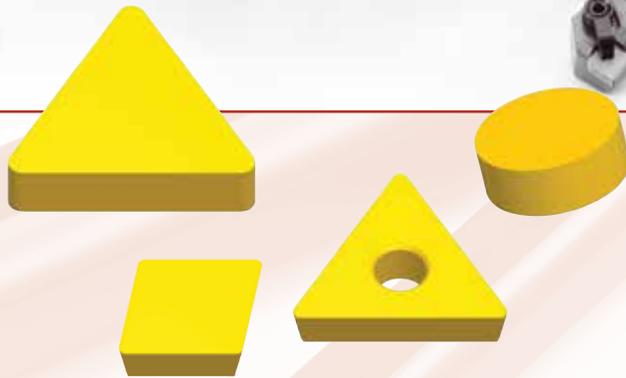
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Boring Bars for Ceramic Inserts

This section contains boring bars using ceramic inserts that Greenleaf believes are most often used by industry.

In addition to tempered-steel bars, Greenleaf also can supply *Heavy Metal* or “*No Chat*” high-density steel bars that can reduce, and sometimes eliminate, “chatter” for those applications that require a longer reach.

Greenleaf’s boring bar capability includes numerous additional styles not shown in this catalog. Contact us if you do not see the bar you need. Our special design and build services can be counted on to meet your individual needs.



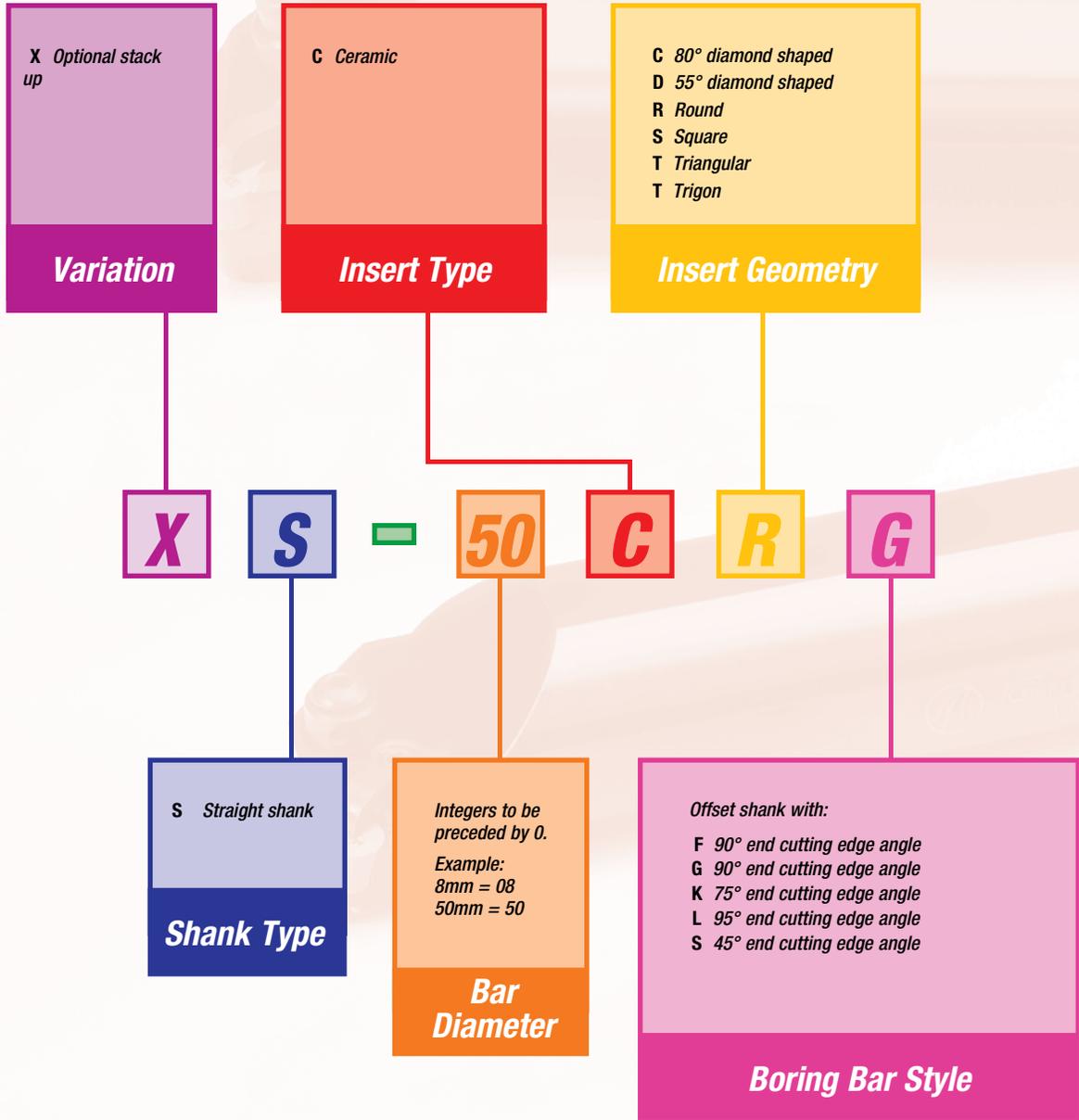
*Greenleaf Corporation is continually upgrading its products.
For the most current information, please visit our web site at:*

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Ceramic-Insert Boring Bar Identification System

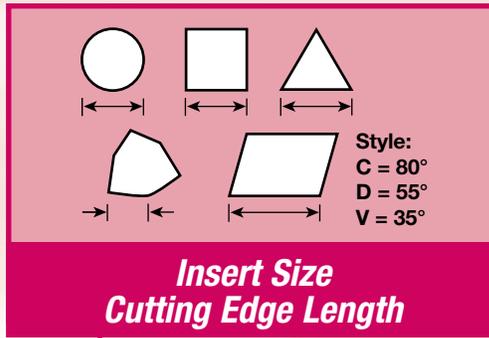


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N Negative rake
P Positive rake

Holder Rake



N

R

19

-

V

L Left
R Right

Hand of Tool

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

Bar Length

Ceramic-Insert Boring Bar Usage Reference Guide

Boring Bar Style

Boring Bar Geometry

Insert Type

Boring Bar Application

Part Number

S-CCKNR/L

Style K
80° Diamond
(Using 100° Corner)
95° Lead Angle

Part Number		Insert	Min. Size	A	C	F	Standard Components	*Tune-Up Kit	Optional Components
S25-CCKNR-12T	S25-CCKNR-12T	CH25-10000	75	25	300	15	CLM-12 STOM-4 TK-02022 NLM-44 CLM-9		
S40-CCKNR-120	S40-CCKNR-120	CH20-10000	102	40	300	22	C20-433 S-488S CLM-12 STOM-4 TK-02041 NLM-48 CLM-9		
S50-CCKNR-120	S50-CCKNR-120	CH20-10000	112	50	400	29	C20-433 S-488S CLM-12 STOM-4 TK-02023 NLM-48 CLM-9		
S80-CCKNR-190	S80-CCKNR-190	CH20-19012	127	80	400	32	C20-433 S-588M CLM-30 STOM-4 TK-02024 NLM-68 CLM-12		
S80-CCKNR-190	S80-CCKNR-190	CH20-19012	127	80	400	45	C20-433 S-588M CLM-30 STOM-4 TK-02024 NLM-68 CLM-12		

S-CDLNR/L

Style L
55° Diamond
Negative Rake
95° Lead Angle

Part Number		Insert	Min. Size	A	C	F	Standard Components	*Tune-Up Kit	Optional Components
S40-CDLNR-110	S40-CDLNR-110	CH20-11000	90	40	300	25	D20-333 S-288M CLM-12 STOM-4 TK-02070 NLM-24		
S50-CDLNR-110	S50-CDLNR-110	CH20-11000	90	50	400	32	D20-333 S-288M CLM-12 STOM-4 TK-02070 NLM-24		
S80-CDLNR-190	S80-CDLNR-190	CH20-19000	112	80	400	35	D20-433 S-488M CLM-30 STOM-4 TK-02070 NLM-48 CLM-12		
S80-CDLNR-190	S80-CDLNR-190	CH20-19000	112	80	400	40	D20-433 S-488M CLM-30 STOM-4 TK-02070 NLM-48 CLM-12		

S-CCLNR/L

Style L
80° Diamond
Negative Rake
95° Lead Angle

Part Number		Insert	Min. Size	A	C	F	Standard Components	*Tune-Up Kit	Optional Components
S25-CCLNR-12T	S25-CCLNR-12T	CH25-10000	75	25	300	15	CLM-12 STOM-4 TK-02022 NLM-44 CLM-9		
S40-CCLNR-120	S40-CCLNR-120	CH20-10000	102	40	300	22	C20-433 S-488M CLM-12 STOM-4 TK-02023 NLM-48 CLM-9		
S50-CCLNR-120	S50-CCLNR-120	CH20-10000	112	50	400	29	C20-433 S-488M CLM-12 STOM-4 TK-02023 NLM-48 CLM-9		
S80-CCLNR-190	S80-CCLNR-190	CH20-19012	127	80	400	32	C20-433 S-588M CLM-30 STOM-4 TK-02024 NLM-68 CLM-12		
S80-CCLNR-190	S80-CCLNR-190	CH20-19012	127	80	400	45	C20-433 S-588M CLM-30 STOM-4 TK-02024 NLM-68 CLM-12		

S-CRGNR/L

Style G
Round
Negative Rake

Part Number		Insert	Min. Size	A	C	F	Standard Components	*Tune-Up Kit	Optional Components
S40-CRGNR-090	S40-CRGNR-090	RC20-09000	75	40	300	25	CLM-12 STOM-4 TK-02019 NLM-4		
S50-CRGNR-090	S50-CRGNR-090	RC20-09000	75	50	400	32	CLM-12 STOM-4 TK-02019 NLM-4		
S80-CRGNR-120	S80-CRGNR-120	RC20-12000	90	60	400	35	RC20-42 S-488M CLM-12 STOM-4 TK-02020 NLM-5 7.92 No Shim		
S80-CRGNR-120	S80-CRGNR-120	RC20-12000	90	60	400	40	RC20-42 S-488M CLM-12 STOM-4 TK-02020 NLM-5 7.92 No Shim		
S80-CRGNR-120	S80-CRGNR-120	RC20-12010	90	50	400	32	RC20-43 S-488M CLM-12 STOM-4 TK-02021 NLM-4 4.75 RSH-45		
S80-CRGNR-120	S80-CRGNR-120	RC20-12010	90	50	400	40	RC20-43 S-488M CLM-12 STOM-4 TK-02021 NLM-4 4.75 RSH-45		
S80-CRGNR-120	S80-CRGNR-120	RC20-12010	90	50	400	32	RC20-43 S-588M CLM-12 STOM-4 TK-02025 NLM-5 4.75 RSH-54		
S80-CRGNR-120	S80-CRGNR-120	RC20-12010	90	50	400	40	RC20-43 S-588M CLM-12 STOM-4 TK-02025 NLM-5 4.75 RSH-54		
S80-CRGNR-190	S80-CRGNR-190	RC20-19010	127	80	400	32	CLM-30 STOM-4 TK-02026 NLM-12 4.75 RSH-62		
S80-CRGNR-190	S80-CRGNR-190	RC20-19010	127	80	400	40	CLM-30 STOM-4 TK-02026 NLM-12 4.75 RSH-62		
S80-CRGNR-190	S80-CRGNR-190	RC20-19010	127	80	400	32	RC20-63 S-488M CLM-30 STOM-4 TK-02092 NLM-12 4.75 RSH-65		
S80-CRGNR-190	S80-CRGNR-190	RC20-19010	127	80	400	40	RC20-63 S-488M CLM-30 STOM-4 TK-02092 NLM-12 4.75 RSH-64		

140

141

Insert Geometry

Optional Components

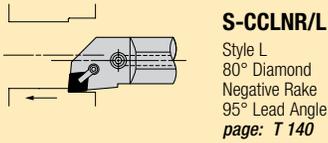
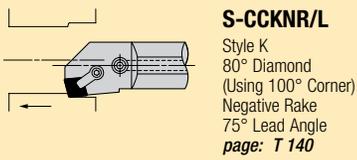
Dimensions

Tune-Up Kits

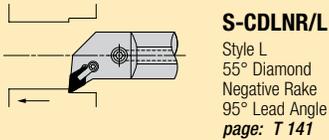
Standard Components

Stocking Program

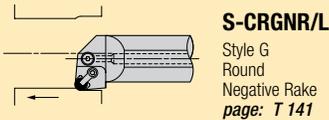
80°/100° Diamond – Negative



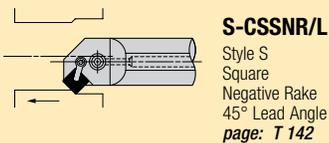
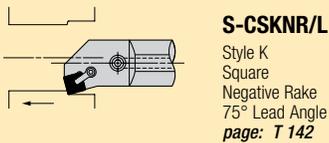
55° Diamond – Negative



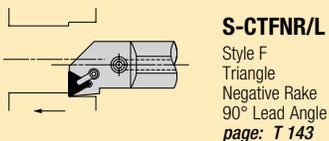
Round – Negative



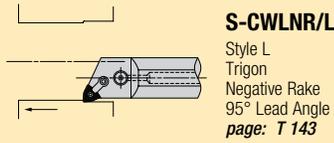
Square – Negative



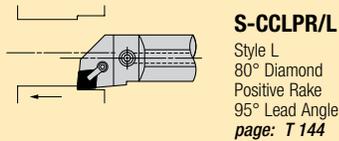
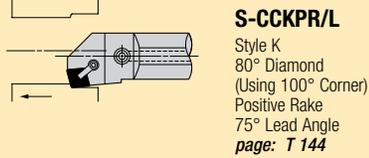
Triangle – Negative



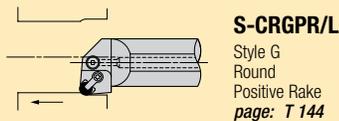
Trigon – Negative



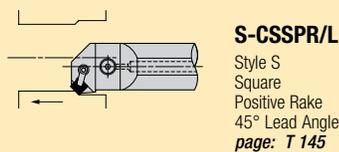
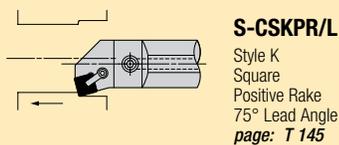
80° Diamond – Positive



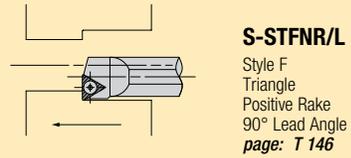
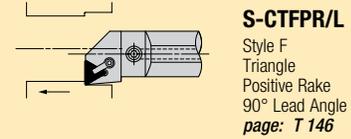
Round – Positive



Square – Positive



Triangle – Positive



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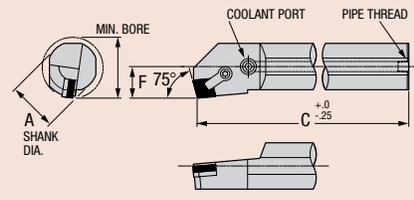
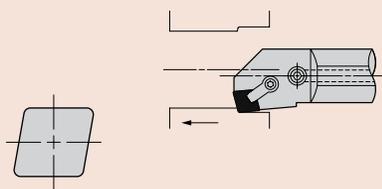
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80°



S-CCKNR/L

Style K
80° Diamond
(Using 100° Corner)
75° Lead Angle



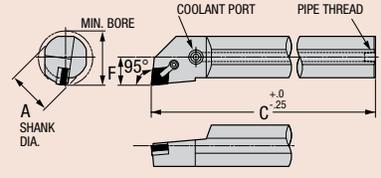
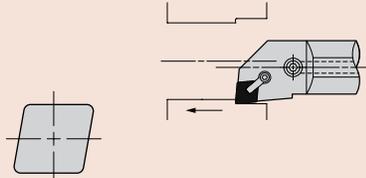
Right-Hand Boring Bar Shown

Part Number		Gage	Stock		Dimensions (millimeters)			Standard Components				*Tune-Up Kit	Optional Components		
Right	Left	Insert	R	L	Min. Bore	A	C	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components	Lock Pin	Clamp
S25-CCKNR-12T	S25-CCKNL-12T	CNGN-120408	○	○	76	25	300	16	-	-	CLM-12	STCM-8	TK-02822	NLM-44	CLM-9
S40-CCKNR-12U	S40-CCKNL-12U	CNGN-120408	○	○	102	40	350	22	CSN-433	S-46MS	CLM-12	STCM-4	TK-02841	NLM-46	CLM-9
S50-CCKNR-12V	S50-CCKNL-12V	CNGN-120408	○	○	102	50	400	29	CSN-433	S-46M	CLM-12	STCM-4	TK-02823	NLM-46	CLM-9
S50-CCKNR-19V	S50-CCKNL-19V	CNGN-190612	○	○	127	50	400	32	CSN-633	S-68M	CLM-30	STCM-4	TK-02824	NLM-68	CLM-12

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

S-CCLNR/L

Style L
80° Diamond
Negative Rake
95° Lead Angle



Right-Hand Boring Bar Shown

Part Number		Gage	Stock		Dimensions (millimeters)			Standard Components				*Tune-Up Kit	Optional Components		
Right	Left	Insert	R	L	Min. Bore	A	C	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components	Lock Pin	Clamp
S25-CCLNR-12T	S25-CCLNL-12T	CNGN-120408	●	●	76	25	300	16	-	-	CLM-12	STCM-8	TK-02822	NLM-44	CLM-9
S40-CCLNR-12U	S40-CCLNL-12U	CNGN-120408	●	●	102	40	350	22	CSN-433	S-46M	CLM-12	STCM-4	TK-02823	NLM-46	CLM-9
S50-CCLNR-12V	S50-CCLNL-12V	CNGN-120408	●	●	102	50	400	29	CSN-433	S-46M	CLM-12	STCM-4	TK-02823	NLM-46	CLM-9
S50-CCLNR-19V	S50-CCLNL-19V	CNGN-190612	○	○	127	50	400	32	CSN-633	S-68M	CLM-30	STCM-4	TK-02824	NLM-68	CLM-12

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

CERAMIC BORING BARS

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● Stocked Standard ○ 10 Business Days or Less

S-CDLNR/L

Style L
55° Diamond
Negative Rake
95° Lead Angle



Right-Hand Boring Bar Shown

Part Number		Gage	Stock		Min. Bore	Dimensions (millimeters)			Standard Components				*Tune-Up Kit	Optional Components	
Right	Left	Insert	R	L		A	C	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components	Lock Pin	Clamp
S40-CDLNR-11U	S40-CDLNL-11U	DNGN-110308	○	○	90	40	350	25	DSN-333	S-34M	CLM-12	STCM-4	TK-02785	NLM-34L	-
S50-CDLNR-11V	S50-CDLNL-11V	DNGN-110308	○	○	90	50	400	32	DSN-333	S-34M	CLM-12	STCM-4	TK-02785	NLM-34L	-
S50-CDLNR-15V	S50-CDLNL-15V	DNGN-150408	○	○	102	50	400	35	DSN-433	S-46M	CLM-30	STCM-4	TK-02786	NLM-46	CLM-12

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

S-CRGNR/L

Style G
Round
Negative Rake



Right-Hand Boring Bar Shown

Part Number		Gage	Stock		Min. Bore	Dimensions (millimeters)			Standard Components				*Tune-Up Kit	Optional Components		
Right	Left	Insert	R	L		A	C	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components	Clamp	Insert Thickness	Shim Seat
S40-CRGNR-09U	S40-CRGNL-09U	RNGN-090400	●	●	76	40	350	25	-	-	CLM-6	STCM-25	TK-02819	CLM-6	-	-
S50-CRGNR-09V	S50-CRGNL-09V	RNGN-090400	●	●	76	50	400	32	-	-	CLM-6	STCM-25	TK-02819	CLM-6	-	-
S50-CRGNR-12V	S50-CRGNL-12V	RNGN-120400	●	●	90	50	400	32	IRSN-42	S-46M	CLM-12	STCM-4	TK-02820	CLM-9	7,92	No shim
XS50-CRGNR-12V	XS50-CRGNL-12V	RNGN-120700	○	○	125	50	400	32	IRSN-43	S-46MS	CLM-12	STCM-4	TK-03064	CLM-9	4,75	IRSN-45
S50-CRGNR-15V	S50-CRGNL-15V	RNGN-150700	○	○	90	50	400	32	-	-	CLM-12	STCM-4	TK-02821	CLM-9	4,75	RSN-52
XS50-CRGNR-15V	XS50-CRGNL-15V	RNGN-150700	○	○	125	50	400	32	RSN-53	S-58M	CLM-12	STCM-4	TK-02825	CLM-9	4,75	IRSN-55
S50-CRGNR-19V	S50-CRGNL-19V	RNGN-190700	○	○	90	50	400	32	-	-	CLM-30	STCM-4	TK-02829	CLM-12	4,75	RSN-62
XS50-CRGNR-19V	XS50-CRGNL-19V	RNGN-190700	○	○	125	50	400	32	RSN-63	S-68M	CLM-30	STCM-4	TK-02792	CLM-12	4,75	IRSN-65

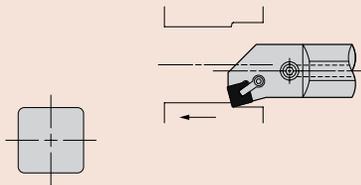
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

10 Business Days or Less Stocked Standard

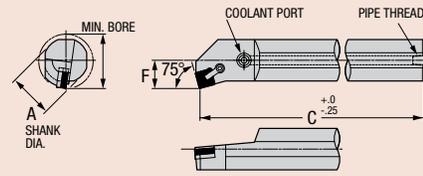
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S-CSKNR/L

Style K
Square
Negative Rake
75° Lead Angle



Right-Hand Boring Bar Shown

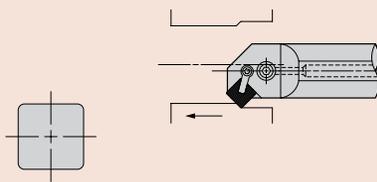


Part Number		Gage	Stock		Dimensions (millimeters)			Standard Components				*Tune-Up Kit	Optional Components		
Right	Left	Insert	R	L	Min. Bore	A	C	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components	Lock Pin	Clamp
S25-CSKNR-12T	S25-CSKNL-12T	SNGN-120408	○	○	76	25	300	16	-	-	CLM-12	STCM-8	TK-02822	NLM-44	CLM-9
S40-CSKNR-12U	S40-CSKNL-12U	SNGN-120408	○	○	102	40	350	22	ISSN-433	S-46M	CLM-12	STCM-4	TK-02844	NLM-46	CLM-9
S50-CSKNR-12V	S50-CSKNL-12V	SNGN-120408	○	○	102	50	400	29	ISSN-433	S-46M	CLM-12	STCM-4	TK-02844	NLM-46	CLM-9
S50-CSKNR-15V	S50-CSKNL-15V	SNGN-150612	○	○	127	50	400	32	SSN-533	S-58M	CLM-12	STCM-4	TK-02794	NLM-58	CLM-9
S50-CSKNR-19V	S50-CSKNL-19V	SNGN-190612	○	○	127	50	400	32	ISSN-633	S-68M	CLM-30	STCM-4	TK-02795	NLM-68	CLM-12

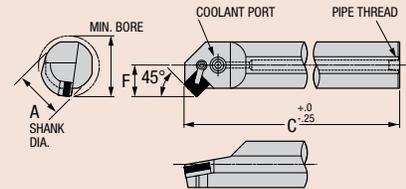
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

S-CSSNR/L

Style S
Square
Negative Rake
45° Lead Angle



Right-Hand Boring Bar Shown



Part Number		Gage	Stock		Dimensions (millimeters)			Standard Components				*Tune-Up Kit	Optional Components		
Right	Left	Insert	R	L	Min. Bore	A	C	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components	Lock Pin	Clamp
S25-CSSNR-12T	S25-CSSNL-12T	SNGN-120408	○	○	76	25	300	16	-	-	CLM-12	STCM-4	TK-02821	NLM-44	CLM-9
S40-CSSNR-12U	S40-CSSNL-12U	SNGN-120408	○	○	102	40	350	22	ISSN-433	S-46M	CLM-12	STCM-4	TK-02821	NLM-46	CLM-9
S50-CSSNR-12V	S50-CSSNL-12V	SNGN-120408	○	○	102	50	400	29	ISSN-433	S-46M	CLM-12	STCM-4	TK-02844	NLM-46	CLM-9
S50-CSSNR-15V	S50-CSSNL-15V	SNGN-150612	○	○	127	50	400	32	SSN-533	S-58M	CLM-12	STCM-4	TK-02794	NLM-58	CLM-9
S50-CSSNR-19V	S50-CSSNL-19V	SNGN-190612	○	○	127	50	400	32	ISSN-633	S-68M	CLM-30	STCM-4	TK-02795	NLM-68	CLM-12

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

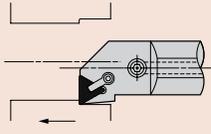
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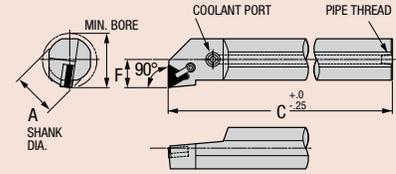


S-CTFNR/L

Style F
Triangle
Negative Rake
90° Lead Angle



Right-Hand Boring Bar Shown

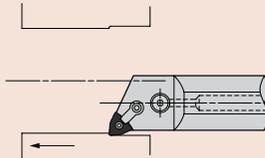


Part Number		Gage	Stock		Min. Bore	Dimensions (millimeters)			Standard Components				*Tune-Up Kit	Optional Components	
Right	Left	Insert	R	L		A	C	F	Shim Seat	Seat Screw	Clamp	Clamp Screw	Includes All Standard Components	Lock Pin	Clamp
S25-CTFNR-16T	S25-CTFNL-16T	TNGN-160408	○	○	76	25	300	16	-	-	CLM-7	STCM-25	TK-02782	NLM-33L	CLM-6
S40-CTFNR-16U	S40-CTFNL-16U	TNGN-160408	○	○	90	40	350	22	ITSN-322	S-34M	CLM-7	STCM-25	TK-02757	NLM-34L	CLM-6
S40-CTFNR-22U	S40-CTFNL-22U	TNGN-220408	●	●	102	40	350	26	ITSN-432	S-46M	CLM-12	STCM-4	TK-02771	NLM-46	CLM-9
S50-CTFNR-22V	S50-CTFNL-22V	TNGN-220408	●	●	102	50	400	32	ITSN-432	S-46M	CLM-12	STCM-4	TK-02771	NLM-46	CLM-9

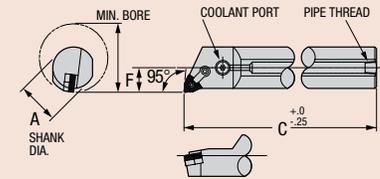
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

S-CWLNR/L

Style L
Trigon
Negative Rake
95° Lead Angle



Right-Hand Boring Bar Shown



Part Number		Gage	Stock		Min. Bore	Dimensions (millimeters)			Standard Components				*Tune-Up Kit
Right	Left	Insert	R	L		A	C	F	Shim Seat	Lock Pin	Clamp	Clamp Screw	Includes All Standard Components
S25-CWLNR-06T	S25-CWLNL-06T	WNGA-060408	○	○	76	25	300	16	-	NLM-33L	CLM-6	STCM-25	TK-02803
S40-CWLNR-06U	S40-CWLNL-06U	WNGA-060408	○	○	90	40	350	22	IWSN-322	NLM-34L	CLM-6	STCM-25	TK-02811
S40-CWLNR-08T	S40-CWLNL-08T	WNGA-080408	○	○	76	25	300	16	-	NLM-44	CLM-20	STCM-26	TK-02826
S50-CWLNR-08U	S50-CWLNL-08U	WNGA-080408	●	●	102	40	350	22	IWSN-433	NLM-46	CLM-20	STCM-26	TK-02808
S63-CWLNR-08V	S63-CWLNL-08V	WNGA-080408	○	○	102	50	400	32	IWSN-433	NLM-46	CLM-20	STCM-26	TK-02808

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

10 Business Days or Less

Stocked Standard

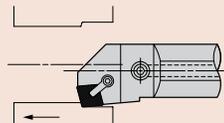
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80°

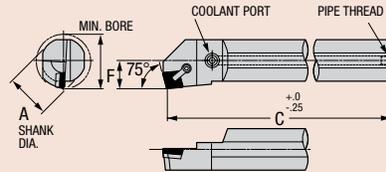


S-CCKPR/L

Style K
80° Diamond
(Using 100° Corner)
75° Lead Angle



Right-Hand Boring Bar Shown

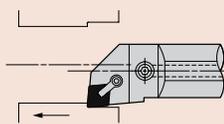


Part Number		Gage	Stock		Min. Bore	Dimensions (millimeters)			Shim Seat	Standard Components			* Tune-Up Kit
Right	Left	Insert	R	L		A	C	F		Seat Screw	Clamp	Clamp Screw	Includes All Standard Components
S25-CCKPR-12T	S25-CCKPL-12T	CPGN-120408	○	○	32	25	300	16	-	-	CLM-22	STCM-32	TK-02778
S40-CCKPR-12U	S40-CCKPL-12U	CPGN-120408	○	○	44	40	350	22	SP-49	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02779
S50-CCKPR-12V	S50-CCKPL-12V	CPGN-120408	○	○	56	50	400	29	SP-49	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02779

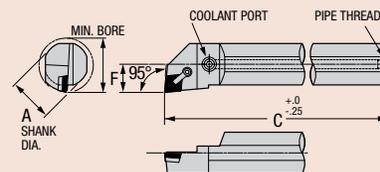
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

S-CCLPR/L

Style L
80° Diamond
Positive Rake
95° Lead Angle



Right-Hand Boring Bar Shown

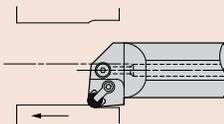


Part Number		Gage	Stock		Min. Bore	Dimensions (millimeters)			Shim Seat	Standard Components			* Tune-Up Kit
Right	Left	Insert	R	L		A	C	F		Seat Screw	Clamp	Clamp Screw	Includes All Standard Components
S25-CCLPR-12T	S25-CCLPL-12T	CPGN-120408	○	○	32	25	300	16	-	-	CLM-22	STCM-32	TK-02778
S40-CCLPR-12U	S40-CCLPL-12U	CPGN-120408	○	○	44	40	350	22	SP-49	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02779
S50-CCLPR-12V	S50-CCLPL-12V	CPGN-120408	○	○	56	50	400	29	SP-49	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02779

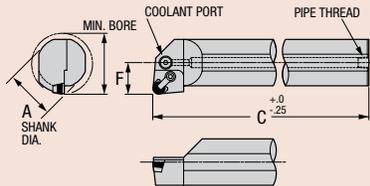
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

S-CRGPR/L

Style G
Round
Positive Rake



Right-Hand Boring Bar Shown



Part Number		Gage	Stock		Min. Bore	Dimensions (millimeters)			Shim Seat	Standard Components			* Tune-Up Kit
Right	Left	Insert	R	L		A	C	F		Seat Screw	Clamp	Clamp Screw	Includes All Standard Components
S25-CRGPR-09T	S25-CRGPL-09T	RPGN-090300	●	●	32	25	300	16	-	-	CLM-7	STCM-25	TK-02782
S40-CRGPR-09U	S40-CRGPL-09U	RPGN-090300	●	●	44	40	350	22	SP-34	TSHCS M2-0.4x6mm	CLM-7	STCM-25	TK-02813
S50-CRGPR-09V	S50-CRGPL-09V	RPGN-090300	●	●	56	50	400	29	SP-34	TSHCS M2-0.4x6mm	CLM-7	STCM-25	TK-02813
S50-CRGPR-12V	S50-CRGPL-12V	RPGN-120400	●	●	63	50	400	32	SP-44	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02814

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

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CERAMIC BORING BARS

S-CSKPR/L

Style K
Square
Positive Rake
75° Lead Angle



Right-Hand Boring Bar Shown

Part Number		Gage	Stock		Min. Bore	Dimensions (millimeters)			Shim Seat	Standard Components			* Tune-Up Kit
Right	Left	Insert	R	L		A	C	F		Seat Screw	Clamp	Clamp Screw	Includes All Standard Components
S25-CSKPR-12T	S25-CSKPL-12T	SPGN-120408	○	○	32	25	300	16	-	-	CLM-7	STCM-25	TK-02782
S40-CSKPR-12U	S40-CSKPL-12U	SPGN-120408	○	○	44	40	350	22	SP-41	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02780
S50-CSKPR-12V	S50-CSKPL-12V	SPGN-120408	○	○	56	50	400	29	SP-41	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02780

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

S-CSSPR/L

Style S
Square
Positive Rake
45° Lead Angle



Right-Hand Boring Bar Shown

Part Number		Gage	Stock		Min. Bore	Dimensions (millimeters)			Shim Seat	Standard Components			* Tune-Up Kit
Right	Left	Insert	R	L		A	C	F		Seat Screw	Clamp	Clamp Screw	Includes All Standard Components
S25-CSSPR-12T	S25-CSSPL-12T	SPGN-120408	○	○	32	25	300	16	-	-	CLM-7	STCM-25	TK-02782
S40-CSSPR-12U	S40-CSSPL-12U	SPGN-120408	○	○	44	40	350	22	SP-41	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02780
S50-CSSPR-12V	S50-CSSPL-12V	SPGN-120408	○	○	56	50	400	29	SP-41	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02780

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

10 Business Days or Less

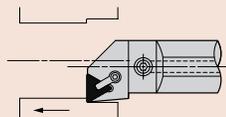
Stocked Standard

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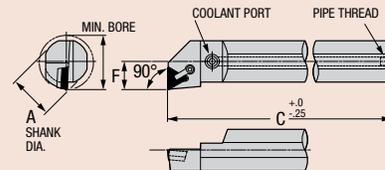


S-CTFPR/L

Style F
Triangle
Positive Rake
90° Lead Angle



Right-Hand Boring Bar Shown

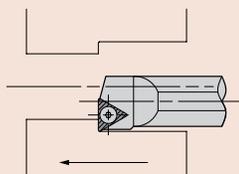


Part Number		Gage	Stock		Min. Bore	Dimensions (millimeters)			Shim Seat	Standard Components			* Tune-Up Kit
Right	Left	Insert	R	L		A	C	F		Seat Screw	Clamp	Clamp Screw	Includes All Standard Components
S25-CTFPR-16T	S25-CTFPL-16T	TPGN-160308	○	○	32	25	300	16	-	-	CLM-7	STCM-25	TK-02782
S40-CTFPR-16U	S40-CTFPL-16U	TPGN-160308	○	○	44	40	350	22	SP-3A	TFHCS M3-0.5x10mm	CLM-7	STCM-25	TK-02817
S40-CTFPR-22U	S40-CTFPL-22U	TPGN-220408	○	○	50	40	350	26	SP-4	TFHCS M3-0.5x10mm	CLM-12	STCM-4	TK-02839
S50-CTFPR-22V	S50-CTFPL-22V	TPGN-220408	●	●	63	50	400	32	SP-4	TFHCS M3-0.5x12mm	CLM-12	STCM-4	TK-02818

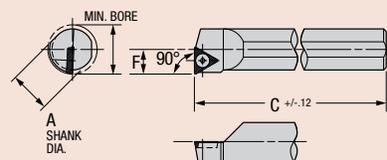
* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

S-STFNR/L

Style F
Triangle
Positive Rake
90° Lead Angle



Right-Hand Boring Bar Shown



Part Number		Gage	Stock		Min. Bore	Dimensions (millimeters)			Insert Screw	* Tune-Up Kit
Right	Left	Insert	R	L		A	C	F		Includes All Standard Components
S10-STFNR-11M	S10-STFNL-11M	TP41	○	○	13	10	150	6	TBHCS M3-0.5x6mm	TK-02838
S12-STFNR-11R	S12-STFNL-11R	TP41	○	○	16	12	200	8	TBHCS M3-0.5x6mm	TK-02838
S16-STFNR-11S	S16-STFNL-11S	TP41	○	○	20	16	250	9	TBHCS M3-0.5x6mm	TK-02838

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the boring bar.

See page T 70 for ceramic inserts.

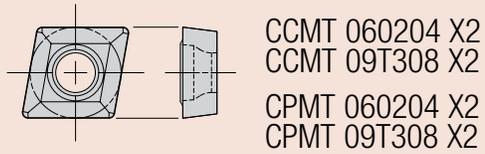
CERAMIC BORING BARS

Greenleaf Sales

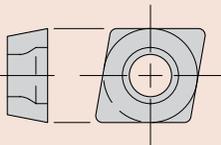
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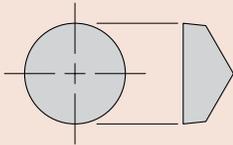
Additional Greenleaf Turning Inserts



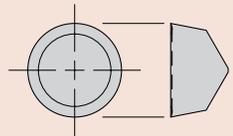
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CCMT 09T308 X2
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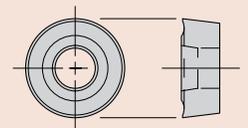
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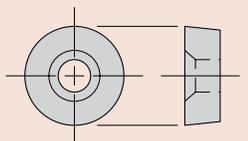
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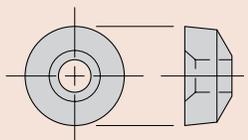
Ceramic
with Chipform
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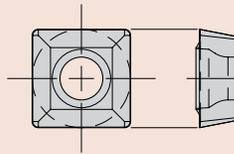
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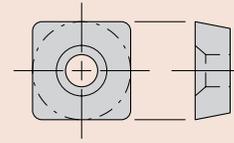
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RD-9P
RD-10P
RD-12P
RD-16P



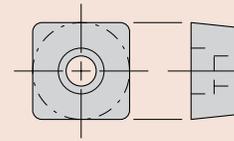
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RD8-C



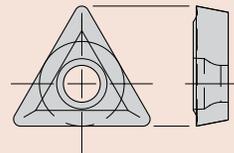
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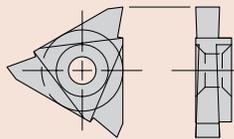
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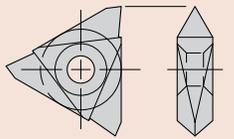
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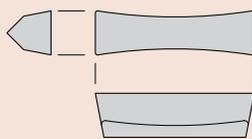
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TNMA-NG
TNMC-NG
TPMC-NG

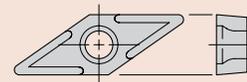


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TPMC-NV

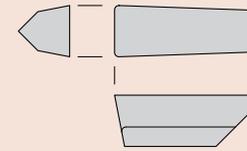


VDB 188RA
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VDB 218RA
VDB 250 RB
VDB 250B015

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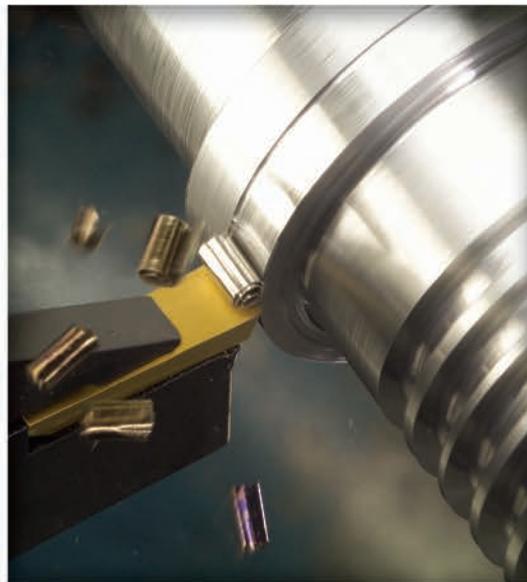
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