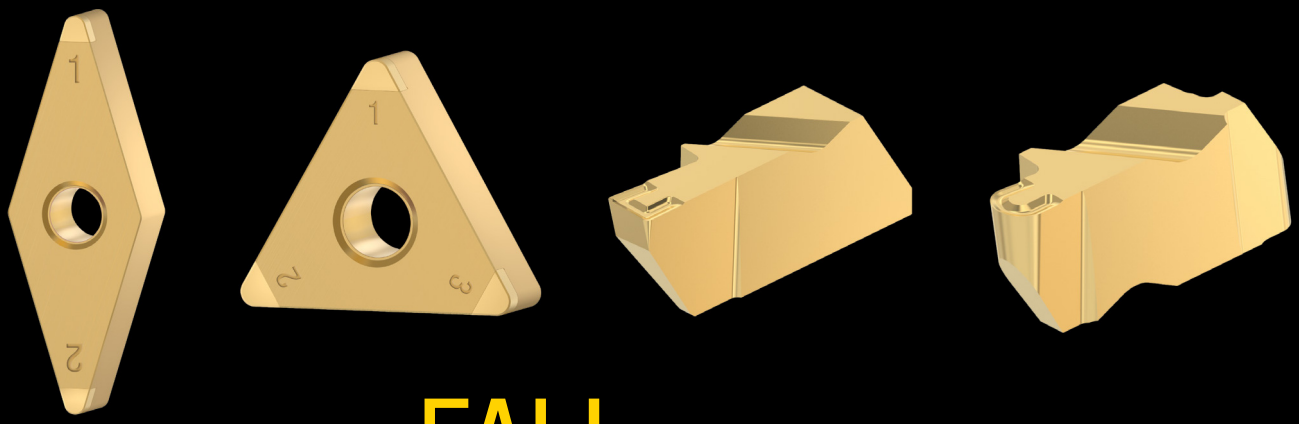
KENNAMETAL®



FALL 2025

inch

INNOVATIONS

METAL CUTTING SAFETY

IMPORTANT SAFETY INSTRUCTIONS

Read before using the tools in this catalog!

PROJECTILE AND FRAGMENTATION HAZARDS:

Modern metal cutting operations involve high spindle and cutter speeds and high temperatures and cutting forces. Hot metal chips may fly off the workpiece during metal cutting. Although cutting tools are designed and manufactured to withstand high cutting forces and temperatures, they can sometimes fragment, particularly if they are subjected to over-stress, severe impact, or other abuse.

- Always wear appropriate personal protective equipment, including safety goggles, when operating metal cutting machines or working nearby.
- Always make sure all machine guards are in place.

BREATHING AND SKIN CONTACT HAZARDS:

Grinding carbide or other advanced cutting tool materials produces dust or mist containing metallic particles. Breathing this dust or mist — especially over an extended period — can cause temporary or permanent lung disease or make existing medical conditions worse. Contact with this dust or mist can irritate eyes, skin, and mucous membranes and may make existing skin conditions worse.

- Always wear breathing protection and safety goggles when grinding.
- Provide ventilation control and collect and properly dispose of dust, mist, or sludge from grinding.
- Avoid skin contact with dust or mist.

For more information, read the applicable Material Safety Data Sheet provided by Kennametal and consult General Industry Safety and Health Regulations, Part 1910, Title 29 of the Code of Federal Regulations.

These safety instructions are general guidelines. Many variables affect machining operations. It is impossible to cover every specific situation. The technical information included in this catalog and recommendations on machining practices may not apply to your particular operation. For more information, consult the Kennametal Metal Cutting Safety booklet, available free from Kennametal at 724 539 5747 or fax 724 539 5439. For specific product safety and environmental questions, contact our Corporate Environmental Health and Safety Office at 724 539 5066 or fax 724 539 5372.

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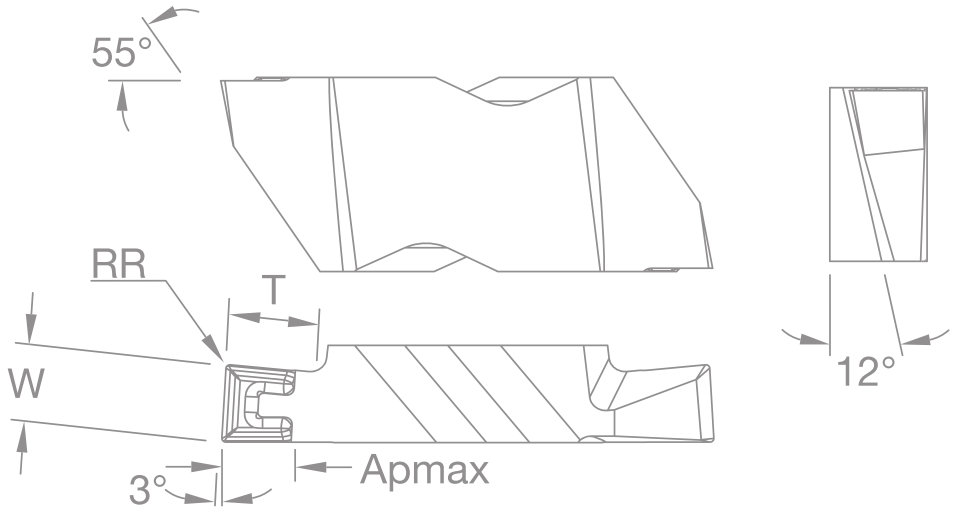
KENNAMETAL
MADE IN BRAZIL
1214800881 H4PA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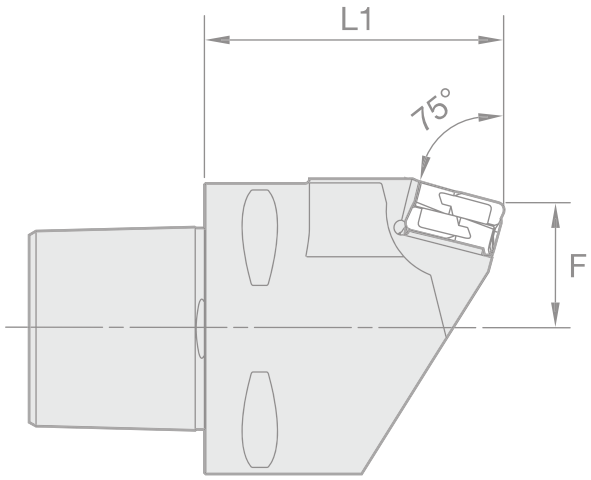
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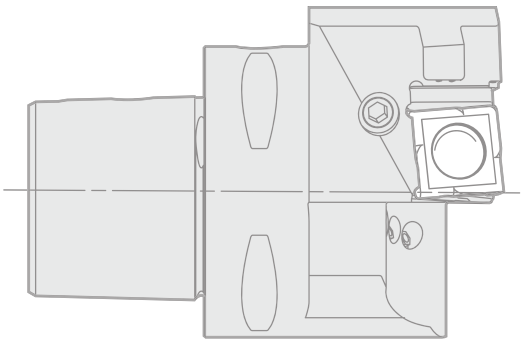

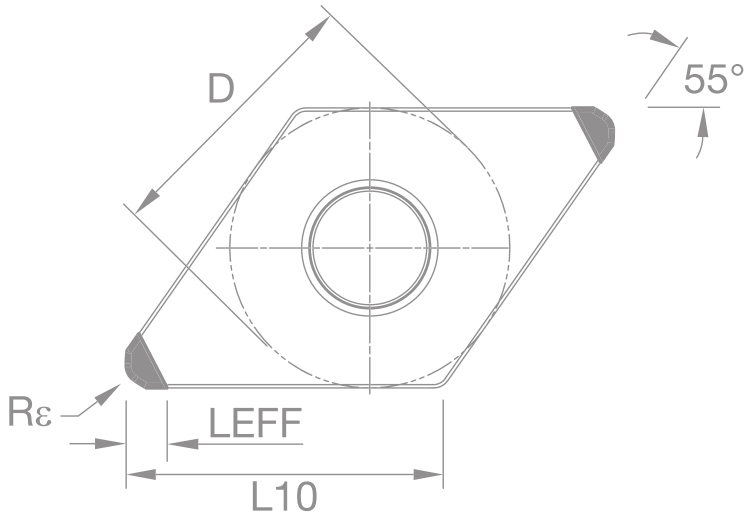
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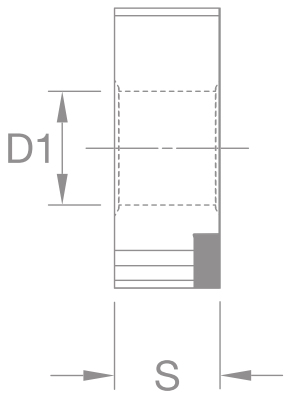

D1
S

Top Notch™ Grooving KCU10B & KCU25B Inserts

The Indisputable Insert for Shallow Grooving is Now Available with KENGold™

KCU10B and KCU25B graded inserts featuring the KENGold PVD multilayer coating provide enhanced wear detection and performance, making them ideal for safe and efficient use in general engineering, automotive, aerospace and other industries. Experience consistent machining productivity across all materials with these precision-ground inserts, which offer stronger, tougher and more accurate indexing—resulting in reliability and repeatability.

Applications

PRIMARY

- Grooving
- Profiling
- Threading
- Cut-Off Operations
- Face Grooving
- I.D. Threading
- I.D. Grooving
- I.D. Face Grooving
- Back Boring
- Boring
- Face Turning

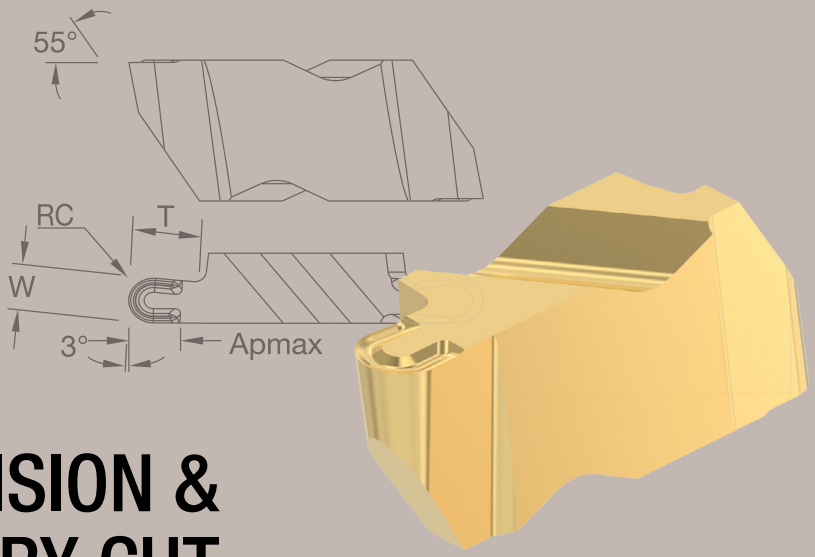
Materials

UNIVERSAL

P M K N S H

Industries

- General Engineering
- Automotive
- EV
- Aerospace
- Oil & Gas
- Wind & Solar
- Medical
- Defense



PRECISION & POWER IN EVERY CUT

EXPLORE Top Notch

HOW DO CATALOG NUMBERS WORK?

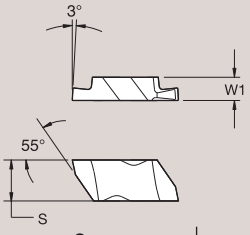
Each character in our Catalog Number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.

NGC2C110R035K									
N	**G**	**C**	**2**	**C**	**110**	**R**	**035**	**K**	
Type of Insert	**Insert Style**	**Additional Information**	**Insert Size**	**Size Identification**	**Groove Size****	**Hand of Insert**	**Cutting Depth**	**Chipbreaker Design**	**Definition of Inserts**
N = Top Notch 	**B =** Blank (for special forms) **F =** Face grooving **G =** Grooving **P =** Back **R =** Full radius **U =** Undercutting (or relieving) **V =** Poly-Vee	**D** = Deep grooving **P** = Positive **C** = Groove and chamfer		**M** = Metric insert groove width **C** = Circlip groove insert width is nominal circlip size ☐ = Blank indicates inch width insert	Position pertains to groove width for F-, G-, and U-style inserts, radii for R-style grooving inserts, and circlip size for groove and chamfer inserts. Dimension in .001" or 0,01mm. **Inch example:** 1/32" width groove or radius equals "031" catalog position number. **Metric example:** 3,25mm width groove or radius equals "325" catalog position number. **Width Tolerance:** ±.001" (±0,025mm) unless otherwise specified.	**L** = Left hand **R** = Right hand	Shown for groove and chamfer inserts in .0004" increments.	**E** = Hone only **K** = Standard chip control **S** = T Land and Hone **ST** = STD Tip (PcBN)	Groove size "J" or "L" for Poly-Vee inserts "I" indicates internal face grooving

Insert Number	W1 (in)	W1 (mm)
1	.100	2,54
2	.150	3,81
3	.195	4,95
4	.255	6,98
5	.380	9,65
6	.383	9,73

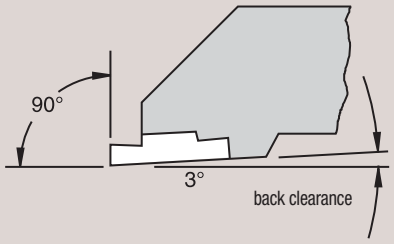
*Kennametal proprietary identification system.
**Omit position for Top Notch NB-style blanks.

Top Notch Threading and Grooving Insert Dimensions



insert size	S mm	S inch	W1 mm	W1 inch
1	2,54	.100	2,54	.100
2	5,56	.219	3,81	.150
3	8,74	.344	4,95	.195
4	11,51	.453	6,48	.255
5	17,48	.688	9,65	.380
6	11,51	.453	9,73	.383
8	7,93	.312	11,13	.438

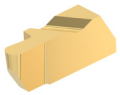
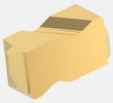
Top Notch Holder Design



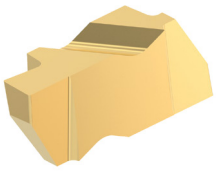
NOTE: Holders are designed to locate insert inclined to 3° to provide back clearance down open side.

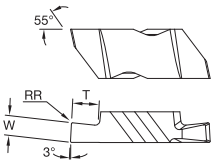
Kennametal and Top Notch tooling technology combine to bring you the very best threading and grooving system available in the world today.

Insert Style	Application	Rake Angle	Page(s)
NG 	• General-purpose grooving. • O-ring grooving. • Circlip grooving.	Neutral	8
NG-K 	• Chip control geometry. • General-purpose grooving. • O-ring grooving. • Circlip grooving. • Light turning.	10° Positive	10
NGC-K 	• Combined groove and chamfered edge break in one positive plunge with chip control. • Designed for DIN 471/472 standard circlip grooves.	10° Positive	18
NGD 	• Deep grooving.	Neutral	12
NGD-K 	• Chip control geometry. • Deep grooving. • Light turning.	10° Positive	12
NGP 	• General-purpose grooving. • O-ring grooving. • Circlip grooving.	5° Positive	9
NF 	• Face grooving. • Additional side clearance.	Neutral	15
NF-K 	• Face grooving with chip control. • Additional side clearance.	10° Positive	15
NFD-K 	• Deep face grooving with chip control. • Additional side clearance.	10° Positive	16

Insert Style	Application	Rake Angle	Page(s)
NFD-KI 	• Internal deep face grooving with chip control. • For use in boring bars for internal face grooves.	10° Positive	16
NP-K NPD-K 	• Turning. • Back turning positive. • Profiling with chip control.	10° Positive	17
NR 	• Full radius grooving. • Turning and profiling.	Neutral	13
NR-K 	• Chip control geometry. • Full radius grooving, turning, and profiling.	10° Positive	14
NRD 	• Deep grooving. • Full radius end-form.	Neutral	15
NRP 	• Full radius grooving. • Light-turning profiling.	5° Positive	14
NU 	• Undercutting.	Neutral	17
NV 	• Poly-Vee grooving.	Neutral	18

GROOVING APPLICATIONS



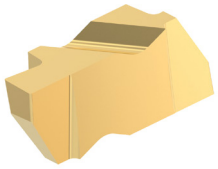


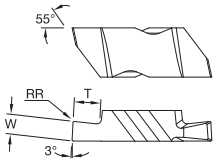
	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

● Primary
○ Secondary

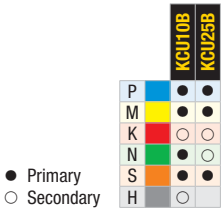
NG • Groove and Turn • Flat Top

		W		RR		T			
Catalog Number	Insert Size	mm	in	mm	in	mm	in	KCU10B	KCU25B
Right Hand									
NG2031R	2	0,79	0.031	0,09	0.004	1,27	0.050	7229641	7249689
NG2041R	2	1,04	0.041	0,09	0.004	1,27	0.050	7229643	7249712
NG2047R	2	1,19	0.047	0,09	0.004	1,27	0.050	7229658	7249715
NG2058R	2	1,47	0.058	0,19	0.008	1,27	0.050	—	7249718
NG2062R	2	1,58	0.062	0,19	0.008	2,79	0.110	7229660	7249741
NG2094R	2	2,39	0.094	0,19	0.008	2,79	0.110	7229672	7249745
NG2125R	2	3,18	0.125	0,19	0.008	2,79	0.110	7229674	7249749
NG3047R	3	1,19	0.047	0,19	0.008	1,91	0.075	7229676	7249732
NG3062R	3	1,58	0.062	0,19	0.008	2,39	0.094	7229678	7249736
NG3072R	3	1,83	0.072	0,19	0.008	2,39	0.094	7229680	—
NG3078R	3	1,98	0.078	0,19	0.008	2,39	0.094	7229705	—
NG3088R	3	2,24	0.088	0,19	0.008	2,39	0.094	7229707	7249763
NG3094R	3	2,39	0.094	0,19	0.008	3,81	0.150	7229708	7249766
NG3097R	3	2,46	0.097	0,32	0.013	3,81	0.150	7229710	7249769
NG3105R	3	2,67	0.105	0,19	0.008	3,81	0.150	7229712	7249781
NG3110R	3	2,79	0.110	0,32	0.013	3,81	0.150	—	7249783
NG3122R	3	3,10	0.122	0,19	0.008	3,81	0.150	—	7249785
NG3125R	3	3,18	0.125	0,19	0.008	3,81	0.150	7229714	7249788
NG3142R	3	3,61	0.142	0,32	0.013	3,81	0.150	7229716	7249811
NG3156R	3	3,96	0.156	0,19	0.008	3,81	0.150	7229717	7249814
NG3178R	3	4,52	0.178	0,19	0.008	3,81	0.150	—	7249817
NG3185R	3	4,70	0.185	0,57	0.023	3,81	0.150	—	7249819
NG3189R	3	4,80	0.189	0,57	0.023	3,81	0.150	7229719	7249832
NG4125R	4	3,18	0.125	0,19	0.008	3,81	0.150	7229726	7250079
NG4189R	4	4,80	0.189	0,57	0.023	6,35	0.250	7229736	7250253
NG4213R	4	5,41	0.213	0,19	0.008	6,35	0.250	—	7250255
NG4250R	4	6,35	0.250	0,57	0.023	6,35	0.250	7229738	7250258
NG5312R	5	7,93	0.312	0,83	0.033	9,52	0.375	—	7255339
NG6375R	6	9,53	0.375	0,83	0.033	6,35	0.250	—	7255340
Left Hand									
NG1031L	1	0,79	0.031	0,19	0.008	1,27	0.050	—	7371787
NG1047L	1	1,19	0.047	0,19	0.008	1,91	0.075	—	7371788
NG1062L	1	1,58	0.062	0,19	0.008	1,91	0.075	—	7371789
NG1094L	1	2,39	0.094	0,19	0.008	1,91	0.075	—	7371790
NG2031L	2	0,79	0.031	0,09	0.004	1,27	0.050	7229620	7249686
NG2041L	2	1,04	0.041	0,09	0.004	1,27	0.050	7229642	7249711
NG2047L	2	1,19	0.047	0,09	0.004	1,27	0.050	7229644	7249713
NG2058L	2	1,47	0.058	0,19	0.008	1,27	0.050	—	7249717
NG2062L	2	1,58	0.062	0,19	0.008	2,79	0.110	7229659	7249719
NG2094L	2	2,39	0.094	0,19	0.008	2,79	0.110	7229671	7249743
NG2125L	2	3,18	0.125	0,19	0.008	2,79	0.110	7229673	7249747
NG3047L	3	1,19	0.047	0,19	0.008	1,91	0.075	7229675	7249590
NG3062L	3	1,57	0.062	0,19	0.008	2,38	0.094	7229677	7249734
NG3072L	3	1,83	0.072	0,19	0.008	2,39	0.094	7229679	—
NG3078L	3	1,98	0.078	0,19	0.008	2,39	0.094	7229691	—



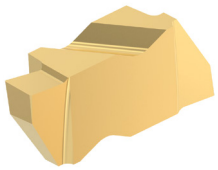


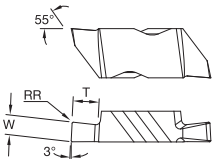
NG • Groove and Turn • Flat Top • Continued



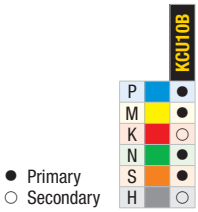
		W		RR		T			
Catalog Number	Insert Size	mm	in	mm	in	mm	in	KCU10B	KCU25B
Left Hand									
NG3088L	3	2,24	0.088	0,19	0.008	2,39	0.094	7229706	7249762
NG3094L	3	2,39	0.094	0,19	0.008	3,81	0.150	7227146	7249764
NG3097L	3	2,46	0.097	0,32	0.013	3,81	0.150	7229709	7249768
NG3105L	3	2,67	0.105	0,19	0.008	3,81	0.150	7229711	7249770
NG3110L	3	2,79	0.110	0,32	0.013	3,81	0.150	—	7249782
NG3122L	3	3,10	0.122	0,19	0.008	3,81	0.150	—	7249784
NG3125L	3	3,18	0.125	0,19	0.008	3,81	0.150	7229713	7249786
NG3142L	3	3,61	0.142	0,32	0.013	3,81	0.150	7229715	7249790
NG3156L	3	3,96	0.156	0,19	0.008	3,81	0.150	—	7249812
NG3178L	3	4,52	0.178	0,19	0.008	3,81	0.150	—	7249816
NG3185L	3	4,70	0.185	0,57	0.023	3,81	0.150	—	7249818
NG3189L	3	4,80	0.189	0,57	0.023	3,81	0.150	7229718	7249820
NG4125L	4	3,18	0.125	0,19	0.008	3,81	0.150	7229720	7250077
NG4189L	4	4,80	0.189	0,57	0.023	6,35	0.250	7229735	7250251
NG4250L	4	6,35	0.250	0,57	0.023	6,35	0.250	7229737	7250256

NOTE: Right-hand insert shown; left-hand insert is mirror image
NG1 Inserts width tolerance is ±0.003" (0.075mm).



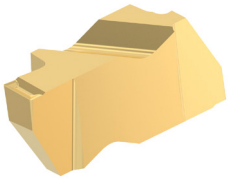


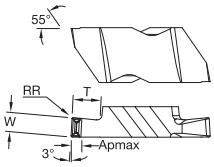
NGP • Groove and Turn • Positive



		W		RR		T		
Catalog Number	Insert Size	mm	in	mm	in	mm	in	KCU10B
Right Hand								
NGP2031R	2	0,79	0.031	0,09	0.004	1,27	0.050	7227452
NGP2062R	2	1,58	0.062	0,19	0.008	2,79	0.110	7227454
NGP2125R	2	3,18	0.125	0,19	0.008	2,79	0.110	7227456
NGP3088R	3	2,24	0.088	0,19	0.008	2,39	0.094	7227458
NGP3125R	3	3,18	0.125	0,19	0.008	3,81	0.150	7227460
NGP3156R	3	3,96	0.156	0,19	0.008	3,81	0.150	7227461
NGP4189R	4	4,80	0.189	0,57	0.023	6,35	0.250	7227462
NGP4250R	4	6,35	0.250	0,57	0.023	6,35	0.250	7227467
Left Hand								
NGP2031L	2	0,79	0.031	0,09	0.004	1,27	0.050	7227451
NGP2062L	2	1,57	0.062	0,19	0.008	2,79	0.110	7227453
NGP2125L	2	3,18	0.125	0,19	0.008	2,79	0.110	7227455
NGP3088L	3	2,24	0.088	0,19	0.008	2,39	0.094	7227457
NGP3125L	3	3,18	0.125	0,19	0.008	3,81	0.150	7227459
NGP4250L	4	6,35	0.250	0,57	0.023	6,35	0.250	7227464

NOTE: Right-hand insert shown; left-hand insert is mirror image.





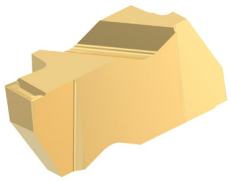
	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

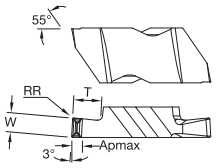
● Primary
○ Secondary

NG-K • Groove and Turn • Chip Control

		W		Ap max		RR		T			
Catalog Number	**Insert Size**	**mm**	**in**	**mm**	**in**	**mm**	**in**	**mm**	**in**	**KCU10B**	**KCU25B**
Right Hand											
NG2M050RK	2	0,50	0.020	0,64	0.025	0,09	0.004	0,64	0.025	7230405	7249772
NG2031RK	2	0,79	0.031	0,76	0.030	0,09	0.004	1,27	0.050	7230325	7249690
NG2M080RK	2	0,80	0.032	0,76	0.030	0,09	0.004	1,27	0.050	7230407	7249774
NG2M100RK	2	1,00	0.039	0,76	0.030	0,09	0.004	1,28	0.050	7230409	7249776
NG2047RK	2	1,19	0.047	0,76	0.030	0,09	0.004	1,27	0.050	7230327	7249716
NG2M120RK	2	1,20	0.047	0,76	0.030	0,09	0.004	1,27	0.050	7230421	7249778
NG2M140RK	2	1,40	0.055	0,76	0.030	0,09	0.004	1,28	0.050	7230423	7249780
NG2M150RK	2	1,50	0.059	1,09	0.043	0,19	0.008	2,81	0.110	—	7249792
NG2062RK	2	1,58	0.062	1,09	0.043	0,19	0.008	2,81	0.110	7230329	—
NG2M170RK	2	1,70	0.067	1,09	0.043	0,19	0.008	2,81	0.110	7230425	7249794
NG2M175RK	2	1,75	0.069	1,09	0.043	0,19	0.008	2,81	0.110	—	7249796
NG2M195RK	2	1,95	0.077	1,09	0.043	0,19	0.008	2,81	0.110	—	7249798
NG2M200RK	2	2,00	0.079	1,09	0.043	0,19	0.008	2,81	0.110	7230430	7249800
NG2M225RK	2	2,25	0.089	1,09	0.043	0,19	0.008	2,81	0.110	7230432	7249804
NG2094RK	2	2,39	0.094	1,09	0.043	0,19	0.008	2,79	0.110	7230401	7249746
NG2M250RK	2	2,50	0.098	1,09	0.043	0,19	0.008	2,81	0.110	—	7249806
NG2M275RK	2	2,75	0.108	1,09	0.043	0,19	0.008	2,81	0.110	7230434	7249808
NG2M300RK	2	3,00	0.118	1,09	0.043	0,19	0.008	2,81	0.110	7230436	7249810
NG2125RK	2	3,18	0.125	1,09	0.043	0,19	0.008	2,79	0.110	7230403	—
NG2M325RK	2	3,25	0.128	1,09	0.043	0,19	0.008	2,79	0.110	—	7249822
NG3M100RK	3	1,00	0.039	0,76	0.030	0,20	0.008	1,91	0.075	—	7249835
NG3047RK	3	1,19	0.047	0,76	0.030	0,19	0.008	1,91	0.075	7230438	7249733
NG3M120RK	3	1,20	0.047	0,76	0.030	0,19	0.008	1,91	0.075	7230474	7249837
NG3M150RK	3	1,50	0.059	1,02	0.040	0,19	0.008	2,39	0.094	—	7249839
NG3062RK	3	1,57	0.062	1,02	0.040	0,19	0.008	2,39	0.094	7230440	7249737
NG3M175RK	3	1,75	0.069	1,02	0.040	0,19	0.008	2,39	0.094	—	7249841
NG3072RK	3	1,83	0.072	1,02	0.040	0,19	0.008	2,39	0.094	7230462	7249739
NG3078RK	3	1,98	0.078	1,02	0.040	0,19	0.008	2,39	0.094	7230464	7249761
NG3M200RK	3	2,00	0.079	1,02	0.040	0,19	0.008	2,39	0.094	—	7249843
NG3M220RK	3	2,20	0.087	1,02	0.040	0,19	0.008	2,39	0.094	—	7249845
NG3M225RK	3	2,24	0.088	1,02	0.040	0,19	0.008	2,39	0.094	7230476	7249847
NG3094RK	3	2,39	0.094	1,02	0.040	0,19	0.008	3,81	0.150	7230466	7249767
NG3M250RK	3	2,50	0.098	1,02	0.040	0,19	0.008	3,81	0.150	—	7249849
NG3M275RK	3	2,75	0.108	1,02	0.040	0,19	0.008	3,81	0.150	7230478	7249871
NG3M300RK	3	3,00	0.118	1,02	0.040	0,19	0.008	3,81	0.150	7230480	7249873
NG3125RK	3	3,18	0.125	1,02	0.040	0,20	0.008	3,81	0.150	—	7249789
NG3M320RK	3	3,20	0.126	1,02	0.040	0,19	0.008	3,81	0.150	—	7249875
NG3M325RK	3	3,25	0.128	1,02	0.040	0,19	0.008	3,81	0.150	—	7249877
NG3M350RK	3	3,50	0.138	2,92	0.115	0,32	0.013	3,81	0.150	—	7249879
NG3156RK	3	3,96	0.156	2,92	0.115	0,19	0.008	3,81	0.150	7230470	7249815
NG3M400RK	3	4,00	0.158	2,92	0.115	0,32	0.013	3,81	0.150	7230482	7249881
NG3M425RK	3	4,25	0.167	2,92	0.115	0,32	0.013	3,81	0.150	7230484	7249883
NG3M450RK	3	4,50	0.177	2,92	0.115	0,32	0.013	3,81	0.150	—	7249885
NG3189RK	3	4,80	0.189	2,92	0.115	0,57	0.023	3,81	0.150	7230472	7249833
NG4M300RK	4	3,00	0.118	1,02	0.040	0,19	0.008	3,81	0.150	—	7250261
NG4125RK	4	3,18	0.125	1,34	0.053	0,19	0.008	3,81	0.150	7230486	7250080
NG4M350RK	4	3,50	0.138	2,92	0.115	0,57	0.023	6,35	0.250	—	7250263
NG4M400RK	4	4,00	0.158	2,92	0.115	0,57	0.023	6,35	0.250	7230492	7250265
NG4M450RK	4	4,50	0.177	2,92	0.115	0,57	0.023	6,35	0.250	—	7250267
NG4189RK	4	4,80	0.189	2,92	0.115	0,57	0.023	6,35	0.250	7230488	7250254
NG4M500RK	4	5,00	0.197	2,92	0.115	0,32	0.013	6,35	0.250	7230494	7250269
NG4M600RK	4	6,00	0.236	3,81	0.150	0,58	0.023	6,35	0.250	—	7250271
NG4250RK	4	6,35	0.250	3,81	0.150	0,57	0.023	6,35	0.250	7230490	7250259

NOTE: Right-hand insert shown; left-hand insert is mirror image.





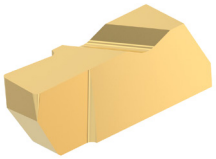
	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

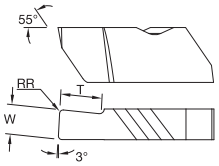
● Primary
○ Secondary

NG-K • Groove and Turn • Chip Control • Continued

		W		Ap max		RR		T			
Catalog Number	Insert Size	mm	in	mm	in	mm	in	mm	in	KCU10B	KCU25B
Left Hand											
NG2M050LK	2	0,50	0.020	0,64	0.025	0,09	0.004	0,64	0.025	7230404	7249771
NG2031LK	2	0,79	0.031	0,76	0.030	0,09	0.004	1,27	0.050	7230324	7249687
NG2M080LK	2	0,80	0.032	0,76	0.030	0,09	0.004	1,27	0.050	7230406	7249773
NG2M100LK	2	1,00	0.039	0,76	0.030	0,09	0.004	1,27	0.050	7230408	7249775
NG2047LK	2	1,19	0.047	0,76	0.030	0,09	0.004	1,27	0.050	7230326	7249714
NG2M120LK	2	1,20	0.047	0,76	0.030	0,09	0.004	1,27	0.050	7230410	—
NG2M140LK	2	1,40	0.055	0,76	0.030	0,09	0.004	1,27	0.050	7230422	7249779
NG2M150LK	2	1,50	0.059	1,09	0.043	0,19	0.008	2,79	0.110	—	7249791
NG2062LK	2	1,58	0.062	1,09	0.043	0,19	0.008	2,81	0.110	7230328	7249720
NG2M170LK	2	1,70	0.067	1,09	0.043	0,19	0.008	2,79	0.110	7230424	7249793
NG2M175LK	2	1,75	0.069	1,09	0.043	0,19	0.008	2,79	0.110	—	7249795
NG2M195LK	2	1,95	0.077	1,09	0.043	0,19	0.008	2,79	0.110	7230426	—
NG2M200LK	2	2,00	0.079	1,09	0.043	0,19	0.008	2,79	0.110	7230428	7249799
NG2M220LK	2	2,20	0.087	1,09	0.043	0,19	0.008	2,79	0.110	—	7249801
NG2M225LK	2	2,25	0.089	1,09	0.043	0,19	0.008	2,79	0.110	7230431	7249803
NG2094LK	2	2,39	0.094	1,09	0.043	0,19	0.008	2,79	0.110	7230330	—
NG2M250LK	2	2,50	0.098	1,09	0.043	0,19	0.008	2,79	0.110	—	7249805
NG2M275LK	2	2,75	0.108	1,09	0.043	0,19	0.008	2,80	0.110	7230433	7249807
NG2M300LK	2	3,00	0.118	1,09	0.043	0,19	0.008	2,80	0.110	—	7249809
NG2125LK	2	3,18	0.125	1,09	0.043	0,19	0.008	2,79	0.110	7230402	7249748
NG2M325LK	2	3,25	0.128	1,09	0.043	0,19	0.008	2,79	0.110	—	7249821
NG3M100LK	3	1,00	0.039	0,76	0.030	0,20	0.008	1,91	0.075	—	7249834
NG3047LK	3	1,19	0.047	0,76	0.030	0,19	0.008	1,90	0.075	7230437	7249731
NG3M120LK	3	1,20	0.047	0,76	0.030	0,19	0.008	1,91	0.075	7230473	7249836
NG3M150LK	3	1,50	0.059	1,02	0.040	0,19	0.008	2,39	0.094	—	7249838
NG3062LK	3	1,58	0.062	1,02	0.040	0,19	0.008	2,39	0.094	7230439	—
NG3M175LK	3	1,75	0.069	1,02	0.040	0,19	0.008	2,39	0.094	—	7249840
NG3072LK	3	1,83	0.072	1,02	0.040	0,19	0.008	2,39	0.094	7230461	—
NG3078LK	3	1,98	0.078	1,02	0.040	0,19	0.008	2,39	0.094	7230463	7249740
NG3M200LK	3	2,00	0.079	1,02	0.040	0,19	0.008	2,39	0.094	—	7249842
NG3M220LK	3	2,20	0.087	1,02	0.040	0,19	0.008	2,39	0.094	—	7249844
NG3M225LK	3	2,25	0.089	1,02	0.040	0,19	0.008	2,39	0.094	7230475	7249846
NG3094LK	3	2,39	0.094	1,02	0.040	0,19	0.008	3,81	0.150	7230465	7249765
NG3M250LK	3	2,50	0.098	1,02	0.040	0,19	0.008	3,81	0.150	—	7249848
NG3M275LK	3	2,75	0.108	1,02	0.040	0,19	0.008	3,81	0.150	7230477	7249850
NG3M300LK	3	3,00	0.118	1,02	0.040	0,19	0.008	3,81	0.150	7230479	7249872
NG3125LK	3	3,18	0.125	1,02	0.040	0,20	0.008	3,81	0.150	7230467	7249787
NG3M320LK	3	3,20	0.126	1,02	0.040	0,19	0.008	3,81	0.150	—	7249874
NG3M325LK	3	3,25	0.128	1,02	0.040	0,19	0.008	3,81	0.150	—	7249876
NG3M350LK	3	3,50	0.138	2,92	0.115	0,32	0.013	3,81	0.150	—	7249878
NG3M400LK	3	4,00	0.158	2,92	0.115	0,32	0.013	3,81	0.150	7230481	7249880
NG3M425LK	3	4,25	0.167	2,92	0.115	0,32	0.013	3,81	0.150	7230483	7249882
NG3M450LK	3	4,50	0.177	2,92	0.115	0,32	0.013	3,81	0.150	—	7249884
NG3189LK	3	4,80	0.189	2,92	0.115	0,57	0.023	3,81	0.150	7230471	7249831
NG4M300LK	4	3,00	0.118	1,02	0.040	0,19	0.008	3,81	0.150	—	7250260
NG4125LK	4	3,18	0.125	1,34	0.053	0,19	0.008	3,81	0.150	7230485	7250078
NG4M350LK	4	3,50	0.138	2,92	0.115	0,57	0.023	6,35	0.250	—	7250262
NG4M400LK	4	4,00	0.158	2,92	0.115	0,57	0.023	6,35	0.250	7230491	7250264
NG4M450LK	4	4,50	0.177	2,92	0.115	0,57	0.023	6,35	0.250	—	7250266
NG4189LK	4	4,80	0.189	2,92	0.115	0,57	0.023	6,35	0.250	7230487	7250252
NG4M500LK	4	5,00	0.197	2,92	0.115	0,32	0.013	6,34	0.250	7230493	7250268
NG4M600LK	4	6,00	0.236	3,81	0.150	0,57	0.023	6,34	0.250	—	7250270
NG4250LK	4	6,35	0.250	3,81	0.150	0,57	0.023	6,35	0.250	7230489	7250257

NOTE: Right-hand insert shown; left-hand insert is mirror image.





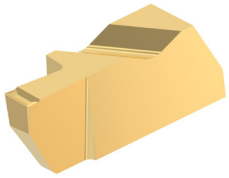
NGD • Groove and Turn • Deep Grooving • Flat Top

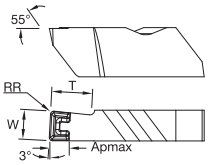
KCU10B	
P	●
M	●
K	○
N	●
S	●
H	○

● Primary
○ Secondary

		W		RR		T		
Catalog Number	Insert Size	mm	in	mm	in	mm	in	KCU10B
Right Hand								
NGD3189R	3	4,80	0.189	0,57	0.023	6,35	0.250	7227148
NGD4250R	4	6,35	0.250	0,57	0.023	12,70	0.500	7227150
Left Hand								
NGD3189L	3	4,80	0.189	0,57	0.023	6,35	0.250	7227147
NGD4250L	4	6,35	0.250	0,57	0.023	12,70	0.500	7227149

NOTE: Inserts have one cutting edge.
Right-hand insert shown; left-hand insert is mirror image.





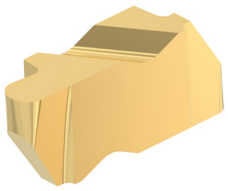
NGD-K • Groove and Turn • Deep Grooving • Chip Control

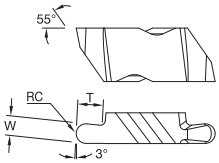
KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

● Primary
○ Secondary

		W		Ap max		RR		T			
Catalog Number	Insert Size	mm	in	mm	in	mm	in	mm	in	KCU10B	KCU25B
Right Hand											
NGD2M150RK	2	1,50	0.059	1,09	0.043	0,19	0.008	4,06	0.160	7227333	7250282
NGD2M200RK	2	2,00	0.079	1,09	0.043	0,19	0.008	5,08	0.200	7227335	7250284
NGD2M250RK	2	2,50	0.098	1,09	0.043	0,19	0.008	5,08	0.200	7230497	7250286
NGD3M200RK	3	2,00	0.079	1,02	0.040	0,19	0.008	4,06	0.160	7227366	7250296
NGD3094RK	3	2,39	0.094	1,02	0.040	0,19	0.008	6,35	0.250	7227361	7250290
NGD3M250RK	3	2,50	0.098	1,02	0.040	0,19	0.008	6,35	0.250	7227367	7250298
NGD3M300RK	3	3,00	0.118	1,02	0.040	0,19	0.008	6,35	0.250	7227369	7250300
NGD3125RK	3	3,18	0.125	1,02	0.040	0,19	0.008	6,35	0.250	7227363	7250292
NGD3M400RK	3	4,00	0.158	2,92	0.115	0,32	0.013	6,35	0.250	7227370	7250303
NGD3189RK	3	4,80	0.189	2,92	0.115	0,58	0.023	6,35	0.250	7227365	7250294
NGD4189RK	4	4,80	0.189	2,92	0.115	0,57	0.023	9,53	0.375	7227374	7250307
NGD4M550RK	4	5,50	0.217	3,81	0.150	0,58	0.023	12,69	0.500	—	7250322
NGD4250RK	4	6,35	0.250	3,81	0.150	0,57	0.023	12,70	0.500	7227376	7250309
Left Hand											
NGD2M150LK	2	1,50	0.059	1,09	0.043	0,19	0.008	4,06	0.160	7230496	7250281
NGD2M200LK	2	2,00	0.079	1,09	0.043	0,19	0.008	5,08	0.200	7227334	7250283
NGD2M250LK	2	2,50	0.098	1,09	0.043	0,19	0.008	5,08	0.200	7227336	7250285
NGD3M200LK	3	2,00	0.079	1,02	0.040	0,19	0.008	4,06	0.160	—	7250295
NGD3094LK	3	2,39	0.094	1,02	0.040	0,19	0.008	6,34	0.250	7227340	7250289
NGD3M250LK	3	2,50	0.098	1,02	0.040	0,19	0.008	6,35	0.250	—	7250297
NGD3M300LK	3	3,00	0.118	1,02	0.040	0,19	0.008	6,35	0.250	7227368	7250299
NGD3125LK	3	3,18	0.125	1,02	0.040	0,19	0.008	6,35	0.250	7227362	7250291
NGD3M350LK	3	3,50	0.138	2,92	0.115	0,32	0.013	6,35	0.250	—	7250301
NGD3M400LK	3	4,00	0.158	2,92	0.115	0,32	0.013	6,35	0.250	7230498	7250302
NGD3189LK	3	4,80	0.189	2,92	0.115	0,57	0.023	6,35	0.250	7227364	7250293
NGD4M400LK	4	4,00	0.158	2,92	0.115	0,58	0.023	9,52	0.375	—	7250310
NGD4189LK	4	4,80	0.189	2,92	0.115	0,57	0.023	9,53	0.375	7227373	7250306
NGD4M500LK	4	5,00	0.197	2,92	0.115	0,58	0.023	12,70	0.500	—	7250321
NGD4250LK	4	6,35	0.250	3,80	0.150	0,57	0.023	12,70	0.500	7227375	7250308

NOTE: Inserts have one cutting edge. Right-hand insert shown; left-hand insert is mirror image.





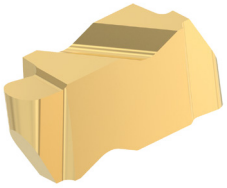
	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

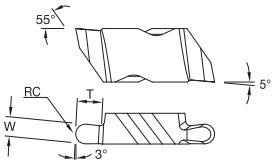
● Primary
○ Secondary

NR • Groove and Turn • Full Radius • Flat Top

		W		RC		T			
Catalog Number	Insert Size	mm	in	mm	in	mm	in	KCU10B	KCU25B
Right Hand									
NR2M050R	2	1,00	0.039	0,50	0.020	1,27	0.050	7227392	7247917
NR2M075R	2	1,50	0.059	0,75	0.030	2,79	0.110	7227393	—
NR2031R	2	1,58	0.062	0,79	0.031	2,79	0.110	7227378	7247870
NR2M100R	2	2,00	0.079	1,00	0.039	2,79	0.110	7227394	7247919
NR2047R	2	2,39	0.094	1,19	0.047	2,79	0.110	—	7247912
NR2M125R	2	2,50	0.098	1,25	0.049	2,79	0.110	—	7247920
NR2M150R	2	3,00	0.118	1,50	0.059	2,79	0.110	—	7247922
NR2062R	2	3,18	0.125	1,59	0.063	2,79	0.110	7227380	7247914
NR2M175R	2	3,50	0.138	1,75	0.069	2,79	0.110	—	7247923
NR3031R	3	1,58	0.062	0,79	0.031	2,39	0.094	7227397	7247926
NR3M100R	3	2,00	0.079	1,00	0.039	2,39	0.094	—	7247941
NR3047R	3	2,39	0.094	1,19	0.047	3,81	0.150	7227402	7247930
NR3M150R	3	3,00	0.118	1,50	0.059	3,81	0.150	—	7247943
NR3062R	3	3,18	0.125	1,59	0.063	3,81	0.150	7227406	7247934
NR3M200R	3	4,00	0.157	2,00	0.079	3,81	0.150	—	7247945
NR3094R	3	4,78	0.188	2,39	0.094	3,81	0.150	7227411	7247939
NR4125R	4	6,35	0.250	3,18	0.125	6,35	0.250	7227419	7247953
Left Hand									
NR2M050L	2	1,00	0.039	0,50	0.020	1,27	0.050	7227391	7247916
NR2031L	2	1,58	0.062	0,79	0.031	2,79	0.110	7227377	7247869
NR2M100L	2	2,00	0.079	1,00	0.039	2,79	0.110	—	7247918
NR2047L	2	2,39	0.094	1,19	0.047	2,79	0.110	—	7247911
NR2M150L	2	3,00	0.118	1,50	0.059	2,79	0.110	—	7247921
NR2062L	2	3,18	0.125	1,59	0.063	2,79	0.110	7227379	7247913
NR3031L	3	1,58	0.062	0,79	0.031	2,39	0.094	7227395	7247924
NR3M100L	3	2,00	0.079	1,00	0.039	2,39	0.094	—	7247940
NR3047L	3	2,39	0.094	1,19	0.047	3,81	0.150	7227399	7247928
NR3M150L	3	3,00	0.118	1,50	0.059	3,81	0.150	7227412	7247942
NR3062L	3	3,18	0.125	1,59	0.063	3,81	0.150	7227404	7247932
NR3M200L	3	4,00	0.157	2,00	0.079	3,81	0.150	—	7247944
NR3094L	3	4,78	0.188	2,39	0.094	3,81	0.150	7227410	7247938
NR4125L	4	6,35	0.250	3,18	0.125	6,35	0.250	7227417	7247951

NOTE: Right-hand insert shown; left-hand insert is mirror image.





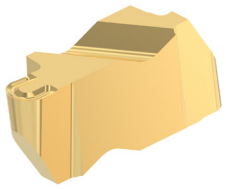
	KCU10B
P	●
M	●
K	○
N	●
S	●
H	○

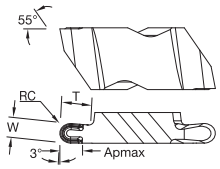
● Primary
○ Secondary

NRP • Groove and Turn • Full Radius • Positive

		W		RC		T		
Catalog Number	Insert Size	mm	in	mm	in	mm	in	KCU10B
Right Hand								
NRP3031R	3	1,58	0.062	0,79	0.031	2,39	0.094	7227505
NRP3047R	3	2,39	0.094	1,19	0.047	3,81	0.150	7227507
NRP3062R	3	3,18	0.125	1,59	0.063	3,81	0.150	7227521
NRP3094R	3	4,78	0.188	2,39	0.094	3,81	0.150	7227523
Left Hand								
NRP3031L	3	1,58	0.062	0,79	0.031	2,39	0.094	7227504
NRP3047L	3	2,39	0.094	1,19	0.047	3,81	0.150	7227506
NRP3062L	3	3,18	0.125	1,59	0.063	3,81	0.150	7227509
NRP3094L	3	4,78	0.188	2,39	0.094	3,81	0.150	7227522

NOTE: Right-hand insert shown; left-hand insert is mirror image.





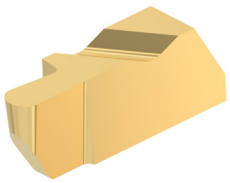
	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

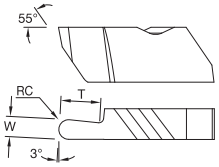
● Primary
○ Secondary

NR-K • Groove and Turn • Full Radius • Chip Control

		W		Ap max		RC		T			
Catalog Number	Insert Size	mm	in	mm	in	mm	in	mm	in	KCU10B	KCU25B
Right Hand											
NR3031RK	3	1,57	0.062	1,97	0.078	0,79	0.031	2,39	0.094	7227398	7247927
NR3047RK	3	2,39	0.094	1,91	0.075	1,19	0.047	3,81	0.150	7227403	7247931
NR3062RK	3	3,18	0.125	2,92	0.115	1,59	0.063	3,81	0.150	7227407	7247935
NR3078RK	3	3,97	0.156	2,54	0.100	1,98	0.078	3,81	0.150	7227409	7247937
NR4062RK	4	3,18	0.125	2,92	0.115	1,59	0.063	3,81	0.150	7227414	7247948
NR4094RK	4	4,79	0.188	3,81	0.150	2,39	0.094	6,35	0.250	7227416	7247950
NR4125RK	4	6,35	0.250	3,81	0.150	3,18	0.125	6,35	0.250	7227431	7247954
Left Hand											
NR3031LK	3	1,58	0.062	1,98	0.078	0,79	0.031	2,39	0.094	7227396	7247925
NR3047LK	3	2,39	0.094	3,81	0.150	1,20	0.047	3,81	0.150	7227400	7247929
NR3062LK	3	3,18	0.125	2,92	0.115	1,59	0.063	3,81	0.150	7227405	7247933
NR3078LK	3	3,96	0.156	2,54	0.100	1,98	0.078	3,81	0.150	7227408	7247936
NR4062LK	4	3,18	0.125	2,92	0.115	1,59	0.063	3,81	0.150	7227413	7247946
NR4094LK	4	4,79	0.188	3,81	0.150	2,39	0.094	6,35	0.250	7227415	7247949
NR4125LK	4	6,36	0.250	3,81	0.150	3,18	0.125	6,35	0.250	7227418	7247952

NOTE: Right-hand insert shown; left-hand insert is mirror image.





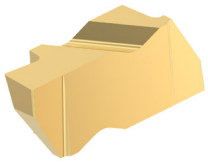
	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

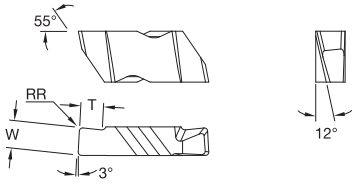
● Primary
○ Secondary

NRD • Groove and Turn • Deep Grooving • Full Radius • Flat Top

		W		RC		T			
Catalog Number	Insert Size	mm	in	mm	in	mm	in	KCU10B	KCU25B
Right Hand									
NRD3062R	3	3,17	0.125	1,59	0.063	6,35	0.250	7227487	7247958
NRD4094R	4	4,78	0.188	2,39	0.094	12,70	0.500	7227501	—
NRD4125R	4	6,35	0.250	3,18	0.125	12,70	0.500	7227503	7247963
Left Hand									
NRD3062L	3	3,17	0.125	1,59	0.063	6,35	0.250	7227486	7247957
NRD4094L	4	4,78	0.188	2,39	0.094	12,70	0.500	7227490	7247961
NRD4125L	4	6,35	0.250	3,18	0.125	12,70	0.500	7227502	7247962

NOTE: Inserts have one cutting edge.
Right-hand insert shown; left-hand insert is mirror image.





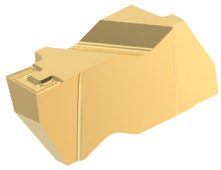
	KCU25B
P	●
M	●
K	○
N	○
S	●
H	

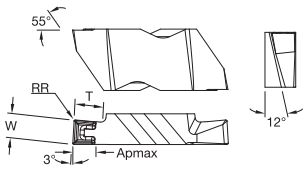
● Primary
○ Secondary

NF • Face Grooving • Flat Top

		W		RR		T		
Catalog Number	Insert Size	mm	in	mm	in	mm	in	KCU25B
Right Hand								
NF3188R	3	4,78	0.188	0,57	0.023	3,81	0.150	7247746
Left Hand								
NF3188L	3	4,78	0.188	0,57	0.023	3,81	0.150	7247745

NOTE: Right-hand insert shown; left-hand insert is mirror image.





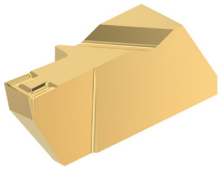
	KCU25B
P	●
M	●
K	○
N	○
S	●
H	

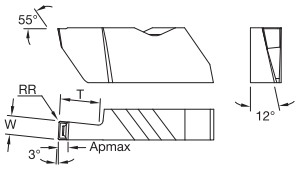
● Primary
○ Secondary

NF-K • Face Grooving • Chip Control

		W		Ap max		RR		T		
Catalog Number	Insert Size	mm	in	mm	in	mm	in	mm	in	KCU25B
Right Hand										
NF3M200RK	3	2,00	0.079	1,02	0.040	0,19	0.008	1,78	0.070	7247748
NF3M300RK	3	3,00	0.118	1,02	0.040	0,19	0.008	3,81	0.150	7247750
NF3125RK	3	3,18	0.125	1,02	0.040	0,19	0.008	3,81	0.150	7247742
NF3156RK	3	3,96	0.156	2,92	0.115	0,19	0.008	3,81	0.150	7247744
Left Hand										
NF3M200LK	3	2,00	0.079	1,02	0.040	0,19	0.008	1,78	0.070	7247747
NF3M300LK	3	3,00	0.118	1,02	0.040	0,19	0.008	3,81	0.150	7247749
NF3125LK	3	3,18	0.125	1,02	0.040	0,19	0.008	3,81	0.150	7247741
NF3156LK	3	3,96	0.156	2,92	0.115	0,19	0.008	3,81	0.150	7247743

NOTE: Right-hand insert shown; left-hand insert is mirror image.





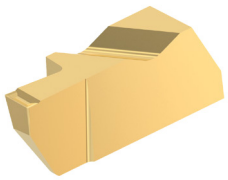
NFD-K • Face Grooving • Deep Grooving • Chip Control

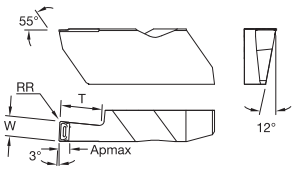
P	M	K	N	S	H
●	●	○	○	●	

● Primary
○ Secondary

		W		Ap max		RR		T		
Catalog Number	Insert Size	mm	in	mm	in	mm	in	mm	in	KCU25B
Right Hand										
NFD3M300RK	3	3,00	0.118	1,02	0.040	0,19	0.008	6,35	0.250	7247758
NFD3125RK	3	3,18	0.125	1,02	0.040	0,19	0.008	6,35	0.250	7247753
NFD4189RK	4	4,80	0.189	2,92	0.115	0,57	0.023	9,53	0.375	7247760
NFD4250RK	4	6,35	0.250	3,81	0.150	0,57	0.023	12,70	0.500	7247762
Left Hand										
NFD3M300LK	3	3,00	0.118	1,02	0.040	0,19	0.008	6,35	0.250	7247757
NFD3125LK	3	3,18	0.125	1,02	0.040	0,19	0.008	6,35	0.250	7247751
NFD4189LK	4	4,80	0.189	2,92	0.115	0,57	0.023	9,53	0.375	7247759
NFD4250LK	4	6,35	0.250	3,81	0.150	0,57	0.023	12,70	0.500	7247761

NOTE: Inserts have one cutting edge.
Right-hand insert shown; left-hand insert is mirror image.





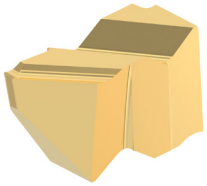
NFD-KI • Internal Face Grooving • Deep Grooving • Chip Control

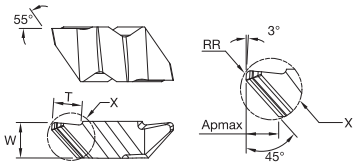
P	M	K	N	S	H
●	●	○	○	●	

● Primary
○ Secondary

		W		Ap max		RR		T		
Catalog Number	Insert Size	mm	in	mm	in	mm	in	mm	in	KCU25B
Right Hand										
NFD3125RKI	3	3,18	0.125	1,02	0.040	0,19	0.008	6,35	0.250	7247754
NFD3189RKI	3	4,80	0.189	2,92	0.115	0,57	0.023	6,35	0.250	7247756
Left Hand										
NFD3125LKI	3	3,18	0.125	1,02	0.040	0,19	0.008	6,35	0.250	7247752
NFD3189LKI	3	4,80	0.189	2,92	0.115	0,57	0.023	6,35	0.250	7247755

NOTE: Inserts have one cutting edge.
NFD-KI inserts are compatible with NS-style boring bars only.
Right-hand insert shown; left-hand insert is mirror image.





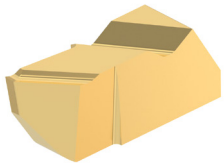
	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

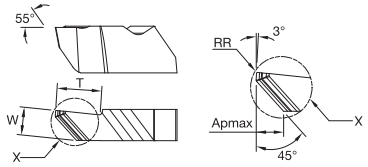
● Primary
○ Secondary

NP-K • Groove and Profile • Back Turning • Chip Control

		W		Ap max		RR		T			
Catalog Number	Insert Size	mm	in	mm	in	mm	in	mm	in	KCU10B	KCU25B
Right Hand											
NP2012RK	2	3,81	0.150	2,78	0.109	0,25	0.010	2,81	0.110	—	7247764
NP2002RK	2	3,73	0.147	2,75	0.108	0,25	0.010	2,81	0.110	7227468	7247763
NP3002RK	3	4,88	0.192	3,84	0.151	0,25	0.010	5,08	0.200	7227470	7247765
NP3012RK	3	4,95	0.195	3,86	0.152	0,25	0.010	5,08	0.200	—	7247766

NOTE: Right-hand insert shown; left-hand insert is mirror image.





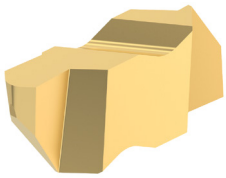
	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

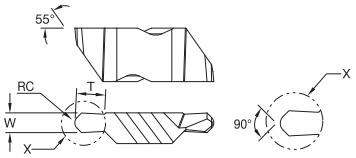
● Primary
○ Secondary

NPD-K • Groove and Profile • Back Turning • Deep • Chip Control

		W		Ap max		RR		T			
Catalog Number	Insert Size	mm	in	mm	in	mm	in	mm	in	KCU10B	KCU25B
Right Hand											
NPD2002RK	2	3,81	0.150	2,75	0.108	0,25	0.010	5,08	0.200	7227481	7247767
NPD3002RK	3	4,95	0.195	3,84	0.151	0,25	0.010	6,35	0.250	—	7247768
NPD3012RK	3	4,90	0.193	3,86	0.152	0,25	0.010	6,35	0.250	7227482	7247769

NOTE: Right-hand insert shown; left-hand insert is mirror image.





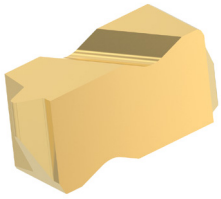
	KCU25B
P	●
M	●
K	○
N	○
S	●
H	

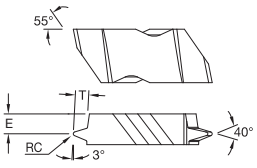
● Primary
○ Secondary

NU • Groove and Turn • 90º • Under Cut • Flat Top

		W		RC		T		
Catalog Number	Insert Size	mm	in	mm	in	mm	in	KCU25B
Right Hand								
NU3094R	3	2,39	0.094	0,51	0.020	3,18	0.125	7255332
NU3125R	3	3,18	0.125	1,19	0.047	4,78	0.188	7255334
Left Hand								
NU3094L	3	2,39	0.094	0,51	0.020	3,18	0.125	7255331
NU3125L	3	3,18	0.125	1,19	0.047	4,78	0.188	7255333
NU3156L	3	3,96	0.156	1,19	0.047	4,78	0.188	7255335

NOTE: Right-hand insert shown; left-hand insert is mirror image.
Tolerance on W ± 0,13mm (± .005").





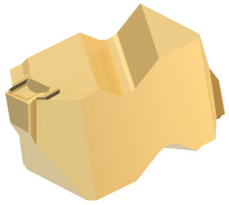
	KCU25B
P	●
M	●
K	○
N	○
S	●
H	

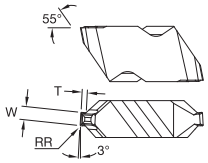
● Primary
○ Secondary

NV • Groove and Turn • Poly-Vee • Flat Top

		E		RC		T		
Catalog Number	**Insert Size**	**mm**	**in**	**mm**	**in**	**mm**	**in**	**KCU25B**
Right Hand								
NV3RJ	3	3,18	0.125	0,32	0.013	2,21	0.087	7255336
NV4RL	4	3,00	0.118	0,32	0.013	5,11	0.201	7255380
Left Hand								
NV4LL	4	3,00	0.118	0,32	0.013	5,11	0.201	7255338

NOTE: Right-hand insert shown; left-hand insert is mirror image.





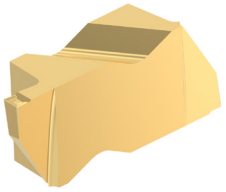
	KCU25B
P	●
M	●
K	○
N	○
S	●
H	

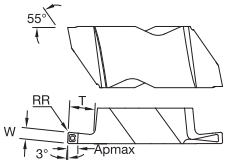
● Primary
○ Secondary

NGC-K • Groove and Chamfer • Circlip Norm DIN 471/472 • Chip Control

		Circlip Size		W		RR		T		
Catalog Number	**Insert Size**	**mm**	**in**	**mm**	**in**	**mm**	**in**	**mm**	**in**	**KCU25B**
Right Hand										
NGC2C130R055K	2	1,30	0.05	1,39	0.055	0,08	0.003	0,55	0.022	7250275
NGC2C185R125K	2	1,85	0.07	1,94	0.076	0,08	0.003	1,25	0.049	7369559
NGC2C215R150K	2	2,15	0.09	2,24	0.088	0,08	0.003	1,50	0.059	7250280
Left Hand										
NGC2C130L055K	2	1,30	0.05	1,39	0.055	0,08	0.003	0,55	0.022	7250272
NGC2C185L125K	2	1,85	0.07	1,94	0.076	0,08	0.003	1,25	0.049	7250278
NGC2C215L150K	2	2,15	0.09	2,24	0.088	0,08	0.003	1,50	0.059	7250279

NOTE: Groove and chamfer inserts for circlip grooves to DIN 471/472 specification.
Right-hand insert shown; left-hand insert is mirror image.





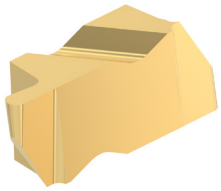
NGD-K-DBL • Groove and Turn • Deep Grooving • Double Ended • Chip Control

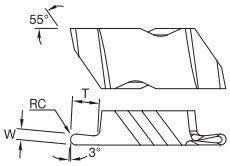
● Primary
○ Secondary

	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

		W		Ap max		RR		T			
Catalog Number	Insert Size	mm	in	mm	in	mm	in	mm	in	KCU10B	KCU25B
Right Hand											
NGD3062RK	3	1,58	0.062	1,02	0.040	0,19	0.008	3,18	0.125	7227338	7250288
NGD4125RK	4	3,18	0.125	1,02	0.040	0,19	0.008	6,35	0.250	7227372	7250305
Left Hand											
NGD3062LK	3	1,57	0.062	1,02	0.040	0,19	0.008	3,18	0.125	7227337	7250287
NGD4125LK	4	3,18	0.125	1,02	0.040	0,19	0.008	6,35	0.250	7227371	7250304

NOTE: Inserts have one cutting edge. Right-hand insert shown; left-hand insert is mirror image.





NRD-DBL • Groove and Turn • Deep Grooving • Full Radius • Double Ended • Flat Top

● Primary
○ Secondary

	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

		W		RC		T			
Catalog Number	Insert Size	mm	in	mm	in	mm	in	KCU10B	KCU25B
Right Hand									
NRD3031R	3	1,58	0.062	0,79	0.031	3,18	0.125	7227485	7247956
NRD4062R	4	3,18	0.125	1,59	0.063	6,35	0.250	7227489	—
Left Hand									
NRD3031L	3	1,58	0.062	0,79	0.031	3,18	0.125	7227484	7247955
NRD4062L	4	3,18	0.125	1,59	0.063	6,35	0.250	7227488	7247959

NOTE: Inserts have one cutting edge. Right-hand insert shown; left-hand insert is mirror image.

THREADING APPLICATIONS

HOW DO CATALOG NUMBERS WORK?

Each character in our Catalog Number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.

NDC38RDR75

N	D	C	3	8RD	R	75	
Type of Insert	**Insert**	**Additional Information**	**Insert Size**	**Industry Thread Identification**	**Hand of Insert**	**Definition of Insert**	**Additional Information**

N — Top Notch*

A — Acme

D — API or NPT

J — UNJ thread

T — 60° V thread

W — 55° V Whitworth

B — Buttress

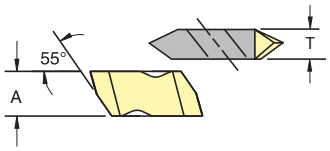
F — Fine pitch

S — Stub Acme

C — Cresting

P — Positive rake

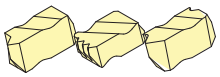
K — Fine pitch, positive



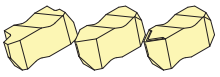
Top Notch insert dimensions

Insert Size	A inch	A mm	T inch	T mm
1	.100	2,54	.100	2,54
2	.219	5,56	.150	3,81
3	.344	8,74	.195	4,95
4	.453	11,51	.255	6,48
5	.688	17,48	.380	9,65
6	.453	11,51	.383	9,73
8	.312	7,93	.438	11,13

NJF NDC-V-M NTC



NA NT NT-K



Indicates API or drilling industry form designation (e.g., 10RD, 8RD, .038)
or
controlled root radius threading inserts indicate the root radius in .001" increments (NJ, NJF, NJP, NJK)
or
M indicates metric ISO thread

R — Right hand

L — Left hand

- Threads per inch or pitch (for metric)
- "A" or "B" type Buttress insert
- Taper per foot — API threads

I — Internal thread

E — External thread (used only if internal and external thread forms are different)

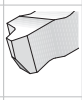
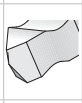
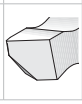
M — Multiple tooth

K — Standard chip control

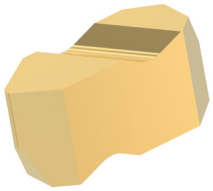
C — Coarse pitch

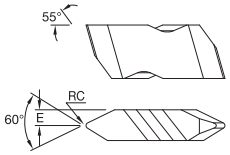
D — Dryseal

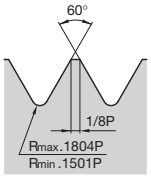
*Kennametal proprietary standard only.

Style						Thread Profile	Standard	Tolerance Class	Cresting	Application	Page(s)
Chip Control — K		Neutral		Positive							
NT-K		NT		NTP		Partial Profile 60°	–	–	N	General use for 60° thread forms, such as ISO and UN, where non-cresting inserts are desired to cut a variety of pitches.	24, 27
NT-CK						Partial Profile 60° — coarse pitch	–	–	N	Coarse pitch 60° thread forms, such as ISO and UN, where non-cresting inserts are desired to cut a variety of pitches.	27
		NTF		NTK		Partial Profile 60° — fine pitch	–	–	N	Fine pitch 60° thread forms, such as ISO and UN, where non-cresting inserts are desired to cut a variety of pitches — able to thread close to shoulders.	26, 27
		NTU				Partial Profile 60° — fine pitch	–	–	N	Four-edged insert for 60° partial profile threading — requires NSU-style toolholder for size 4U insert.	26
		NTC-M				Metric ISO	ISO R262, DIN 13	6g/6H	Y	Widely used metric 60° V-form for all industries.	26
		NTC				American UN	ANSI B1.1:74	2A/2B	Y	Widely used inch-based 60° V-form for all industries.	25
		NJ		NJP		UNJ	MIL-S-8879C	3A/3B	N	Controlled root radius on external threads for defense and aerospace industries.	22
		NJF		NJK		UNJ — fine pitch	MIL-S-8879C	3A/3B	N	Controlled root radius on external threads for defense and aerospace industries — able to thread close to shoulders.	23
		NDC-V				NPT	ANSI/ACME B1.201: 1983	Standard NPT	Y	National Pipe Thread standard forms for pipe fittings.	29
		NDC-V-M				NPT — multitooth	ANSI/ACME B1.201: 1983	Standard NPT	Y	High-productivity multi-tooth threading inserts for NPT threads.	28
		NWC-E				Whitworth, BSW, BSP	BS 84:1956, ISO 228/1:1982, DIN 259	Medium Class A	Y	Widely used 55° form for gas and water connections.	29
		ND				API Rotary Shoulder Connections — partial profile	API SPEC. 7:1990	Standard API	N	60° V-form used for rotary shoulder pipe connections in the oil and gas industry including V-.038R, V-.040, and V-.050 forms.	28
		NDC				API Rotary Shoulder Connections — cresting	API SPEC. 7:1990	Standard API	Y	60° V-form used for rotary shoulder pipe connections in the oil and gas industry including V-.038R, V-.040, and V-.050 forms — complete cresting form including taper.	28
		NDC-RD				API Round	API STD. 5B:1979	Standard API RD	Y	60° V-form with large radius for casing, tubing, and line pipe in the oil and gas industry, including 8 and 10 round forms.	32
		NDC-RD-M				API Round — multitooth	API STD. 5B:1979	Standard API RD	Y	High productivity multitooth threading inserts for API round threads.	30
		NA				Acme	ANSI B1.5:1988	3G	N	29° truncated thread form for motion applications in a wide variety of industries.	30
		NAS				Stub Acme	ANSI B1.8:1988	2G	N	Shallow depth 29° truncated thread form for motion applications in a wide variety of industries.	31
		NTB-A				American Buttress — 7° clearance flank leading (Push)	ANSI B1.9:1973	Class 2	N	Sawtooth form for axial load bearing applications in a variety of industries — use the “A” style when the 7° clearance flank is the leading flank.	31
		NTB-B				American Buttress — 45° clearance flank leading (Pull)	ANSI B1.9:1973	Class 2	N	Sawtooth form for axial load bearing applications in a variety of industries — use the “B” style when the 45° clearance flank is the leading flank.	32

THREADING APPLICATIONS







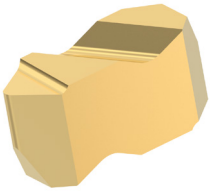
UNJ External

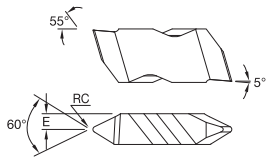
NJ

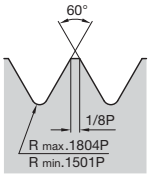
			RC		E				
Catalog Number	Insert Size	Thread Series	mm	in	mm	in	External TPI	KCU10B	KCU25B
Right Hand									
NJ3010R16	3	UNJ	0,25	0.010	2,49	0.098	16	—	7247791
NJ3014R12	3	UNJ	0,33	0.013	2,49	0.098	12	7237228	7247793
NJ3020R8	3	UNJ	0,49	0.019	2,49	0.098	8	7237229	7247795
Left Hand									
NJ3010L16	3	UNJ	0,25	0.010	2,49	0.098	16	—	7247770
NJ3014L12	3	UNJ	0,33	0.013	2,49	0.098	12	7237227	7247792
NJ3020L8	3	UNJ	0,49	0.019	2,49	0.098	8	—	7247794

● Primary
○ Secondary

	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	●	







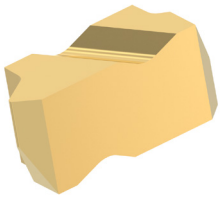
UNJ External

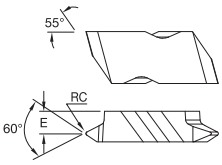
NJP

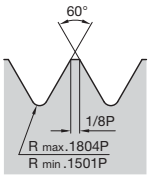
			RC		E				
Catalog Number	Insert Size	Thread Series	mm	in	mm	in	External TPI	KCU10B	KCU25B
Right Hand									
NJP3010R16	3	UNJ	0,25	0.010	2,49	0.098	16	7237261	7247812
NJP3014R12	3	UNJ	0,33	0.013	2,49	0.098	12	7237263	7247813
NJP3020R8	3	UNJ	0,49	0.019	2,49	0.098	8	7237264	7247815
Left Hand									
NJP3010L16	3	UNJ	0,25	0.010	2,49	0.098	16	—	7247811
NJP3014L12	3	UNJ	0,33	0.013	2,49	0.098	12	7237262	—
NJP3020L8	3	UNJ	0,49	0.019	2,49	0.098	8	—	7247814

● Primary
○ Secondary

	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	







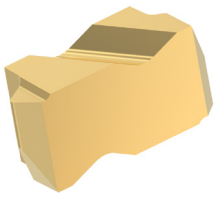
UNJ External

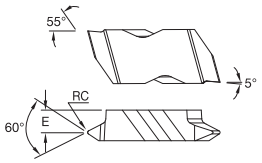
	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

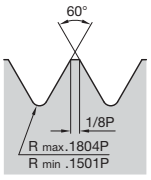
● Primary
○ Secondary

NJF

			RC		E				
Catalog Number	Insert Size	Thread Series	mm	in	mm	in	External TPI	KCU10B	KCU25B
Right Hand									
NJF3005R32	3	UNJ	0,13	0.005	3,58	0.141	32	7237230	—
NJF3006R28	3	UNJ	0,15	0.006	3,58	0.141	28	7237231	7247796
NJF3007R24	3	UNJ	0,17	0.007	3,58	0.141	24	7237233	7247797
NJF3008R20	3	UNJ	0,20	0.008	3,58	0.141	20	7237235	7247798
NJF3009R18	3	UNJ	0,22	0.009	3,58	0.141	18	7237236	7247799
NJF3010R16	3	UNJ	0,25	0.010	3,58	0.141	16	7237238	7247800
NJF3012R14	3	UNJ	0,28	0.011	3,58	0.141	14	7237239	7247801
Left Hand									
NJF3007L24	3	UNJ	0,17	0.007	3,58	0.141	24	7237232	—
NJF3008L20	3	UNJ	0,20	0.008	3,58	0.141	20	7237234	—
NJF3010L16	3	UNJ	0,25	0.010	3,58	0.141	16	7237237	—







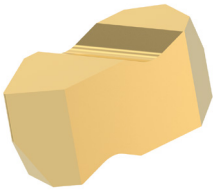
UNJ External

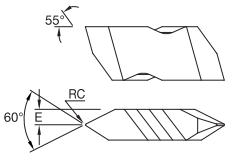
	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	●	

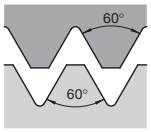
● Primary
○ Secondary

NJK

			RC		E				
Catalog Number	Insert Size	Thread Series	mm	in	mm	in	External TPI	KCU10B	KCU25B
Right Hand									
NJK3005R32	3	UNJ	0,13	0.005	3,58	0.141	32	7237241	7247803
NJK3006R28	3	UNJ	0,15	0.006	3,58	0.141	28	7237243	7247805
NJK3007R24	3	UNJ	0,17	0.007	3,58	0.141	24	7237245	7247806
NJK3008R20	3	UNJ	0,20	0.008	3,58	0.141	20	7237246	7247807
NJK3009R18	3	UNJ	0,22	0.009	3,58	0.141	18	7237248	7247808
NJK3010R16	3	UNJ	0,25	0.010	3,58	0.141	16	—	7247809
NJK3012R14	3	UNJ	0,28	0.011	3,58	0.141	14	7237250	7247810
Left Hand									
NJK3005L32	3	UNJ	0,13	0.005	3,58	0.141	32	—	7247802
NJK3006L28	3	UNJ	0,15	0.006	3,58	0.141	28	—	7247804







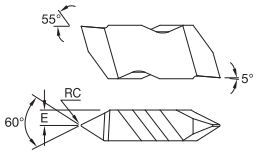
Partial Profile 60°

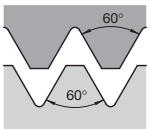
	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

● Primary
○ Secondary

NT

Catalog Number	Insert Size	Thread Series	RC mm	RC in	E mm	E in	External Thread Pitch mm	Internal Thread Pitch inch	External TPI	Internal TPI	KCU10B	KCU25B
Right Hand												
NT2R	2	60 Degree Partial	0,10	0.004	1,90	0.075	0,70-3,0	1.25-3.5	8-36	7-20	7236732	7247819
NT3R	3	60 Degree Partial	0,17	0.007	2,49	0.098	1,25-4,0	2.0-5.0	6-20	5-12	7236734	7247874
NT4R	4	60 Degree Partial	0,17	0.007	3,25	0.128	1,25-6,25	2.0-6.25	4-20	4-12	7236736	7247880
Left Hand												
NT2L	2	60 Degree Partial	0,10	0.004	1,90	0.075	0,70-3,0	1.25-3.5	8-36	7-20	7236731	7247817
NT3L	3	60 Degree Partial	0,17	0.007	2,49	0.098	1,25-4,0	2.0-5.0	6-20	5-12	7236733	7247871
NT4L	4	60 Degree Partial	0,17	0.007	3,25	0.128	1,25-6,25	2.0-6.25	4-20	4-12	7236735	7247877





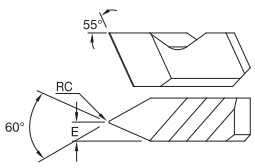
Partial Profile 60°

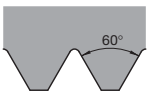
	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	●	

● Primary
○ Secondary

NTP

Catalog Number	Insert Size	Thread Series	RC mm	RC in	E mm	E in	External Thread Pitch mm	Internal Thread Pitch inch	External TPI	Internal TPI	KCU10B	KCU25B
Right Hand												
NTP2R	2	UN	0,10	0.004	1,91	0.075	0,70-3,0	1.25-3.5	8-36	7-20	7236750	7247895
NTP3R	3	UN	0,17	0.007	2,49	0.098	1,25-4,0	2.0-5.0	6-20	5-12	7236752	7247897
NTP4R	4	UN	0,17	0.007	3,25	0.128	1,25-6,25	2.0-6.25	4-20	4-12	7236754	7247899
Left Hand												
NTP2L	2	UN	0,10	0.004	1,91	0.075	0,70-3,0	1.25-3.5	8-36	7-20	7236749	7247894
NTP3L	3	UN	0,17	0.007	2,49	0.098	1,25-4,0	2.0-5.0	6-20	5-12	7236751	7247896
NTP4L	4	UN	0,17	0.007	3,25	0.128	1,25-6,25	2.0-6.25	4-20	4-12	7236753	—





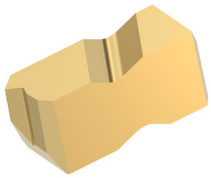
Partial Profile
60° Internal

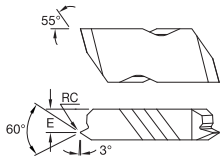
	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

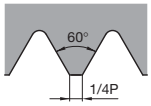
● Primary
○ Secondary

NT-1L

Catalog Number	Insert Size	Thread Series	RC mm	RC in	E mm	E in	Internal Thread Pitch inch	Internal TPI	KCU10B	KCU25B
Left Hand										
NT1L	1	60 Degree Partial	0,08	0.003	1,09	0.043	1.0-2.0	12-24	7250010	7255315







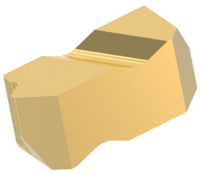
American
UN-Internal

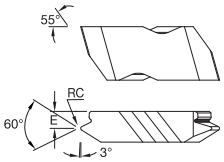
	KCU25B
P	●
M	●
K	○
N	○
S	●
H	

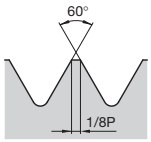
● Primary
○ Secondary

NTC-I

Catalog Number	Insert Size	Thread Series	RC mm	RC in	E mm	E in	Internal TPI	KCU25B
Right Hand								
NTC3R12I	3	UN	0,10	0.004	3,76	0.148	12	7255372
Left Hand								
NTC3L16I	3	UN	0,08	0.003	3,76	0.148	16	7255322
NTC3L14I	3	UN	0,09	0.004	3,76	0.148	14	7255321
NTC3L12I	3	UN	0,10	0.004	3,76	0.148	12	7255320
NTC3L10I	3	UN	0,13	0.005	2,72	0.107	10	7255319
NTC3L8I	3	UN	0,18	0.007	2,72	0.107	8	7255323







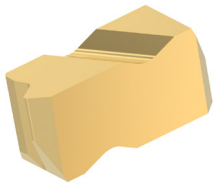
American
UN-External

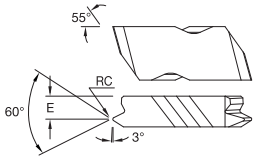
	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

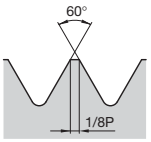
● Primary
○ Secondary

NTC-E

Catalog Number	Insert Size	Thread Series	RC mm	RC in	E mm	E in	External TPI	KCU10B	KCU25B
Right Hand									
NTC3R32E	3	UN	0,10	0.004	3,76	0.148	32	7250034	7255328
NTC3R28E	3	UN	0,12	0.005	3,76	0.148	28	—	7255327
NTC3R24E	3	UN	0,13	0.005	3,76	0.148	24	7247848	7255379
NTC3R20E	3	UN	0,16	0.006	3,76	0.148	20	7247847	7255378
NTC3R18E	3	UN	0,18	0.007	3,76	0.148	18	7247846	7255377
NTC3R16E	3	UN	0,19	0.008	3,76	0.148	16	7247845	7255376
NTC3R14E	3	UN	0,22	0.009	3,76	0.148	14	7247844	7255374
NTC3R13E	3	UN	0,24	0.010	3,76	0.148	13	7247843	7255373
NTC3R12E	3	UN	0,25	0.010	3,76	0.148	12	7247842	7255371
NTC3R11E	3	UN	0,28	0.011	2,72	0.107	11	7250042	7255326
NTC3R10E	3	UN	0,32	0.012	2,72	0.107	10	7250041	7255325
NTC3R9E	3	UN	0,36	0.014	2,72	0.107	9	7237283	—
NTC3R8E	3	UN	0,41	0.016	2,72	0.107	8	7250035	7255330
NTC3R7E	3	UN	0,47	0.019	2,72	0.107	7	—	7255329
Left Hand									
NTC3L16E	3	UN	0,19	0.008	3,76	0.148	16	7237270	—
NTC3L12E	3	UN	0,25	0.010	3,76	0.148	12	7237269	—
NTC3L10E	3	UN	0,32	0.012	2,72	0.107	10	7237268	—
NTC3L8E	3	UN	0,41	0.016	2,72	0.107	8	7237281	—







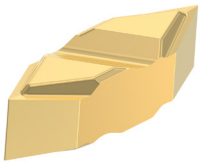
ISO Metric-External

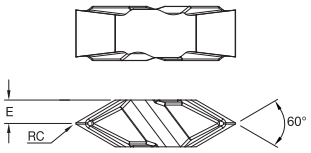
	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

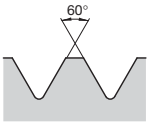
● Primary
○ Secondary

NTC-M-E

			RC		E				
Catalog Number	Insert Size	Thread Series	mm	in	mm	in	External Thread Pitch mm	KCU10B	KCU25B
Right Hand									
NTC3MR150E	3	M-Metric/ISO	0,20	0.008	3,68	0.145	1.50	—	7255324
NTC3MR200E	3	M-Metric/ISO	0,27	0.011	3,68	0.145	2.00	7237282	—







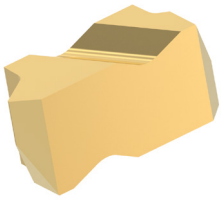
Partial Profile
60° External

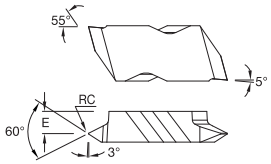
	KCU25B
P	●
M	●
K	○
N	○
S	●
H	

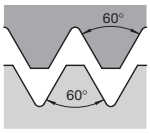
● Primary
○ Secondary

NTU • 4 Edges • Reversible

			RC		E				
Catalog Number	Insert Size	Thread Series	mm	in	mm	in	External Thread Pitch mm	External TPI	KCU25B
Right Hand									
NTU4R	4U	UN	0,11	0.005	3,18	0.125	1.25-6.25	4-20	7254268







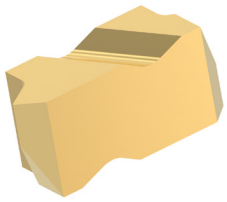
Partial Profile 60°

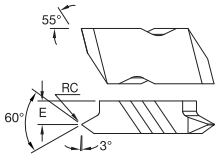
	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

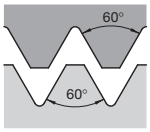
● Primary
○ Secondary

NTK

			RC		E							
Catalog Number	Insert Size	Thread Series	mm	in	mm	in	External Thread Pitch mm	Internal Thread Pitch inch	External TPI	Internal TPI	KCU10B	KCU25B
Right Hand												
NTK2R	2	UN	0,08	0.003	2,79	0.110	0,60-1,75	1.0-2.0	14-44	12-24	7236746	7247891
NTK3R	3	UN	0,08	0.003	3,58	0.141	0,60-2,50	1.0-2.5	10-44	9-24	7236748	7247893
Left Hand												
NTK2L	2	UN	0,08	0.003	2,79	0.110	0,60-1,75	1.0-2.0	14-44	12-24	7236745	7247890
NTK3L	3	UN	0,08	0.003	3,58	0.141	0,60-2,50	1.0-2.5	10-44	9-24	7236747	7247892







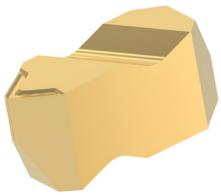
Partial Profile 60°

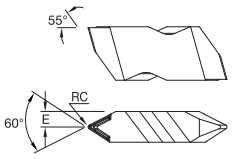
	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

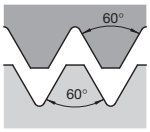
● Primary
○ Secondary

NTF

Catalog Number	Insert Size	Thread Series	RC mm	RC in	E mm	E in	External Thread Pitch mm	Internal Thread Pitch inch	External TPI	Internal TPI	KCU10B	KCU25B
Right Hand												
NTF2R	2	UN	0,08	0.003	2,79	0.110	0,60-1,75	1.0-2.0	14-44	12-24	7236742	—
NTF3R	3	UN	0,08	0.003	3,58	0.141	0,60-2,5	1.0-2.5	10-44	9-24	7236744	7247888
NTF4R	4	UN	0,08	0.003	5,11	0.201	0,60-2,5	1.0-2.5	10-44	9-24	—	7247889
Left Hand												
NTF2L	2	UN	0,08	0.003	2,79	0.110	0,60-1,75	1.0-2.0	14-44	12-24	7236741	7247885
NTF3L	3	UN	0,08	0.003	3,58	0.141	0,60-2,5	1.0-2.5	10-44	9-24	7236743	7247887







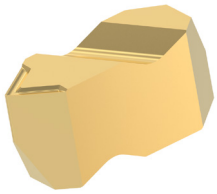
Partial Profile 60°

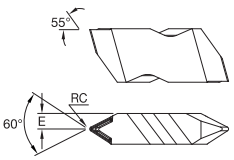
	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

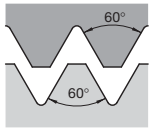
● Primary
○ Secondary

NT-CK

Catalog Number	Insert Size	Thread Series	RC mm	RC in	E mm	E in	External Thread Pitch mm	Internal Thread Pitch inch	External TPI	Internal TPI	KCU10B	KCU25B
Right Hand												
NT3RCK	3	60 Degree Partial	0,34	0.014	2,46	0.097	2,5-4,0	4.0	6-11	6	7227529	7247875
NT4RCK	4	60 Degree Partial	0,34	0.014	3,23	0.127	2,5-5,5	4.0-5.5	4.5-11	4.5-6	7227532	—
Left Hand												
NT3LCK	3	60 Degree Partial	0,34	0.014	2,46	0.097	2,5-4,0	4.0	6-11	6	7227527	7247872
NT4LCK	4	60 Degree Partial	0,34	0.014	3,23	0.127	2,5-5,5	4.0-5.5	4.5-11	4.5-6	—	7247878







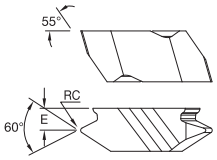
Partial Profile 60°

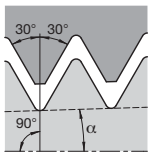
	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

● Primary
○ Secondary

NT-K

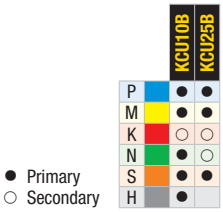
Catalog Number	Insert Size	Thread Series	RC mm	RC in	E mm	E in	External Thread Pitch mm	Internal Thread Pitch inch	External TPI	Internal TPI	KCU10B	KCU25B
Right Hand												
NT2RK	2	60 Degree Partial	0,10	0.004	1,90	0.075	0,70-3,0	1.25-3.5	8-36	7-20	7227526	7247820
NT3RK	3	60 Degree Partial	0,17	0.007	2,49	0.098	1,25-4,0	2.0-5.0	6-20	5-12	7227530	7247876
NT4RK	4	60 Degree Partial	0,16	0.007	3,24	0.128	1,25-6,25	2.0-6.25	4-20	4-12	7227533	7247882
Left Hand												
NT2LK	2	60 Degree Partial	0,10	0.004	1,90	0.075	0,70-3,0	1.25-3.5	8-36	7-20	7227525	7247818
NT3LK	3	60 Degree Partial	0,17	0.007	2,49	0.098	1,25-4,0	2.0-5.0	6-20	5-12	7227528	7247873
NT4LK	4	60 Degree Partial	0,16	0.007	3,24	0.128	1,25-6,25	2.0-6.25	4-20	4-12	7227531	7247879





α=1/2arctg (tpf/12)

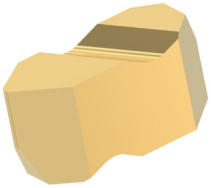
API Rotary Shoulder Connections

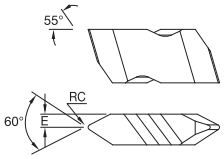


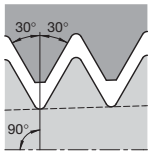
● Primary
○ Secondary

NDC (Cresting)

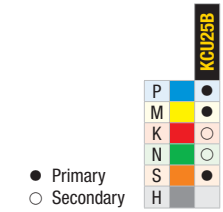
			RC		E					
Catalog Number	**Insert Size**	**Thread Series**	**mm**	**in**	**mm**	**in**	**TPI**	**TPF**	**KCU10B**	**KCU25B**
Right Hand										
NDC3040R3	3	API	0,45	0.018	3,73	0.147	5	3.000	—	7255305
NDC4040R3	4	API	0,45	0.018	3,73	0.147	5	3.000	—	7255357
NDC4038R2	4	API	0,90	0.036	4,65	0.183	4	2.000	—	7255309
NDC4050R2	4	API	0,57	0.023	4,65	0.183	4	2.000	—	7255311
NDC4050R3	4	API	0,57	0.023	4,65	0.183	4	3.000	—	7255312
Left Hand										
NDC3040L3	3	API	0,45	0.018	3,73	0.147	5	3.000	7237284	—
NDC4050L3	4	API	0,57	0.023	4,65	0.183	4	3.000	7237290	—
NDC4038L2	4	API	0,90	0.036	4,65	0.183	4	2.000	—	7255308
NDC4050L2	4	API	0,57	0.023	4,65	0.183	4	2.000	—	7255310







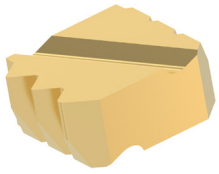
API Rotary Shoulder Connections

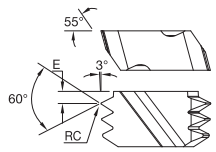


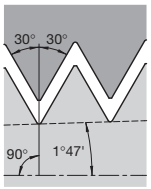
● Primary
○ Secondary

ND (Partial Profile)

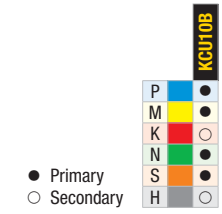
			RC		E			
Catalog Number	**Insert Size**	**Thread Series**	**mm**	**in**	**mm**	**in**	**TPI**	**KCU25B**
Right Hand								
ND3040R	3	API	0,45	0.018	2,08	0.082	5	7255303
ND3038R	3	API	0,90	0.036	2,08	0.082	4	7255302
ND4050R	4	API	0,57	0.023	3,25	0.128	4	7255304
Left Hand								
ND3040L	3	API	0,45	0.018	2,08	0.082	5	7255354
ND3038L	3	API	0,90	0.036	2,08	0.082	4	7255353







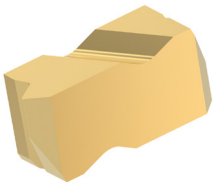
NPT

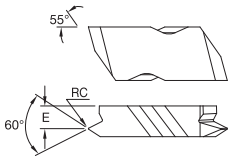


● Primary
○ Secondary

NDC-V-M (MULTI-TOOTH)

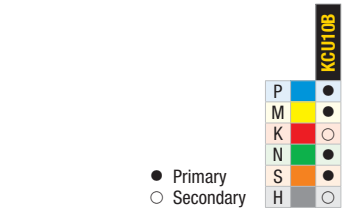
			RC		E				
Catalog Number	**Insert Size**	**Thread Series**	**mm**	**in**	**mm**	**in**	**TPI**	**TPF**	**KCU10B**
Right Hand									
NDC8115VR75M	8	NPT	0,10	0.004	2,59	0.102	11.5	0.750	7237292
NDC88VR75M	8	NPT	0,13	0.005	2,41	0.095	8	0.750	7237294
Left Hand									
NDC88VL75M	8	NPT	0,13	0.005	2,41	0.095	8	0.750	7237293

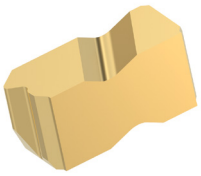


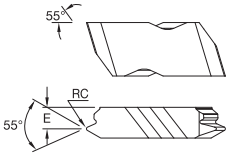


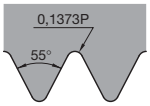
NDC-V

			RC		E				
Catalog Number	Insert Size	Thread Series	mm	in	mm	in	TPI	TPF	KCU10B
Right Hand									
NDC327VR75	3	NPT	0,05	0.002	3,66	0.144	27	0.750	7237226
NDC314VR75	3	NPT	0,08	0.003	3,66	0.144	14	0.750	7237287
NDC3115VR75	3	NPT	0,10	0.004	3,66	0.144	11.5	0.750	7237286
NDC38VR75	3	NPT	0,13	0.005	2,54	0.100	8	0.750	7237289
Left Hand									
NDC3115VL75	3	NPT	0,10	0.004	3,66	0.144	11.5	0.750	7237285
NDC38VL75	3	NPT	0,13	0.005	2,54	0.100	8	0.750	7237288





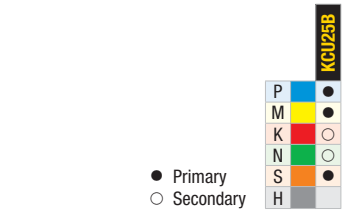


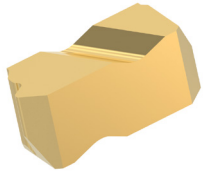


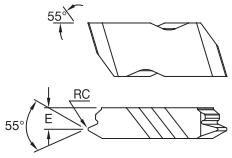
Whitworth BSW,
BSP-Internal

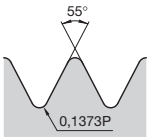
NWC-I

			RC		E			
Catalog Number	Insert Size	Thread Series	mm	in	mm	in	TPI	KCU25B
Left Hand								
NWC3L11I	3	Whitworth	0,30	0.012	3,43	0.135	11	7255358





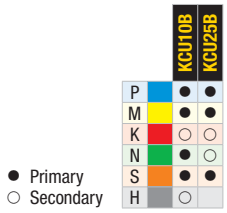


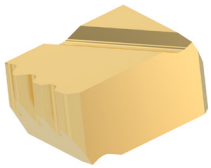


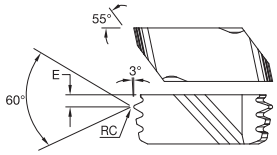
Whitworth BSW,
BSP-External

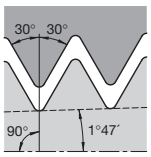
NWC-E

			RC		E				
Catalog Number	Insert Size	Thread Series	mm	in	mm	in	TPI	KCU10B	KCU25B
Right Hand									
NWC3R14E	3	Whitworth	0,24	0.009	3,43	0.135	14	7250037	7255314
NWC3R11E	3	Whitworth	0,30	0.012	3,43	0.135	11	7250036	7255313









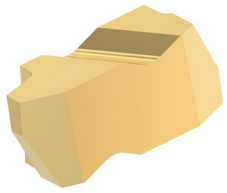
API Round

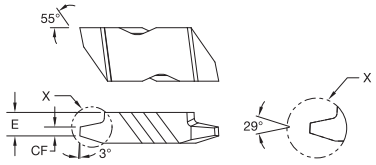
	KCU10B
P	●
M	●
K	○
N	●
S	●
H	○

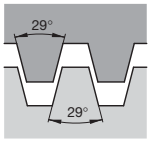
● Primary
○ Secondary

NDC-RD-M (MULTI-TOOTH)

			RC		E				
Catalog Number	Insert Size	Thread Series	mm	in	mm	in	TPI	TPF	KCU10B
Right Hand									
NDC68RDR75M	6	API Round	0,41	0.016	2,62	0.103	8	0.750	7237291







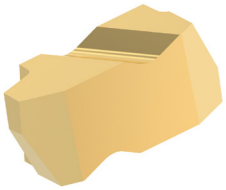
Acme

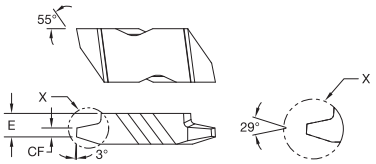
	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

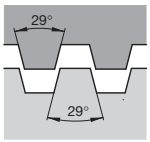
● Primary
○ Secondary

NA

			E				
Catalog Number	Insert Size	Thread Series	mm	in	TPI	KCU10B	KCU25B
Right Hand							
NA3R16	3	ACME	3,79	0.149	16	7237212	—
NA3R12	3	ACME	3,79	0.149	12	7237211	7237315
NA3R10	3	ACME	3,79	0.149	10	—	7237314
NA3R8	3	ACME	3,79	0.149	8	7237216	7237319
NA3R6	3	ACME	3,79	0.149	6	7237215	7237318
NA3R5	3	ACME	3,79	0.149	5	7237214	7237317
NA3R4	3	ACME	3,38	0.133	4	7237213	7237316
NA4R6	4	ACME	5,13	0.202	6	—	7255293
NA4R5	4	ACME	5,13	0.202	5	—	7255292
NA6R3	6	ACME	7,19	0.283	3	—	7255301
NA6R25	6	ACME	7,19	0.283	2.5	—	7255300
NA6R2	6	ACME	7,19	0.283	2	7250039	7255299
Left Hand							
NA3L16	3	ACME	3,79	0.149	16	7237205	—
NA3L12	3	ACME	3,79	0.149	12	7237204	7237297
NA3L10	3	ACME	3,79	0.149	10	—	7237296
NA3L8	3	ACME	3,79	0.149	8	7237209	7237313
NA3L6	3	ACME	3,79	0.149	6	7237208	7237312
NA3L5	3	ACME	3,79	0.149	5	7237207	7237311
NA3L4	3	ACME	3,38	0.133	4	7237206	7237298
NA4L8	4	ACME	5,13	0.202	8	—	7255291
NA4L6	4	ACME	5,13	0.202	6	—	7255230
NA4L5	4	ACME	5,13	0.202	5	—	7255229
NA4L4	4	ACME	5,13	0.202	4	7250009	7255228
NA6L3	6	ACME	7,19	0.283	3	—	7255296
NA6L25	6	ACME	7,19	0.283	2.5	—	7255295
NA6L2	6	ACME	7,19	0.283	2	7250038	7255294







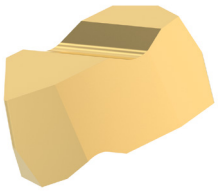
Stub Acme

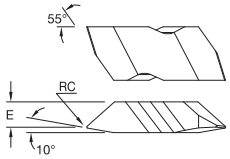
	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

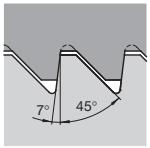
● Primary
○ Secondary

NAS

			E				
Catalog Number	**Insert Size**	**Thread Series**	**mm**	**in**	**TPI**	**KCU10B**	**KCU25B**
Right Hand							
NAS3R16	3	STUB ACME	3,79	0.149	16	—	7237338
NAS3R12	3	STUB ACME	3,79	0.149	12	—	7237337
NAS3R10	3	STUB ACME	3,79	0.149	10	—	7237336
NAS3R8	3	STUB ACME	3,79	0.149	8	7237225	7237342
NAS3R6	3	STUB ACME	3,79	0.149	6	—	7237341
NAS3R5	3	STUB ACME	3,79	0.149	5	7237223	7237340
NAS3R4	3	STUB ACME	3,79	0.149	4	—	7237339
Left Hand							
NAS3L12	3	STUB ACME	3,79	0.149	12	—	7237331
NAS3L10	3	STUB ACME	3,79	0.149	10	7237218	7237320
NAS3L8	3	STUB ACME	3,79	0.149	8	—	7237335
NAS3L6	3	STUB ACME	3,79	0.149	6	7237220	7237334
NAS3L5	3	STUB ACME	3,79	0.149	5	7237219	7237333
NAS3L4	3	STUB ACME	3,79	0.149	4	—	7237332







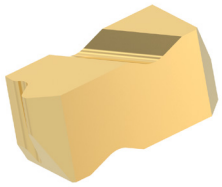
American
Buttress-Push

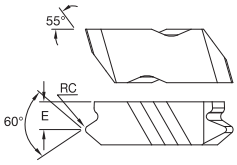
	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

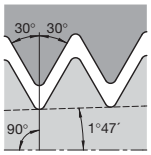
● Primary
○ Secondary

NTB-A

			RC		E				
Catalog Number	**Insert Size**	**Thread Series**	**mm**	**in**	**mm**	**in**	**TPI**	**KCU10B**	**KCU25B**
Right Hand									
NTB3RA	3	Buttress	0,17	0.007	4,17	0.164	8-16	7250032	7255317
NTB4RA	4	Buttress	0,25	0.010	5,23	0.206	4-6	7236739	—
Left Hand									
NTB3LA	3	Buttress	0,17	0.007	4,17	0.164	8-16	7247669	7255359







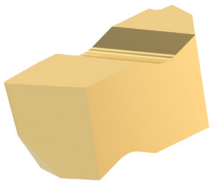
API Round

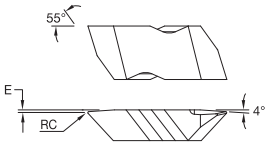
	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

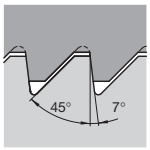
● Primary
○ Secondary

NDC-RD

			RC		E					
Catalog Number	Insert Size	Thread Series	mm	in	mm	in	TPI	TPF	KCU10B	KCU25B
Right Hand										
NDC310RDR75	3	API Round	0,36	0.014	3,18	0.125	10	0.750	—	7255307
NDC38RDR75	3	API Round	0,41	0.016	3,18	0.125	8	0.750	7247667	7255356
Left Hand										
NDC310RDL75	3	API Round	0,36	0.014	3,18	0.125	10	0.750	—	7255306
NDC38RDL75	3	API Round	0,41	0.016	3,18	0.125	8	0.750	7247850	7255355







American
Buttress-Pull

	KCU10B	KCU25B
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

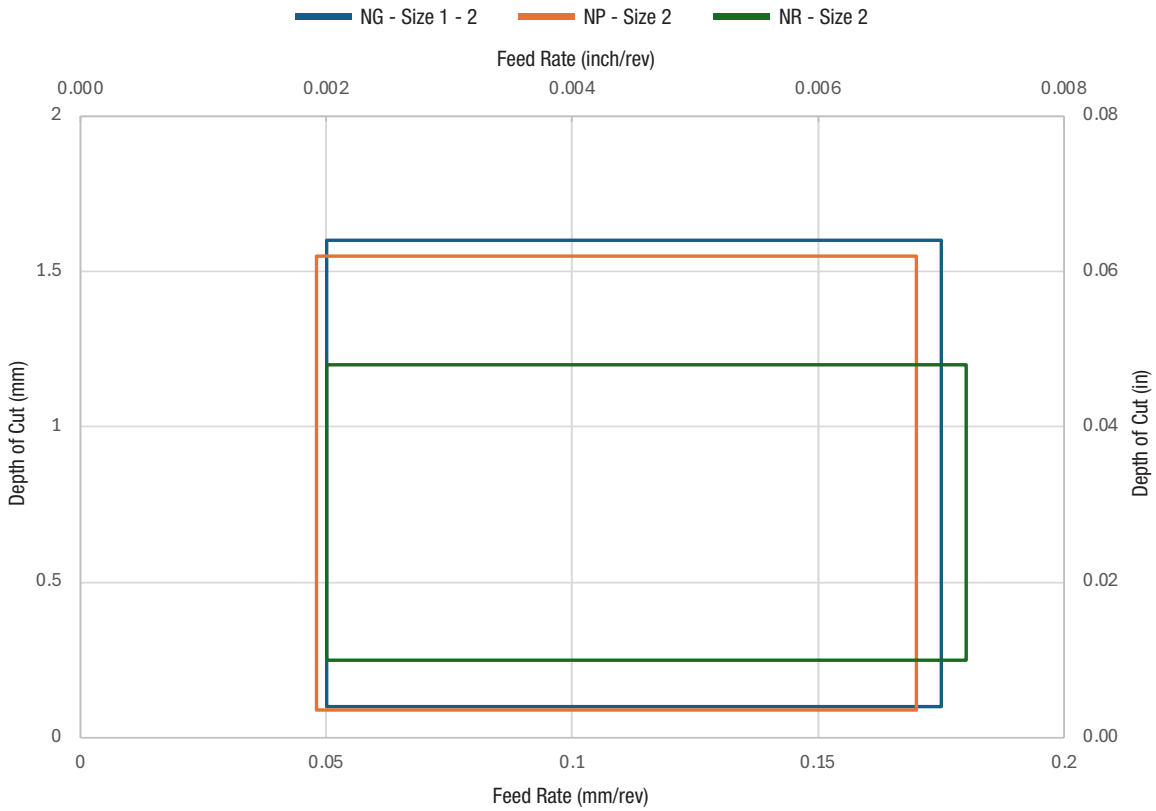
● Primary
○ Secondary

NTB-B

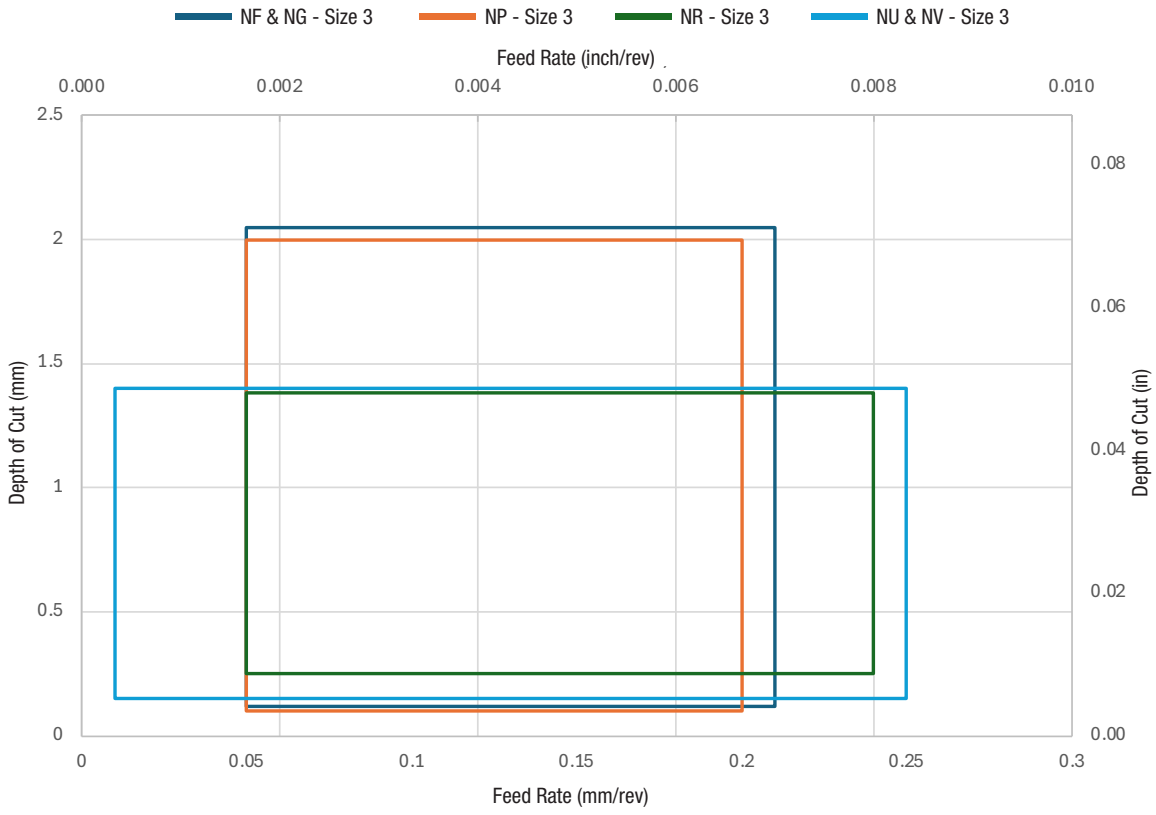
			RC		E				
Catalog Number	Insert Size	Thread Series	mm	in	mm	in	TPI	KCU10B	KCU25B
Right Hand									
NTB2RB	2	Buttress	0,08	0.003	0,25	0.010	16-20	7237267	—
NTB3R12B	3	Buttress	0,15	0.006	2,49	0.098	12	7247841	—
NTB3RB	3	Buttress	0,17	0.007	0,31	0.012	8-16	7250033	7255318
NTB4RB	4	Buttress	0,25	0.010	0,41	0.016	4-6	7236740	7247884
Left Hand									
NTB2LB	2	Buttress	0,08	0.003	0,25	0.010	16-20	7236737	—
NTB3L12B	3	Buttress	0,15	0.006	2,49	0.098	12	7247668	—
NTB3LB	3	Buttress	0,17	0.007	0,31	0.012	8-16	7250031	7255316
NTB4LB	4	Buttress	0,25	0.010	0,41	0.016	4-6	7236738	7247883

Top Notch • Application Data • Feed & Depth of Cut

Seat Size 1 and 2 • NG - NP - NR • OD Groove & Turn

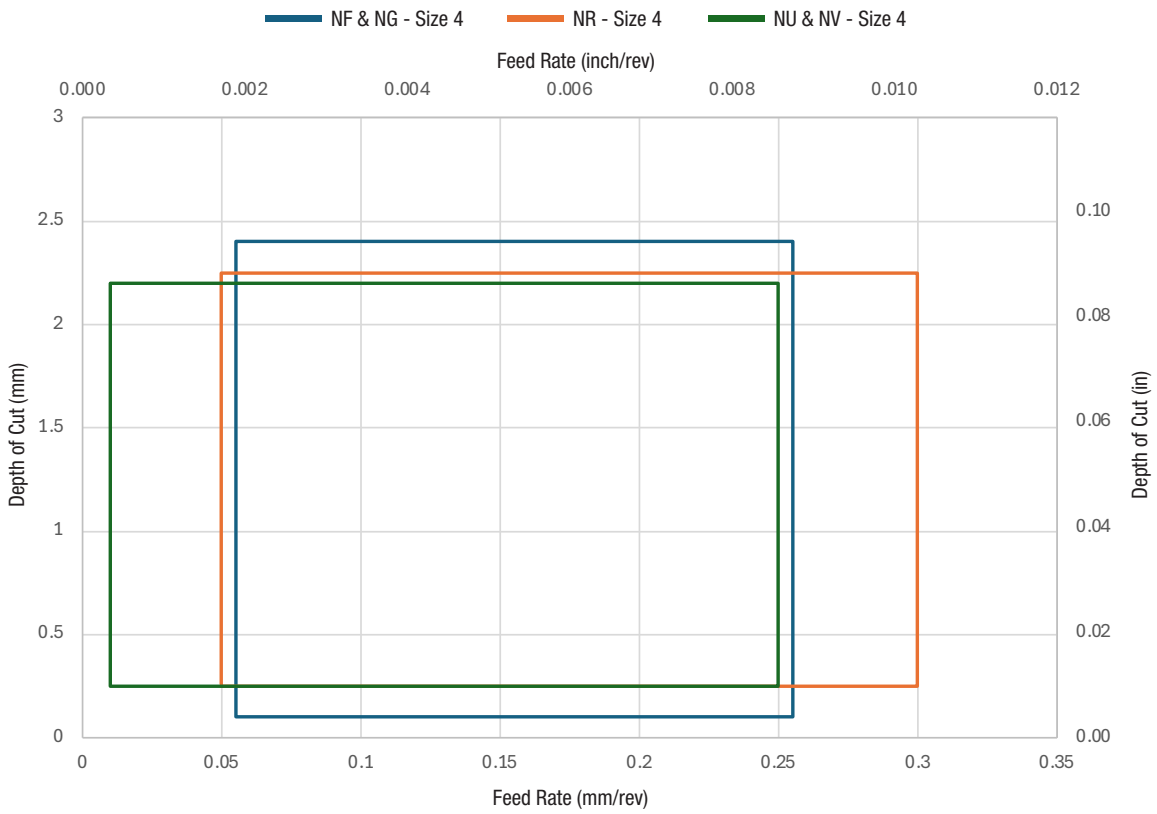


Seat Size 3 • NG - NF - NP - NR - NU - NV • Groove & Turn

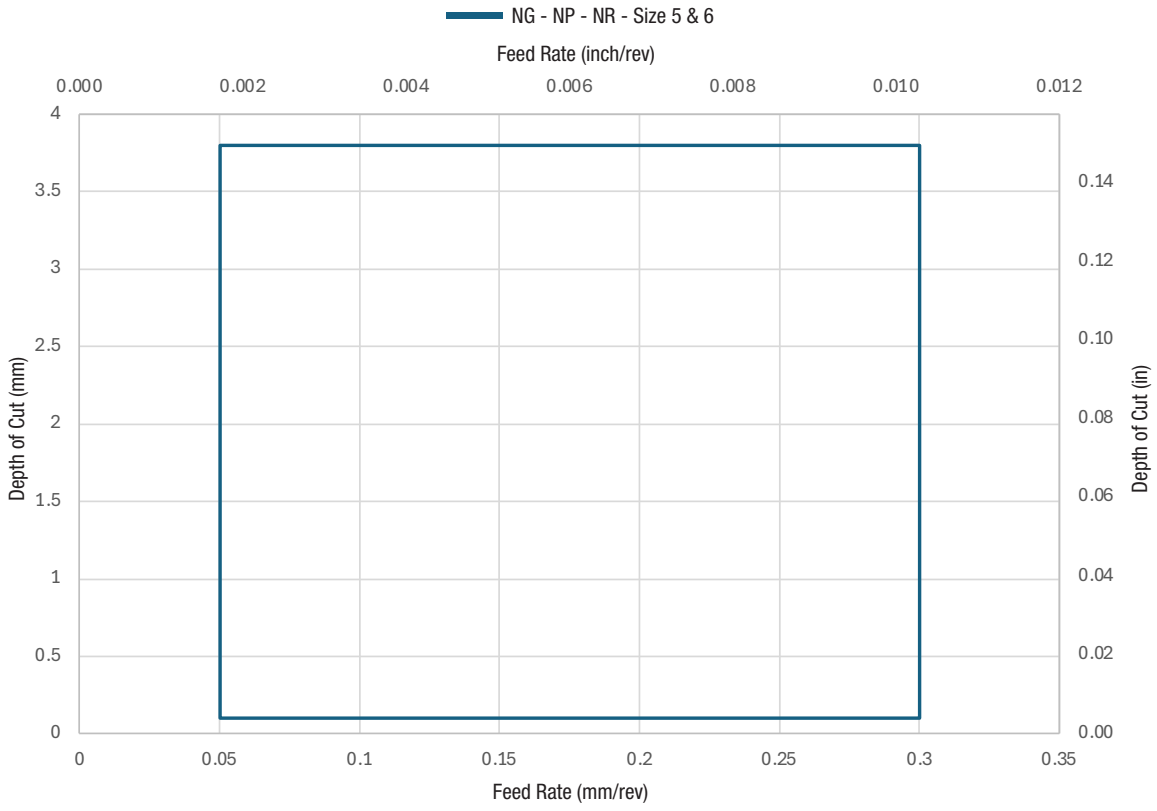


Top Notch • Application Data • Feed & Depth of Cut

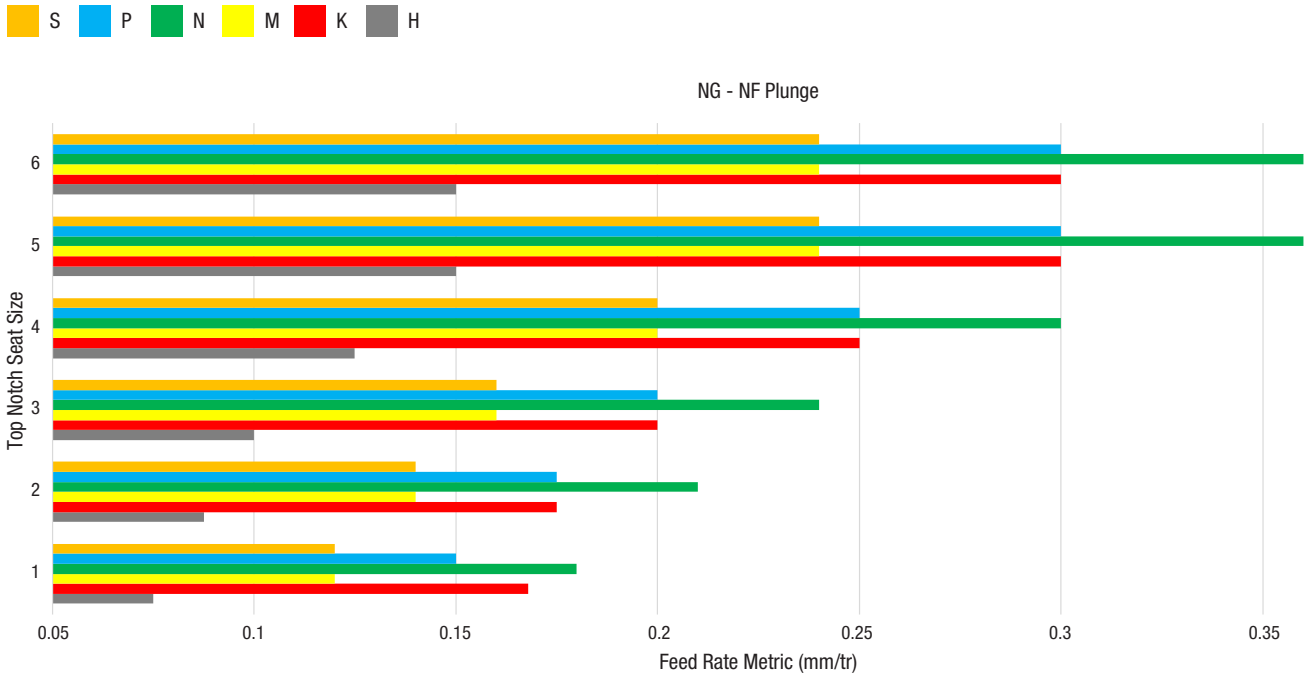
Seat Size 4 • NG - NP - NR - NU - NV - NF • Groove & Turn

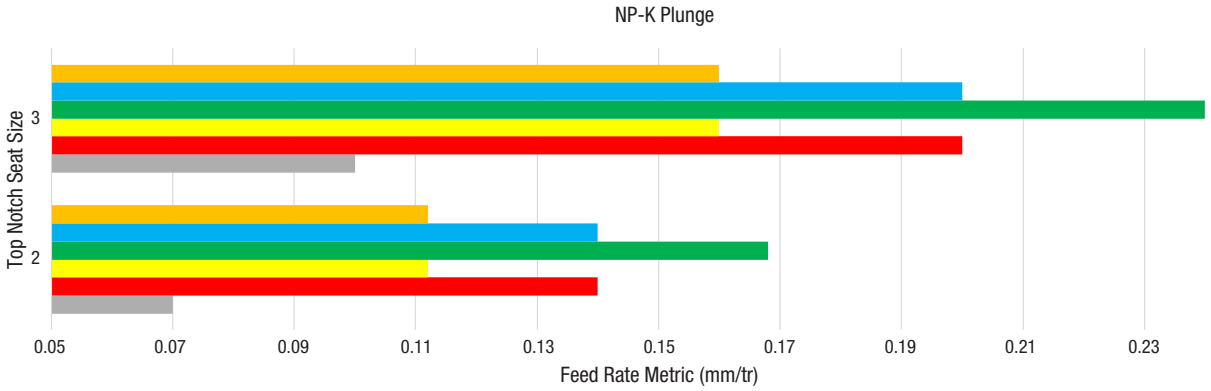


Seat Size 5-6 • NG - NP - NR • Groove & Turn



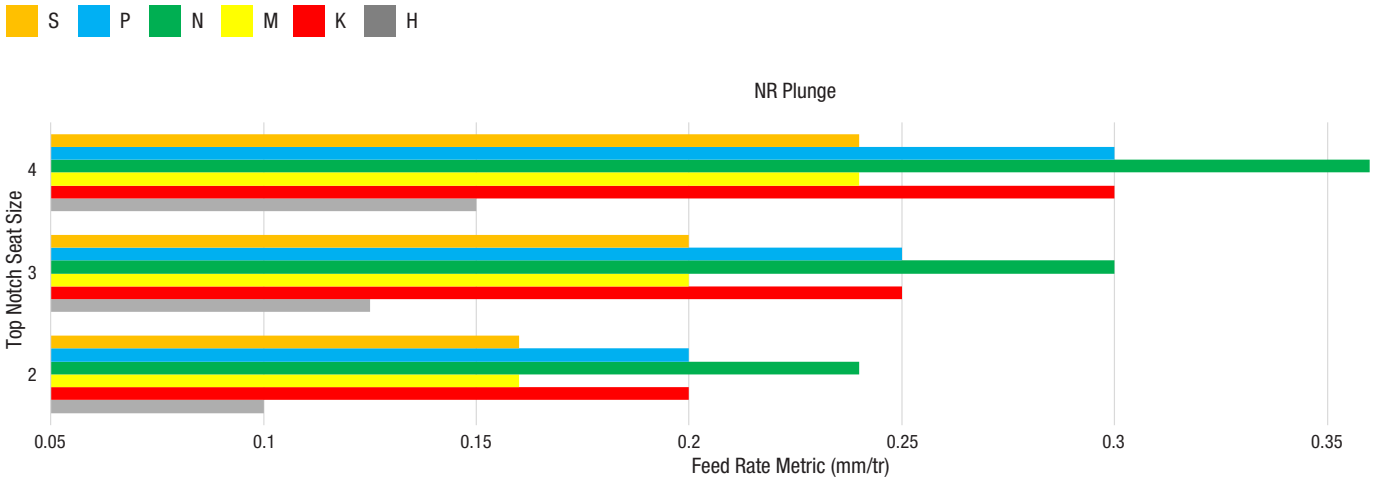
Top Notch
Application Data • Plunging Data • Metric

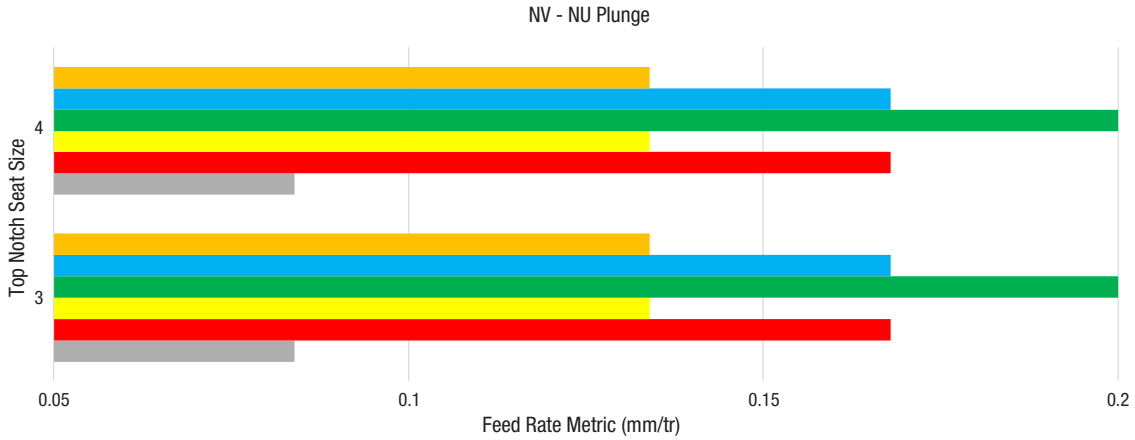




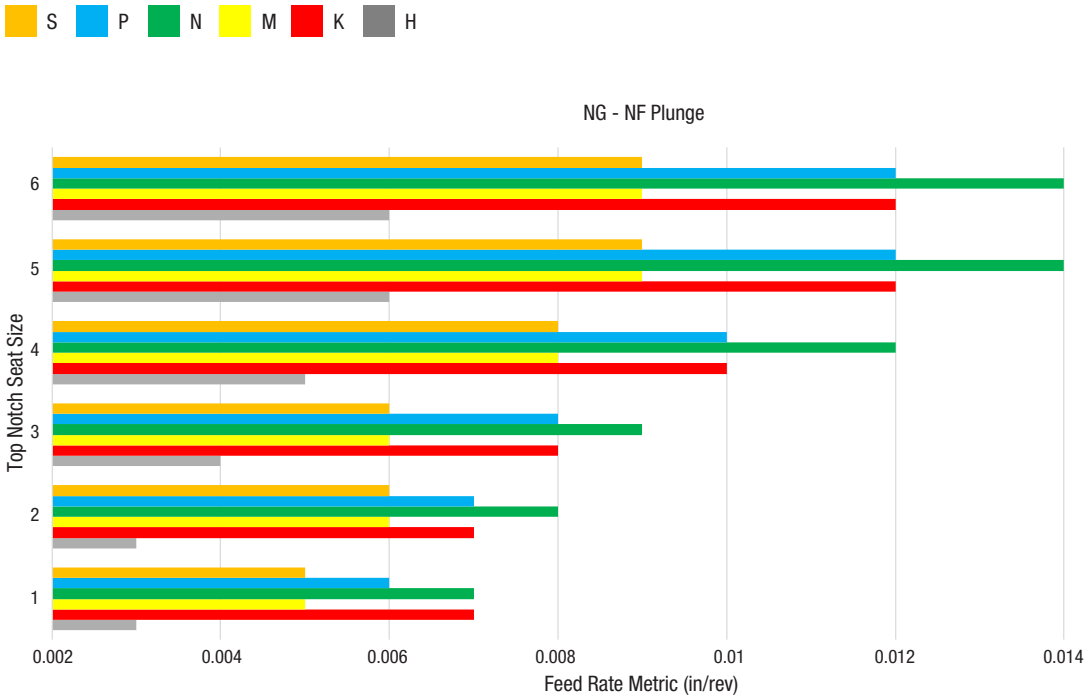
Top Notch

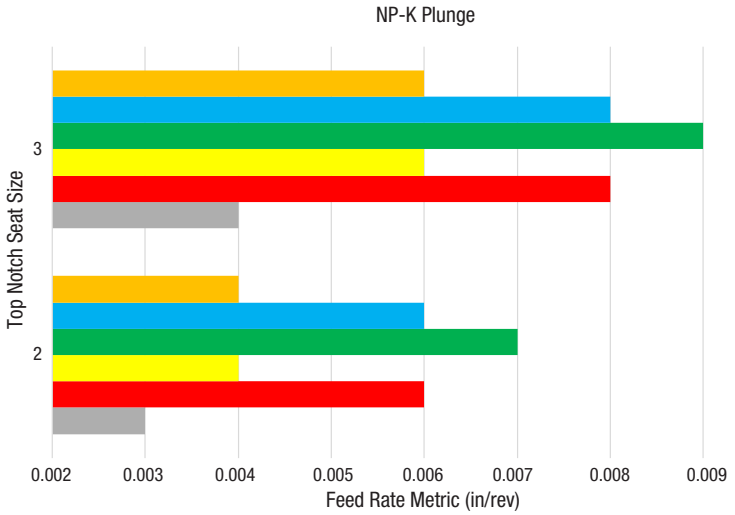
Application Data • Plunging Data • Metric • Continued





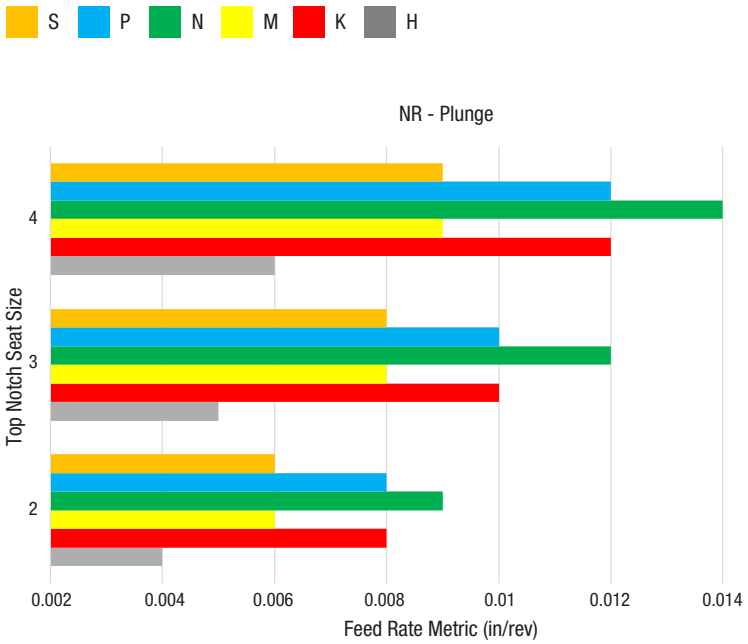
Top Notch
Application Data • Plunging Data • Inch

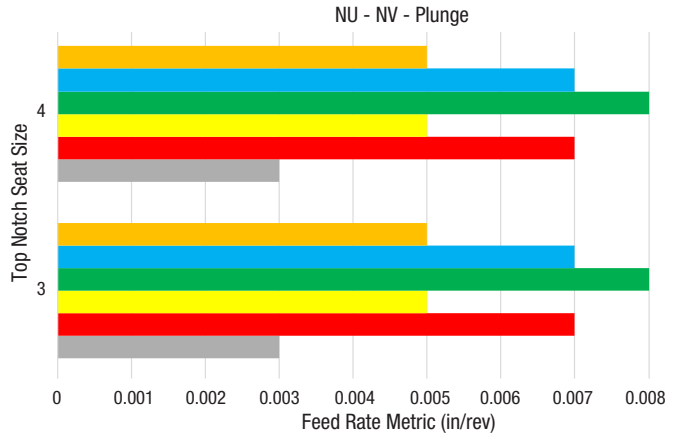




Top Notch

Application Data • Plunging Data • Inch • Continued





KCU10B - KCU25B: Top Notch
Application Data • Metric
(General Machining)

Groove & Turn and Cut-Off • Application Data • Recommended Starting Speed (m/min)				
Material Group	KCU10B		KCU25B	
	MIN	MAX	MIN	MAX
P0	140	350	90	230
P1	140	295	90	230
P2	140	255	90	165
P3	140	255	90	165
P4	75	180	50	115
P5	120	275	80	180
P6	110	240	70	160
M1	110	220	100	205
M2	95	205	75	180
M3	95	205	50	125
K1	75	165	90	255
K2	55	140	90	255
K3	40	100	90	220
N1	150	1025	100	655
N2	150	1025	100	655
N3	-	-	80	410
N4	90	640	80	410
N5	90	255	60	165
N6	120	320	80	205
S1	10	115	8	65
S2	10	115	8	80
S3	10	115	15	80
S4	10	140	8	115
H1	30	65	-	-

KCU10B - KCU25B: Top Notch
Application Data • Inch
(General Machining)

Groove & Turn and Cut-Off • Application Data • Recommended Starting Speed (sfm)				
Material Group	KCU10B		KCU25B	
	MIN	MAX	MIN	MAX
P0	459	1148	295	755
P1	459	968	295	755
P2	459	837	295	541
P3	459	837	295	541
P4	246	591	164	377
P5	394	902	262	591
P6	361	787	230	525
M1	361	722	328	673
M2	312	673	246	591
M3	312	673	164	410
K1	246	541	295	837
K2	180	459	295	837
K3	131	328	295	722
N1	492	3363	328	2149
N2	492	3363	328	2149
N3	-	-	262	1345
N4	295	2100	262	1345
N5	295	837	197	541
N6	394	1050	262	673
S1	33	377	26	213
S2	33	377	26	262
S3	33	377	49	262
S4	33	459	26	377
H1	98	213	-	-

Maximum Feed Rate Values

Material Group	Feed Factor
M	0.8
N	1.2
S	0.8
H	0.5

Data above is for P and K material groups. Maximum feed rates should be adjusted by multiplying max feed rate values by following factors for shown material groups.

Top Notch Grooving KCU10B & KCU25B Inserts

LET'S TAKE YOUR **MANUFACTURING** TO THE **NEXT LEVEL**

kennametal.com/**Top-Notch**

FIX8™ TURNING

Heavy-Duty Turning

FIX8 is the perfect heavy-duty turning solution featuring eight cutting edges per insert. The rigid design is ideal for medium machining and roughing applications, offering the lowest cost per edge. The unique clamping system pulls the insert into the pocket seat, ensuring a secure fit and the ability to withstand large cutting forces and vibrations.

With its large depth of cut (up to 12mm [0.475"]) and feed rate (up to 1.4mm [0.055"]) capabilities, FIX8 ensures the highest possible metal removal rates in steel, cast iron and stainless steels. Additionally, FIX8 reduces cutting forces by up to 15%, making the inserts ideal for low-horsepower lathes.

The tangential design increases the amount of carbide between the workpiece and the tool holder, allowing the system to take higher loads. A carbide shim protects the pocket against deformation and ensures process safety.

PRECISION COOLANT TECHNOLOGY

Coolant exit holes directed toward the insert flank control heat in the cutting zone and prolong tool life, while three coolant nozzles aimed at the rake face control the temperature, facilitate chip evacuation and support chip formation.

Features & Benefits

- Precision 3D coolant technology supplied directly to the cutting edge
- Low cutting forces and excellent chip control
- Heavy-duty chip geometry for the largest feed rates
- High-performance, cutting-edge strength and rigid clamping system
- Eight cutting edges per insert
- RN geometry for small and large depths of cut without sacrificing chip control and chip breakage

Applications

Turning | Facing | Chamfer Turning

Materials

P Steels | M Stainless Steels | K Cast Iron

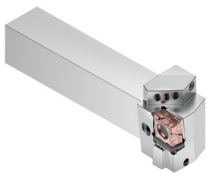
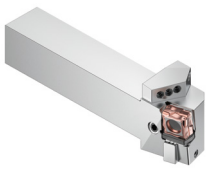
Industries

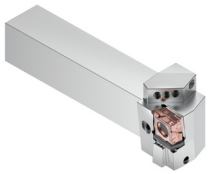
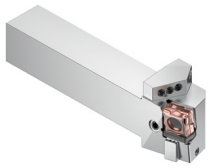
General Engineering | Automotive | EV

Oil & Gas | Wind & Solar

EXPLORE FIX8

FIX8 • TOOL SELECTION GUIDES • INCH AND METRIC

Tool Selection Guide - FIX8 - Metric				
				
Internal Coolant		✔		✔
Main Operation				
Clamping	Kenlever™ P-Clamping		Kenlever P-Clamping	
Style	FIX8PCJN…		FIX8PCBN…	
Approach Angle [KRI]	93°		75°	
Shank Height [H]	25-40mm		32-40mm	

Tool Selection Guide - FIX8 - INCH				
				
Internal Coolant		✔		✔
Main Operation				
Clamping	Kenlever™ P-Clamping		Kenlever P-Clamping	
Style	FIX8PCJN…		FIX8PCBN…	
Approach Angle [KRA]	-3°		15°	
Shank Height [H]	1.000-1.500"		1.250-1.500"	

FIX8 • TOOL SELECTION GUIDES • INCH AND METRIC

	Tool Selection Guide - Metric			
	KM	KM	PSC	PSC
				
Internal Coolant	✔	✔	✔	✔
Main Operation				
Clamping	Kenlever™ P-Clamping	Kenlever P-Clamping	Kenlever P-Clamping	Kenlever P-Clamping
Style	KM...PCJN...FIX8HPC	KM...PCBN...FIX8HPC	PSC...PCJN...FIX8HPC	PSC...PCBN...FIX8HPC
Approach Angle [KRI]	93°	75°	93°	75°
System Size [CSMS]	KM50, KM63 & KM80	KM50, KM63 & KM80	PSC50, PSC63, PSC80	PSC50, PSC63, PSC80

	Tool Selection Guide - FIX8 - INCH			
	KM	KM	PSC	PSC
				
Internal Coolant	✔	✔	✔	✔
Main Operation				
Clamping	Kenlever™ P-Clamping	Kenlever P-Clamping	Kenlever P-Clamping	Kenlever P-Clamping
Style	KM...PCJN...FIX8HPC	KM...PCBN...FIX8HPC	PSC...PCJN...FIX8HPC	PSC...PCBN...FIX8HPC
Approach Angle [KRA]	-3°	15°	-3°	15°
Shank Height [H]	KM50, KM63 & KM80	KM50, KM63 & KM80	PSC50, PSC63, PSC80	PSC50, PSC63, PSC80

ISO TOOLHOLDERS • CATALOG NUMBERING SYSTEM • METRIC

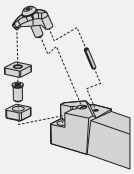
Each character in our Catalog Number signifies a specific trait of that product. Use the following key columns to easily identify which attributes apply.

FIX8PCJNR2525M19C

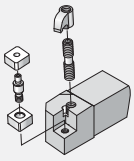
FIX8	S	C	L	C	R	
Family Name	Insert Holding Method	Insert Shape	Tool Style or Lead Angle	Insert Clearance Angle	Hand of Tool	Additional Information

Insert Holding Method

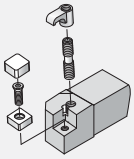
Kenclamp



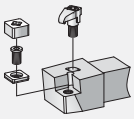
KENLOC



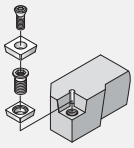
KENDEX



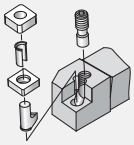
TOP NOTCH Profiling



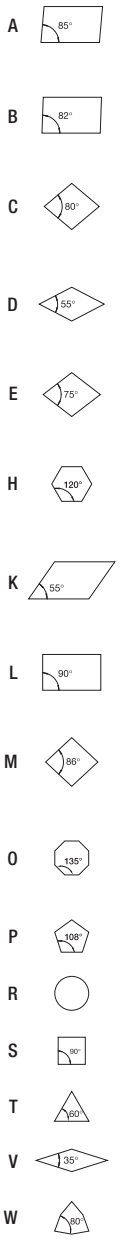
Screw-On



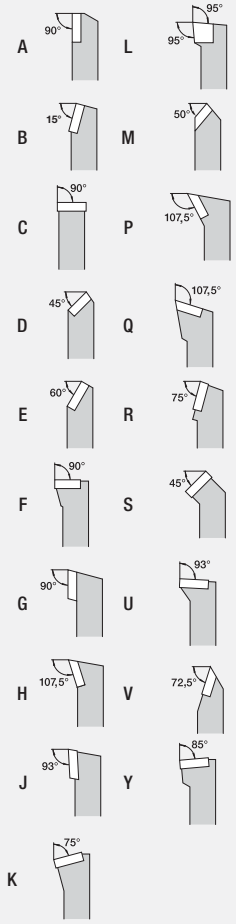
Kenlever



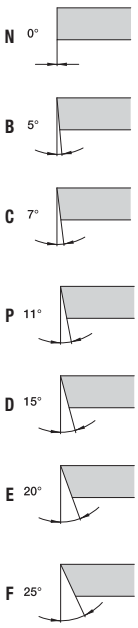
Insert Shape



Tool Style or Lead Angle

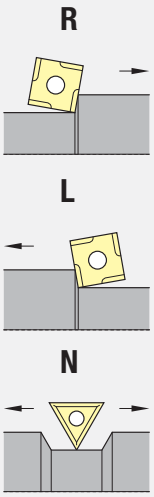


Insert Clearance Angle



Hand of Tool

R = Right hand
L = Left hand
N = Neutral



Additional Information

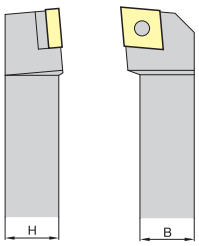
C = Deep pocket for ceramic insert
S = Single pocket locating wall
F = Straight shank, no offset

ISO TOOLHOLDERS • CATALOG NUMBERING SYSTEM • METRIC • Continued

Each character in our Catalog Number signifies a specific trait of that product. Use the following key columns to easily identify which attributes apply.

FIX8PCJNR**2525M19C**

20	20	X	09	C	03
Shank Dimensions		**Tool Length**	**Insert Size**	**Additional Information**	**Insert Thickness (optional)**



The seventh and eighth position shall be a significant two-digit number that indicates the holder cross section.

- If the dimension for the width "B" or the height "H" is represented by a one-digit number, a 0 (zero) will be used in front of it.

Example: 8,0mm = 08

L1	ISO
32	A
40	B
50	C
60	D
70	E
80	F
90	G
100	H
110	J
125	K
140	L
150	M
160	N
170	P
180	Q
200	R
250	S
300	T
350	U
400	V
450	W
500	Y
Special Design	X

Cutting Edge Length L10					
H	Hexagon 120°		C	Rhomboid 80°	
			D	55°	
O	Octagon 135°		E	75°	
			M	86°	
			V	35°	
P	Pentagon 108°		W	Trigon 80° with enlarged corner angles	
S	Square 90°		L	Rectangular 90°	
T	Triangular 60°		A	Parallelogram 85°	
R	Round —		B	82°	
			K	55°	

KC = Kenclamp

H4 = Wedgelock clamping system

M = MTS clamping system for ceramic and PcBN inserts

C = Through coolant

04 = 4,76mm
06 = 6,35mm

ISO TOOLHOLDERS • CATALOG NUMBERING SYSTEM • INCH

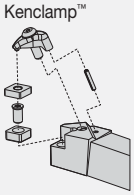
Each character in our Catalog Number signifies a specific trait of that product. Use the following key columns to easily identify which attributes apply.

FIX8SCLCR164DKC3

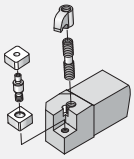
FIX8	S	C	L	C	R	
Family Name	Insert Holding Method	Insert Shape	Tool Style or Lead Angle	Insert Clearance Angle	Hand of Tool	Additional Information

Insert Holding Method (S)

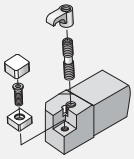
Kenclamp™



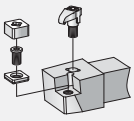
KENLOC™



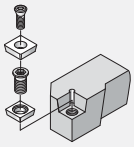
KENDEX™



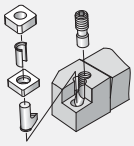
TOP NOTCH™ Profiling



Screw-On



Kenlever™



Insert Shape (C)

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

Tool Style or Lead Angle (L)

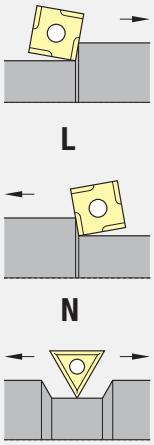
A	90°	L	95° / 95°
B	15°	M	50°
C	90°	P	107,5°
D	45°	Q	107,5°
E	60°	R	75°
F	90°	S	45°
G	90°	U	93°
H	107,5°	V	72,5°
J	93°	Y	85°
K	75°		

Insert Clearance Angle (C)

N	0°
B	5°
C	7°
P	11°
D	15°
E	20°
F	25°

Hand of Tool (R)

R = Right hand
L = Left hand
N = Neutral



Additional Information

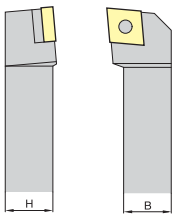
C = Deep pocket for ceramic insert
S = Single pocket locating wall
F = Straight shank, no offset

ISO TOOLHOLDERS • CATALOG NUMBERING SYSTEM • INCH • Continued

Each character in our Catalog Number signifies a specific trait of that product. Use the following key columns to easily identify which attributes apply.

FIX8SCLCR**164DKC3**

1	6	4	D	KC	3
Shank Dimensions		**Insert Size**	**Qualified Surface and Length**	**Additional Information**	**Insert Thickness (optional)**



This two-digit number indicates the holder cross section.

- For shanks 5/8" square and larger, the number represents the number of sixteenths of width and height.
- For shanks under 5/8" square, the number of sixteenths of cross section are preceded by zero.
- For rectangular holders, the first digit represents the number of eighths of width "B" and the second digit the number of quarters of height "H," except for a toolholder 1-1/4" x 1-1/2", which is given the number 91.

06 = 0.375
08 = 0.500
10 = 0.625
12 = 0.750
16 = 1.000
20 = 1.250
24 = 1.500
32 = 2.000

Insert IC

Number of 1/8ths of "D"

A = 4" long
B = 4.5" long
C = 5" long
D = 6" long
E = 7" long
F = 8" long
G* = 5.5" long
H* = 5.625" long
I* = 3" long
J* = 5.3" long
K* = 14" long
L* = 6.8" long
M = 4" long
N = 4.5" long
P = 5" long
R = 6" long
S = 7" long
T = 8" long
U* = 5.5" long
V* = 3.5" long
W* = 3.5" long
Y* = 3.75" long
Z* = 3.250" long

* Kennametal standard only.

R =

Radial clearance for 4" minimum bore

S =

3.00 minimum bore

KC =

Kenclamp™

H4 =

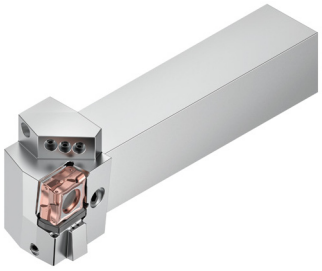
Wedgelock™ clamping system

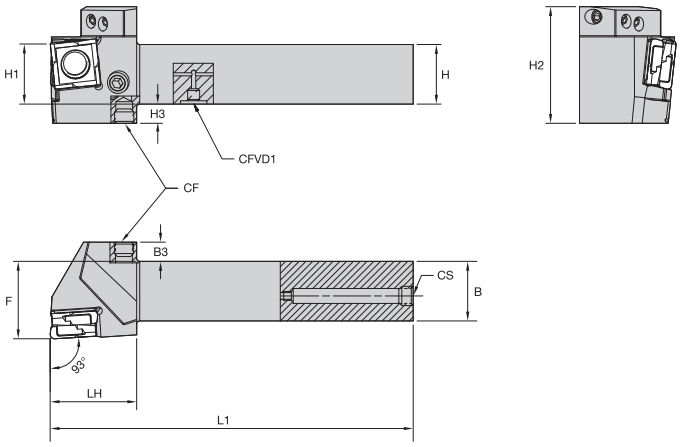
M.. =

TNT/MTS clamping system for ceramic and PcBN inserts

3 = .188"

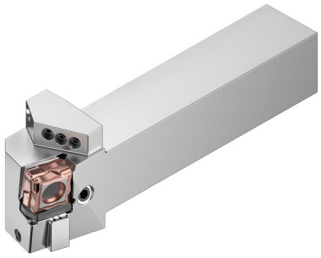
4 = .250"

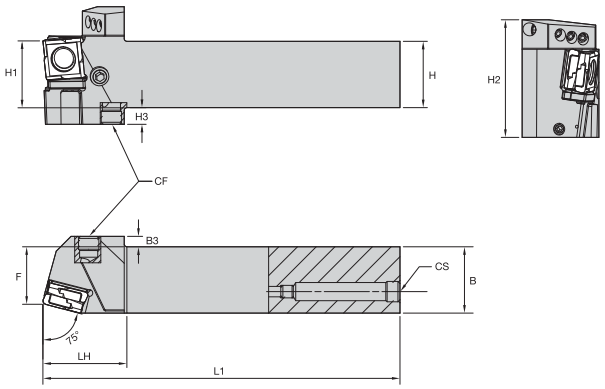




FIX8 • Toolholder • PCJN • 93° • Through Coolant • Metric

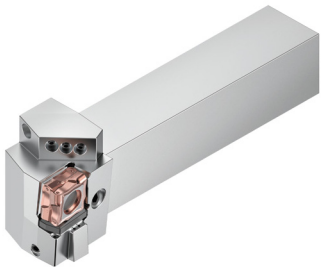
Order Number	Catalog Number	H	B	F	L1	LH	B3	H1	H3	CS	CF	CFVDI	GI
Right Hand													
6913114	FIX8PCJNR2525M19C	25	25	32,3	150,0	36	8	25	8	M8 X 1	M8 X 1	M5 X 0.8	CNUX191016R
6913091	FIX8PCJNR3232P19C	32	32	40,3	170,0	36	—	32	8	G1/8 - 28	G1/8 - 28	—	CNUX191016R
Left Hand													
6913115	FIX8PCJNL2525M19C	25	25	32,3	150,0	36	8	25	8	M8 X 1	M8 X 1	M5 X 0.8	CNUX191016L
6913092	FIX8PCJNL3232P19C	32	32	40,3	170,0	36	—	32	8	G1/8 - 28	G1/8 - 28	—	CNUX191016L

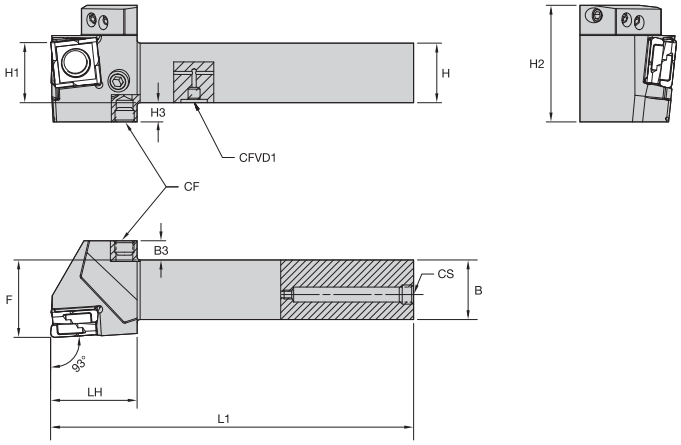




FIX8 • Toolholder • PCBN • 75° • Through Coolant • Metric

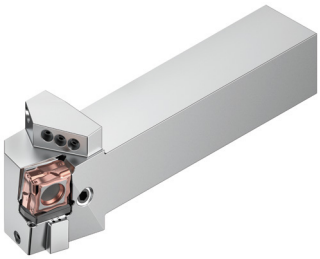
Order Number	Catalog Number	H	B	F	L1	LH	B3	H1	H3	CS	CF	GI
Right Hand												
6913106	FIX8PCBNR3232P19C	32	32	27,3	172,5	39	5	32	8	G1/8 - 28	G1/8 - 28	CNUX191016R
Left Hand												
6913107	FIX8PCBNL3232P19C	32	32	27,3	172,5	39	5	32	8	G1/8 - 28	G1/8 - 28	CNUX191016L

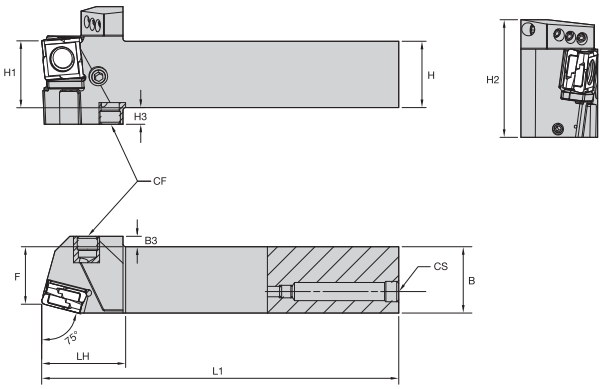




FIX8 • Toolholder • PCJN • -3° • Through Coolant • Inch

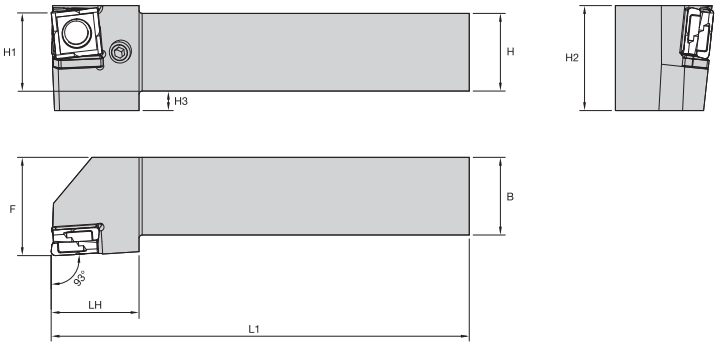
Order Number	Catalog Number	H	B	F	L1	LH	B3	H1	H3	CS	CF	CFVDI	GI
Right Hand													
6913116	FIX8PCJNR166DC	1.00	1.00	1.250	6.00	1.42	.32	1.00	.32	M8 X 1	M8 X 1	M4 X 0.7	CNUX191016R
6913097	FIX8PCJNR206DC	1.25	1.25	1.579	6.00	1.42	—	1.25	.32	G1/8 - 28	G1/8 - 28	—	CNUX191016R
Left Hand													
6913117	FIX8PCJNL166DC	1.00	1.00	1.250	6.00	1.42	.32	1.00	.32	M8 X 1	M8 X 1	M4 X 0.7	CNUX191016L
6913101	FIX8PCJNL206DC	1.25	1.25	1.579	6.00	1.42	—	1.25	.32	G1/8 - 28	G1/8 - 28	—	CNUX191016L





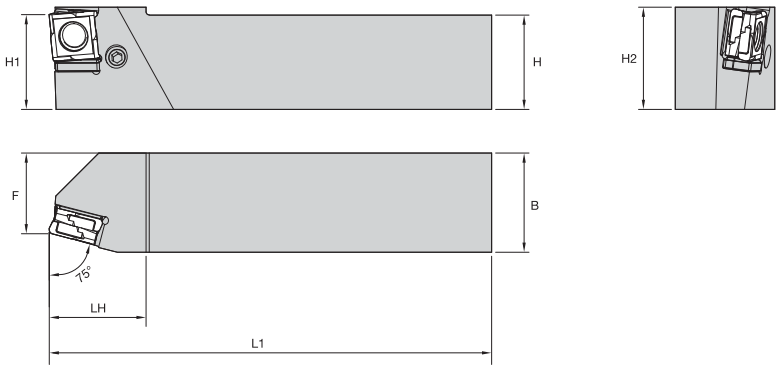
FIX8 • Toolholder • PCBN • 15° • Through Coolant • Inch

Order Number	Catalog Number	H	B	F	L1	LH	B3	H1	H2	H3	CF	GI
Right Hand												
6913110	FIX8PCBNR206DC	1.25	1.25	.990	6.00	1.54	.28	1.25	2.53	.32	G1/8 - 28	CNUX191016R
Left Hand												
6913111	FIX8PCBNL206DC	1.25	1.25	.990	6.00	1.54	.28	1.25	2.53	.32	G1/8 - 28	CNUX191016L



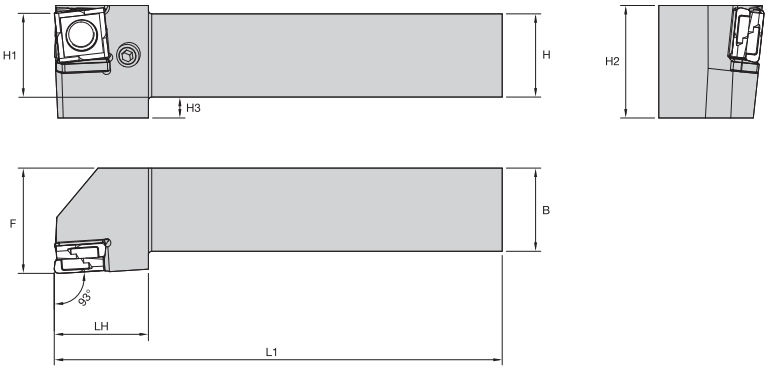
FIX8 • Toolholder • PCJN • 93° • Metric

Order Number	Catalog Number	H	B	F	L1	LH	H1	H2	H3	GI
Right Hand										
6913093	FIX8PCJNR3232P19	32	32	40,3	170,0	36	32	40	8	CNUX191016R
6913095	FIX8PCJNR4040R19	40	40	50,3	200,0	36	40	43	—	CNUX191016R
Left Hand										
6913094	FIX8PCJNL3232P19	32	32	40,3	170,0	36	32	40	8	CNUX191016L
6913096	FIX8PCJNL4040R19	40	40	50,3	200,0	36	40	43	—	CNUX191016L



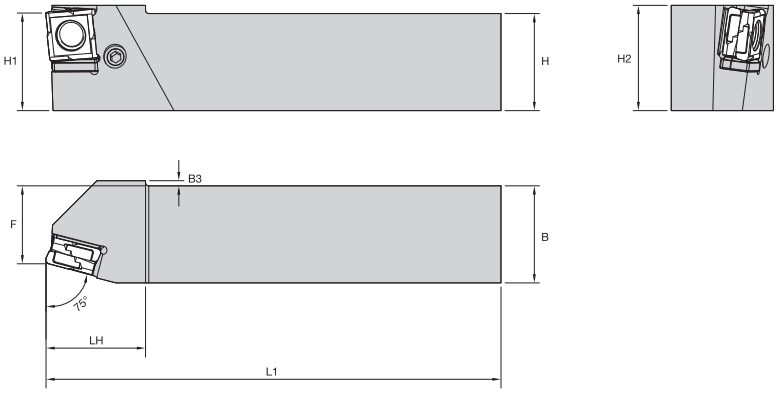
FIX8 • Toolholder • PCBN • 75° • Metric

Order Number	Catalog Number	H	B	F	L1	LH	H1	H2	GI
Right Hand									
6913108	FIX8PCBNR4040R19	40	40	35,3	202,5	39	40	43	CNUX191016R
Left Hand									
6913109	FIX8PCBNL4040R19	40	40	35,3	202,5	39	40	43	CNUX191016L



FIX8 • Toolholder • PCJN • -3° • Inch

Order Number	Catalog Number	H	B	F	L1	LH	H1	H2	H3	GI
Right Hand										
6913102	FIX8PCJNR206D	1.25	1.25	1.500	6.00	1.42	1.25	1.53	.32	CNUX191016R
6913104	FIX8PCJNR246E	1.50	1.50	2.000	7.00	1.42	1.50	1.62	—	CNUX191016R
Left Hand										
6913103	FIX8PCJNL206D	1.25	1.25	1.500	6.00	1.42	1.25	1.53	.32	CNUX191016L
6913105	FIX8PCJNL246E	1.50	1.50	2.000	7.00	1.42	1.50	1.62	—	CNUX191016L



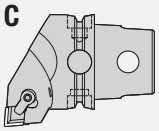
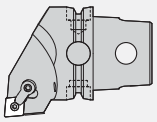
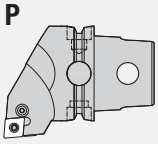
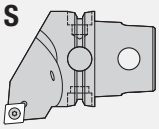
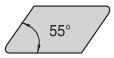
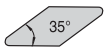
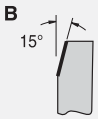
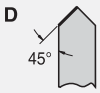
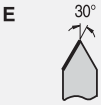
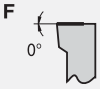
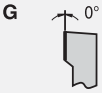
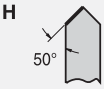
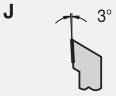
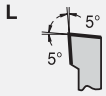
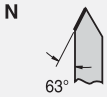
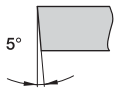
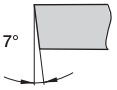
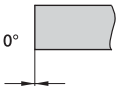
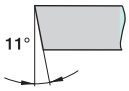
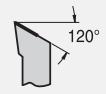
FIX8 • Toolholder • PCBN • 15° • Inch

Order Number	Catalog Number	H	B	F	L1	LH	B3	H1	H2	GI
Right Hand										
6913112	FIX8PCBNR246E	1.50	1.50	1.186	7.00	1.54	.08	1.50	1.62	CNUX191016R
Left Hand										
6913113	FIX8PCBNL246E	1.50	1.50	1.186	7.00	1.54	.08	1.50	1.62	CNUX191016L

KM™ QUICK CHANGE • CATALOG NUMBERING SYSTEM

Each character in our Catalog Number signifies a specific trait of that product. Use the following key columns to easily identify which attributes apply.

KM63TSPCJNR12FIX8HPC

KM	63	TS	P	C	J	N
Connection Style Machine Side (CSMS)	System Size	Feature	Insert Holding Method	Insert Shape	Toolholder Style	Insert Clearance Angle
KM™ KM4X™ PSC	30 32 40 50 63 80 100 125	TS XMZ ATC 4X	**C**  **C-Clamping** Top clamping by clamping finger for inserts without hole **M**  **M-Clamping** Top and hole clamping for inserts with hole **P**  **P-Clamping** Insert clamping by toggle lever for insert with hole **S**  **S-Clamping** Center clamping by screw for inserts with hole	**C**  **D**  **K**  **R**  **S**  **T**  **V**  **W** 	**B**  **D**  **E**  **F**  **G**  **H**  **J**  **K**  **L**  **N**  **P** 	**B**  **C**  **N**  **P**  **Q**  **R**  **S**  **U**  **V**  **X** 

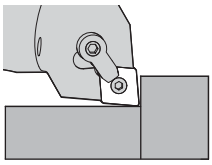
KM QUICK CHANGE • CATALOG NUMBERING SYSTEM • Continued

Each character in our Catalog Number signifies a specific trait of that product. Use the following key columns to easily identify which attributes apply.

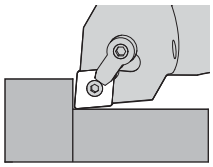
KM63TSPCJN**R12FIX8HPC**

R	12	FIX8	HPC
Hand of Tool	**Insert Size Cutting Edge Length L10**	**Family Name**	**Additional Information**
R = Right hand L = Left hand N = Neutral		MX = Ceramic inserts	HPC = High Pressure Coolant

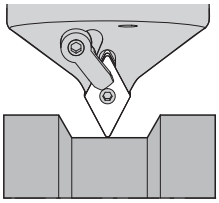
R



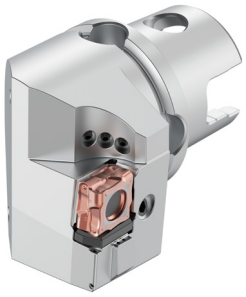
L

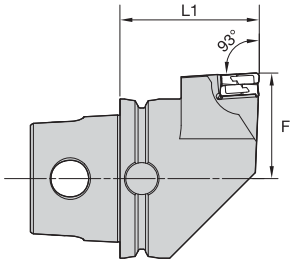


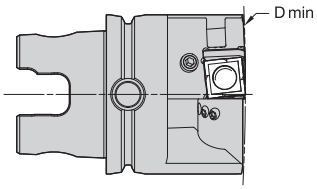
N



IC	C	D	K	R	S	T	V	W
3,97	—	04	—	03	03	06	—	—
4,76	04	05	—	04	04	08	08	S3
5,56	05	06	03	05	05	09	09	03
6,00	—	—	—	06	—	—	—	—
6,35	06	07	04	06	06	11	11	04
7,94	08	09	05	07	07	13	13	05
8,00	—	—	—	08	—	—	11	—
9,52	09	11	06	09	09	16	16	06
9,52	—	—	—	—	—	—	—	—
10,00	—	—	—	10	—	—	—	—
11,11	11	13	07	11	11	19	19	07
12,00	—	—	—	12	—	—	—	—
12,70	12	15	08	12	12	22	22	08
14,29	14	17	09	14	14	24	24	09
15,88	16	19	10	15	15	27	27	10
16,00	—	—	—	16	—	—	—	—
17,46	17	21	11	17	17	30	30	11
19,05	19	23	13	19	19	33	33	13
20,00	—	—	—	20	—	—	—	—
22,22	22	27	15	22	22	38	38	15
25,00	—	—	—	25	—	—	—	—
25,40	25	31	17	25	25	44	44	17
31,75	32	38	21	31	31	54	54	21
32,00	—	—	—	32	—	—	—	—

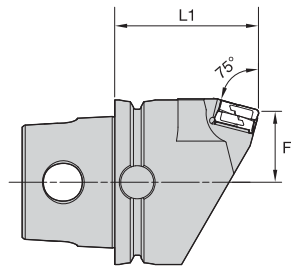


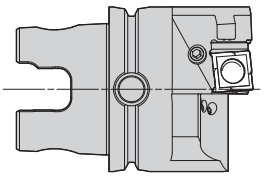




FIX8 • Toolholder • KM • PCJN • 93° • Through Coolant

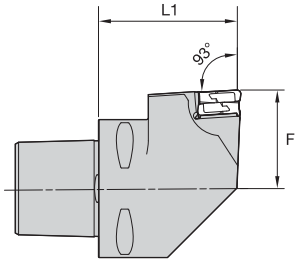
Order Number	Catalog Number	CSMS System Size	D min	F	L1	GI
Right Hand						
6939711	KM50TSPCJNR19FIX8HPC	KM50TS	850	35,0	60,0	CNUX191016R
6741041	KM63TSPCJNR19FIX8HPC	KM63TS	2000	43,0	60,0	CNUX191016R
6741045	KM80TSPCJNR19FIX8HPC	KM80TS	2000	53,0	70,0	CNUX191016R
Left Hand						
6939712	KM50TSPCJNL19FIX8HPC	KM50TS	850	35,0	60,0	CNUX191016L
6741042	KM63TSPCJNL19FIX8HPC	KM63TS	2000	43,0	60,0	CNUX191016L
6741046	KM80TSPCJNL19FIX8HPC	KM80TS	2000	53,0	70,0	CNUX191016L

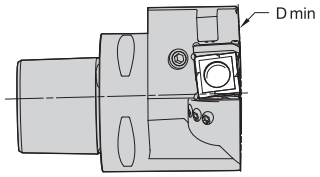




FIX8 • Toolholder • KM • PCBN • 75° • Through Coolant

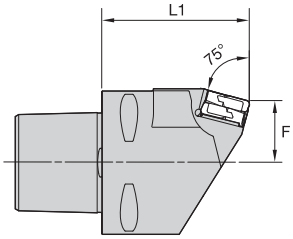
Order Number	Catalog Number	CSMS System Size	F	L1	GI
Right Hand					
6939713	KM50TSPCBNR19FIX8HPC	KM50TS	20,5	60,0	CNUX191016R
6741043	KM63TSPCBNR19FIX8HPC	KM63TS	27,0	60,0	CNUX191016R
6741047	KM80TSPCBNR19FIX8HPC	KM80TS	35,0	70,0	CNUX191016R
Left Hand					
6939719	KM50TSPCBNL19FIX8HPC	KM50TS	20,5	60,0	CNUX191016L
6741044	KM63TSPCBNL19FIX8HPC	KM63TS	27,0	60,0	CNUX191016L
6741048	KM80TSPCBNL19FIX8HPC	KM80TS	35,0	70,0	CNUX191016L

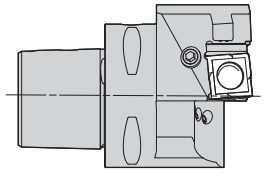




FIX8 • Toolholder • PSC • PCJN • 93° • Through Coolant

Order Number	Catalog Number	CSMS System Size	D min	F	L1	GI
Right Hand						
6939657	PSC50PCJNR19FIX8HPC	PSC50	850	35	60	CNUX191016R
6921218	PSC63PCJNR19FIX8HPC	PSC63	2000	45	65	CNUX191016R
6990519	PSC80PCJNR19FIX8HPC	PSC80	2000	55	80	CNUX191016R
Left Hand						
6939658	PSC50PCJNL19FIX8HPC	PSC50	850	35	60	CNUX191016L
6921219	PSC63PCJNL19FIX8HPC	PSC63	2000	45	65	CNUX191016L
6990520	PSC80PCJNL19FIX8HPC	PSC80	2000	55	80	CNUX191016L





FIX8 • Toolholder • PSC • PCBN • 75° • Through Coolant

Order Number	Catalog Number	CSMS System Size	F	L1	GI
Right Hand					
6939659	PSC50PCBNR19FIX8HPC	PSC50	22	60	CNUX191016R
6921220	PSC63PCBNR19FIX8HPC	PSC63	27	65	CNUX191016R
6990641	PSC80PCBNR19FIX8HPC	PSC80	35	80	CNUX191016R
Left Hand					
6939660	PSC50PCBNL19FIX8HPC	PSC50	22	60	CNUX191016L
6921351	PSC63PCBNL19FIX8HPC	PSC63	27	65	CNUX191016L
6990642	PSC80PCBNL19FIX8HPC	PSC80	35	80	CNUX191016L

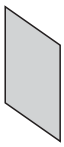
CATALOG NUMBERING SYSTEM • METRIC

Each character in our Catalog Number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.

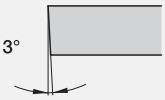
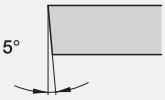
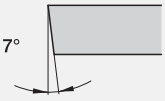
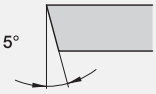
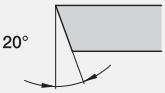
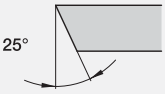
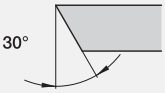
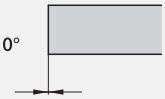
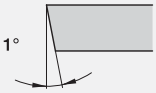
CNMG120408FP

C	N	M	G	12
Insert Shape	Insert Clearance Angle	Tolerance Class	Insert Features	Size

C — Insert Shape

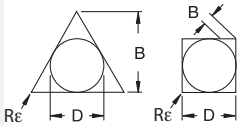
H	Hexagon 120°	
O	Octagon 135°	
P	Pentagon 108°	
R	Round—	
S	Square 90°	
T	Triangular 60°	
C D E M V	Rhomboid 80° 55° 75° 86° 35°	
W	Trigon 80° with enlarged corner angles	
L	Rectangular 90°	
A B N/K	Parallelogram 85° 82° 55°	

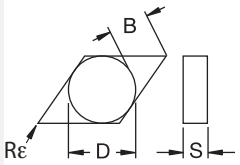
N — Insert Clearance Angle

A	3°	
B	5°	
C	7°	
D	15°	
E	20°	
F	25°	
G	30°	
N	0°	
P	11°	
O	Indicated for other clearance angles requiring descriptions.	

M — Tolerance Class

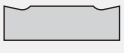
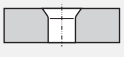
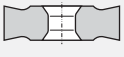
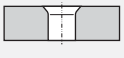
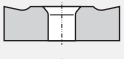
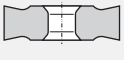
Tolerances apply prior to edge prep and coating





D = Theoretical diameter of the insert inscribed circle
S = Thickness
B = See figures below

G — Insert Features

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

12 — Size

"D" mm	Code for inch cutting edge length "L10" C	D	R	S	T	V	W
3,97	S4	04	03	03	06	–	–
4,76	04	05	04	04	08	08	S3
5,56	05	06	05	05	09	09	03
6,00	–	–	06	–	–	–	–
6,35	06	07	06	06	11	11	04
7,94	08	09	07	07	13	13	05
8,00	–	–	08	–	–	–	–
9,52	09	11	09	09	16	16	06
10,00	–	–	10	–	–	–	–
11,11	11	13	11	11	19	19	07
12,00	–	–	12	–	–	–	–
12,70	12	15	12	12	22	22	08
14,29	14	17	14	14	24	24	09
15,88	16	19	15	15	27	27	10
16,00	–	–	16	–	–	–	–
17,46	17	21	17	17	30	30	11
19,05	19	23	19	19	33	33	13
20,00	–	–	20	–	–	–	–
22,22	22	27	22	22	38	38	15
25,00	–	–	25	–	–	–	–
25,40	25	31	25	25	44	44	17
31,75	32	38	31	31	54	54	21
32,00	–	–	32	–	–	–	–

Tolerance Class	Tolerance on "D"	Tolerance on "B"	Tolerance on "S"
C	±0,025	±0,013	±0,025
H	±0,013	±0,013	±0,025
E	±0,025	±0,025	±0,025
G	±0,025	±0,025	±0,013
M	See tables on next page		±0,013
U	See tables on next page		±0,013

CATALOG NUMBERING SYSTEM • METRIC • Continued

Each character in our Catalog Number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.

CNMG12**0408FP**

04	**08**			**FP**
Thickness S	**Corner Radius "Rε"**	**Hand of Insert (optional)**	**Cutting Edge (optional)**	**Chipbreaker (optional)**

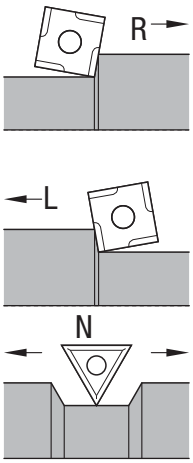
symbol	thickness
mm	mm
—	0,79
T0	1,00
01	1,59
T1	1,98
02	2,38
03	3,18
T3	3,97
04	4,76
05	5,56
06	6,35
07	7,94
9	9,52
11	11,11
12	12,70

symbol	corner radius
mm	mm
X0	0,04
01	0,1
02	0,2
04	0,4
08	0,8
12	1,2
16	1,6
20	2,0
24	2,4
28	2,8
32	3,2
00	round insert
M0	
—	

R = Right hand

L = Left hand

N = Neutral

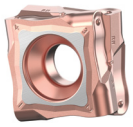


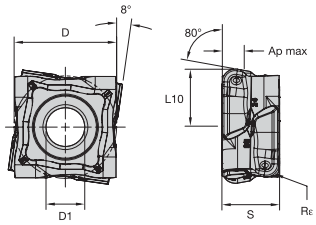
F	Sharp
E	Rounded
T	Chamfered
S	Chamfered and Rounded
K	Double-Chamfered
P	Double-Chamfered and Rounded

F	=	Sharp
FF	=	Fine Finishing
FN	=	Finishing Negative
MV	=	Medium Versatile
MN	=	Medium Negative
MR	=	Medium Roughing
RN	=	Roughing Negative
UN	=	Universal Medium
FP	=	Finishing Positive
MP	=	Medium Positive
RP	=	Roughing Positive
RM	=	Roughing Medium
RH	=	Roughing Heavy
FW	=	Finishing Wiper
MW	=	Medium Wiper
FS	=	Finishing Sharp
MS	=	Medium Sharp
RW	=	Roughing Wiper
HP	=	High Positive
UP	=	Universal Positive
K	=	Light-Feed Chip Control
UF	=	Ultra-Fine Finishing
LF	=	Light Finishing
MF	=	Medium Finishing
E	=	Hone Only
T	=	Negative Land
S	=	Negative Land Plus Hone
MP-K	=	Medium Positive

	± Tolerance on "D"			
	Class M Tolerance			Class U Tolerance
"D"	Shapes S, T, C, R, & W	Shape D	Shape V	Shapes S, T, & C
mm	mm	mm	mm	mm
3,97	0,05	–	–	–
4,76	0,05	–	–	0,08
5,56	0,05	0,05	0,05	0,08
6,35	0,05	0,05	0,05	0,08
7,94	0,05	0,05	0,05	0,08
9,52	0,05	0,05	0,05	0,08
11,11	0,08	0,08	0,08	0,13
12,70	0,08	0,08	0,08	0,13
14,29	0,08	0,08	0,08	0,13
15,88	0,10	0,10	0,10	0,18
17,46	0,10	0,10	0,10	0,18
19,05	0,10	0,10	0,10	0,18
22,22	0,13	–	–	0,25
25,40	0,13	–	–	0,25
31,75	0,15	–	–	0,25

	± Tolerance on "B"			
	Class M Tolerance			Class U Tolerance
"D"	Shapes S, T, C, R, & W	Shape D	Shape V	Shapes S, T, & C
mm	mm	mm	mm	mm
3,97	0,08	–	–	–
4,76	0,08	–	–	0,13
5,56	0,08	0,11	–	0,13
6,35	0,08	0,11	–	0,13
7,94	0,08	0,11	–	0,13
9,52	0,08	0,11	0,18	0,13
11,11	0,13	0,15	–	–
12,70	0,13	0,15	0,25	0,20
14,29	0,13	0,15	–	–
15,88	0,15	0,18	–	0,27
17,46	0,15	0,18	–	0,27
19,05	0,15	0,18	–	0,27
22,22	0,15	–	–	0,38
25,40	0,18	–	–	0,38
31,75	0,20	–	–	0,38





	KCP10B	KCP25B	KCP40B	KCPK05
P	●	●	●	●
M			○	
K	○	○		●
N				
S				
H				

● Primary
○ Secondary

FIX8 • Negative Insert • CNUX-RN • Metric

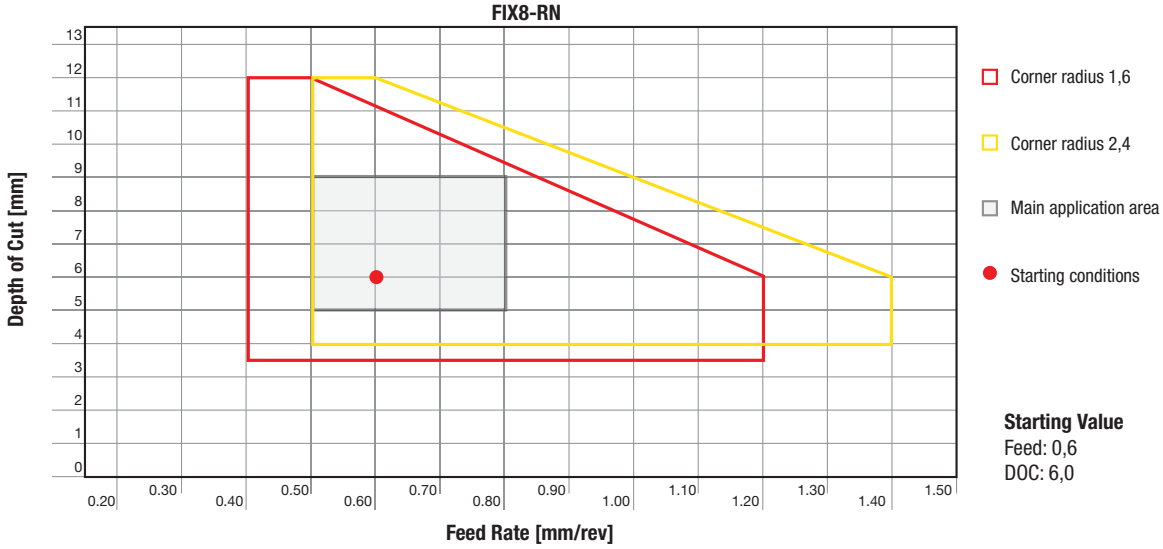
Catalog Number	D	D1	L10	S	Rε	KCP10B	KCP25B	KCP40B	KCPK05
Right Hand									
CNUX191016RRN	19,05	7,21	12,00	10,58	1,60	6710681	6710685	6710689	6917560
CNUX191024RRN	19,05	7,21	12,00	10,58	2,40	6710683	6710687	6710701	6917612
Left Hand									
CNUX191016LRN	19,05	7,21	12,00	10,58	1,60	6710682	6710686	6710690	6917611
CNUX191024LRN	19,05	7,21	12,00	10,58	2,40	6710684	6710688	6710702	6917613

FIX8
Application Data • Grade Recommendations

● Primary
○ Secondary

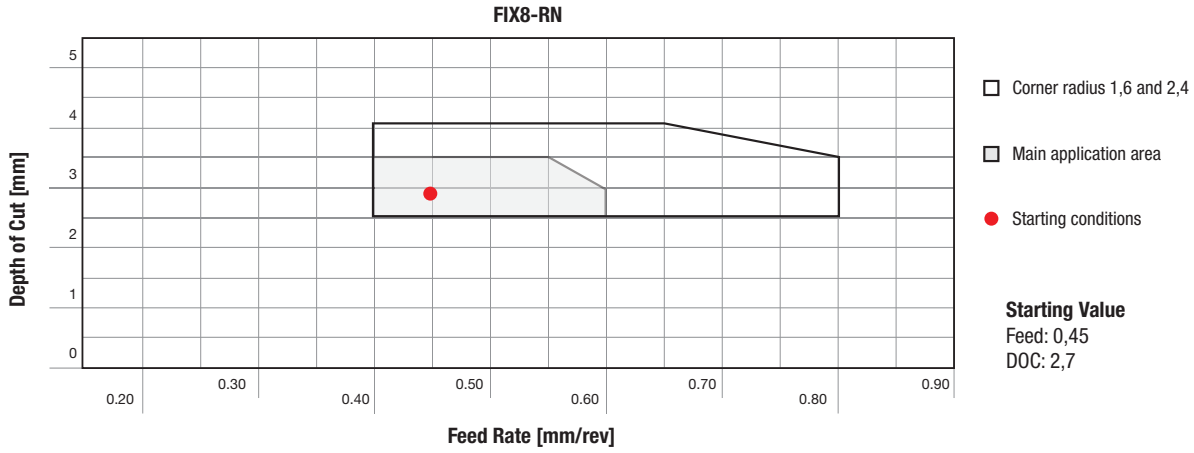
	Conditions	Negative Geometry -RN KCP10B	KCP25B	KCP40B	KCPK05
P	Heavily Interrupted Cut		○	●	
	Lightly Interrupted Cut	●	●	●	
	Varying Depth of Cut	●	●		●
	Smooth Cut	●			●
M	Heavily Interrupted Cut			○	
	Lightly Interrupted Cut			○	
K	Heavily Interrupted Cut	○	○		
	Lightly Interrupted Cut	○	○		●
	Varying Depth of Cut	○	○		●
	Smooth Cut	○			●

FIX8
Application Data • Feed & Depth of Cut • Longitudinal Turning • Metric



NOTE: For the 25mm toolholders, KM50 and PSC50, it is recommended to not surpass 80% of the maximum depth of cut or the maximum feed rate due to toolholder stability.

FIX8
Application Data • Feed & Depth of Cut • Face Turning • Metric



NOTE: For the 25mm toolholders, KM50 and PSC50, it is recommended to not surpass 80% of the maximum depth of cut or the maximum feed rate due to toolholder stability.

FIX8
Application Data • Speed • Metric

Material Group		KCPK05		KCP10B		KCP25B		KCP40B	
		Speed – m/min							
		min	max	min	max	min	max	min	max
P	0-1	125	320	100	315	95	250	90	170
	2	125	280	125	245	95	225	90	160
	3	125	195	120	175	95	160	70	120
	4	65	145	65	140	50	125	35	100
	5	105	190	105	210	85	190	75	105
	6	105	190	75	190	75	155	55	100
M	1	–	–	–	–	–	–	55	95
	2	–	–	–	–	–	–	55	90
	3	–	–	–	–	–	–	55	95
K	1	215	460	180	460	180	430	–	–
	2	110	290	110	270	110	250	–	–
	3	120	270	125	270	125	250	–	–

CATALOG NUMBERING SYSTEM • INCH

Each character in our Catalog Number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.

CNMG432FP

C — Insert Shape

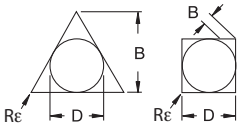
H	Hexagon	120°
O	Octagon	135°
P	Pentagon	108°
R	Round	—
S	Square	90°
T	Triangular	60°
C	Rhomboid	80°
D	Rhomboid	55°
E	Rhomboid	75°
M	Rhomboid	86°
V	Rhomboid	35°
W	Trigon	80° with enlarged corner angles
L	Rectangular	90°
A	Parallelogram	85°
B	Parallelogram	82°
N/K	Parallelogram	55°

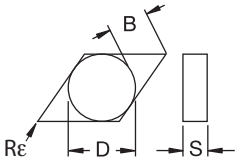
N — Insert Clearance Angle

A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°
O	Indicated for other clearance angles requiring descriptions.

M — Tolerance Class

Tolerances apply prior to edge prep and coating





D = Theoretical diameter of the insert inscribed circle
S = Thickness
B = See figures below

G — Insert Features

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

4 — Size

		Code for inch cutting edge length "L10"						
inch	"D" inch	C	D	R	S	T	V	W
1.2 (5)	5/32	S4	04	03	03	06	—	—
1.5 (6)	3/16	04	05	04	04	08	08	S3
1.8 (7)	7/32	05	06	05	05	09	09	03
—	.236	—	—	06	—	—	—	—
2	1/4	06	07	06	06	11	11	04
2.5	5/16	08	09	07	07	13	13	05
—	.315	—	—	08	—	—	—	—
3	3/8	09	11	09	09	16	16	06
—	.394	—	—	10	—	—	—	—
3.5	7/16	11	13	11	11	19	19	07
—	.472	—	—	12	—	—	—	—
4	1/2	12	15	12	12	22	22	08
4.5	9/16	14	17	14	14	24	24	09
5	5/8	16	19	15	15	27	27	10
—	.630	—	—	16	—	—	—	—
5.5	11/16	17	21	17	17	30	30	11
6	3/4	19	23	19	19	33	33	13
—	.787	—	—	20	—	—	—	—
7	7/8	22	27	22	22	38	38	15
—	.984	—	—	25	—	—	—	—
8	1	25	31	25	25	44	44	17
10	1-1/4	32	38	31	31	54	54	21
—	1.260	—	—	32	—	—	—	—

Tolerance Class	Tolerance on "D"	Tolerance on "B"	Tolerance on "S"
C	±.0010"	±.0005"	±.001"
H	±.0005"	±.0005"	±.001"
E	±.0010"	±.0010"	±.001"
G	±.0010"	±.0010"	±.005"
M	See tables on next page		±.005"
U	See tables on next page		±.005"

CATALOG NUMBERING SYSTEM • INCH • Continued

Each character in our Catalog Number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.

CNMG4**32FP**

3	2			FP
Thickness S	**Corner Radius "Rε"**	**Hand of Insert (optional)**	**Cutting Edge (optional)**	**Chipbreaker (optional)**

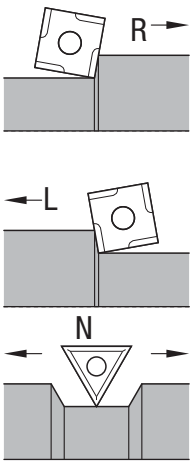
symbol inch	thickness inch
.5 (1)	1/32
.6	.040
1 (2)	1/16
1.2	5.64
1.5	3/32
2	1/8
2.5	5/32
3	3/16
3.5	7/32
4	1/4
5	5/16
6	3/8
7	7/16
18	1/2

symbol inch	corner radius inch
X0	.0015
0	.004
.5	.008
1	1/64
2	1/32
3	3/64
4	1/16
5	5/64
6	3/32
7	7/64
8	1/8
—	round insert
—	

R = Right hand

L = Left hand

N = Neutral



F Sharp

E Rounded

T Chamfered

S Chamfered and Rounded

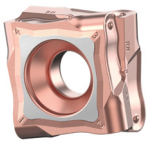
K Double-Chamfered

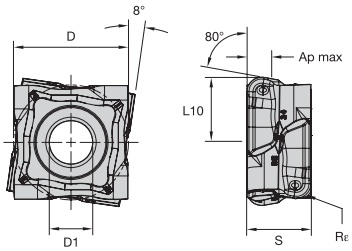
P Double-Chamfered and Rounded

F = Sharp
FF = Fine Finishing
FN = Finishing Negative
MV = Medium Versatile
MN = Medium Negative
MR = Medium Roughing
RN = Roughing Negative
UN = Universal Medium
FP = Finishing Positive
MP = Medium Positive
RP = Roughing Positive
RM = Roughing Medium
RH = Roughing Heavy
FW = Finishing Wiper
MW = Medium Wiper
FS = Finishing Sharp
MS = Medium Sharp
RW = Roughing Wiper
HP = High Positive
UP = Universal Positive
K = Light-Feed Chip Control
UF = Ultra-Fine Finishing
LF = Light Finishing
MF = Medium Finishing
E = Hone Only
T = Negative Land
S = Negative Land Plus Hone
MP-K = Medium Positive

"D"	± Tolerance on "D"			
	Class M Tolerance			Class U Tolerance
	Shapes S, T, C, R, & W	Shape D	Shape V	Shapes S, T, & C
inch	inch	inch	inch	inch
5/32	.002	–	–	–
3/16	.002	–	–	.003
7/32	.002	.002	.002	.003
1/4	.002	.002	.002	.003
5/16	.002	.002	.002	.003
3/8	.002	.002	.002	.003
7/16	.003	.003	.003	.005
1/2	.003	.003	.003	.005
9/16	.003	.003	.003	.005
5/8	.004	.004	.004	.007
11/16	.004	.004	.004	.007
3/4	.004	.004	.004	.007
7/8	.005	–	–	.010
1	.005	–	–	.010
1 1/4	.006	–	–	.010

"D"	± Tolerance on "B"			
	Class M Tolerance			Class U Tolerance
	Shapes S, T, C, R, & W	Shape D	Shape V	Shapes S, T, & C
inch	inch	inch	inch	inch
5/32	.003	–	–	–
3/16	.003	–	–	.005
7/32	.003	.004	–	.005
1/4	.003	.004	–	.005
5/16	.003	.004	–	.005
3/8	.003	.004	.007	.005
7/16	.005	.006	–	–
1/2	.005	.006	.010	.008
9/16	.005	.006	–	–
5/8	.006	.007	–	.011
11/16	.006	.007	–	.011
3/4	.006	.007	–	.011
7/8	.006	–	–	.015
1	.007	–	–	.015
1 1/4	.008	–	–	.015





	KCP10B	KCP25B	KCP40B	KCPK05
P	●	●	●	●
M			○	
K	○	○		●
N				
S				
H				

● Primary
○ Secondary

FIX8 • Negative Insert • CNUX-RN • Inch

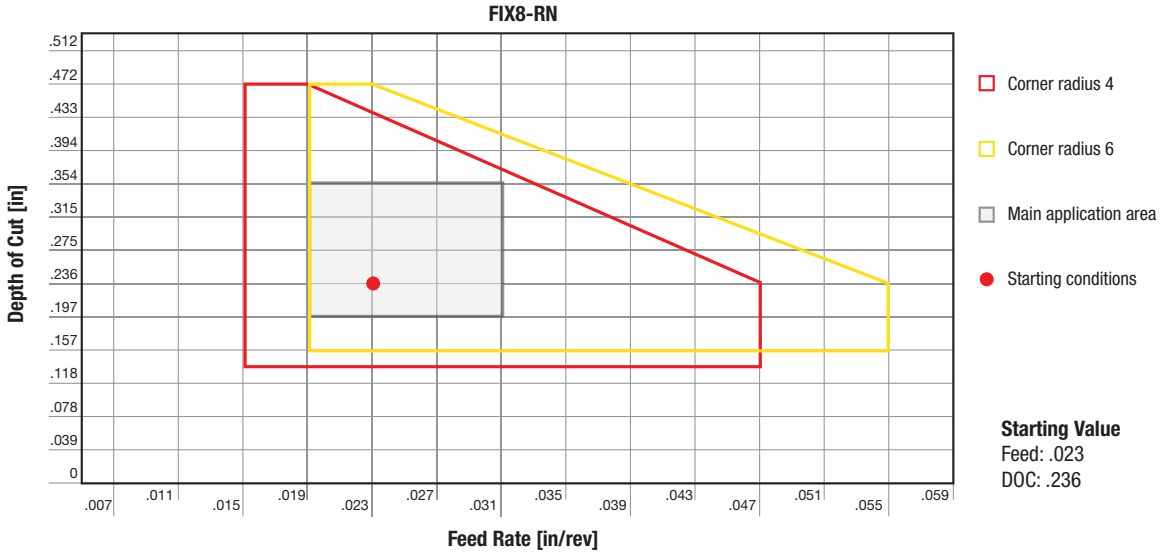
	D		D1		L10		S		Rε					
Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	KCP10B	KCP25B	KCP40B	KCPK05
Right Hand														
CNUX6674RRN	19,05	0.750	7,21	0.284	12,00	0.472	10,58	0.417	1,60	0.063	6710681	6710685	6710689	6917560
CNUX6676RRN	19,05	0.750	7,21	0.284	12,00	0.472	10,58	0.417	2,40	0.095	6710683	6710687	6710701	6917612
Left Hand														
CNUX6674LRN	19,05	0.750	7,21	0.284	12,00	0.472	10,58	0.417	1,60	0.063	6710682	6710686	6710690	6917611
CNUX6676LRN	19,05	0.750	7,21	0.282	12,00	0.472	10,58	0.417	2,40	0.095	6710684	6710688	6710702	6917613

FIX8
Application Data • Grade Recommendations

● Primary
○ Secondary

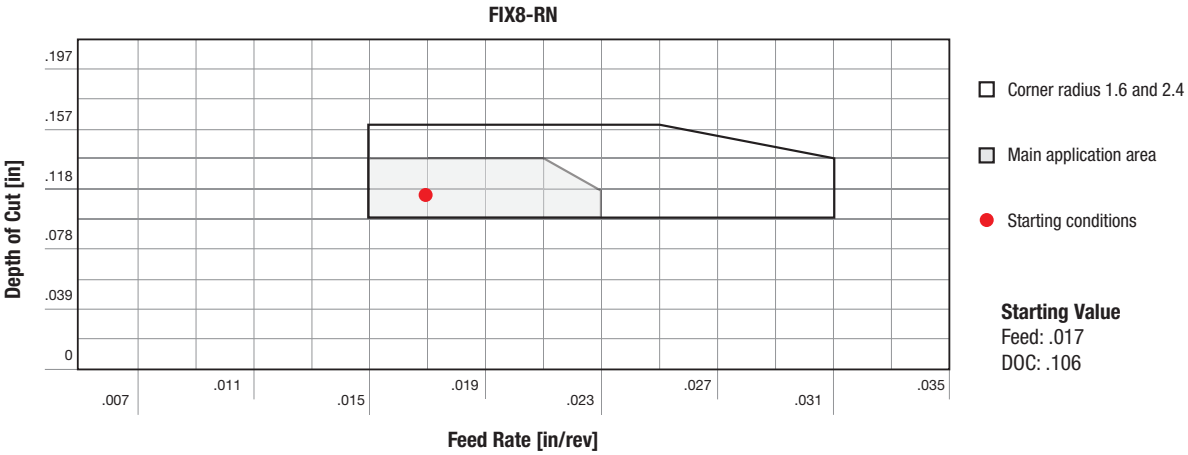
		Negative Geometry			
		-RN			
	Conditions	KCP10B	KCP25B	KCP40B	KCPK05
P	Heavily Interrupted Cut		○	●	
	Lightly Interrupted Cut	●	●	●	
	Varying Depth of Cut	●	●		●
	Smooth Cut	●			●
M	Heavily Interrupted Cut			○	
	Lightly Interrupted Cut			○	
K	Heavily Interrupted Cut	○	○		
	Lightly Interrupted Cut	○	○		●
	Varying Depth of Cut	○	○		●
	Smooth Cut	○			●

FIX8
Application Data • Feed & Depth of Cut • Longitudinal Turning • Inch



NOTE: For the 1-inch toolholders, KM50 and PSC50, it is recommended to not surpass 80% of the maximum depth of cut or the maximum feed rate due to toolholder stability.

FIX8
Application Data • Feed & Depth of Cut • Face Turning • Inch



NOTE: For the 1-inch toolholders, KM50 and PSC50, it is recommended to not surpass 80% of the maximum depth of cut or the maximum feed rate due to toolholder stability.

FIX8
Application Data • Speed • Inch

Material Group		KCPK05		KCP10B		KCP25B		KCP40B	
		Speed – SFM (m/min)							
		min	max	min	max	min	max	min	max
P	0-1	410 (125)	1050 (320)	330 (100)	1035 (315)	310 (95)	820 (250)	295 (90)	560 (170)
	2	410 (125)	920 (280)	410 (125)	805 (245)	310 (95)	740 (225)	295 (90)	525 (160)
	3	410 (125)	640 (195)	395 (120)	575 (175)	310 (95)	525 (160)	230 (70)	395 (120)
	4	215 (65)	475 (145)	215 (65)	460 (140)	165 (50)	410 (125)	115 (35)	330 (100)
	5	345 (105)	625 (190)	345 (105)	690 (210)	280 (85)	625 (190)	245 (75)	345 (105)
	6	345 (105)	625 (190)	245 (75)	625 (190)	245 (75)	510 (155)	180 (55)	330 (100)
M	1	–	–	–	–	–	–	180 (55)	310 (95)
	2	–	–	–	–	–	–	180 (55)	295 (90)
	3	–	–	–	–	–	–	180 (55)	310 (95)
K	1	705 (215)	1510 (460)	590 (180)	1510 (460)	590 (180)	1410 (430)	–	–
	2	360 (110)	950 (290)	360 (110)	885 (270)	360 (110)	820 (250)	–	–
	3	395 (120)	885 (270)	410 (125)	885 (270)	410 (125)	820 (250)	–	–

FIX8

LET'S TAKE YOUR **MANUFACTURING**
TO THE **NEXT LEVEL**

kennametal.com/**FIX8**

KBH10B & KBH20B HARDENED STEEL GRADES

Precision PcBN Mini Tip Inserts Make Hard Turning Look Easy

Kenloc™ and Screw-On PVD coated mini tip inserts are the latest additions to the KBH10B and KBH20B PcBN hard-turning portfolio. These robust inserts are designed with an improved edge prep and wiper design for optimal surface finish and cost-efficiency without compromising performance.

Features & Benefits

- Gold top layer for easy identification of flank wear
- Improved edge prep and wiper design offer optimal surface finishes
- PVD multilayer coating with thermal barrier to reduce crater wear and enhance adhesion strength
- Increased material removal rates for high productivity without compromising tool life

Applications

Turning | Facing | Profiling | Boring

Back Boring | I.D. Facing | O.D. Facing

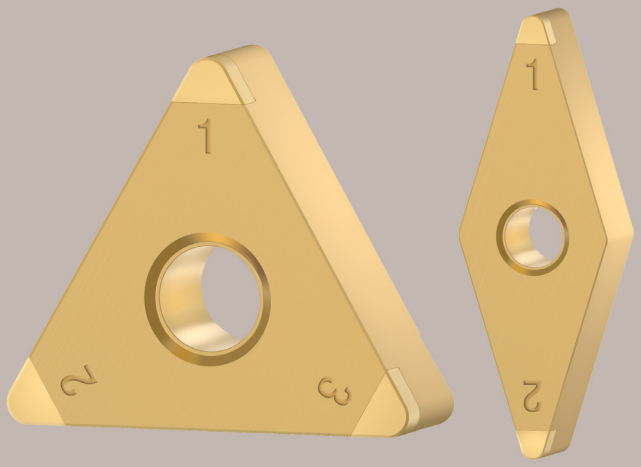
Materials

H Hardened Steels

Industries

General Engineering | Automotive | EV | Wind & Solar

WE DON'T CUT CORNERS. WE CUT METAL.



EXPLORE KBH10B & KBH20B

ISO INSERTS • CATALOG NUMBERING SYSTEM • Metric

Each character in our catalog number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.

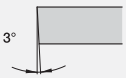
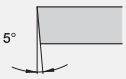
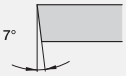
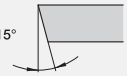
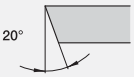
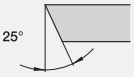
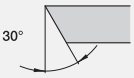
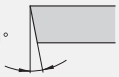
CNGN120408T02020

C	N	G	N	12
Insert Shape	Insert Clearance Angle	Tolerance Class	Insert Features	Size

C — Insert Shape

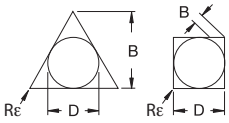
H	Hexagon 120°	
O	Octagon 135°	
P	Pentagon 108°	
R	Round —	
S	Square 90°	
T	Triangular 60°	
C D E M V	Rhomboid 80° 55° 75° 86° 35°	
W	Trigon 80° with enlarged corner angles	
L	Rectangular 90°	
A B N/K	Parallelogram 85° 82° 55°	

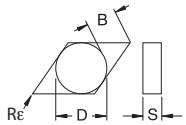
N — Insert Clearance Angle

A	3°	
B	5°	
C	7°	
D	15°	
E	20°	
F	25°	
G	30°	
N	0°	
P	11°	
O	For other clearance angles requiring descriptions.	

G — Tolerance Class

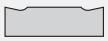
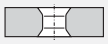
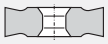
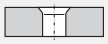
Tolerances apply prior to edge prep and coating





D = Theoretical diameter of the insert inscribed circle
S = Thickness
B = See figures below

N — Insert Features

N	
R	
F	
A	
M	
G	
W	
T	
Q	
U	
B	
H	
C	
J	
X V	Special Design

12 — Size

"D" mm	Code for metric cutting edge length "L10" C	D	R	S	T	V	W
3,97	S4	04	03	03	06	—	—
4,76	04	05	04	04	08	08	S3
5,56	05	06	05	05	09	09	03
6,00	—	—	06	—	—	—	—
6,35	06	07	06	06	11	11	04
7,94	08	09	07	07	13	13	05
8,00	—	—	08	—	—	—	—
9,52	09	11	09	09	16	16	06
10,00	—	—	10	—	—	—	—
11,11	11	13	11	11	19	19	07
12,00	—	—	12	—	—	—	—
12,70	12	15	12	12	22	22	08
14,29	14	17	14	14	24	24	09
15,88	16	19	15	15	27	27	10
16,00	—	—	16	—	—	—	—
17,46	17	21	17	17	30	30	11
19,05	19	23	19	19	33	33	13
20,00	—	—	20	—	—	—	—
22,22	22	27	22	22	38	38	15
25,00	—	—	25	—	—	—	—
25,40	25	31	25	25	44	44	17
31,75	32	38	31	31	54	54	21
32,00	—	—	32	—	—	—	—

tolerance class*	tolerance on "D"	tolerance on "B"	tolerance on "S"
C	±0,025	±0,013	±0,025
H	±0,013	±0,013	±0,025
E	±0,025	±0,025	±0,025
G	±0,025	±0,025	±0,013
M	See tables on next page		±0,013
U	See tables on next page		±0,013

*Tolerances apply prior to edge prep and coating.

ISO INSERTS • CATALOG NUMBERING SYSTEM • Metric • Continued

Each character in our catalog number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.

CNGN012**0408T02020**

04	**08**		**T**	**020**	**20**		
Thickness "S"	**Corner Radius "Rε"**	**Hand of Insert (optional)**	**Cutting Edge (optional)**	**T-Land Width (optional)**	**T-Land Angle (optional)**	**Tip Style (optional)**	**Chipbreaker (optional)**

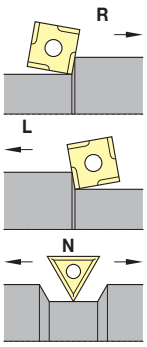
symbol	thick-ness
mm	mm
—	0,79
T0	1,00
01	11,59
T1	1,98
02	2,38
03	3,18
T3	3,97
04	4,76
05	5,56
06	6,35
07	7,94
09	9,52
11	11,11
12	12,70

symbol	corner radius
mm	mm
X0	0,4
01	0,1
02	0,2
04	0,4
08	0,8
12	1,2
16	1,6
20	2,0
24	2,4
28	2,8
32	3,2
00	round insert
M0	

R = Right hand

L = Left hand

N = Neutral



F* Sharp

E Rounded

T* Chamfered

S* Chamfered and Rounded

K Double-Chamfered

P Double-Chamfered and Rounded

*Also available in wiper style.

symbol	size
ISO	mm
010	0,01
020	0,02

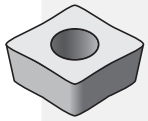
symbol	size
10	10°
15	15°
20	20°
25	25°
30	30°

FW = Finishing Wiper

MW = Medium Wiper

GW = General Wiper

symbol	usage
C	full tip
M	mini tip
MT	multi-tip
MMT	multi mini tip
ST	single tip
DMT	double-sided mini-tip



	± Tolerance on "D"			
	Class M Tolerance			Class U Tolerance
"D"	Shapes S, T, C, R, & W	Shape D	Shape V	Shapes S, T, & C
mm	mm	mm	mm	mm
3,97	0,05	–	–	–
4,76	0,05	–	–	0,08
5,56	0,05	0,05	0,05	0,08
6,35	0,05	0,05	0,05	0,08
7,94	0,05	0,05	0,05	0,08
9,52	0,05	0,05	0,05	0,08
11,11	0,08	0,08	0,08	0,13
12,70	0,08	0,08	0,08	0,13
14,29	0,08	0,08	0,08	0,13
15,88	0,10	0,10	0,10	0,18
17,46	0,10	0,10	0,10	0,18
19,05	0,10	0,10	0,10	0,18
22,22	0,13	–	–	0,25
25,40	0,13	–	–	0,25
31,75	0,15	–	–	0,25

	± Tolerance on "B"			
	Class M Tolerance			Class U Tolerance
"D"	Shapes S, T, C, R, & W	Shape D	Shape V	Shapes S, T, & C
mm	mm	mm	mm	mm
3,97	0,08	–	–	–
4,76	0,08	–	–	0,13
5,56	0,08	0,11	–	0,13
6,35	0,08	0,11	–	0,13
7,94	0,08	0,11	–	0,13
9,52	0,08	0,11	0,18	0,13
11,11	0,13	0,15	–	–
12,70	0,13	0,15	0,25	0,20
14,29	0,13	0,15	–	–
15,88	0,15	0,18	–	0,27
17,46	0,15	0,18	–	0,27
19,05	0,15	0,18	–	0,27
22,22	0,15	–	–	0,38
25,40	0,18	–	–	0,38
31,75	0,20	–	–	0,38

ISO INSERTS • CATALOG NUMBERING SYSTEM • Inch

Each character in our catalog number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.

CNGN332T0820

C	N	G	N	3
Insert Shape	Insert Clearance Angle	Tolerance Class	Insert Features	Size

C — Insert Shape

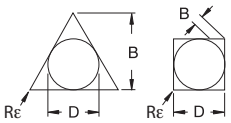
H	Hexagon	120°
O	Octagon	135°
P	Pentagon	108°
R	Round	—
S	Square	90°
T	Triangular	60°
C D E M V	Rhomboid	80° 55° 75° 86° 35°
W	Trigon	80° with enlarged corner angles
L	Rectangular	90°
A B N/K	Parallelogram	85° 82° 55°

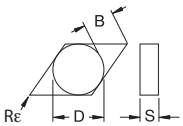
N — Insert Clearance Angle

A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°
O	For other clearance angles requiring descriptions.

G — Tolerance Class

Tolerances apply prior to edge prep and coating





D = Theoretical diameter of the insert inscribed circle
S = Thickness
B = See figures below

N — Insert Features

N	
R	
F	
A	
M	
G	
W	
T	
Q	
U	
B	
H	
C	
J	
X V	Special Design

3 — Size

"D"		Code for inch cutting edge length "L10"						
inch	inch	C	D	R	S	T	V	W
1.2 (5)	5/32	S4	04	03	03	06	—	—
1.5 (6)	3/16	04	05	04	04	08	08	S3
1.8 (7)	7/32	05	06	05	05	09	09	03
—	.236	—	—	06	—	—	—	—
2	1/4	06	07	06	06	11	11	04
2.5	5/16	08	09	07	07	13	13	05
—	.315	—	—	08	—	—	—	—
3	3/8	09	11	09	09	16	16	06
—	.394	—	—	10	—	—	—	—
3.5	7/16	11	13	11	11	19	19	07
—	.472	—	—	12	—	—	—	—
4	1/2	12	15	12	12	22	22	08
4.5	9/16	14	17	14	14	24	24	09
5	5/8	16	19	15	15	27	27	10
—	.630	—	—	16	—	—	—	—
5.5	11/16	17	21	17	17	30	30	11
6	3/4	19	23	19	19	33	33	13
—	.787	—	—	20	—	—	—	—
7	7/8	22	27	22	22	38	38	15
—	.984	—	—	25	—	—	—	—
8	1	25	31	25	25	44	44	17
10	1-1/4	32	38	31	31	54	54	21
—	1.260	—	—	32	—	—	—	—

tolerance class*	tolerance on "D"	tolerance on "B"	tolerance on "S"
C	±.0010"	±.0005"	±.001"
H	±.0005"	±.0005"	±.001"
E	±.0010"	±.0010"	±.001"
G	±.0010"	±.0010"	±.005"
M	See tables on next page		±.005"
U	See tables on next page		±.005"

*Tolerances apply prior to edge prep and coating.

ISO INSERTS • CATALOG NUMBERING SYSTEM • Inch • Continued

Each character in our catalog number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.

CNGN332T0820

3	2		T	08	20		
Thickness "S"	**Corner Radius "Rε"**	**Hand of Insert (optional)**	**Cutting Edge (optional)**	**T-Land Width (optional)**	**T-Land Angle (optional)**	**Tip Style (optional)**	**Chipbreaker (optional)**

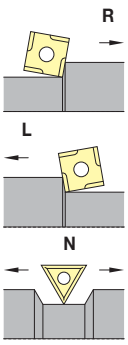
symbol inch	thickness inch
.5 (1)	1/32
.6	.040
1 (2)	1/16
1.2	5.64
1.5 (3)	3/32
2	1/8
2.5	5/32
3	3/16
3.5	7/32
4	1/4
5	5/16
6	3/8
7	7/16
8	1/2

symbol inch	corner radius inch
X0	.0015
0	.004
.5	.008
1	1/64
2	1/32
3	3/64
4	1/16
5	5/64
6	3/32
7	7/64
8	1/8
—	round insert
—	

R = Right hand

L = Left hand

N = Neutral



F* Sharp

E Rounded

T* Chamfered

S* Chamfered and Rounded

K Double-Chamfered

P Double-Chamfered and Rounded

*Also available in wiper style.

symbol ANSI	inch size
04	.004
08	.008

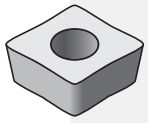
symbol	size
10	10°
15	15°
20	20°
25	25°
30	30°

FW = Finishing Wiper

MW = Medium Wiper

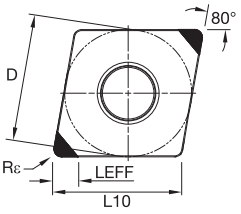
GW = General Wiper

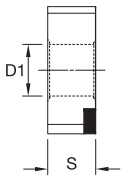
symbol	usage
C	full tip
M	mini tip
MT	multi-tip
MMT	multi mini tip
ST	single tip
DMT	double-sided mini-tip



"D"	± Tolerance on "D"			
	Class M Tolerance			Class U Tolerance
	Shapes S, T, C, R, & W	Shape D	Shape V	Shapes S, T, & C
inch	inch	inch	inch	inch
5/32	.002	–	–	–
3/16	.002	–	–	.003
7/32	.002	.002	.002	.003
1/4	.002	.002	.002	.003
5/16	.002	.002	.002	.003
3/8	.002	.002	.002	.003
7/16	.003	.003	.003	.005
1/2	.003	.003	.003	.005
9/16	.003	.003	.003	.005
5/8	.004	.004	.004	.007
11/16	.004	.004	.004	.007
3/4	.004	.004	.004	.007
7/8	.005	–	–	.010
1	.005	–	–	.010
1 1/4	.006	–	–	.010

"D"	± Tolerance on "B"			
	Class M Tolerance			Class U Tolerance
	Shapes S, T, C, R, & W	Shape D	Shape V	Shapes S, T, & C
inch	inch	inch	inch	inch
5/32	.003	–	–	–
3/16	.003	–	–	.005
7/32	.003	.004	–	.005
1/4	.003	.004	–	.005
5/16	.003	.004	–	.005
3/8	.003	.004	.007	.005
7/16	.005	.006	–	–
1/2	.005	.006	.010	.008
9/16	.005	.006	–	–
5/8	.006	.007	–	.011
11/16	.006	.007	–	.011
3/4	.006	.007	–	.011
7/8	.006	–	–	.015
1	.007	–	–	.015
1 1/4	.008	–	–	.015



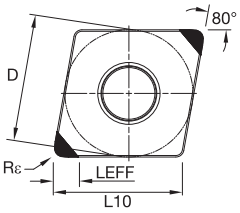


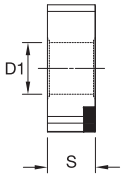
Kenloc • Negative Inserts • CNGA • Single-Sided Mini Tip

● Primary
○ Secondary

	KBH10B	KBH20B
P		
M		
K		
N		
S		
H	●	●

		D		D1		L10		S		Rε		LEFF			
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH10B	KBH20B
CNGA431S0415MMT	CNGA120404S01015MMT	12,70	0.500	5,16	0.203	12,90	0.508	4,78	0.188	0,40	0.016	2,444	0.9620	7309689	7309814
CNGA431S0525MMT	CNGA120404S01225MMT	12,70	0.500	5,16	0.203	12,90	0.508	4,79	0.188	0,40	0.016	2,444	0.0962	7309690	7309815
CNGA432EMMT	CNGA120408EMMT	12,70	0.500	5,16	0.203	12,90	0.508	4,78	0.188	0,80	0.032	2,367	0.0932	—	7309817
CNGA432S0415MMT	CNGA120408S01015MMT	12,70	0.500	5,16	0.203	12,90	0.508	4,79	0.188	0,80	0.032	2,367	0.0932	7309735	7309818
CNGA432S0525MMT	CNGA120408S01225MMT	12,70	0.500	5,16	0.203	12,90	0.508	4,79	0.188	0,80	0.032	2,367	0.0932	7309736	7309819
CNGA432S0735MMT	CNGA120408S01735MMT	12,70	0.500	5,16	0.203	12,90	0.508	4,78	0.188	0,80	0.031	2,367	0.0932	—	7316667
CNGA433S0415MMT	CNGA120412S01015MMT	12,70	0.500	5,16	0.203	12,90	0.508	4,79	0.188	1,20	0.047	2,382	0.0938	7309738	7309832
CNGA433S0525MMT	CNGA120412S01225MMT	12,70	0.500	5,16	0.203	12,90	0.508	4,79	0.188	1,20	0.047	2,382	0.0938	7309739	7309833
CNGA433S0735MMT	CNGA120412S01735MMT	12,70	0.500	5,16	0.203	12,90	0.508	4,79	0.188	1,20	0.047	2,382	0.5077	—	7309835



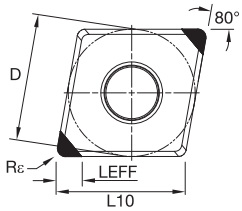


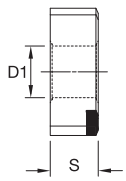
Kenloc • Negative Inserts • CNGA • Wiper • Single-Sided Mini Tip

● Primary
○ Secondary

	KBH10B	KBH20B
P		
M		
K		
N		
S		
H	●	●

		D		D1		L10		S		Rε		LEFF			
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH10B	KBH20B
CNGA431S0615GWMMT	CNGA120404S01515GWMMT	12,70	0.500	5,16	0.203	12,90	0.508	4,79	0.188	0,40	0.016	2,378	0.0936	7309733	7309816
CNGA432S0615GWMMT	CNGA120408S01515GWMMT	12,70	0.500	5,16	0.203	12,90	0.508	4,79	0.188	0,80	0.031	2,306	0.0908	7309737	7309831
CNGA433S0615GWMMT	CNGA120412S01515GWMMT	12,70	0.500	5,16	0.203	12,90	0.508	4,79	0.188	1,20	0.047	2,325	0.0915	7309740	7309834



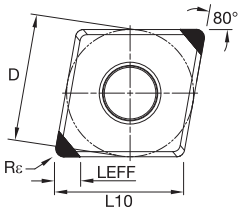


Kenloc • Negative Inserts • CNGM • Chipbreaker • Single-Sided Mini Tip

● Primary
○ Secondary

	KBH10B	KBH20B
P		
M		
K		
N		
S		
H	●	●

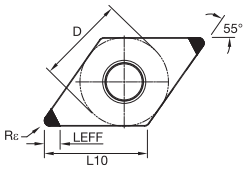
		D		D1		L10		S		Rε		LEFF			
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH10B	KBH20B
CNGM431S0525CB1MMT	CNGM120404S01225CB1MMT	12,70	0.500	5,16	0.203	12,90	0.508	4,78	0.188	0,40	0.016	2,444	0.0962	7316669	7316668
CNGM432S0525CB1MMT	CNGM120408S01225CB1MMT	12,70	0.500	5,16	0.203	12,90	0.508	4,78	0.188	0,80	0.031	2,367	0.0932	7316692	7316693



Kenloc • Negative Inserts • CNGM • Wiper with Chipbreaker • Single-Sided Mini Tip

● Primary
○ Secondary

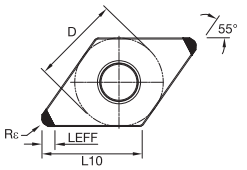
		D		D1		L10		S		Rε		LEFF			
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH10B	KBH20B
CNGM431S0525GWCB1MMT	CNGM120404S01225GWCB1MMT	12,70	0.500	5,16	0.203	12,90	0.508	4,78	0.188	0,40	0.016	2,378	0.0936	7316691	7316670
CNGM432S0525GWCB1MMT	CNGM120408S01225GWCB1MMT	12,70	0.500	5,16	0.203	12,90	0.508	4,78	0.188	0,80	0.031	2,306	0.5077	7316694	7316695



Kenloc • Negative Inserts • DNGA • Single-Sided Mini Tip

● Primary
○ Secondary

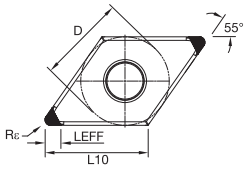
		D		D1		L10		S		Rε		LEFF			
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH10B	KBH20B
DNGA431S0415MMT	DNGA150404S01015MMT	12,70	0.500	5,16	0.203	15,50	0.610	4,78	0.188	0,40	0.016	2,618	0.1031	7309741	7309836
DNGA431S0525MMT	DNGA150404S01225MMT	12,70	0.500	5,16	0.203	15,50	0.610	4,79	0.188	0,40	0.016	2,618	0.1031	7316734	7309837
DNGA432EMMT	DNGA150408EMMT	12,70	0.500	5,16	0.203	15,50	0.610	4,79	0.188	0,80	0.032	2,249	0.0886	—	7309838
DNGA432S0415MMT	DNGA150408S01015MMT	12,70	0.500	5,16	0.203	15,50	0.610	4,79	0.188	0,80	0.031	2,249	0.0886	7309743	7309839
DNGA432S0525MMT	DNGA150408S01225MMT	12,70	0.500	5,16	0.203	15,50	0.610	4,79	0.188	0,80	0.031	2,246	0.0886	7309744	7309840
DNGA432S0735MMT	DNGA150408S01735MMT	12,70	0.500	5,16	0.203	15,50	0.610	4,78	0.188	0,80	0.031	2,249	0.0886	—	7316736
DNGA433S0415MMT	DNGA150412S01015MMT	12,70	0.500	5,16	0.203	15,50	0.610	4,79	0.188	1,20	0.047	2,219	0.0874	7309745	—
DNGA433S0525MMT	DNGA150412S01225MMT	12,70	0.500	5,16	0.203	15,50	0.610	4,79	0.188	1,20	0.047	2,219	0.0874	7309746	7309852
DNGA433S0735MMT	DNGA150412S01735MMT	12,70	0.500	5,16	0.203	15,50	0.610	4,78	0.188	1,20	0.047	2,219	0.0874	—	7316737
DNGA441S0415MMT	DNGA150604S01015MMT	12,70	0.500	5,16	0.203	15,50	0.610	6,37	0.251	0,40	0.016	2,618	0.1031	7309747	7309853
DNGA441S0525MMT	DNGA150604S01225MMT	12,70	0.500	5,16	0.203	15,50	0.610	6,37	0.251	0,40	0.016	2,618	0.1031	7316738	7309854
DNGA442EMMT	DNGA150608EMMT	12,70	0.500	5,16	0.203	15,50	0.610	6,37	0.251	0,80	0.032	2,249	0.0886	—	7316739
DNGA442S0415MMT	DNGA150608S01015MMT	12,70	0.500	5,16	0.203	15,50	0.610	6,37	0.251	0,80	0.032	2,249	0.0886	7309748	7309855
DNGA442S0525MMT	DNGA150608S01225MMT	12,70	0.500	5,16	0.203	15,50	0.610	6,37	0.251	0,80	0.032	2,249	0.0886	7309774	7309856
DNGA442S0735MMT	DNGA150608S01735MMT	12,70	0.500	5,16	0.203	15,50	0.610	6,35	0.250	0,80	0.032	2,249	0.0886	—	7309857
DNGA443S0415MMT	DNGA150612S01015MMT	12,70	0.500	5,16	0.203	15,50	0.610	6,37	0.251	1,20	0.047	2,219	0.0874	7309775	—
DNGA443S0525MMT	DNGA150612S01225MMT	12,70	0.500	5,16	0.203	15,50	0.610	6,37	0.251	1,20	0.047	2,219	0.0874	7309749	7309858
DNGA443S0735MMT	DNGA150612S01735MMT	12,70	0.500	5,16	0.203	15,50	0.610	6,37	0.251	1,20	0.047	2,219	0.0874	—	7316742



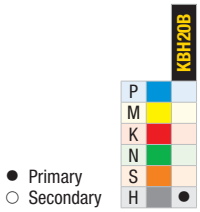
Kenloc • Negative Inserts • DNGA • Wiper • Single-Sided Mini Tip

● Primary
○ Secondary

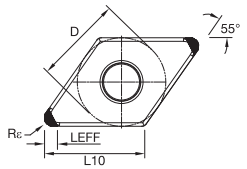
		D		D1		L10		S		Rε		LEFF			
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH10B	KBH20B
DNGA432S0615GWMMT	DNGA150408S01515GWMMT	12,70	0.500	5,16	0.203	15,50	0.610	4,79	0.188	0,80	0.031	1,838	0.0724	7316735	7309851
DNGA442S0615GWMMT	DNGA150608S01515GWMMT	12,70	0.500	5,16	0.203	15,50	0.610	6,37	0.251	0,80	0.031	1,838	0.0724	7316740	7316741



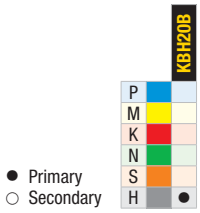
Kenloc • Negative Inserts • DNGM • Chipbreaker • Single-Sided Mini Tip



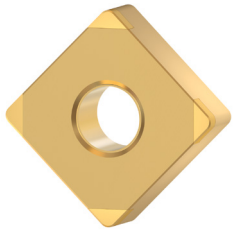
		D		D1		L10		S		Rε		LEFF		
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH20B
DNGM431S0525CB1MMT	DNGM150404S01225CB1MMT	12,70	0.500	5,16	0.203	15,50	0.610	4,78	0.188	0,40	0.016	2,618	0.1031	7316743
DNGM432S0525CB1MMT	DNGM150408S01225CB1MMT	12,70	0.500	5,16	0.203	15,50	0.610	4,78	0.188	0,80	0.031	2,249	0.0886	7316745
DNGM441S0525CB1MMT	DNGM150604S01225CB1MMT	12,70	0.500	5,16	0.203	15,50	0.610	6,37	0.251	0,40	0.016	2,618	0.1031	7316747
DNGM442S0525CB1MMT	DNGM150608S01225CB1MMT	12,70	0.500	5,16	0.203	15,50	0.610	6,37	0.251	0,80	0.032	2,249	0.0886	7316749

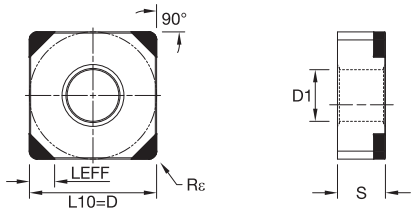


Kenloc • Negative Inserts • DNGM • Wiper with Chipbreaker • Single-Sided Mini Tip

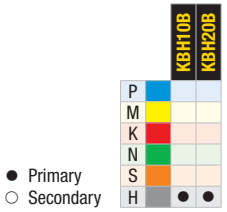


		D		D1		L10		S		Rε		LEFF		
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH20B
DNGM431S0525GWCB1MMT	DNGM150404S01225GWCB1MMT	12,70	0.500	5,16	0.203	15,50	0.610	4,78	0.188	0,40	0.016	2,071	0.0815	7316744
DNGM432S0525GWCB1MMT	DNGM150408S01225GWCB1MMT	12,70	0.500	5,16	0.203	15,50	0.610	4,78	0.188	0,80	0.031	1,838	0.0724	7316746
DNGM441S0525GWCB1MMT	DNGM150604S01225GWCB1MMT	12,70	0.500	5,16	0.203	15,50	0.610	6,37	0.251	0,40	0.016	2,618	0.1031	7316748
DNGM442S0525GWCB1MMT	DNGM150608S01225GWCB1MMT	12,70	0.500	5,16	0.203	15,50	0.610	6,37	0.251	0,80	0.032	1,838	0.0724	7316750

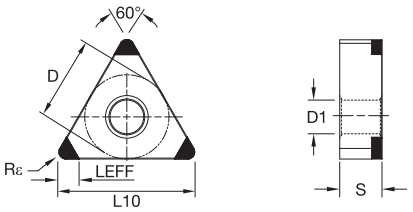




Kenloc • Negative Inserts • SNGA • Single-Sided Mini Tip



		D		D1		L10		S		Rε		LEFF			
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH10B	KBH20B
SNGA432S0415MMT	SNGA120408S01015MMT	12,70	0.500	5,16	0.203	12,70	0.500	4,78	0.188	0,80	0.032	2,499	0.0984	7316773	7316774
SNGA432S0525MMT	SNGA120408S01225MMT	12,70	0.500	5,16	0.203	12,70	0.500	4,79	0.188	0,80	0.032	2,499	0.0984	7309750	7309859
SNGA433S0415MMT	SNGA120412S01015MMT	12,70	0.500	5,16	0.203	12,70	0.500	4,79	0.188	1,20	0.047	2,596	0.1022	7316775	7316776
SNGA433S0525MMT	SNGA120412S01225MMT	12,70	0.500	5,16	0.203	12,70	0.500	4,79	0.188	1,20	0.047	2,596	0.1022	7316777	7309860

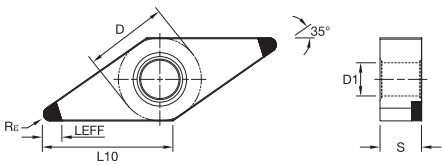


Kenloc • Negative Inserts • TNGA • Single-Sided Mini Tip

● Primary
○ Secondary

	KBH10B	KBH20B
P		
M		
K		
N		
S		
H	●	●

		D		D1		L10		S		Rε		LEFF			
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH10B	KBH20B
TNGA331S0415MMT	TNGA160404S01015MMT	9,53	0.375	3,81	0.150	16,50	0.650	4,78	0.188	0,40	0.016	2,536	0.0999	7309751	7309861
TNGA331S0525MMT	TNGA160404S01225MMT	9,53	0.375	3,81	0.150	16,50	0.650	4,78	0.188	0,40	0.016	2,536	0.0999	7316781	7309863
TNGA332S0415MMT	TNGA160408S01015MMT	9,53	0.375	3,81	0.150	16,50	0.650	4,78	0.188	0,80	0.032	2,536	0.0999	7309752	7309864
TNGA332S0525MMT	TNGA160408S01225MMT	9,53	0.375	3,81	0.150	16,50	0.650	4,78	0.188	0,80	0.031	2,243	0.0883	7309753	7309865
TNGA332S0735MMT	TNGA160408S01735MMT	9,53	0.375	3,81	0.150	16,50	0.650	4,78	0.188	0,80	0.031	2,243	0.0883	7309754	7309866
TNGA333S0415MMT	TNGA160412S01015MMT	9,53	0.375	3,81	0.150	16,50	0.650	4,78	0.188	1,20	0.047	2,222	0.0875	7316783	7316784
TNGA333S0525MMT	TNGA160412S01225MMT	9,53	0.375	3,81	0.150	16,50	0.650	4,78	0.188	1,20	0.047	2,222	0.0875	7309755	7309867
TNGA333S0735MMT	TNGA160412S01735MMT	9,53	0.375	3,81	0.150	16,50	0.650	4,78	0.188	1,20	0.047	2,222	0.0875	7309756	—

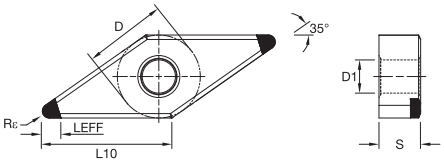


Kenloc • Negative Inserts • VNGA • Single-Sided Mini Tip

● Primary
○ Secondary

	KBH10B	KBH20B
P		
M		
K		
N		
S		
H	●	●

		D		D1		L10		S		Rε		LEFF			
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH10B	KBH20B
VNGA331S0415MMT	VNGA160404S01015MMT	9,53	0.375	3,81	0.150	16,61	0.654	4,79	0.188	0,40	0.016	2,988	0.1176	7309757	7309868
VNGA331S0525MMT	VNGA160404S01225MMT	9,53	0.375	3,81	0.150	16,61	0.654	4,78	0.188	0,40	0.016	2,988	0.1176	7309759	7309869
VNGA331S0735MMT	VNGA160404S01735MMT	9,53	0.375	3,81	0.150	16,61	0.654	4,78	0.188	0,40	0.016	2,988	0.1176	—	7309871
VNGA332S0415MMT	VNGA160408S01015MMT	9,53	0.375	3,81	0.150	16,61	0.654	4,78	0.188	0,80	0.032	2,119	0.0834	7309760	7309872
VNGA332S0525MMT	VNGA160408S01225MMT	9,53	0.375	3,81	0.150	16,61	0.654	4,78	0.188	0,80	0.032	2,119	0.0834	7309771	7309873
VNGA332S0735MMT	VNGA160408S01735MMT	9,53	0.375	3,81	0.150	16,61	0.654	4,78	0.188	0,80	0.032	2,119	0.0834	—	7316796
VNGA333S0525MMT	VNGA160412S01225MMT	9,53	0.375	3,81	0.150	16,61	0.654	4,79	0.188	1,20	0.047	2,278	0.0897	7316797	7309874

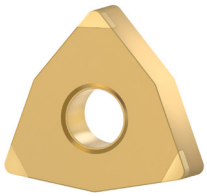


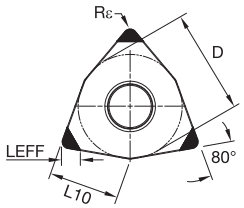
Kenloc • Negative Inserts • VNGM • Chipbreaker • Single-Sided Mini Tip

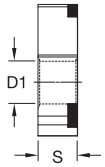
● Primary
○ Secondary

	KBH10B	KBH20B
P		
M		
K		
N		
S		
H	●	●

		D		D1		L10		S		Rε		LEFF			
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH10B	KBH20B
VNGM331S0525CB1MMT	VNGM160404S01225CB1MMT	9,53	0.375	3,81	0.150	16,61	0.654	4,78	0.186	0,40	0.016	2,988	0.1176	7316798	7316799
VNGM332S0525CB1MMT	VNGM160408S01225CB1MMT	9,53	0.375	3,81	0.150	16,61	0.654	4,78	0.188	0,80	0.032	2,119	0.0834	7316801	7316800





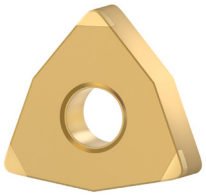


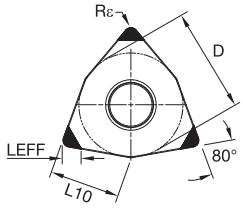
Kenloc • Negative Inserts • WNGA • Single-Sided Mini Tip

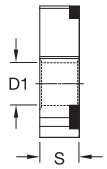
● Primary
○ Secondary

	KBH10B	KBH20B
P		
M		
K		
N		
S		
H	●	●

		D		D1		L10		S		Rε		LEFF			
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH10B	KBH20B
WNGA431S0415MMT	WNGA080404S01015MMT	12,70	0.500	5,16	0.203	8,69	0.342	4,78	0.188	0,40	0.016	2,444	0.0962	7316802	7309877
WNGA431S0525MMT	WNGA080404S01225MMT	12,70	0.500	5,16	0.203	8,69	0.342	4,78	0.188	0,40	0.016	2,444	0.0962	7316803	7316804
WNGA432S0415MMT	WNGA080408S01015MMT	12,70	0.500	5,16	0.203	8,69	0.342	4,78	0.188	0,80	0.032	2,367	0.0932	7309772	—
WNGA432S0525MMT	WNGA080408S01225MMT	12,70	0.500	5,16	0.203	8,69	0.342	4,78	0.188	0,80	0.032	2,367	0.0932	7309773	7309878
WNGA432S0735MMT	WNGA080408S01735MMT	12,70	0.500	5,16	0.203	8,69	0.342	4,78	0.188	0,80	0.032	2,367	0.0932	—	7309880





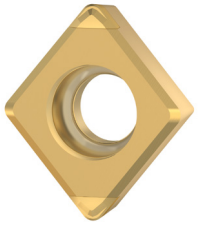


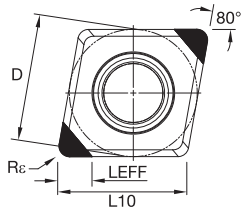
Kenloc • Negative Inserts • WNGA • Wiper • Single-Sided Mini Tip

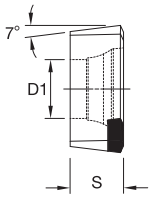
● Primary
○ Secondary

	KBH10B	KBH20B
P		
M		
K		
N		
S		
H	●	●

		D		D1		L10		S		Rε		LEFF			
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH10B	KBH20B
WNGA432S0615GWMMT	WNGA080408S01515GWMMT	12,70	0.500	5,16	0.203	8,69	0.342	4,78	0.188	0,80	0.032	2,303	0.0907	7316805	7309879





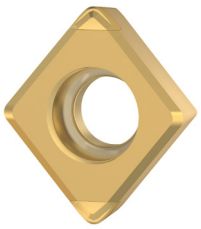


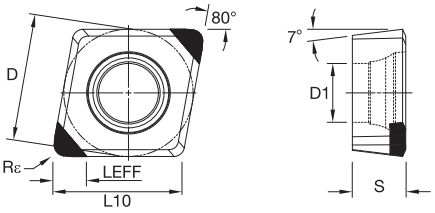
Screw-On • Positive Inserts • CCGT • Chipbreaker • Single-Sided Mini Tip

● Primary
○ Secondary

	KBH20B
P	
M	
K	
N	
S	
H	●

		D		D1		L10		S		Rε		LEFF		
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH20B
CCGT3251S0525CB1MMT	CCGT09T304S01225CB1MMT	9,53	0.375	4,40	0.173	9,67	0.381	3,99	0.157	0,40	0.016	2,503	0.0986	7316275
CCGT3252S0525CB1MMT	CCGT09T308S01225CB1MMT	9,53	0.375	4,40	0.173	9,67	0.381	3,99	0.157	0,80	0.032	2,427	0.0955	7316277



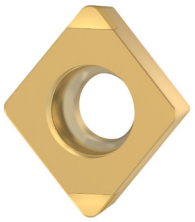


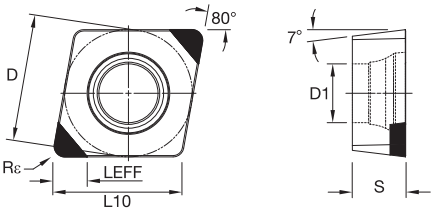
Screw-On • Positive Inserts • CCGT • Wiper with Chipbreaker • Single-Sided Mini Tip

● Primary
○ Secondary

	KBH20B
P	
M	
K	
N	
S	
H	●

		D		D1		L10		S		Rε		LEFF		
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH20B
CCGT3251S0525GWCB1MMT	CCGT09T304S01225GWCB1MMT	9,53	0.375	4,40	0.173	9,67	0.381	3,99	0.157	0,40	0.016	2,438	0.0960	7316276
CCGT3252S0525GWCB1MMT	CCGT09T308S01225GWCB1MMT	9,53	0.375	4,40	0.173	9,67	0.381	3,99	0.157	0,80	0.032	2,365	0.0931	7316278



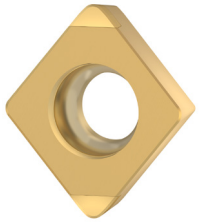


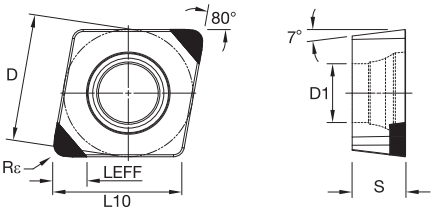
Screw-On • Positive Inserts • CCGW • Single-Sided Mini Tip

● Primary
○ Secondary

	KBH10B	KBH20B
P		
M		
K		
N		
S		
H	●	●

		D		D1		L10		S		Rε		LEFF			
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH10B	KBH20B
CCGW21505S0415MMT	CCGW060202S01015MMT	6,35	0.250	2,80	0.110	6,45	0.254	2,40	0.095	0,20	0.008	2,577	0.1014	7309698	7316279
CCGW21505S0525MMT	CCGW060202S01225MMT	6,35	0.250	2,80	0.110	6,45	0.254	2,40	0.095	0,20	0.008	2,577	0.1014	—	7310631
CCGW2151S0415MMT	CCGW060204S01015MMT	6,35	0.250	2,80	0.110	6,45	0.254	2,40	0.095	0,40	0.016	2,539	0.0999	7309699	7316280
CCGW2151S0525MMT	CCGW060204S01225MMT	6,35	0.250	2,80	0.110	6,45	0.254	2,40	0.095	0,40	0.016	2,538	0.0999	7316661	7310632
CCGW2152EMMT	CCGW060208EMMT	6,35	0.250	2,80	0.110	6,45	0.254	2,40	0.094	0,80	0.031	2,461	0.0969	7309700	—
CCGW32505S0415MMT	CCGW09T302S01015MMT	9,53	0.375	4,40	0.173	9,67	0.381	3,99	0.157	0,20	0.008	2,542	0.1001	7309891	—
CCGW3251EMMT	CCGW09T304EMMT	9,53	0.375	4,40	0.173	9,67	0.381	3,99	0.157	0,40	0.016	2,509	0.0988	—	7316664
CCGW3251S0415MMT	CCGW09T304S01015MMT	9,53	0.375	4,40	0.173	9,67	0.381	3,99	0.157	0,40	0.016	2,503	0.0986	7309892	7310633
CCGW3251S0525MMT	CCGW09T304S01225MMT	9,53	0.375	4,40	0.173	9,67	0.381	3,99	0.157	0,40	0.016	2,496	0.0983	7309893	7310634
CCGW3252EMMT	CCGW09T308EMMT	9,53	0.375	4,40	0.173	9,67	0.381	3,99	0.157	0,80	0.032	2,433	0.0958	—	7316665
CCGW3252S0415MMT	CCGW09T308S01015MMT	9,53	0.375	4,40	0.173	9,67	0.381	3,99	0.157	0,80	0.031	2,427	0.0955	7309894	7310636
CCGW3252S0525MMT	CCGW09T308S01225MMT	9,53	0.375	4,40	0.173	9,67	0.381	3,99	0.157	0,80	0.032	2,419	0.0953	7309895	7310637
CCGW432S0415MMT	CCGW120408S01015MMT	12,70	0.500	5,50	0.216	12,90	0.508	4,78	0.188	0,80	0.032	2,358	0.0928	—	7310639
CCGW432S0525MMT	CCGW120408S01225MMT	12,70	0.500	5,50	0.216	12,90	0.508	4,78	0.188	0,80	0.032	2,354	0.0927	—	7316666



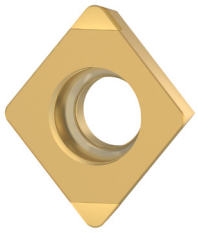


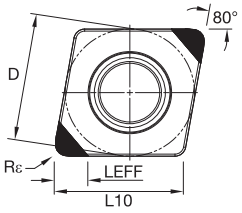
Screw-On • Positive Inserts • CCGW • Wiper • Single-Sided Mini Tip

● Primary
○ Secondary

	KBH10B	KBH20B
P		
M		
K		
N		
S		
H	●	●

		D		D1		L10		S		Rε		LEFF			
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH10B	KBH20B
CCGW3251S0615GWMMT	CCGW09T304S01515GWMMT	9,53	0.375	4,40	0.172	9,67	0.381	3,99	0.157	0,40	0.016	2,440	0.0961	—	7310635
CCGW3252S0615GWMMT	CCGW09T308S01515GWMMT	9,53	0.375	4,40	0.173	9,67	0.381	3,99	0.157	0,80	0.032	2,367	0.0932	7309896	7310638



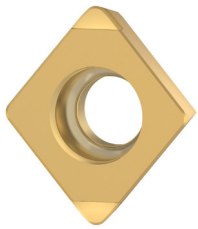


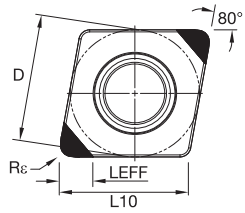
Screw-On • Positive Inserts • CPGW • Single-Sided Mini Tip

● Primary
○ Secondary

	KBH10B	KBH20B
P		
M		
K		
N		
S		
H	●	●

		D		D1		L10		S		Rε		LEFF			
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH10B	KBH20B
CPGW21505EMMT	CPGW060202EMMT	6,35	0.250	2,80	0.110	6,45	0.254	2,40	0.095	0,20	0.008	2,551	0.1004	7316696	7316697
CPGW21505S0415MMT	CPGW060202S01015MMT	6,35	0.250	2,80	0.110	6,45	0.254	2,40	0.095	0,20	0.008	2,577	0.1014	—	7316698
CPGW21505S0525MMT	CPGW060202S01225MMT	6,35	0.250	2,80	0.110	6,45	0.254	2,40	0.095	0,20	0.008	2,577	0.1014	—	7316699
CPGW2151S0415MMT	CPGW060204S01015MMT	6,35	0.250	2,80	0.110	6,45	0.254	2,40	0.095	0,40	0.016	2,538	0.0999	7316701	7316700
CPGW2151S0525MMT	CPGW060204S01225MMT	6,35	0.250	2,80	0.110	6,45	0.254	2,40	0.095	0,40	0.016	2,538	0.0999	—	7316702
CPGW2152S0415MMT	CPGW060208S01015MMT	6,35	0.250	2,80	0.110	6,45	0.254	2,40	0.095	0,80	0.032	2,432	0.0957	7316704	7316703
CPGW2152S0525MMT	CPGW060208S01225MMT	6,35	0.250	2,80	0.110	6,45	0.254	2,40	0.095	0,80	0.032	2,462	0.0969	—	7316705
CPGW3251S0415MMT	CPGW09T304S01015MMT	9,53	0.375	4,40	0.173	9,67	0.381	3,99	0.157	0,40	0.016	2,500	0.0984	7309897	—
CPGW3252S0415MMT	CPGW09T308S01015MMT	9,53	0.375	4,40	0.173	9,67	0.381	3,99	0.157	0,80	0.032	2,423	0.0954	7309898	—



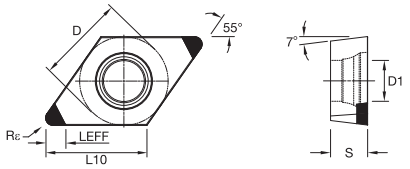


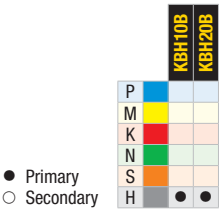
Screw-On • Positive Inserts • CPGW • Wiper • Single-Sided Mini Tip

● Primary
○ Secondary

	KBH10B	KBH20B
P		
M		
K		
N		
S		
H	●	●

		D		D1		L10		S		Rε		LEFF			
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH10B	KBH20B
CPGW2152S0615GWMMT	CPGW060208S01515GWMMT	6,35	0.250	2,80	0.110	6,45	0.254	2,40	0.095	0,80	0.032	2,368	0.0932	—	7316706
CPGW3251S0615GWMMT	CPGW09T304S01515GWMMT	9,53	0.375	4,40	0.173	9,67	0.381	3,99	0.157	0,40	0.016	2,437	0.0960	7316707	—
CPGW3252S0615GWMMT	CPGW09T308S01515GWMMT	9,67	0.381	4,40	0.173	9,67	0.381	3,99	0.157	0,80	0.032	2,365	0.9310	7309911	—

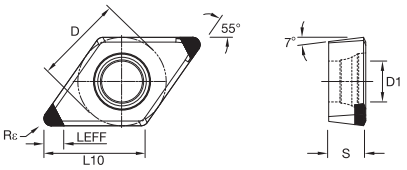




● Primary
○ Secondary

Screw-On • Positive Inserts • DCGW • Single-Sided Mini Tip

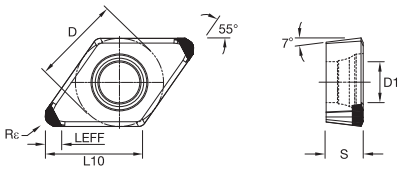
		D		D1		L10		S		Rε		LEFF			
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH10B	KBH20B
DCGW21505EMMT	DCGW070202EMMT	6,35	0.250	2,80	0.110	7,75	0.305	2,40	0.095	0,20	0.008	2,844	0.1120	7316712	7316713
DCGW21505S0415MMT	DCGW070202S01015MMT	6,35	0.250	2,80	0.110	7,75	0.305	2,40	0.095	0,20	0.008	2,839	0.1118	7309912	7316714
DCGW21505S0525MMT	DCGW070202S01225MMT	6,35	0.250	2,80	0.110	7,75	0.305	2,40	0.095	0,20	0.008	2,833	0.1115	—	7310640
DCGW2151S0415MMT	DCGW070204S01015MMT	6,35	0.250	2,80	0.110	7,75	0.305	2,40	0.094	0,40	0.016	2,655	0.1045	7309913	7310641
DCGW2151S0525MMT	DCGW070204S01225MMT	6,35	0.250	2,80	0.110	7,75	0.305	2,40	0.095	0,40	0.016	2,649	0.1043	7309914	7310642
DCGW2152S0415MMT	DCGW070208S01015MMT	6,35	0.250	2,80	0.110	7,75	0.305	2,40	0.095	0,80	0.032	2,286	0.0900	—	7316715
DCGW2152S0525MMT	DCGW070208S01225MMT	6,35	0.250	2,80	0.110	7,75	0.305	2,40	0.095	0,80	0.032	2,280	0.0898	—	7316716
DCGW32505S0415MMT	DCGW11T302S01015MMT	9,53	0.375	4,40	0.173	11,63	0.458	3,99	0.157	0,20	0.008	2,727	0.1074	7309915	7316717
DCGW32505S0525MMT	DCGW11T302S01225MMT	9,53	0.375	4,40	0.173	11,63	0.458	3,99	0.157	0,20	0.008	2,727	0.1074	—	7310643
DCGW3251EMMT	DCGW11T304EMMT	9,53	0.375	4,40	0.173	11,63	0.458	3,99	0.157	0,40	0.016	2,521	0.0992	—	7316718
DCGW3251S0415MMT	DCGW11T304S01015MMT	9,53	0.375	4,40	0.173	11,63	0.458	3,99	0.157	0,40	0.016	2,543	0.1001	7309916	7310646
DCGW3251S0525MMT	DCGW11T304S01225MMT	9,53	0.375	4,40	0.173	11,63	0.458	3,99	0.157	0,40	0.016	2,543	0.1001	7309917	7310647
DCGW3252EMMT	DCGW11T308EMMT	9,53	0.375	4,40	0.173	11,63	0.458	3,99	0.156	0,80	0.032	2,152	0.0847	7316719	7316720
DCGW3252S0415MMT	DCGW11T308S01015MMT	9,53	0.375	4,40	0.173	11,63	0.458	3,99	0.157	0,80	0.032	2,175	0.0856	7309918	7310648
DCGW3252S0525MMT	DCGW11T308S01225MMT	9,53	0.375	4,40	0.173	11,63	0.458	3,99	0.157	0,80	0.032	2,175	0.0856	7309919	7310649
DCGW3253S0525MMT	DCGW11T312S01225MMT	9,53	0.375	4,40	0.173	11,63	0.458	3,99	0.157	1,20	0.047	2,112	0.0831	—	7316731



● Primary
○ Secondary

Screw-On • Positive Inserts • DCGT • Chipbreaker • Single-Sided Mini Tip

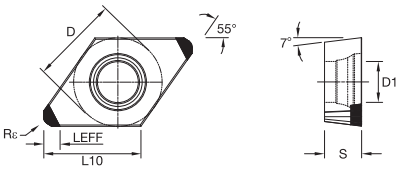
		D		D1		L10		S		Rε		LEFF		
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH20B
DCGT3251S0525CB1MMT	DCGT11T304S01225CB1MMT	9,53	0.375	4,40	0.173	11,63	0.458	3,99	0.157	0,40	0.016	2,517	0.0991	7316708
DCGT3252S0525CB1MMT	DCGT11T308S01225CB1MMT	9,53	0.375	4,40	0.173	11,63	0.458	3,99	0.156	0,80	0.031	2,149	0.0846	7316710



● Primary
○ Secondary

Screw-On • Positive Inserts • DCGT • Wiper with Chipbreaker • Single-Sided Mini Tip

		D		D1		L10		S		Rε		LEFF		
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH20B
DCGT3251S0525GWCB1MMT	DCGT11T304S01225GWCB1MMT	9,53	0.375	4,40	0.173	11,63	0.458	3,99	0.157	0,40	0.016	1,971	0.0776	7316709
DCGT3252S0525GWCB1MMT	DCGT11T308S01225GWCB1MMT	9,53	0.375	4,40	0.173	11,63	0.458	3,99	0.156	0,80	0.031	1,738	0.0684	7316711

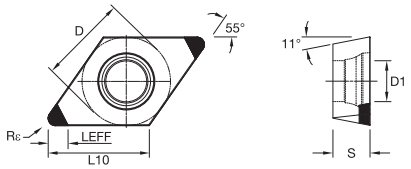


Screw-On • Positive Inserts • DCGW • Wiper • Single-Sided Mini Tip

● Primary
○ Secondary

	KBH10B	KBH20B
P		
M		
K		
N		
S		
H	●	●

		D		D1		L10		S		Rε		LEFF			
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH10B	KBH20B
DCGW3252S0615GWMMT	DCGW11T308S01515GWMMT	9,53	0.375	4,40	0.173	11,63	0.458	3,99	0.157	0,79	0.031	1,756	0.0691	7309920	7310650
DCGW3253S0615GWMMT	DCGW11T312S01515GWMMT	9,53	0.375	4,40	0.173	11,63	0.458	3,99	0.157	1,20	0.047	1,843	0.0726	—	7316733

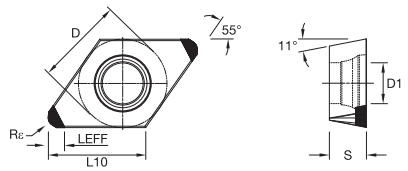


Screw-On • Positive Inserts • DPGW • Single-Sided Mini Tip

● Primary
○ Secondary

	KBH10B	KBH20B
P		
M		
K		
N		
S		
H	●	●

		D		D1		L10		S		Rε		LEFF			
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH10B	KBH20B
DPGW2151S0415MMT	DPGW070204S01015MMT	6,35	0.250	2,80	0.110	7,75	0.305	2,40	0.095	0,40	0.016	2,652	0.1044	7316752	7316751
DPGW2151S0525MMT	DPGW070204S01225MMT	6,35	0.250	2,80	0.110	7,75	0.305	2,40	0.095	0,40	0.016	2,642	0.1040	7316753	7316754
DPGW2152S0415MMT	DPGW070208S01015MMT	6,35	0.250	2,80	0.110	7,75	0.305	2,40	0.095	0,80	0.031	2,283	0.0899	7316755	—
DPGW2152S0525MMT	DPGW070208S01225MMT	6,35	0.250	2,80	0.110	7,75	0.305	2,40	0.095	0,80	0.031	2,274	0.0895	7316756	—
DPGW32505S0415MMT	DPGW11T302S01015MMT	9,53	0.375	4,40	0.173	11,63	0.458	3,99	0.157	0,20	0.008	2,727	0.1074	7316758	7316757
DPGW32505S0525MMT	DPGW11T302S01225MMT	9,53	0.375	4,40	0.173	11,63	0.458	3,99	0.157	0,20	0.008	2,727	0.1074	—	7316759
DPGW3251S0415MMT	DPGW11T304S01015MMT	9,53	0.375	4,40	0.173	11,63	0.458	3,99	0.157	0,40	0.016	2,543	0.1001	7309931	7316760
DPGW3251S0525MMT	DPGW11T304S01225MMT	9,53	0.375	4,40	0.173	11,63	0.458	3,99	0.157	0,20	0.008	2,727	0.1074	7316762	7316761
DPGW3252EMMT	DPGW11T308EMMT	9,53	0.375	4,40	0.173	11,63	0.458	3,99	0.157	0,80	0.031	2,175	0.0856	7316763	—
DPGW3252S0415MMT	DPGW11T308S01015MMT	9,53	0.375	4,40	0.173	11,63	0.458	3,99	0.157	0,80	0.031	2,175	0.0856	7316764	—
DPGW3252S0525MMT	DPGW11T308S01225MMT	9,53	0.375	4,40	0.173	11,63	0.458	3,99	0.157	0,80	0.031	2,146	0.0845	7316765	—

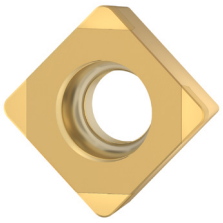


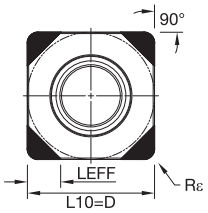
Screw-On • Positive Inserts • DPGW • Wiper • Single-Sided Mini Tip

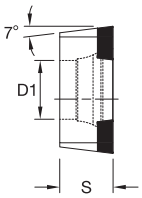
● Primary
○ Secondary

	KBH10B
P	
M	
K	
N	
S	
H	●

		D		D1		L10		S		Rε		LEFF		
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH10B
DPGW3252S0615GWMMT	DPGW11T308S01515GWMMT	9,53	0.375	4,40	0.173	11,63	0.458	3,99	0.157	0,80	0.031	1,737	0.0684	7316766



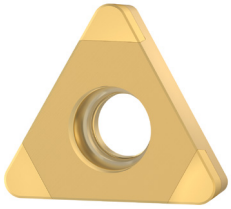


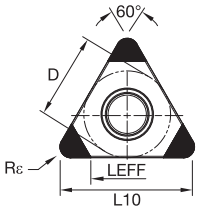


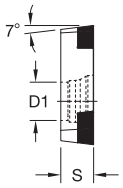
Screw-On • Positive Inserts • SCGW • Single-Sided Mini Tip

● Primary
○ Secondary

		D		D1		L10		S		Rε		LEFF			
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH10B	KBH20B
SCGW3251S0415MMT	SCGW09T304S01015MMT	9,53	0.375	4,40	0.173	9,53	0.375	3,97	0.156	0,40	0.016	3,000	0.1181	—	7316767
SCGW3251S0525MMT	SCGW09T304S01225MMT	9,53	0.375	4,40	0.173	9,53	0.375	3,99	0.157	0,40	0.016	2,485	0.0978	—	7316768
SCGW3252S0415MMT	SCGW09T308S01015MMT	9,53	0.375	4,40	0.173	9,53	0.375	3,99	0.157	0,80	0.031	2,493	0.0981	7316770	7316769
SCGW3252S0525MMT	SCGW09T308S01225MMT	9,53	0.375	4,40	0.173	9,53	0.375	3,99	0.157	0,80	0.031	2,485	0.0978	7316771	7316772



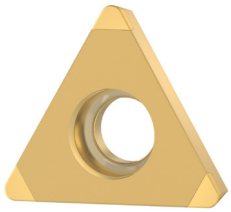


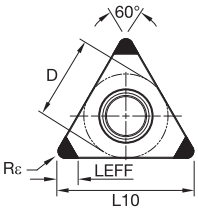


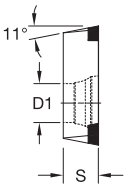
Screw-On • Positive Inserts • TCGW • Single-Sided Mini Tip

● Primary
○ Secondary

		D		D1		L10		S		Rε		LEFF			
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH10B	KBH20B
TCGW21505S0415MMT	TCGW110202S01015MMT	6,35	0.250	2,80	0.110	11,00	0.433	2,40	0.095	0,20	0.008	2,534	0.0998	7316778	7316779
TCGW2151S0415MMT	TCGW110204S01015MMT	6,35	0.250	2,80	0.110	11,00	0.433	2,40	0.095	0,40	0.016	2,534	0.0998	7309932	7310651
TCGW2151S0525MMT	TCGW110204S01225MMT	6,35	0.250	2,80	0.110	11,00	0.433	2,40	0.095	0,40	0.016	2,532	0.0997	7309933	—
TCGW2152EMMT	TCGW110208EMMT	6,35	0.250	2,80	0.110	11,00	0.433	2,40	0.095	0,80	0.032	2,243	0.0883	7316780	—
TCGW2152S0415MMT	TCGW110208S01015MMT	6,35	0.250	2,80	0.110	11,00	0.433	2,40	0.095	0,80	0.032	2,241	0.0882	7309934	7310652
TCGW2152S0525MMT	TCGW110208S01225MMT	6,35	0.250	2,80	0.110	11,00	0.433	2,40	0.095	0,80	0.032	2,239	0.0882	7309935	—



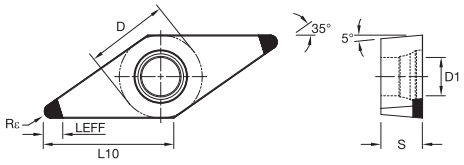




Screw-On • Positive Inserts • TPGW • Single-Sided Mini Tip

● Primary
○ Secondary

		D		D1		L10		S		Rε		LEFF			
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH10B	KBH20B
TPGW2151S0415MMT	TPGW110204S01015MMT	6,35	0.250	2,80	0.110	11,00	0.433	2,40	0.095	0,40	0.016	2,533	0.0997	7316785	7310653
TPGW2152S0415MMT	TPGW110208S01015MMT	6,35	0.250	2,80	0.110	11,00	0.433	2,40	0.095	0,80	0.032	2,240	0.0882	7316786	7310654
TPGW3252S0415MMT	TPGW16T308S01015MMT	9,53	0.375	4,40	0.173	16,50	0.650	3,99	0.157	0,80	0.032	2,240	0.0882	—	7316787
TPGW3252S0525MMT	TPGW16T308S01225MMT	9,53	0.375	4,40	0.173	16,50	0.650	3,99	0.157	0,80	0.032	2,237	0.0881	—	7316788

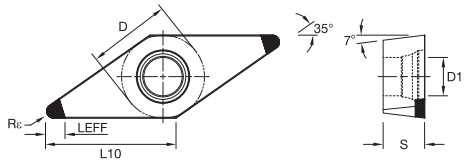


	KBH10B	KBH20B
P		
M		
K		
N		
S		
H	●	●

● Primary
○ Secondary

Screw-On • Positive Inserts • VBGW • Single-Sided Mini Tip

		D		D1		L10		S		Rε		LEFF			
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH10B	KBH20B
VBGW221S0415MMT	VBGW110304S01015MMT	6,35	0.250	2,80	0.110	11,07	0.436	3,20	0.126	0,40	0.016	2,986	0.1176	7309936	7310655
VBGW221S0525MMT	VBGW110304S01225MMT	6,35	0.250	2,80	0.110	11,07	0.436	3,20	0.126	0,40	0.016	2,985	0.1175	7316789	7310656
VBGW222S0415MMT	VBGW110308S01015MMT	6,35	0.250	2,80	0.110	11,07	0.436	3,20	0.126	0,80	0.032	2,117	0.8340	7309937	7316790
VBGW222S0525MMT	VBGW110308S01225MMT	6,35	0.250	2,80	0.110	11,07	0.436	3,20	0.126	0,80	0.032	2,117	0.0833	7316791	7310657
VBGW331S0415MMT	VBGW160404S01015MMT	9,53	0.375	4,40	0.173	16,61	0.654	4,78	0.188	0,40	0.016	2,987	0.1176	7309938	7310658
VBGW332S0415MMT	VBGW160408S01015MMT	9,53	0.375	4,40	0.173	16,61	0.654	4,78	0.188	0,80	0.032	2,118	0.0834	7309939	7310659
VBGW333S0415MMT	VBGW160412S01015MMT	9,53	0.375	4,40	0.173	16,61	0.654	4,78	0.188	1,20	0.047	2,277	0.0897	—	7316792



	KBH10B	KBH20B
P		
M		
K		
N		
S		
H	●	●

● Primary
○ Secondary

Screw-On • Positive Inserts • VCGW • Single-Sided Mini Tip

		D		D1		L10		S		Rε		LEFF			
ANSI Catalog Number	ISO Catalog Number	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	KBH10B	KBH20B
VCGW331S0415MMT	VCGW160404S01015MMT	9,53	0.375	4,40	0.173	16,61	0.654	4,78	0.188	0,40	0.016	2,987	0.1176	7316793	7316794
VCGW331S0525MMT	VCGW160404S01225MMT	9,53	0.375	4,40	0.173	16,61	0.654	4,78	0.188	0,40	0.016	2,985	0.1175	—	7310660
VCGW332S0415MMT	VCGW160408S01015MMT	9,53	0.375	4,40	0.173	16,61	0.654	4,78	0.188	0,80	0.315	2,118	0.0834	7316795	7310661
VCGW332S0525MMT	VCGW160408S01225MMT	9,53	0.375	4,40	0.173	16,61	0.654	4,78	0.188	0,80	0.032	2,117	0.0833	—	7310662

KBH10B & KBH20B
Application Data

Hardened Materials; 44-48 HRC		m/min		SFM	
Material Group	**Grade**	**MIN**	**MAX**	**MIN**	**MAX**
H1	KBH10B	175	320	574	1050
	KBH20B	125	275	410	902

Hardened Materials; 48-55 HRC		m/min		SFM	
Material Group	**Grade**	**MIN**	**MAX**	**MIN**	**MAX**
H2	KBH10B	160	290	525	951
	KBH20B	115	250	377	820

Hardened Materials; 55-60 HRC		m/min		SFM	
Material Group	**Grade**	**MIN**	**MAX**	**MIN**	**MAX**
H3	KBH10B	140	260	459	853
	KBH20B	100	220	328	722

Hardened Materials; 60-66 HRC		m/min		SFM	
Material Group	**Grade**	**MIN**	**MAX**	**MIN**	**MAX**
H4	KBH10B	120	220	394	722
	KBH20B	90	180	295	591

KBH10B & KBH20B
Application Data • Negative Rake • Metric

.NGA… & .NGM…		C-Style, D-Style, S-Style & W-Style							V-Style & T-Style					
		…MMT							…MMT					
		Feed			DOC				Feed			DOC		
Edge Prep	CR	MIN	START	MAX	MIN	START	MAX		MIN	START	MAX	MIN	START	MAX
E	0,8	0,05	**0,15**	0,25	0,03	**0,20**	0,30		0,05	**0,15**	0,25	0,03	**0,20**	0,30
S01015	0,4	0,05	**0,15**	0,25	0,03	**0,20**	0,30		0,05	**0,12**	0,20	0,03	**0,12**	0,20
	0,8	0,05	**0,15**	0,25	0,03	**0,20**	0,30		0,05	**0,15**	0,25	0,03	**0,20**	0,30
	1,2	0,05	**0,15**	0,25	0,03	**0,20**	0,30		0,05	**0,15**	0,25	0,03	**0,20**	0,30
S01225	0,4	0,05	**0,15**	0,25	0,03	**0,20**	0,30		0,05	**0,12**	0,20	0,03	**0,12**	0,20
	0,8	0,05	**0,15**	0,25	0,03	**0,20**	0,30		0,05	**0,15**	0,25	0,03	**0,20**	0,30
	1,2	0,05	**0,15**	0,25	0,03	**0,20**	0,30		0,05	**0,15**	0,25	0,03	**0,20**	0,30
S01735	0,4								0,05	**0,12**	0,20	0,03	**0,12**	0,20
	0,8	0,05	**0,15**	0,25	0,03	**0,20**	0,30		0,05	**0,15**	0,25	0,03	**0,20**	0,30
	1,2	0,05	**0,15**	0,25	0,03	**0,20**	0,30		0,05	**0,15**	0,25	0,03	**0,20**	0,30
S01225CB1	0,4	0,05	**0,18**	0,30	0,03	**0,30**	0,50		0,05	**0,18**	0,30	0,03	**0,27**	0,45
	0,8	0,05	**0,20**	0,35	0,03	**0,40**	0,70		0,05	**0,20**	0,35	0,03	**0,27**	0,45
S01515GW	0,4	0,05	**0,18**	0,30	0,03	**0,16**	0,25							
	0,8	0,05	**0,21**	0,35	0,03	**0,18**	0,28							
	1,2	0,05	**0,24**	0,40	0,03	**0,20**	0,30							
S01225GWCB1	0,4	0,05	**0,18**	0,30	0,03	**0,30**	0,50							
	0,8	0,05	**0,20**	0,35	0,03	**0,40**	0,70							

KBH10B & KBH20B
Application Data • Postive Rake • Metric

..GW… & ..GT…		C.GW09 / D.GW11 / S.GW09							C.GW06 / D.GW07 / T.GW11 / V.GW11 / V.GW16					
		…MMT							…MMT					
		Feed			DOC				Feed			DOC		
Edge Prep	CR	MIN	START	MAX	MIN	START	MAX		MIN	START	MAX	MIN	START	MAX
E	0,2								0,05	**0,09**	0,15	0,03	**0,13**	0,20
	0,4	0,05	**0,12**	0,20	0,03	**0,13**	0,20		0,05	**0,12**	0,20	0,03	**0,13**	0,20
	0,8	0,05	**0,15**	0,25	0,03	**0,20**	0,30		0,05	**0,15**	0,25	0,03	**0,16**	0,25
S01015	0,2	0,05	**0,09**	0,15	0,03	**0,13**	0,20		0,05	**0,09**	0,15	0,03	**0,13**	0,20
	0,4	0,05	**0,12**	0,20	0,03	**0,13**	0,20		0,05	**0,12**	0,20	0,03	**0,13**	0,20
	0,8	0,05	**0,15**	0,25	0,03	**0,20**	0,30		0,05	**0,12**	0,20	0,03	**0,16**	0,25
	1,2	0,05	**0,15**	0,25	0,03	**0,20**	0,30		0,05	**0,15**	0,25	0,03	**0,20**	0,30
S01225	0,2	0,05	**0,09**	0,15	0,03	**0,13**	0,20		0,05	**0,09**	0,15	0,03	**0,13**	0,20
	0,4	0,05	**0,12**	0,20	0,03	**0,13**	0,20		0,05	**0,12**	0,20	0,03	**0,13**	0,20
	0,8	0,05	**0,15**	0,25	0,03	**0,16**	0,25		0,05	**0,12**	0,20	0,03	**0,16**	0,25
	1,2	0,05	**0,15**	0,25	0,03	**0,20**	0,30							
S01225CB1	0,4	0,05	**0,18**	0,30	0,03	**0,30**	0,50							
	0,8	0,05	**0,20**	0,35	0,03	**0,40**	0,70							
S01515GW	0,4	0,05	**0,18**	0,30	0,03	**0,16**	0,25							
	0,8	0,05	**0,21**	0,35	0,03	**0,18**	0,28							
	1,2	0,05	**0,24**	0,40	0,03	**0,20**	0,30							
S01225GWCB1	0,4	0,05	**0,18**	0,30	0,03	**0,33**	0,50							
	0,8	0,05	**0,21**	0,35	0,03	**0,33**	0,50							

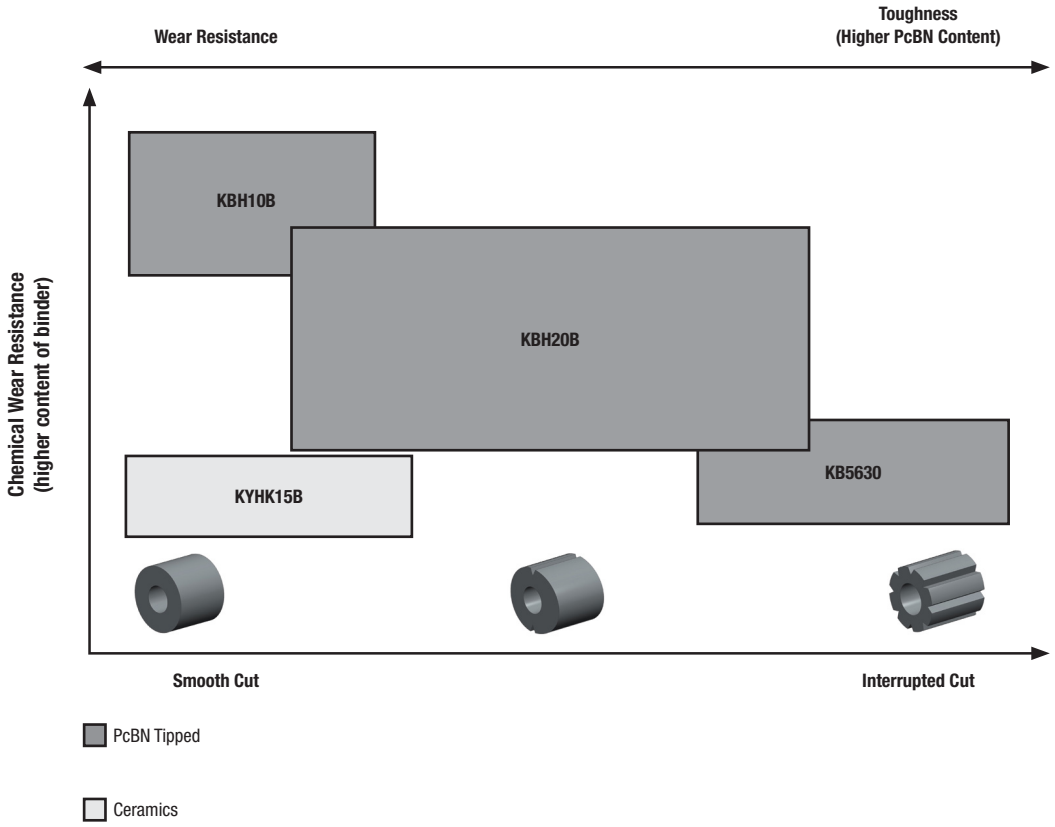
KBH10B & KBH20B
Application Data • Negative Rake • Inch

		C-Style, D-Style, S-Style & W-Style						V-Style & T-Style					
		…MMT						…MMT					
		Feed			DOC			Feed			DOC		
Edge Prep	CR	MIN	START	MAX	MIN	START	MAX	MIN	START	MAX	MIN	START	MAX
E	2	.002	**.006**	.01	.001	**.008**	.012	.002	**.006**	.01	.001	**.008**	.012
S0415	1	.002	**.006**	.01	.001	**.008**	.012	.002	**.005**	.008	.001	**.005**	.008
	2	.002	**.006**	.01	.001	**.008**	.012	.002	**.006**	.01	.001	**.008**	.012
	3	.002	**.006**	.01	.001	**.008**	.012	.002	**.006**	.01	.001	**.008**	.012
S0525	1	.002	**.006**	.01	.001	**.008**	.012	.002	**.005**	.008	.001	**.005**	.008
	2	.002	**.006**	.01	.001	**.008**	.012	.002	**.006**	.01	.001	**.008**	.012
	3	.002	**.006**	.01	.001	**.008**	.012	.002	**.006**	.01	.001	**.008**	.012
S0735	1							.002	**.005**	.008	.001	**.005**	.008
	2	.002	**.006**	.01	.001	**.008**	.012	.002	**.006**	.01	.001	**.008**	.012
	3	.002	**.006**	.01	.001	**.008**	.012	.002	**.006**	.01	.001	**.008**	.012
S0525CB1	1	.002	**.007**	.012	.001	**.012**	.02	.002	**.007**	.012	.001	**.011**	.018
	2	.002	**.008**	.014	.001	**.016**	.028	.002	**.008**	.014	.001	**.011**	.018
S0615GW	1	.002	**.007**	.012	.001	**.006**	.01						
	2	.002	**.008**	.014	.001	**.007**	.011						
	3	.002	**.009**	.016	.001	**.008**	.012						
S0525GWCB1	1	.002	**.007**	.012	.001	**.012**	.02						
	2	.002	**.008**	.014	.001	**.016**	.028						

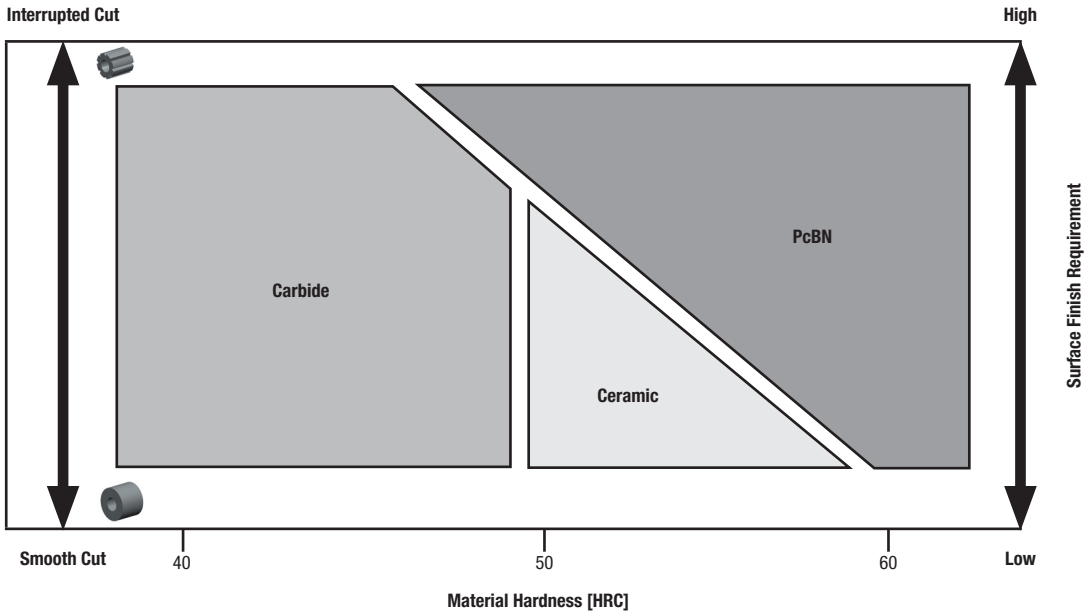
KBH10B & KBH20B
Application Data • Postive Rake • Inch

		C.GW3 / D.GW3 / S.GW3						C.GW2 / D.GW02 / T.GW2/ V.GW2 / V.GW3					
		…MMT						…MMT					
		Feed			DOC			Feed			DOC		
Edge Prep	CR	MIN	START	MAX	MIN	START	MAX	MIN	START	MAX	MIN	START	MAX
E	05							.002	**.004**	.006	.001	**.005**	.008
	1	.002	**.005**	.008	.001	**.005**	.008	.002	**.005**	.008	.001	**.005**	.008
	2	.002	**.006**	.01	.001	**.008**	.012	.002	**.006**	.01	.001	**.006**	.01
S0415	05	.002	**.004**	.006	.001	**.005**	.008	.002	**.004**	.006	.001	**.005**	.008
	1	.002	**.005**	.008	.001	**.005**	.008	.002	**.005**	.008	.001	**.005**	.008
	2	.002	**.006**	.01	.001	**.008**	.012	.002	**.005**	.008	.001	**.006**	.01
	3	.002	**.006**	.01	.001	**.008**	.012	.002	**.006**	.01	.001	**.008**	.012
S0525	05	.002	**.004**	.006	.001	**.005**	.008	.002	**.004**	.006	.001	**.005**	.008
	1	.002	**.005**	.008	.001	**.005**	.008	.002	**.005**	.008	.001	**.005**	.008
	2	.002	**.006**	.01	.001	**.006**	.01	.002	**.005**	.008	.001	**.006**	.01
	3	.002	**.006**	.01	.001	**.008**	.012						
S0525CB1	1	.002	**.007**	.012	.001	**.012**	.02						
	2	.002	**.008**	.014	.001	**.016**	.028						
S0615GW	1	.002	**.007**	.012	.001	**.006**	.01						
	2	.002	**.008**	.014	.001	**.007**	.011						
	3	.002	**.009**	.016	.001	**.008**	.012						
S0525GWCB1	1	.002	**.007**	.012	.001	**.013**	.02						
	2	.002	**.008**	.014	.001	**.013**	.02						

TOOL SELECTION – CHOOSING THE RIGHT CUTTING MATERIAL



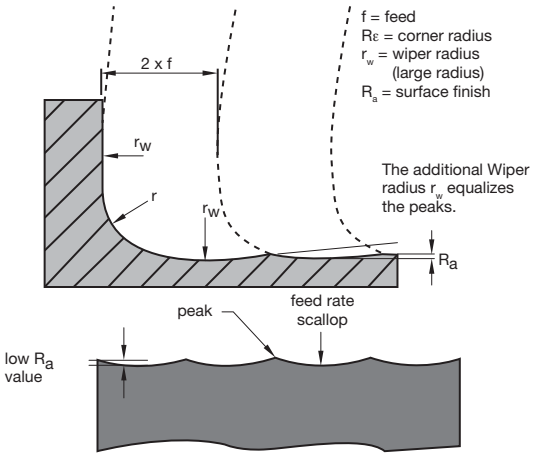
KYHK15B can be an excellent choice to reduce insert cost while almost obtaining the same performance of PcBN. Whenever it comes to smooth-cut applications and the need for high chemical wear resistance, KBH10B is the best choice.



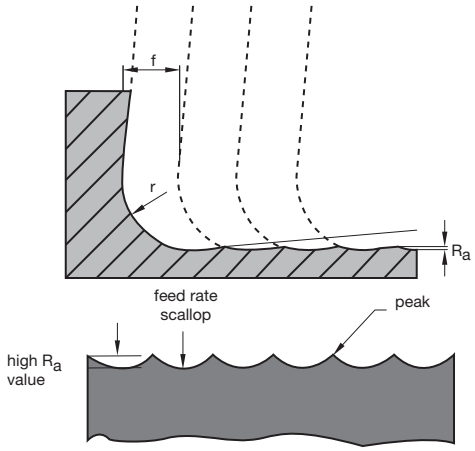
Depending on the surface requirement and the type of cut, the ceramic grade KYHK15B can be an economic alternative to PcBN inserts when machining hard materials >48 HRC.

PRINCIPLE OF A WIPER INSERT

Wiper insert

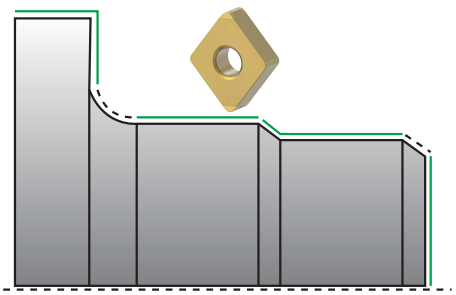


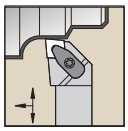
Regular insert



CHOOSING THE RIGHT INSERT STYLE

C-Style longitudinal turning and facing



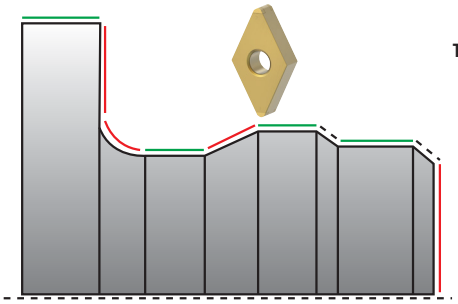


CN..80° insert for DCLN, PCLN, MCLN, CCLN 95°/-5° toolholder.

Surface finish with wiper effect.

Surface with effective corner radius.

D-Style longitudinal turning and facing

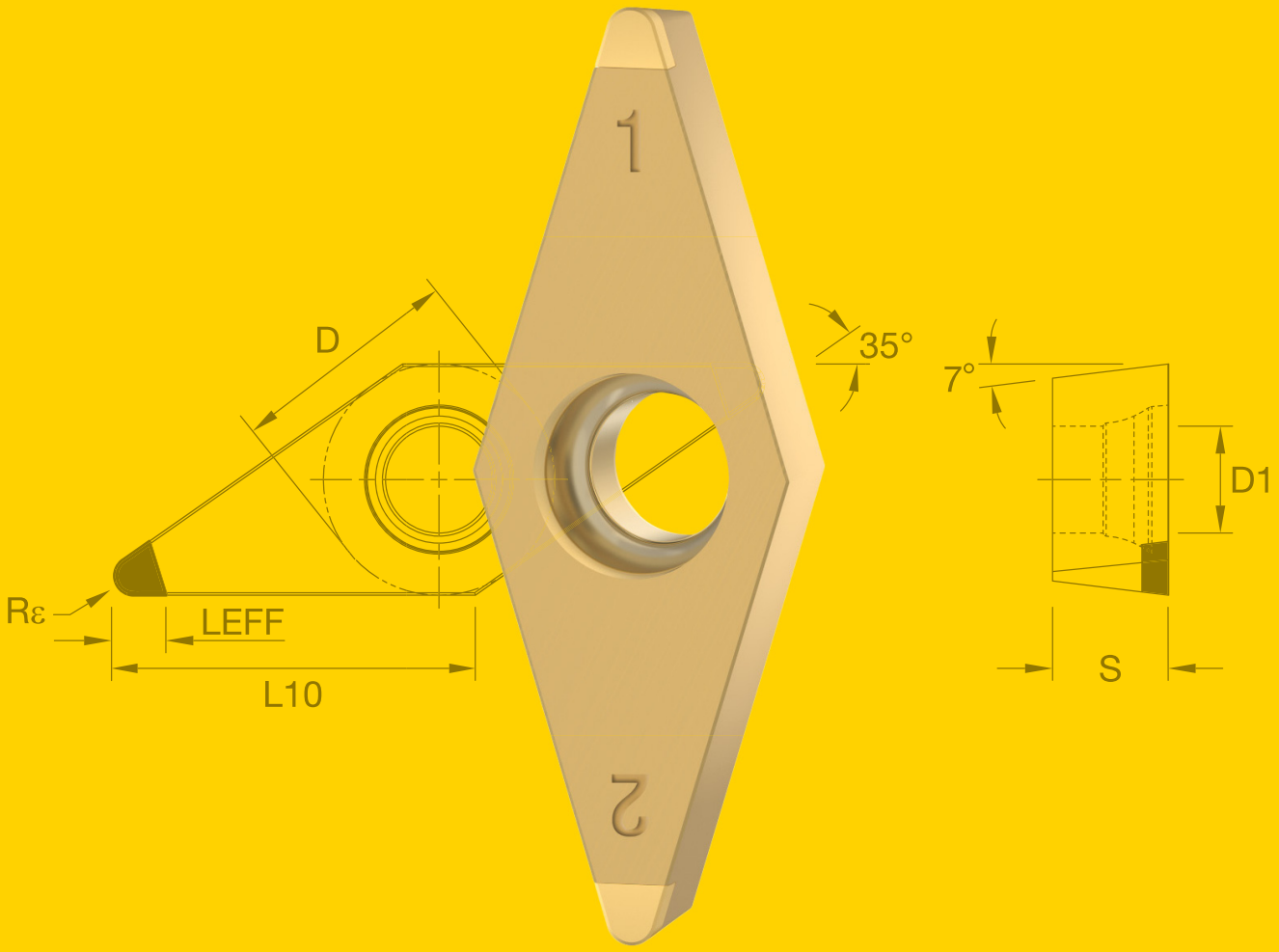


DN..55° insert for DDJN, PCJN, MDJN, 93°/-3° toolholder.

Surface finish with wiper effect.

Surface finish with effective corner radius, no wiper effect.

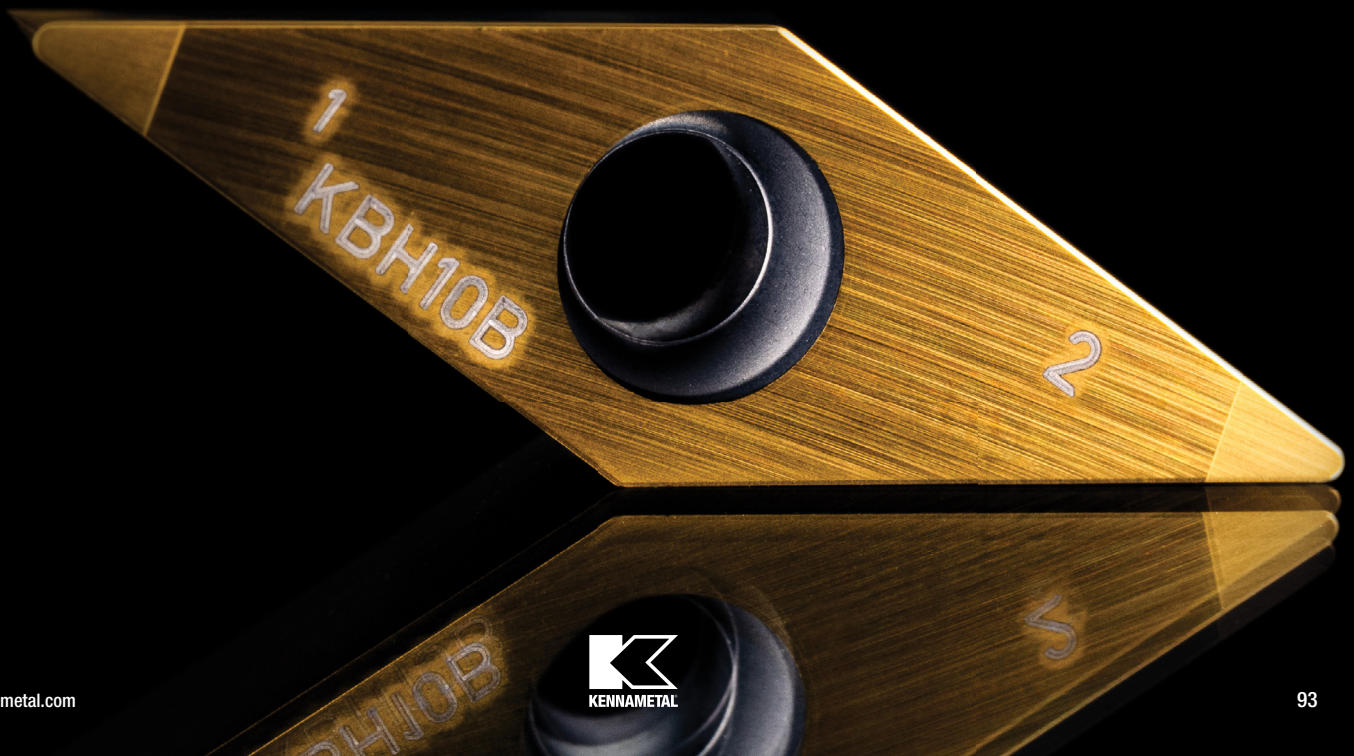
No profiling and facing possible.

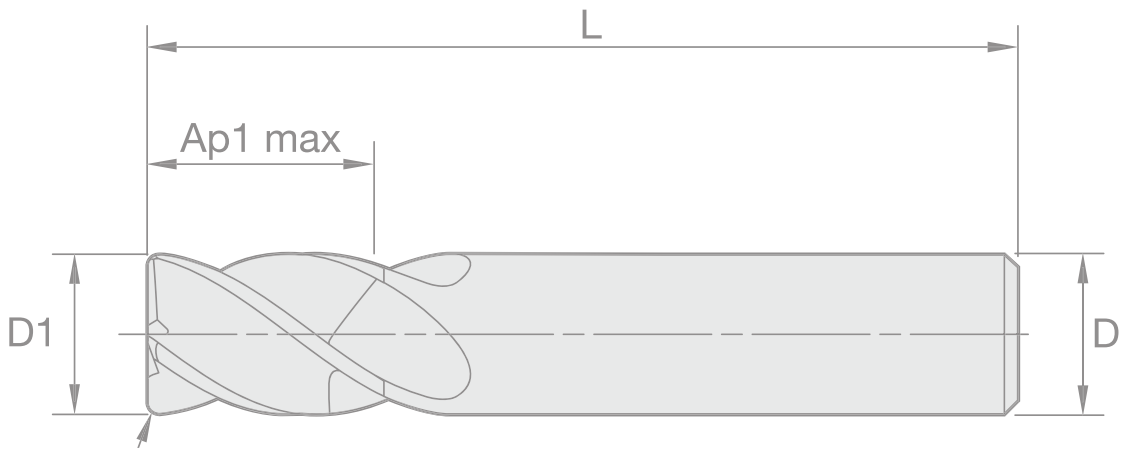

1
2
D
35°
7°
D1
Rε
LEFF
L10
S

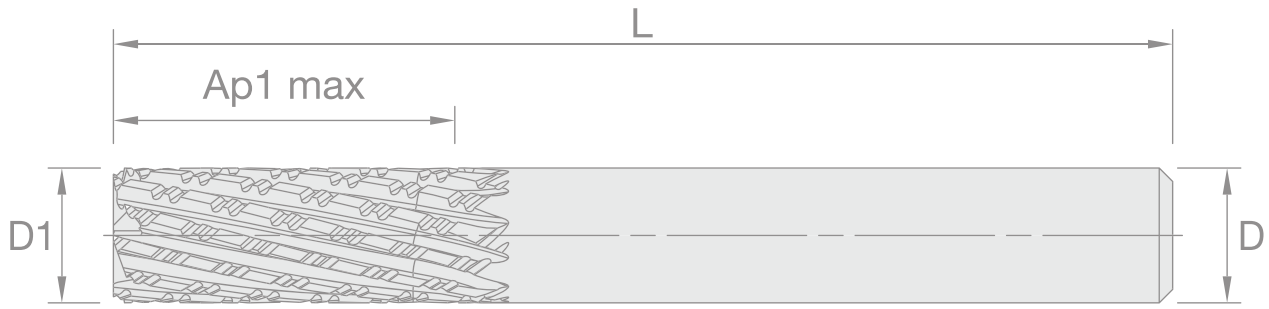
KBH10B & KBH20B HARDENED STEEL GRADES

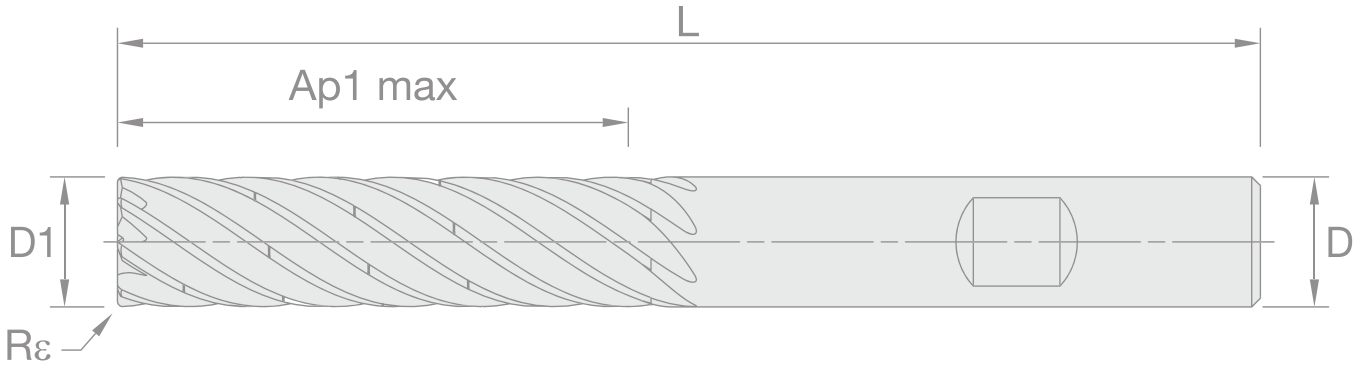
LET'S TAKE YOUR **MANUFACTURING**
TO THE **NEXT LEVEL**

kennametal.com




L
Ap1 max
D1
D


L
Ap1 max
D1
D


L
Ap1 max
D1
D
Rε

GOmill™ PRO SOLID CARBIDE END MILLS

Ideal for shops working in the general engineering, transportation, energy and medical industries, GOmill PRO serves as a do-it-all end mill where price, performance and versatility meet for next level operations.

Your Go-To End Mill for Price, Performance & Versatility

Kennametal's 4-flute GOmill PRO Solid Carbide End Mills are suited to become the go-to solution for small and medium sized shops. Designed for side and shoulder milling, helical milling, pocketing, slotting and shallow ramping, GOmill PRO delivers affordability, versatility and high performance for next level machining.

Features & Benefits

- Asymmetric divided flutes for better vibration control and tool life and smoother cutting
- Variable helix angle for better vibration control and tool life
- Tapered core for better chip evacuation and tool strength
- Multilayer TiN/TiALN coating for high performance with medium-high cutting on steels, stainless steels and cast iron
- Special relief design for higher edge strength, better vibration control and workpiece material flexibility

Product

Cutting Diameter	Length of Cut	Grade	End Face Styles	Shank Styles
5/64 – 1 1/4"	**1xD – 8xD**	**KCU20**	**Square End, Chamfer, Radius, Ball Nose**	**Weldon & Cylindrical Shanks**

Applications

Side Milling/ Shoulder Milling | Helical Milling | Pocketing | Slotting | Ramping | Dynamic Milling

Materials

PRIMARY

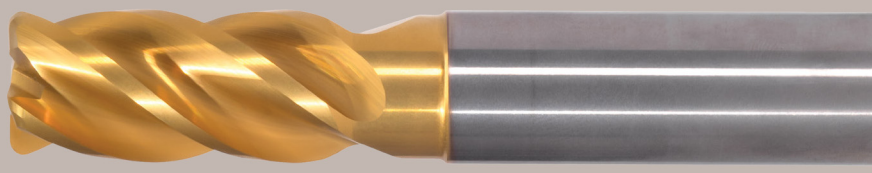
P Steels | K Cast Iron | M Stainless Steels

SECONDARY

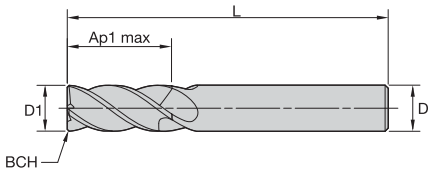
S High-Temp Alloys

Industries

General Engineering | Automotive | Wind & Solar | Oil & Gas | Medical



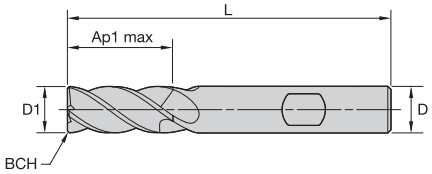
EXPLORE GOmill PRO

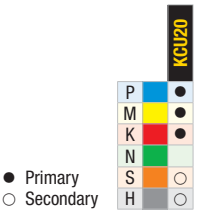


● Primary
○ Secondary

GOmill PRO • Chamfered • 4 Flutes • Plain Shank • Inch

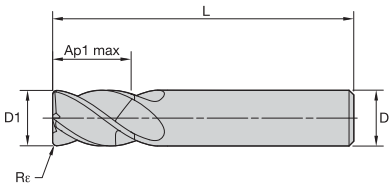
Catalog Number	D1	D	Ap1 Max	L	BCH	KCU20
GOPR4CH0125S025HA	1/8	1/8	1/4	1 1/2	.010	7300365
GOPR4CH0125L050HA	1/8	1/8	1/2	2	.010	7300364
GOPR4CH0125X075HA	1/8	1/8	3/4	2 1/4	.010	7300949
GOPR4CH0125X100HA	1/8	1/8	1	3	.010	7300948
GOPR4CH0156L056HA	5/32	3/16	9/16	2	.010	7300950
GOPR4CH0188S031HA	3/16	3/16	5/16	2	.010	7301032
GOPR4CH0188R063HA	3/16	3/16	5/8	2 1/4	.010	7300366
GOPR4CH0188L075HA	3/16	3/16	3/4	2 1/2	.010	7301031
GOPR4CH0219R063HA	7/32	1/4	5/8	2 1/2	.016	7301033
GOPR4CH0250S038HA	1/4	1/4	3/8	2	.015	7300368
GOPR4CH0250R075HA	1/4	1/4	3/4	2 1/2	.015	7300367
GOPR4CH0313S050HA	5/16	5/16	1/2	2	.015	7300370
GOPR4CH0313R075HA	5/16	5/16	3/4	2 1/2	.015	7300369
GOPR4CH0375S050HA	3/8	3/8	1/2	2	.020	7300382
GOPR4CH0375R088HA	3/8	3/8	7/8	2 1/2	.020	7300381
GOPR4CH0438S063HA	7/16	7/16	5/8	2 1/2	.020	7300383
GOPR4CH0438S088HA	7/16	7/16	7/8	3	.020	7301034
GOPR4CH0500S063HA	1/2	1/2	5/8	2 1/2	.020	7301041
GOPR4CH0500S100HA	1/2	1/2	1	3	.020	7301039
GOPR4CH0500R125HA	1/2	1/2	1 1/4	3 1/4	.020	7301037
GOPR4CH0500R150HA	1/2	1/2	1 1/2	4	.020	7301036
GOPR4CH0500L200HA	1/2	1/2	2	4	.020	7301035
GOPR4CH0625S075HA	5/8	5/8	3/4	3	.020	7301048
GOPR4CH0625S125HA	5/8	5/8	1 1/4	3 1/2	.020	7301045
GOPR4CH0625R163HA	5/8	5/8	1 5/8	4 1/8	.020	7301044
GOPR4CH0625L225HA	5/8	5/8	2 1/4	5	.020	7301042
GOPR4CH0625S075HAE	5/8	5/8	3/4	6	.020	7301046
GOPR4CH0750S088HA	3/4	3/4	7/8	3 1/2	.020	7301056
GOPR4CH0750S150HA	3/4	3/4	1 1/2	4	.020	7301053
GOPR4CH0750R163HA	3/4	3/4	1 5/8	4	.020	7301051
GOPR4CH0750R225HA	3/4	3/4	2 1/4	5	.020	7301050
GOPR4CH0750S100HA	3/4	3/4	1	6	.020	7301054
GOPR4CH0750L300HA	3/4	3/4	3	6	.020	7301049





GOmill PRO • Chamfered • 4 Flutes • Weldon Shank • Inch

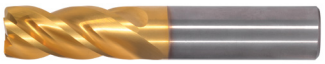
Catalog Number	D1	D	Ap1 Max	L	BCH	KCU20
GOPR4CH0500S063HB	1/2	1/2	5/8	2 1/2	.020	7300386
GOPR4CH0500S100HB	1/2	1/2	1	3	.020	7301040
GOPR4CH0500R125HB	1/2	1/2	1 1/4	3 1/4	.020	7301038
GOPR4CH0500R150HB	1/2	1/2	1 1/2	4	.020	7300385
GOPR4CH0500L200HB	1/2	1/2	2	4	.020	7300384
GOPR4CH0625S075HB	5/8	5/8	3/4	3	.020	7300389
GOPR4CH0625S125HB	5/8	5/8	1 1/4	3 1/2	.020	7300388
GOPR4CH0625R163HB	5/8	5/8	1 5/8	4 1/8	.020	7300387
GOPR4CH0625L225HB	5/8	5/8	2 1/4	5	.020	7301043
GOPR4CH0625S075HBE	5/8	5/8	3/4	6	.020	7301047
GOPR4CH0750S088HB	3/4	3/4	7/8	3 1/2	.020	7300403
GOPR4CH0750S150HB	3/4	3/4	1 1/2	4	.020	7300402
GOPR4CH0750R163HB	3/4	3/4	1 5/8	4	.020	7301052
GOPR4CH0750R225HB	3/4	3/4	2 1/4	5	.020	7300401
GOPR4CH0750S100HB	3/4	3/4	1	6	.020	7301055
GOPR4CH0750L300HB	3/4	3/4	3	6	.020	7300390
GOPR4CH1000S150HB	1	1	1 1/2	4	.020	7300407
GOPR4CH1000S200HB	1	1	2	5	.020	7300406
GOPR4CH1000R225HB	1	1	2 1/4	5	.020	7301058
GOPR4CH1000R263HB	1	1	2 5/8	5	.020	7301057
GOPR4CH1000R300HB	1	1	3	6	.020	7300405
GOPR4CH1000L400HB	1	1	4	7	.020	7300404
GOPR4CH1250S225HB	1 1/4	1 1/4	2 1/4	5	.020	7301059

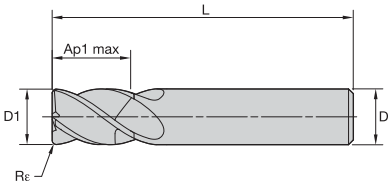


● Primary
○ Secondary

GOmill PRO • Radiused • 4 Flutes • Plain Shank • Inch

Catalog Number	D1	D	Ap1 Max	L	Rε	KCU20
GOPR4RA0094R038HAR010	3/32	1/8	3/8	1 1/2	.010	7301737
GOPR4RA0094R038HAR015	3/32	1/8	3/8	1 1/2	.015	7301736
GOPR4RA0125S025HAR015	1/8	1/8	1/4	1 1/2	.015	7300260
GOPR4RA0125R050HAR010	1/8	1/8	1/2	1 1/2	.010	7301771
GOPR4RA0125R050HAR015	1/8	1/8	1/2	1 1/2	.015	7301740
GOPR4RA0125R050HAR020	1/8	1/8	1/2	1 1/2	.020	7301739
GOPR4RA0125R050HAR030	1/8	1/8	1/2	1 1/2	.030	7301738
GOPR4RA0125R050HAR015E	1/8	1/8	1/2	2	.015	7300259
GOPR4RA0125S025HAR015E	1/8	1/8	1/4	2 1/2	.015	7301772
GOPR4RA0188S031HAR015	3/16	3/16	5/16	2	.015	7300264
GOPR4RA0188S031HAR030	3/16	3/16	5/16	2	.030	7300263
GOPR4RA0188R063HAR010	3/16	3/16	5/8	2	.010	7301776
GOPR4RA0188R063HAR015	3/16	3/16	5/8	2	.015	7301775
GOPR4RA0188R063HAR020	3/16	3/16	5/8	2	.020	7301774
GOPR4RA0188R063HAR030	3/16	3/16	5/8	2	.030	7301773
GOPR4RA0188R063HAR015E	3/16	3/16	5/8	2 1/4	.015	7300262
GOPR4RA0188R063HAR030X	3/16	3/16	5/8	2 1/4	.030	7300261
GOPR4RA0188S031HAR015E	3/16	3/16	5/16	2 1/2	.015	7301778
GOPR4RA0188R063HAR030E	3/16	3/16	5/8	2 1/2	.030	7301777
GOPR4RA0250S038HAR030	1/4	1/4	3/8	2	.030	7300270
GOPR4RA0250S038HAR015	1/4	1/4	3/8	2 1/2	.015	7301785
GOPR4RA0250S050HAR015	1/4	1/4	1/2	2 1/2	.015	7301784
GOPR4RA0250S050HAR030	1/4	1/4	1/2	2 1/2	.030	7301783
GOPR4RA0250S050HAR060	1/4	1/4	1/2	2 1/2	.060	7301782
GOPR4RA0250R075HAR015	1/4	1/4	3/4	2 1/2	.015	7300269
GOPR4RA0250R075HAR030	1/4	1/4	3/4	2 1/2	.030	7300268
GOPR4RA0250R075HAR060	1/4	1/4	3/4	2 1/2	.060	7300267
GOPR4RA0250R100HAR015	1/4	1/4	1	3	.015	7301781
GOPR4RA0250R125HAR015	1/4	1/4	1 1/4	3 1/4	.015	7300266
GOPR4RA0250R125HAR030	1/4	1/4	1 1/4	3 1/4	.030	7300265
GOPR4RA0250R175HAR015	1/4	1/4	1 3/4	4	.015	7301780
GOPR4RA0250R175HAR030	1/4	1/4	1 3/4	4	.030	7301779
GOPR4RA0313S050HAR030	5/16	5/16	1/2	2	.030	7300285
GOPR4RA0313S050HAR015	5/16	5/16	1/2	2 1/2	.015	7301803
GOPR4RA0313R075HAR015	5/16	5/16	3/4	2 1/2	.015	7300284
GOPR4RA0313R075HAR030	5/16	5/16	3/4	2 1/2	.030	7300283
GOPR4RA0313R075HAR060	5/16	5/16	3/4	2 1/2	.060	7300282
GOPR4RA0313R081HAR015	5/16	5/16	13/16	2 1/2	.015	7301802
GOPR4RA0313R081HAR020	5/16	5/16	13/16	2 1/2	.020	7301801
GOPR4RA0313R081HAR030	5/16	5/16	13/16	2 1/2	.030	7301790
GOPR4RA0313R081HAR045	5/16	5/16	13/16	2 1/2	.045	7301789
GOPR4RA0313R081HAR060	5/16	5/16	13/16	2 1/2	.060	7301788
GOPR4RA0313R125HAR030	5/16	5/16	1 1/4	3 1/4	.030	7300281
GOPR4RA0375S050HAR015	3/8	3/8	1/2	2	.015	7300294
GOPR4RA0375S050HAR030	3/8	3/8	1/2	2	.030	7300293
GOPR4RA0375S050HAR060	3/8	3/8	1/2	2	.060	7300292
GOPR4RA0375S050HAR015E	3/8	3/8	1/2	2 1/2	.015	7301815
GOPR4RA0375S050HAR030E	3/8	3/8	1/2	2 1/2	.030	7301814
GOPR4RA0375R088HAR015	3/8	3/8	7/8	2 1/2	.015	7300291
GOPR4RA0375R088HAR030	3/8	3/8	7/8	2 1/2	.030	7300290
GOPR4RA0375R088HAR060	3/8	3/8	7/8	2 1/2	.060	7300289
GOPR4RA0375R088HAR090	3/8	3/8	7/8	2 1/2	.090	7300288
GOPR4RA0375R088HAR015E	3/8	3/8	7/8	3	.015	7301813
GOPR4RA0375R088HAR030E	3/8	3/8	7/8	3	.030	7301812
GOPR4RA0375R088HAR090E	3/8	3/8	7/8	3	.090	7301811
GOPR4RA0375R100HAR015	3/8	3/8	1	3	.015	7301810
GOPR4RA0375R100HAR030	3/8	3/8	1	3	.030	7301809
GOPR4RA0375R100HAR060	3/8	3/8	1	3	.060	7301808
GOPR4RA0375R125HAR015	3/8	3/8	1 1/4	3	.015	7301807
GOPR4RA0375R125HAR030	3/8	3/8	1 1/4	3	.030	7301806
GOPR4RA0375R125HAR060	3/8	3/8	1 1/4	3	.060	7301805

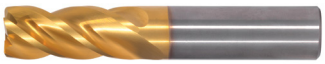


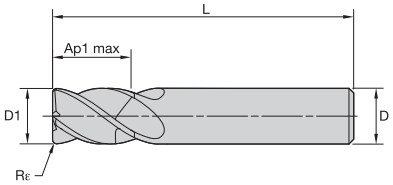


● Primary
○ Secondary

GOmill PRO • Radiused • 4 Flutes • Plain Shank • Inch • Continued

Catalog Number	D1	D	Ap1 Max	L	Rε	KCU20
GOPR4RA0375R150HAR030	3/8	3/8	1 1/2	4	.030	7300287
GOPR4RA0375R150HAR060	3/8	3/8	1 1/2	4	.060	7300286
GOPR4RA0375R250HAR030	3/8	3/8	2 1/2	4	.030	7301804
GOPR4RA0438R113HAR015	7/16	7/16	1 1/8	3 1/2	.015	7301818
GOPR4RA0500S063HAR015	1/2	1/2	5/8	2 1/2	.015	7301850
GOPR4RA0500S063HAR030	1/2	1/2	5/8	2 1/2	.030	7301849
GOPR4RA0500S063HAR060	1/2	1/2	5/8	2 1/2	.060	7301848
GOPR4RA0500S063HAR015E	1/2	1/2	5/8	3	.015	7301846
GOPR4RA0500S063HAR030E	1/2	1/2	5/8	3	.030	7301844
GOPR4RA0500S100HAR030	1/2	1/2	1	3	.030	7301842
GOPR4RA0500S100HAR060	1/2	1/2	1	3	.060	7301830
GOPR4RA0500R125HAR015	1/2	1/2	1 1/4	3 1/4	.015	7301828
GOPR4RA0500R125HAR030	1/2	1/2	1 1/4	3 1/4	.030	7301826
GOPR4RA0500R125HAR060	1/2	1/2	1 1/4	3 1/4	.060	7301824
GOPR4RA0500R125HAR090	1/2	1/2	1 1/4	3 1/4	.090	7301820
GOPR4RA0500R125HAR120	1/2	1/2	1 1/4	3 1/4	.120	7301822
GOPR4RA0500R150HAR015	1/2	1/2	1 1/2	4	.015	7301819
GOPR4RA0500R150HAR030	1/2	1/2	1 1/2	4	.030	7301883
GOPR4RA0500R150HAR060	1/2	1/2	1 1/2	4	.060	7301881
GOPR4RA0500R150HAR120	1/2	1/2	1 1/2	4	.120	7301882
GOPR4RA0500R163HAR030	1/2	1/2	1 5/8	4	.030	7301879
GOPR4RA0500R163HAR060	1/2	1/2	1 5/8	4	.060	7301877
GOPR4RA0500R163HAR120	1/2	1/2	1 5/8	4	.120	7301875
GOPR4RA0500R200HAR030	1/2	1/2	2	4	.030	7301874
GOPR4RA0500R200HAR060	1/2	1/2	2	4	.060	7301872
GOPR4RA0500R200HAR030E	1/2	1/2	2	4 1/2	.030	7301873
GOPR4RA0500R250HAR030	1/2	1/2	2 1/2	4 1/2	.030	7301871
GOPR4RA0500R250HAR060	1/2	1/2	2 1/2	4 1/2	.060	7301859
GOPR4RA0500R250HAR030E	1/2	1/2	2 1/2	5	.030	7301857
GOPR4RA0500R300HAR030	1/2	1/2	3	5	.030	7301855
GOPR4RA0500R300HAR060	1/2	1/2	3	5	.060	7301853
GOPR4RA0625S075HAR060	5/8	5/8	3/4	3	.060	7301906
GOPR4RA0625S075HAR015	5/8	5/8	3/4	3 1/2	.015	7301904
GOPR4RA0625S075HAR030	5/8	5/8	3/4	3 1/2	.030	7301902
GOPR4RA0625S075HAR060E	5/8	5/8	3/4	3 1/2	.060	7301900
GOPR4RA0625S125HAR030	5/8	5/8	1 1/4	3 1/2	.030	7301899
GOPR4RA0625S125HAR060	5/8	5/8	1 1/4	3 1/2	.060	7301898
GOPR4RA0625S125HAR090	5/8	5/8	1 1/4	3 1/2	.090	7301897
GOPR4RA0625S125HAR120	5/8	5/8	1 1/4	3 1/2	.120	7301896
GOPR4RA0625R213HAR030	5/8	5/8	2 1/8	4	.030	7301769
GOPR4RA0625R213HAR060	5/8	5/8	2 1/8	4	.060	7301768
GOPR4RA0625R213HAR120	5/8	5/8	2 1/8	4	.120	7301767
GOPR4RA0625R163HAR030E	5/8	5/8	1 5/8	4 1/8	.030	7301895
GOPR4RA0625R163HAR060E	5/8	5/8	1 5/8	4 1/8	.060	7301894
GOPR4RA0625R163HAR120	5/8	5/8	1 5/8	4 1/8	.120	7301893
GOPR4RA0625R225HAR060	5/8	5/8	2 1/4	5	.060	7301766
GOPR4RA0750S088HAR030	3/4	3/4	7/8	3 1/2	.030	7301947
GOPR4RA0750S088HAR060	3/4	3/4	7/8	3 1/2	.060	7301946
GOPR4RA0750S088HAR090	3/4	3/4	7/8	3 1/2	.090	7301945
GOPR4RA0750S088HAR120	3/4	3/4	7/8	3 1/2	.120	7301944
GOPR4RA0750S088HAR030E	3/4	3/4	7/8	4	.030	7301940
GOPR4RA0750S150HAR015	3/4	3/4	1 1/2	4	.015	7301939
GOPR4RA0750S150HAR030	3/4	3/4	1 1/2	4	.030	7301938
GOPR4RA0750S150HAR060	3/4	3/4	1 1/2	4	.060	7301937
GOPR4RA0750S150HAR090	3/4	3/4	1 1/2	4	.090	7301935
GOPR4RA0750S150HAR120	3/4	3/4	1 1/2	4	.120	7301936
GOPR4RA0750R163HAR030	3/4	3/4	1 5/8	4	.030	7301933
GOPR4RA0750R163HAR060	3/4	3/4	1 5/8	4	.060	7301931
GOPR4RA0750R163HAR090	3/4	3/4	1 5/8	4	.090	7301929
GOPR4RA0750R163HAR120	3/4	3/4	1 5/8	4	.120	7301927
GOPR4RA0750R225HAR030	3/4	3/4	2 1/4	5	.030	7301925

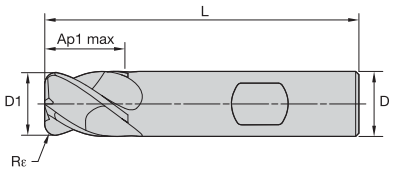




● Primary
○ Secondary

GOmill PRO • Radiused • 4 Flutes • Plain Shank • Inch • Continued

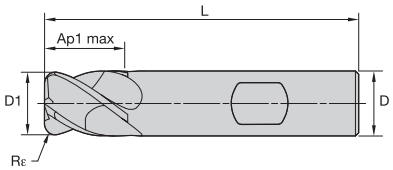
Catalog Number	D1	D	Ap1 Max	L	Rε	KCU20
GOPR4RA0750R225HAR060	3/4	3/4	2 1/4	5	.060	7301924
GOPR4RA0750R225HAR090	3/4	3/4	2 1/4	5	.090	7301923
GOPR4RA0750R225HAR120	3/4	3/4	2 1/4	5	.120	7301922
GOPR4RA0750R300HAR030	3/4	3/4	3	6	.030	7301921
GOPR4RA0750R300HAR060	3/4	3/4	3	6	.060	7301920
GOPR4RA0750R300HAR090	3/4	3/4	3	6	.090	7301919
GOPR4RA0750R300HAR120	3/4	3/4	3	6	.120	7301918
GOPR4RA0750R400HAR030	3/4	3/4	4	6 1/4	.030	7301915
GOPR4RA0750R400HAR060	3/4	3/4	4	6 1/4	.060	7301913
GOPR4RA0750R400HAR090	3/4	3/4	4	6 1/4	.090	7301911
GOPR4RA0750R400HAR120	3/4	3/4	4	6 1/4	.120	7301907
GOPR4RA0875S150HAR015	7/8	7/8	1 1/2	4	.015	7301961
GOPR4RA0875S150HAR020	7/8	7/8	1 1/2	4	.020	7301960
GOPR4RA0875S150HAR030	7/8	7/8	1 1/2	4	.030	7301959
GOPR4RA0875S150HAR060	7/8	7/8	1 1/2	4	.060	7301958
GOPR4RA0875S150HAR090	7/8	7/8	1 1/2	4	.090	7301957
GOPR4RA0875S150HAR120	7/8	7/8	1 1/2	4	.120	7301956
GOPR4RA1000S150HAR030	1	1	1 1/2	4	.030	7301969
GOPR4RA1000S200HAR030	1	1	2	4 1/2	.030	7301968
GOPR4RA1250S225HAR060	1 1/4	1 1/4	2 1/4	5	.060	7301972
GOPR4RA1250S225HAR090	1 1/4	1 1/4	2 1/4	5	.090	7301971
GOPR4RA1250S225HAR120	1 1/4	1 1/4	2 1/4	5	.120	7301970



● Primary
○ Secondary

GOmill PRO • Radiused • 4 Flutes • Weldon Shank • Inch

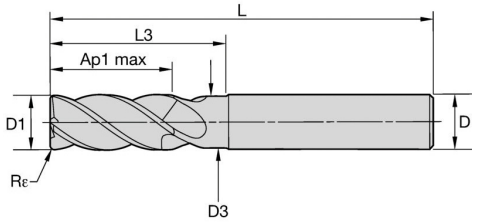
Catalog Number	D1	D	Ap1 Max	L	Rε	KCU20
GOPR4RA0500S063HBR015	1/2	1/2	5/8	2 1/2	.015	7300300
GOPR4RA0500S063HBR030	1/2	1/2	5/8	2 1/2	.030	7300299
GOPR4RA0500S063HBR060	1/2	1/2	5/8	2 1/2	.060	7300298
GOPR4RA0500S063HBR015E	1/2	1/2	5/8	3	.015	7301847
GOPR4RA0500S063HBR030E	1/2	1/2	5/8	3	.030	7301845
GOPR4RA0500S100HBR030	1/2	1/2	1	3	.030	7301843
GOPR4RA0500S100HBR060	1/2	1/2	1	3	.060	7301841
GOPR4RA0500R125HBR015	1/2	1/2	1 1/4	3 1/4	.015	7301829
GOPR4RA0500R125HBR030	1/2	1/2	1 1/4	3 1/4	.030	7301827
GOPR4RA0500R125HBR060	1/2	1/2	1 1/4	3 1/4	.060	7301825
GOPR4RA0500R125HBR090	1/2	1/2	1 1/4	3 1/4	.090	7301821
GOPR4RA0500R125HBR120	1/2	1/2	1 1/4	3 1/4	.120	7301823
GOPR4RA0500R150HBR015	1/2	1/2	1 1/2	4	.015	7300296
GOPR4RA0500R150HBR030	1/2	1/2	1 1/2	4	.030	7300295
GOPR4RA0500R150HBR045	1/2	1/2	1 1/2	4	.045	7300297
GOPR4RA0500R150HBR060	1/2	1/2	1 1/2	4	.060	7300306
GOPR4RA0500R150HBR090	1/2	1/2	1 1/2	4	.090	7300305
GOPR4RA0500R150HBR120	1/2	1/2	1 1/2	4	.120	7300307
GOPR4RA0500R163HBR030	1/2	1/2	1 5/8	4	.030	7301880
GOPR4RA0500R163HBR060	1/2	1/2	1 5/8	4	.060	7301878
GOPR4RA0500R163HBR120	1/2	1/2	1 5/8	4	.120	7301876
GOPR4RA0500R200HBR030	1/2	1/2	2	4	.030	7300304
GOPR4RA0500R200HBR060	1/2	1/2	2	4	.060	7300303
GOPR4RA0500R250HBR030	1/2	1/2	2 1/2	4 1/2	.030	7300302
GOPR4RA0500R250HBR060	1/2	1/2	2 1/2	4 1/2	.060	7300301

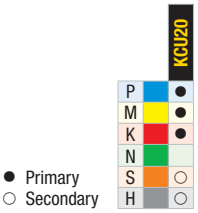


● Primary
○ Secondary

GOmill PRO • Radiused • 4 Flutes • Weldon Shank • Inch • Continued

Catalog Number	D1	D	Ap1 Max	L	Rε	KCU20
GOPR4RA0500R250HBR030E	1/2	1/2	2 1/2	5	.030	7301858
GOPR4RA0500R300HBR030	1/2	1/2	3	5	.030	7301856
GOPR4RA0500R300HBR060	1/2	1/2	3	5	.060	7301854
GOPR4RA0625S075HBR060	5/8	5/8	3/4	3	.060	7300326
GOPR4RA0625S075HBR015	5/8	5/8	3/4	3 1/2	.015	7301905
GOPR4RA0625S075HBR030	5/8	5/8	3/4	3 1/2	.030	7301903
GOPR4RA0625S075HBR060E	5/8	5/8	3/4	3 1/2	.060	7301901
GOPR4RA0625S125HBR030	5/8	5/8	1 1/4	3 1/2	.030	7300325
GOPR4RA0625S125HBR060	5/8	5/8	1 1/4	3 1/2	.060	7300324
GOPR4RA0625S125HBR090	5/8	5/8	1 1/4	3 1/2	.090	7300323
GOPR4RA0625S125HBR120	5/8	5/8	1 1/4	3 1/2	.120	7300322
GOPR4RA0625R213HBR030	5/8	5/8	2 1/8	4	.030	7301892
GOPR4RA0625R213HBR060	5/8	5/8	2 1/8	4	.060	7301891
GOPR4RA0625R213HBR120	5/8	5/8	2 1/8	4	.120	7301770
GOPR4RA0625R163HBR030E	5/8	5/8	1 5/8	4 1/8	.030	7300321
GOPR4RA0625R163HBR060E	5/8	5/8	1 5/8	4 1/8	.060	7300310
GOPR4RA0625R163HBR120E	5/8	5/8	1 5/8	4 1/8	.120	7300309
GOPR4RA0625R225HBR060	5/8	5/8	2 1/4	5	.060	7300308
GOPR4RA0750S088HBR030	3/4	3/4	7/8	3 1/2	.030	7300353
GOPR4RA0750S088HBR060	3/4	3/4	7/8	3 1/2	.060	7300352
GOPR4RA0750S088HBR090	3/4	3/4	7/8	3 1/2	.090	7300351
GOPR4RA0750S088HBR120	3/4	3/4	7/8	3 1/2	.120	7300350
GOPR4RA0750S088HBR030E	3/4	3/4	7/8	4	.030	7301941
GOPR4RA0750S150HBR015	3/4	3/4	1 1/2	4	.015	7300349
GOPR4RA0750S150HBR030	3/4	3/4	1 1/2	4	.030	7300348
GOPR4RA0750S150HBR060	3/4	3/4	1 1/2	4	.060	7300347
GOPR4RA0750S150HBR090	3/4	3/4	1 1/2	4	.090	7300345
GOPR4RA0750S150HBR120	3/4	3/4	1 1/2	4	.120	7300346
GOPR4RA0750R163HBR030	3/4	3/4	1 5/8	4	.030	7301934
GOPR4RA0750R163HBR060	3/4	3/4	1 5/8	4	.060	7301932
GOPR4RA0750R163HBR090	3/4	3/4	1 5/8	4	.090	7301930
GOPR4RA0750R163HBR120	3/4	3/4	1 5/8	4	.120	7301928
GOPR4RA0750R225HBR030	3/4	3/4	2 1/4	5	.030	7300344
GOPR4RA0750R225HBR060	3/4	3/4	2 1/4	5	.060	7300343
GOPR4RA0750R225HBR090	3/4	3/4	2 1/4	5	.090	7300342
GOPR4RA0750R225HBR120	3/4	3/4	2 1/4	5	.120	7300341
GOPR4RA0750R300HBR030	3/4	3/4	3	6	.030	7300330
GOPR4RA0750R300HBR060	3/4	3/4	3	6	.060	7300329
GOPR4RA0750R300HBR090	3/4	3/4	3	6	.090	7300328
GOPR4RA0750R300HBR120	3/4	3/4	3	6	.120	7300327
GOPR4RA0750R400HBR030	3/4	3/4	4	6 1/4	.030	7301916
GOPR4RA0750R400HBR060	3/4	3/4	4	6 1/4	.060	7301914
GOPR4RA0750R400HBR090	3/4	3/4	4	6 1/4	.090	7301912
GOPR4RA0750R400HBR120	3/4	3/4	4	6 1/4	.120	7301908
GOPR4RA1000S150HBR030	1	1	1 1/2	4	.030	7300363
GOPR4RA1000S150HBR060	1	1	1 1/2	4	.060	7300362
GOPR4RA1000S150HBR090	1	1	1 1/2	4	.090	7300361
GOPR4RA1000S150HBR120	1	1	1 1/2	4	.120	7300360
GOPR4RA1000S150HBR250	1	1	1 1/2	4	.250	7300359
GOPR4RA1000S200HBR030	1	1	2	4 1/2	.030	7301967
GOPR4RA1000S200HBR060	1	1	2	4 1/2	.060	7301966
GOPR4RA1000S200HBR120	1	1	2	4 1/2	.120	7301965
GOPR4RA1000S200HBR030E	1	1	2	5	.030	7300358
GOPR4RA1000R225HBR030	1	1	2 1/4	5	.030	7301964
GOPR4RA1000R225HBR060	1	1	2 1/4	5	.060	7301963
GOPR4RA1000R263HBR030	1	1	2 5/8	5	.030	7301962
GOPR4RA1000R300HBR030	1	1	3	6	.030	7300357
GOPR4RA1000R300HBR060	1	1	3	6	.060	7300356
GOPR4RA1000R400HBR030	1	1	4	7	.030	7300355
GOPR4RA1000R400HBR060	1	1	4	7	.060	7300354
GOPR4RA1250S225HBR030	1 1/4	1 1/4	2 1/4	5	.030	7301973

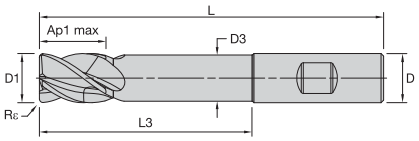


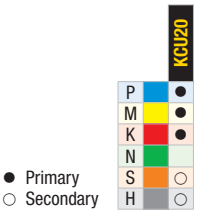


● Primary
○ Secondary

GOmill PRO • Radiused • 4 Flutes • Necked • Plain Shank • Inch

Catalog Number	D1	D	D3	Ap1 Max	L3	L	Rε	KCU20
GOPR4RA0250N038HAR015	1/4	1/4	0.2350	3/8	1 1/4	4	.015	7301787
GOPR4RA0250N038HAR030	1/4	1/4	0.2350	3/8	1 1/4	4	.030	7301786
GOPR4RA0375E050HAR030	3/8	3/8	0.3525	1/2	2	4	.030	7301817
GOPR4RA0375N050HAR030	3/8	3/8	0.3525	1/2	1 7/8	4	.030	7301816
GOPR4RA0500N063HAR030	1/2	1/2	0.4700	5/8	2 1/4	4	.030	7301851
GOPR4RA0750N100HAR030	3/4	3/4	0.7050	1	3 1/4	5 1/4	.030	7301948
GOPR4RA0750N100HAR060	3/4	3/4	0.7050	1	3 1/4	5 1/4	.060	7301952
GOPR4RA0750N100HAR090	3/4	3/4	0.7050	1	3 1/4	5 1/4	.090	7301951
GOPR4RA0750N100HAR120	3/4	3/4	0.7050	1	3 1/4	5 1/4	.120	7301950

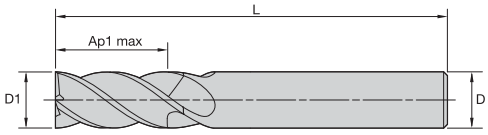


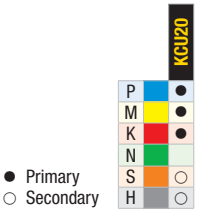


● Primary
○ Secondary

GOmill PRO • Radiused • 4 Flutes • Necked • Weldon Shank • Inch

Catalog Number	D1	D	D3	Ap1 Max	L3	L	Rε	KCU20
GOPR4RA0500N063HBR030	1/2	1/2	0.4700	5/8	2 1/4	4	.030	7301852
GOPR4RA0750N100HBR030	3/4	3/4	0.7050	1	3 1/4	5 1/4	.030	7301949
GOPR4RA0750N100HBR060	3/4	3/4	0.7050	1	3 1/4	5 1/4	.060	7301955
GOPR4RA0750N100HBR090	3/4	3/4	0.7050	1	3 1/4	5 1/4	.090	7301954
GOPR4RA0750N100HBR120	3/4	3/4	0.7050	1	3 1/4	5 1/4	.120	7301953

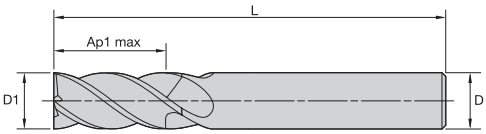




● Primary
○ Secondary

GOmill PRO • Square End • 4 Flutes • Plain Shank • Inch

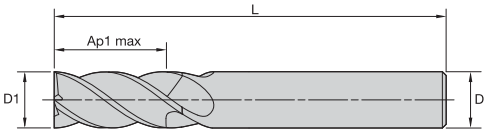
Catalog Number	D1	D	Ap1 Max	L	KCU20
GOPR4SE0094R038HA	3/32	1/8	3/8	1 1/2	7301165
GOPR4SE0094R063HA	3/32	1/8	5/8	2	7301166
GOPR4SE0109R038HA	7/64	1/8	3/8	1 1/2	7301167
GOPR4SE0125S025HA	1/8	1/8	1/4	1 1/2	7300039
GOPR4SE0125R050HA	1/8	1/8	1/2	1 1/2	7301170
GOPR4SE0125S025HAE	1/8	1/4	1/4	2	7301169
GOPR4SE0125R050HAX	1/8	1/8	1/2	2	7300040
GOPR4SE0125R075HA	1/8	1/8	3/4	2 1/4	7301251
GOPR4SE0125R050HAE	1/8	1/8	1/2	2 1/2	7301168
GOPR4SE0125R100HA	1/8	1/8	1	3	7301252
GOPR4SE0141R056HA	9/64	3/16	9/16	2	7301253
GOPR4SE0156R056HA	5/32	3/16	9/16	2	7301254
GOPR4SE0188S031HA	3/16	3/16	5/16	2	7300231
GOPR4SE0188R063HA	3/16	3/16	5/8	2	7301257
GOPR4SE0188R063HAE	3/16	3/16	5/8	2 1/4	7300232
GOPR4SE0188S031HAE	3/16	3/16	5/16	2 1/2	7301255
GOPR4SE0188R063HAX	3/16	3/16	5/8	2 1/2	7301256
GOPR4SE0188R075HA	3/16	3/16	3/4	2 1/2	7301258
GOPR4SE0188R113HA	3/16	3/16	1 1/8	3	7301259

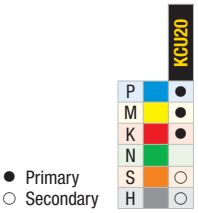


● Primary
○ Secondary

GOmill PRO • Square End • 4 Flutes • Plain Shank • Inch • Continued

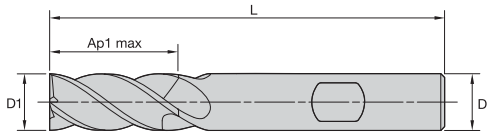
Catalog Number	D1	D	Ap1 Max	L	KCU20
GOPR4SE0203R063HA	13/64	1/4	5/8	2 1/2	7301260
GOPR4SE0219S044HA	7/32	1/4	7/16	2	7301261
GOPR4SE0219R063HA	7/32	1/4	5/8	2 1/2	7301262
GOPR4SE0234R075HA	15/64	1/4	3/4	2 1/2	7301263
GOPR4SE0250S038HA	1/4	1/4	3/8	2	7300233
GOPR4SE0250S050HA	1/4	1/4	1/2	2 1/2	7301264
GOPR4SE0250R075HA	1/4	1/4	3/4	2 1/2	7300234
GOPR4SE0250R100HA	1/4	1/4	1	3	7301265
GOPR4SE0250R125HA	1/4	1/4	1 1/4	3 1/4	7300235
GOPR4SE0250R175HA	1/4	1/4	1 3/4	4	7301266
GOPR4SE0281R075HA	9/32	5/16	3/4	2 1/2	7301267
GOPR4SE0297R081HA	19/64	5/16	13/16	2 1/2	7301268
GOPR4SE0313S038HA	5/16	5/16	3/8	2	7301270
GOPR4SE0313S050HA	5/16	5/16	1/2	2	7300236
GOPR4SE0313S050HAE	5/16	5/16	1/2	2 1/2	7301269
GOPR4SE0313R075HA	5/16	5/16	3/4	2 1/2	7300237
GOPR4SE0313R081HA	5/16	5/16	13/16	2 1/2	7301271
GOPR4SE0313R113HA	5/16	5/16	1 1/8	3	7301272
GOPR4SE0313R125HA	5/16	5/16	1 1/4	3 1/4	7300238
GOPR4SE0313R163HA	5/16	5/16	1 5/8	4	7301273
GOPR4SE0328R100HA	21/64	3/8	1	2 1/2	7301274
GOPR4SE0375S050HA	3/8	3/8	1/2	2	7300239
GOPR4SE0375S050HAE	3/8	3/8	1/2	2 1/2	7301275
GOPR4SE0375R088HA	3/8	3/8	7/8	2 1/2	7300240
GOPR4SE0375R088HAE	3/8	3/8	7/8	3	7301276
GOPR4SE0375R100HA	3/8	3/8	1	3	7301277
GOPR4SE0375R125HA	3/8	3/8	1 1/4	3	7301278
GOPR4SE0375R150HA	3/8	3/8	1 1/2	4	7300241
GOPR4SE0375R250HA	3/8	3/8	2 1/2	4	7301279
GOPR4SE0391R100HA	25/64	7/16	1	2 3/4	7301280
GOPR4SE0406R100HA	13/32	7/16	1	2 3/4	7301291
GOPR4SE0422R100HA	27/64	7/16	1	2 3/4	7301292
GOPR4SE0438S063HA	7/16	7/16	5/8	2 1/2	7300242
GOPR4SE0438R100HAE	7/16	7/16	1	2 3/4	7301294
GOPR4SE0438S088HA	7/16	7/16	7/8	3	7301293
GOPR4SE0438R100HA	7/16	7/16	1	3	7301295
GOPR4SE0438R150HA	7/16	7/16	1 1/2	4	7301296
GOPR4SE0438R200HA	7/16	7/16	2	4	7300243
GOPR4SE0438R300HA	7/16	7/16	3	6	7301297
GOPR4SE0453R100HA	29/64	1/2	1	3	7301298
GOPR4SE0469R100HA	15/32	1/2	1	3	7301299
GOPR4SE0484R100HA	31/64	1/2	1	3	7301300
GOPR4SE0500S063HA	1/2	1/2	5/8	2 1/2	7301301
GOPR4SE0500S100HA	1/2	1/2	1	2 1/2	7301317
GOPR4SE0500S063HAE	1/2	1/2	5/8	3	7301303
GOPR4SE0500S100HAE	1/2	1/2	1	3	7301307
GOPR4SE0500R125HA	1/2	1/2	1 1/4	3 1/4	7301309
GOPR4SE0500R150HA	1/2	1/2	1 1/2	4	7301310
GOPR4SE0500R163HA	1/2	1/2	1 5/8	4	7301312
GOPR4SE0500R200HA	1/2	1/2	2	4	7301313
GOPR4SE0500R250HA	1/2	1/2	2 1/2	4 1/2	7301314
GOPR4SE0500R300HA	1/2	1/2	3	5	7301316
GOPR4SE0500S063HAX	1/2	1/2	5/8	6	7301305
GOPR4SE0563S075HA	9/16	9/16	3/4	3	7301318
GOPR4SE0563R125HA	9/16	9/16	1 1/4	3 1/2	7301319
GOPR4SE0563R225HA	9/16	9/16	2 1/4	5	7301320
GOPR4SE0625S075HA	5/8	5/8	3/4	3	7301325
GOPR4SE0625S125HA	5/8	5/8	1 1/4	3 1/2	7301326
GOPR4SE0625R213HA	5/8	5/8	2 1/8	4	7301329
GOPR4SE0625R163HAE	5/8	5/8	1 5/8	4 1/8	7301327
GOPR4SE0625R225HA	5/8	5/8	2 1/4	5	7301331
GOPR4SE0625R300HA	5/8	5/8	3	5 1/4	7301324

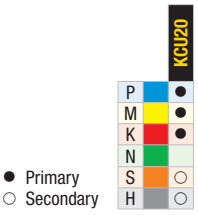




GOmill PRO • Square End • 4 Flutes • Plain Shank • Inch • Continued

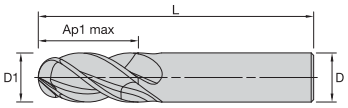
Catalog Number	D1	D	Ap1 Max	L	KCU20
GOPR4SE0750S088HA	3/4	3/4	7/8	3 1/2	7301333
GOPR4SE0750S150HA	3/4	3/4	1 1/2	4	7301337
GOPR4SE0750R163HA	3/4	3/4	1 5/8	4	7301339
GOPR4SE0750R225HA	3/4	3/4	2 1/4	5	7301340
GOPR4SE0750S100HA	3/4	3/4	1	6	7301335
GOPR4SE0750R300HA	3/4	3/4	3	6	7301351
GOPR4SE0750R400HA	3/4	3/4	4	6 1/4	7301353
GOPR4SE0813S150HA	13/16	7/8	1 1/2	4	7301354
GOPR4SE0875S150HA	7/8	7/8	1 1/2	4	7301355
GOPR4SE0875R225HA	7/8	7/8	2 1/4	5	7301356
GOPR4SE1000R300HA	1	1	3	6	7301362
GOPR4SE1250S225HA	1 1/4	1 1/4	2 1/4	5	7301363





GOmill PRO • Square End • 4 Flutes • Weldon Shank • Inch

Catalog Number	D1	D	Ap1 Max	L	KCU20
GOPR4SE0500S063HB	1/2	1/2	5/8	2 1/2	7300244
GOPR4SE0500S063HBE	1/2	1/2	5/8	3	7301302
GOPR4SE0500S100HB	1/2	1/2	1	3	7301306
GOPR4SE0500R125HB	1/2	1/2	1 1/4	3 1/4	7301308
GOPR4SE0500R150HB	1/2	1/2	1 1/2	4	7300245
GOPR4SE0500R163HB	1/2	1/2	1 5/8	4	7301311
GOPR4SE0500R200HB	1/2	1/2	2	4	7300246
GOPR4SE0500R250HB	1/2	1/2	2 1/2	4 1/2	7300247
GOPR4SE0500R300HB	1/2	1/2	3	5	7301315
GOPR4SE0500S063HBX	1/2	1/2	5/8	6	7301304
GOPR4SE0563S075HB	9/16	9/16	3/4	3	7301321
GOPR4SE0563R125HB	9/16	9/16	1 1/4	3 1/2	7301322
GOPR4SE0563R225HB	9/16	9/16	2 1/4	5	7301323
GOPR4SE0625S075HB	5/8	5/8	3/4	3	7300248
GOPR4SE0625S125HB	5/8	5/8	1 1/4	3 1/2	7300249
GOPR4SE0625R213HB	5/8	5/8	2 1/8	4	7301328
GOPR4SE0625R163HBE	5/8	5/8	1 5/8	4 1/8	7300250
GOPR4SE0625R225HB	5/8	5/8	2 1/4	5	7301330
GOPR4SE0625R300HB	5/8	5/8	3	5 1/4	7301332
GOPR4SE0750S088HB	3/4	3/4	7/8	3 1/2	7300251
GOPR4SE0750S150HB	3/4	3/4	1 1/2	4	7300252
GOPR4SE0750R163HB	3/4	3/4	1 5/8	4	7301338
GOPR4SE0750R225HB	3/4	3/4	2 1/4	5	7300253
GOPR4SE0750R100HB	3/4	3/4	1	5 1/4	7301336
GOPR4SE0750S100HB	3/4	3/4	1	6	7301334
GOPR4SE0750R300HB	3/4	3/4	3	6	7300254
GOPR4SE0750R400HB	3/4	3/4	4	6 1/4	7301352
GOPR4SE0875S150HB	7/8	7/8	1 1/2	4	7301357
GOPR4SE0875R225HB	7/8	7/8	2 1/4	5	7301358
GOPR4SE1000S150HB	1	1	1 1/2	4	7300255
GOPR4SE1000S200HB	1	1	2	4 1/2	7301359
GOPR4SE1000S200HBE	1	1	2	5	7300256
GOPR4SE1000R225HB	1	1	2 1/4	5	7301360
GOPR4SE1000R263HB	1	1	2 5/8	5	7301361
GOPR4SE1000R300HB	1	1	3	6	7300257
GOPR4SE1000R400HB	1	1	4	7	7300258
GOPR4SE1250S225HB	1 1/4	1 1/4	2 1/4	5	7301364



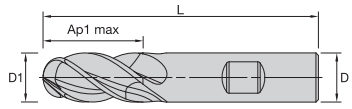
KCU20

P	●
M	●
K	●
N	
S	○
H	○

● Primary
○ Secondary

GOmill PRO • Ball Nose • 4 Flutes • Plain Shank • Inch

Catalog Number	D1	D	Ap1 Max	L	KCU20
GOPR4BN0078S019HA	5/64	1/8	3/16	1 1/2	7301201
GOPR4BN0094S019HA	3/32	1/8	3/16	1 1/2	7301203
GOPR4BN0094S038HA	3/32	1/8	3/8	1 1/2	7301202
GOPR4BN0109S038HA	7/64	1/8	3/8	1 1/2	7301204
GOPR4BN0125R050HA	1/8	1/8	1/2	2	7300408
GOPR4BN0141S056HA	9/64	3/16	9/16	2	7301205
GOPR4BN0156S031HA	5/32	3/16	5/16	2	7301206
GOPR4BN0172S063HA	11/64	3/16	5/8	2	7301207
GOPR4BN0188S031HA	3/16	3/16	5/16	2	7301210
GOPR4BN0188R063HA	3/16	3/16	5/8	2 1/4	7300409
GOPR4BN0188S075HA	3/16	3/16	3/4	2 1/2	7301209
GOPR4BN0188S100HA	3/16	3/16	1	2 1/2	7301208
GOPR4BN0203S063HA	13/64	1/4	5/8	2 1/2	7301211
GOPR4BN0219S063HA	7/32	1/4	5/8	2 1/2	7301212
GOPR4BN0234S075HA	15/64	1/4	3/4	2 1/2	7301213
GOPR4BN0250R075HA	1/4	1/4	3/4	2 1/2	7300410
GOPR4BN0266S075HA	17/64	5/16	3/4	2 1/2	7301214
GOPR4BN0281S075HA	9/32	5/16	3/4	2 1/2	7301215
GOPR4BN0313S050HA	5/16	5/16	1/2	2	7301219
GOPR4BN0313R075HA	5/16	5/16	3/4	2 1/2	7300411
GOPR4BN0313S081HA	5/16	5/16	13/16	2 1/2	7301218
GOPR4BN0313S113HA	5/16	5/16	1 1/8	3	7301217
GOPR4BN0313S163HA	5/16	5/16	1 5/8	3 1/2	7301216
GOPR4BN0344S100HA	11/32	3/8	1	3	7301220
GOPR4BN0375R050HA	3/8	3/8	1/2	2 1/2	7301221
GOPR4BN0375R088HA	3/8	3/8	7/8	2 1/2	7300412
GOPR4BN0438R088HA	7/16	7/16	7/8	3	7301222
GOPR4BN0500R063HA	1/2	1/2	5/8	3	7301225
GOPR4BN0500R100HA	1/2	1/2	1	3	7301224
GOPR4BN0500S125HA	1/2	1/2	1 1/4	3 1/4	7301223
GOPR4BN0563S125HA	9/16	9/16	1 1/4	3 1/2	7301227
GOPR4BN0625R075HA	5/8	5/8	3/4	3	7301229
GOPR4BN0625R125HA	5/8	5/8	1 1/4	3 1/2	7301228
GOPR4BN0750R100HA	3/4	3/4	1	3 1/2	7301242
GOPR4BN0750R150HA	3/4	3/4	1 1/2	4	7301241
GOPR4BN0875S150HA	7/8	7/8	1 1/2	4	7301244
GOPR4BN1000R113HA	1	1	1 1/8	4	7301246
GOPR4BN1000R150HA	1	1	1 1/2	4	7301245
GOPR4BN1250S225HA	1 1/4	1 1/4	2 1/4	5	7301248



KCU20

P	●
M	●
K	●
N	
S	○
H	○

● Primary
○ Secondary

GOmill PRO • Ball Nose • 4 Flutes • Weldon Shank • Inch

Catalog Number	D1	D	Ap1 Max	L	KCU20
GOPR4BN0500R063HB	1/2	1/2	5/8	3	7301226
GOPR4BN0500R100HB	1/2	1/2	1	3	7300414
GOPR4BN0500S125HB	1/2	1/2	1 1/4	3 1/4	7300413
GOPR4BN0625R075HB	5/8	5/8	3/4	3	7301230
GOPR4BN0625R125HB	5/8	5/8	1 1/4	3 1/2	7300415
GOPR4BN0750R100HB	3/4	3/4	1	3 1/2	7301243
GOPR4BN0750R150HB	3/4	3/4	1 1/2	4	7300416
GOPR4BN1000R113HB	1	1	1 1/8	4	7301247
GOPR4BN1000R150HB	1	1	1 1/2	4	7300417
GOPR4BN1250S225HB	1 1/4	1 1/4	2 1/4	5	7301249


GOmill PRO
Application Data • Inch

Material Group		Side Milling		Slotting	KCU20 Cutting Speed Vc SFM		Fraction	Recommended Feed per Tooth (IPT=Inch/th) is for Side Milling (A). For Slotting (B) Reduce Fz by 20%. D1 - Diameter										
								1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	1	1 1/4
		ap	ae	ap	Min	Max	dec.	0.0625	0.1250	0.1875	0.2500	0.3125	0.3750	0.4375	0.5000	0.6250	0.7500	1.0000	1.2500
P	P0	Ap1Max	0.4xD	1xD	490	660	IPT	0.0004	0.0009	0.0013	0.0018	0.0023	0.0027	0.0031	0.0034	0.0039	0.0044	0.0049	0.0049
	P1	Ap1Max	0.4xD	1xD	490	660	IPT	0.0004	0.0009	0.0013	0.0018	0.0023	0.0027	0.0031	0.0034	0.0039	0.0044	0.0049	0.0049
	P2	Ap1Max	0.4xD	1xD	460	620	IPT	0.0004	0.0009	0.0013	0.0018	0.0023	0.0027	0.0031	0.0034	0.0039	0.0044	0.0049	0.0049
	P3	Ap1Max	0.4xD	1xD	390	520	IPT	0.0004	0.0007	0.0011	0.0015	0.0020	0.0023	0.0026	0.0029	0.0034	0.0039	0.0045	0.0048
	P4	Ap1Max	0.4xD	0.75xD	300	490	IPT	0.0003	0.0007	0.0010	0.0014	0.0017	0.0020	0.0023	0.0026	0.0030	0.0034	0.0039	0.0040
	P5	Ap1Max	0.4xD	1xD	200	330	IPT	0.0003	0.0006	0.0009	0.0012	0.0016	0.0018	0.0021	0.0023	0.0027	0.0031	0.0036	0.0039
	P6	Ap1Max	0.4xD	0.75xD	160	250	IPT	0.0002	0.0005	0.0008	0.0010	0.0013	0.0015	0.0017	0.0019	0.0022	0.0025	0.0028	0.0029
M	M1	Ap1Max	0.4xD	1xD	300	380	IPT	0.0004	0.0007	0.0011	0.0015	0.0020	0.0023	0.0026	0.0029	0.0034	0.0039	0.0045	0.0048
	M2	Ap1Max	0.4xD	1xD	200	260	IPT	0.0003	0.0006	0.0009	0.0012	0.0016	0.0018	0.0021	0.0023	0.0027	0.0031	0.0036	0.0039
	M3	Ap1Max	0.4xD	1xD	200	230	IPT	0.0002	0.0005	0.0008	0.0010	0.0013	0.0015	0.0017	0.0019	0.0022	0.0025	0.0028	0.0029
K	K1	Ap1Max	0.4xD	1xD	390	490	IPT	0.0004	0.0009	0.0013	0.0018	0.0023	0.0027	0.0031	0.0034	0.0039	0.0044	0.0049	0.0049
	K2	Ap1Max	0.4xD	1xD	360	460	IPT	0.0004	0.0007	0.0011	0.0015	0.0020	0.0023	0.0026	0.0029	0.0034	0.0039	0.0045	0.0048
	K3	Ap1Max	0.4xD	1xD	360	430	IPT	0.0003	0.0006	0.0009	0.0012	0.0016	0.0018	0.0021	0.0023	0.0027	0.0031	0.0036	0.0039
S	S1	Ap1Max	0.4xD	0.3XD	160	300	IPT	0.0004	0.0007	0.0011	0.0015	0.0020	0.0023	0.0026	0.0029	0.0034	0.0039	0.0045	0.0048
	S2	Ap1Max	0.4xD	0.3XD	80	160	IPT	0.0002	0.0004	0.0006	0.0008	0.0010	0.0012	0.0014	0.0015	0.0018	0.0021	0.0024	0.0026
	S3	Ap1Max	0.4xD	1xD	80	130	IPT	0.0002	0.0004	0.0006	0.0008	0.0010	0.0012	0.0014	0.0015	0.0018	0.0021	0.0024	0.0026
	S4	Ap1Max	0.4xD	1xD	160	200	IPT	0.0002	0.0005	0.0008	0.0011	0.0014	0.0017	0.0019	0.0021	0.0025	0.0028	0.0033	0.0036
H	H1	Ap1Max	0.4xD	0.75xD	260	460	IPT	0.0003	0.0007	0.0010	0.0014	0.0017	0.0020	0.0023	0.0026	0.0030	0.0034	0.0039	0.0040
	H2	Ap1Max	0.4xD	0.5xD	230	390	IPT	0.0002	0.0005	0.0008	0.0010	0.0013	0.0015	0.0017	0.0019	0.0022	0.0025	0.0028	0.0029

NOTE:
These guidelines may require variations to achieve optimum results.
Lower value of cutting speed is used for high stock removal applications or for higher hardness (machinability) within group.
Higher value of cutting speed is used for finishing applications or for lower hardness (machinability) within group.
Above parameters are based on ideal conditions. For smaller taper machining centers, please adjust parameters accordingly on diameters greater than 1/2".
For better surface finish, reduce feed per tooth.
Side milling applications - for longest reach (L3) tools, reduce Ae by 30%.
Slot milling applications - for longest reach (L3) tools, reduce Ae by 30%.
Sharp corner tools are not recommended for slotting application.

GOmill PRO
Adjustment Factor Table for Feed and Speed Calculation

	Ae/D	2%	4%	5%	8%	10%	12%	20%	30%	40%
Speed Factor	Kv	2-3.3	1.45- 2.73	1.45-2.27	1.45	1.27	1.25	1.18	1.09	1.00
Feed Factor	KFz	3.51	2.51	2.25	1.80	1.64	1.51	1.23	1.07	1.00
phi [°]		**16.26**	**23.07**	**25.84**	**32.86**	**36.87**	**40.54**	**53.13**	**66.42**	**78.46**

NOTE:
These calculations are for roughing/semi-finishing cuts when used with the recommended base fz.
For light finishing cuts requiring improved surface quality, it is recommended to reduce the base fz approximately 50% and then apply these factors.
For an Ae/D ration of 5% or less there is range given for speed factor Kv, which allows the user to either be more conservative at the lower value or more aggressive with the higher value.
This can also be considered based on machinability of the material, from difficult to free cutting.

To calculate application specific cutting data, please use above Kv coefficient for adaptation of cutting speed and KFz for feed respectively.

Vc new = Vc*Kv
Fz new = Fz*KFz

Calculation Example:

Application:	D1 =	0.6250"
	Material Group	P5
	Ae= 0.125	20% of D1
Cutting data recommendation:	Vc =	265 SFM
	Fz =	0.00273 IPT
Adjustment coefficient:	Kv =	1.18
	KFz =	1.23

Final cutting data recommendation:

Vc new = 265 * 1.18 = 312.7 SFM
Fz new = 0.0027 * 1.23 = 0.0034 IPT


GOmill PRO

Application Data • Ramping • Inch

Material Group		Helical Interpolation / Ramping 0°- 5°	KCU20		Recommended Feed per Tooth (Fz = IPT) for Helical Interpolation and Ramping - Zef=2												
			Cutting Speed Vc			D1 - Diameter											
			SFM		min-max	.144 - .238	.179 - .296	.216 - .356	.251 - .415	.288 - .475	.323 - .534	.359 - .594	.431 - .713	.575 - .950	.719 - 1.188	.863 - 1.425	1.150 - 1.900	1.437 - 2.375
		Max Depth	Min	Max	dec.	0.1250	0.1563	0.1875	0.2188	0.2500	0.2813	0.3125	0.3750	0.5000	0.6250	0.7500	1.0000	1.2500
P	P0	1,25 x D1	490	660	IPT	0.0010	0.0012	0.0015	0.0017	0.0020	0.0023	0.0026	0.0030	0.0037	0.0043	0.0048	0.0054	0.0054
	P1	1,25 x D1	490	660	IPT	0.0010	0.0012	0.0015	0.0017	0.0020	0.0023	0.0026	0.0030	0.0037	0.0043	0.0048	0.0054	0.0054
	P2	1,25 x D1	460	620	IPT	0.0010	0.0012	0.0015	0.0017	0.0020	0.0023	0.0026	0.0030	0.0037	0.0043	0.0048	0.0054	0.0054
	P3	1,25 x D1	390	520	IPT	0.0008	0.0010	0.0012	0.0014	0.0017	0.0019	0.0021	0.0025	0.0032	0.0038	0.0042	0.0050	0.0053
	P4	1,25 x D1	300	490	IPT	0.0007	0.0009	0.0011	0.0013	0.0015	0.0017	0.0019	0.0022	0.0028	0.0033	0.0037	0.0042	0.0044
	P5	1,25 x D1	200	330	IPT	0.0007	0.0008	0.0010	0.0012	0.0014	0.0015	0.0017	0.0020	0.0025	0.0030	0.0034	0.0040	0.0043
	P6	1,25 x D1	160	250	IPT	0.0006	0.0007	0.0008	0.0010	0.0011	0.0013	0.0014	0.0017	0.0021	0.0025	0.0027	0.0031	0.0032
M	M1	1,25 x D1	300	380	IPT	0.0008	0.0010	0.0012	0.0014	0.0017	0.0019	0.0021	0.0025	0.0032	0.0038	0.0042	0.0050	0.0053
	M2	1,25 x D1	200	260	IPT	0.0007	0.0008	0.0010	0.0012	0.0014	0.0015	0.0017	0.0020	0.0025	0.0030	0.0034	0.0040	0.0043
	M3	1,0 x D1	200	230	IPT	0.0006	0.0007	0.0008	0.0010	0.0011	0.0013	0.0014	0.0017	0.0021	0.0025	0.0027	0.0031	0.0032
K	K1	1,0 x D1	390	490	IPT	0.0010	0.0012	0.0015	0.0017	0.0020	0.0023	0.0026	0.0030	0.0037	0.0043	0.0048	0.0054	0.0054
	K2	1,0 x D1	360	460	IPT	0.0008	0.0010	0.0012	0.0014	0.0017	0.0019	0.0021	0.0025	0.0032	0.0038	0.0042	0.0050	0.0053
	K3	1,0 x D1	360	430	IPT	0.0007	0.0008	0.0010	0.0012	0.0014	0.0015	0.0017	0.0020	0.0025	0.0030	0.0034	0.0040	0.0043
S	S1	0,75 x D1	160	300	IPT	0.0008	0.0010	0.0012	0.0014	0.0017	0.0019	0.0021	0.0025	0.0032	0.0038	0.0042	0.0050	0.0053
	S2	0,75 x D1	80	160	IPT	0.0004	0.0005	0.0007	0.0008	0.0009	0.0010	0.0011	0.0013	0.0017	0.0020	0.0023	0.0027	0.0029
	S3	0,5 x D1	80	130	IPT	0.0004	0.0005	0.0007	0.0008	0.0009	0.0010	0.0011	0.0013	0.0017	0.0020	0.0023	0.0027	0.0029
	S4	1,25 x D1	160	200	IPT	0.0005	0.0007	0.0008	0.0010	0.0012	0.0014	0.0016	0.0019	0.0023	0.0028	0.0031	0.0036	0.0039
H	H1	1,0 x D1	260	460	IPT	0.0007	0.0009	0.0011	0.0013	0.0015	0.0017	0.0019	0.0022	0.0028	0.0033	0.0037	0.0042	0.0044
	H2	1,0 x D1	230	390	IPT	0.0006	0.0007	0.0008	0.0010	0.0011	0.0013	0.0014	0.0017	0.0021	0.0025	0.0027	0.0031	0.0032

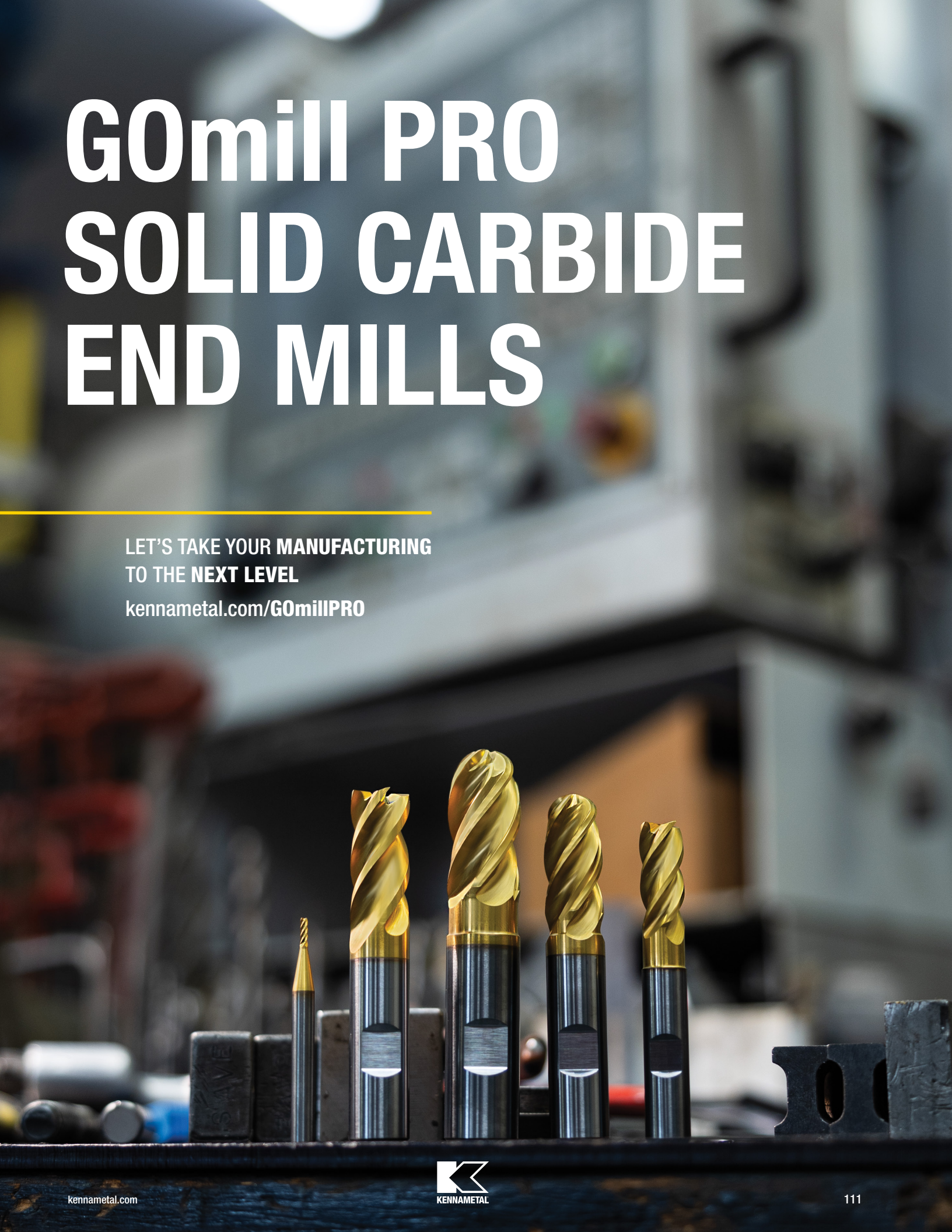

GOmill PRO LONG

Application Data • Long • Inch • For >3xD Cutting Lengths

Material Group		Side Milling		KCU20		Recommended Feed per Tooth (IPT=Inch/th) is for Side Milling (A). No Slotting Operations Recommended.											
				Cutting Speed Vc			D1 - Diameter										
				SFM		Fraction	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	1	1 1/4
		ap	ae	Min	Max	dec.	0.0625	0.1250	0.1875	0.2500	0.3125	0.3750	0.4375	0.5000	0.6250	0.7500	1.0000	1.2500
P	P0	Ap1Max	0.2xD	490	660	IPT	0.0004	0.0009	0.0013	0.0018	0.0023	0.0027	0.0031	0.0034	0.0039	0.0044	0.0049	0.0049
	P1	Ap1Max	0.2xD	490	660	IPT	0.0004	0.0009	0.0013	0.0018	0.0023	0.0027	0.0031	0.0034	0.0039	0.0044	0.0049	0.0049
	P2	Ap1Max	0.2xD	460	620	IPT	0.0004	0.0009	0.0013	0.0018	0.0023	0.0027	0.0031	0.0034	0.0039	0.0044	0.0049	0.0049
	P3	Ap1Max	0.2xD	390	520	IPT	0.0004	0.0007	0.0011	0.0015	0.0020	0.0023	0.0026	0.0029	0.0034	0.0039	0.0045	0.0048
	P4	Ap1Max	0.2xD	300	490	IPT	0.0003	0.0007	0.0010	0.0014	0.0017	0.0020	0.0023	0.0026	0.0030	0.0034	0.0039	0.0040
	P5	Ap1Max	0.2xD	200	330	IPT	0.0003	0.0006	0.0009	0.0012	0.0016	0.0018	0.0021	0.0023	0.0027	0.0031	0.0036	0.0039
	P6	Ap1Max	0.15xD	160	250	IPT	0.0002	0.0005	0.0008	0.0010	0.0013	0.0015	0.0017	0.0019	0.0022	0.0025	0.0028	0.0029
M	M1	Ap1Max	0.2xD	300	380	IPT	0.0004	0.0007	0.0011	0.0015	0.0020	0.0023	0.0026	0.0029	0.0034	0.0039	0.0045	0.0048
	M2	Ap1Max	0.2xD	200	260	IPT	0.0003	0.0006	0.0009	0.0012	0.0016	0.0018	0.0021	0.0023	0.0027	0.0031	0.0036	0.0039
	M3	Ap1Max	0.2xD	200	230	IPT	0.0002	0.0005	0.0008	0.0010	0.0013	0.0015	0.0017	0.0019	0.0022	0.0025	0.0028	0.0029
K	K1	Ap1Max	0.2xD	390	490	IPT	0.0004	0.0009	0.0013	0.0018	0.0023	0.0027	0.0031	0.0034	0.0039	0.0044	0.0049	0.0049
	K2	Ap1Max	0.2xD	360	460	IPT	0.0004	0.0007	0.0011	0.0015	0.0020	0.0023	0.0026	0.0029	0.0034	0.0039	0.0045	0.0048
	K3	Ap1Max	0.2xD	360	430	IPT	0.0003	0.0006	0.0009	0.0012	0.0016	0.0018	0.0021	0.0023	0.0027	0.0031	0.0036	0.0039
S	S1	Ap1Max	0.1xD	160	300	IPT	0.0004	0.0007	0.0011	0.0015	0.0020	0.0023	0.0026	0.0029	0.0034	0.0039	0.0045	0.0048
	S2	Ap1Max	0.1xD	80	160	IPT	0.0002	0.0004	0.0006	0.0008	0.0010	0.0012	0.0014	0.0015	0.0018	0.0021	0.0024	0.0026
	S3	Ap1Max	0.1xD	80	130	IPT	0.0002	0.0004	0.0006	0.0008	0.0010	0.0012	0.0014	0.0015	0.0018	0.0021	0.0024	0.0026
	S4	Ap1Max	0.15xD	160	200	IPT	0.0002	0.0005	0.0008	0.0011	0.0014	0.0017	0.0019	0.0021	0.0025	0.0028	0.0033	0.0036
H	H1	Ap1Max	0.15xD	260	460	IPT	0.0003	0.0007	0.0010	0.0014	0.0017	0.0020	0.0023	0.0026	0.0030	0.0034	0.0039	0.0040
	H2	Ap1Max	0.15xD	230	440	IPT	0.0002	0.0005	0.0008	0.0010	0.0013	0.0015	0.0017	0.0019	0.0022	0.0025	0.0028	0.0029

NOTE: These guidelines may require variations to achieve optimum results.
Lower value of cutting speed is used for high stock removal applications or for higher hardness (machinability) within group.
Higher value of cutting speed is used for finishing applications or for lower hardness (machinability) within group.
For better surface finish, reduce feed per tooth.


Ap1 max
D1
D
Rε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LET'S TAKE YOUR MANUFACTURING
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ROCO™ BURR & DOWN-CUT ROUTERS

Your High-Performance Routers for Machining Composites

Introducing the ROCO platform, the home for our composite router lineup. ROCO burr and down-cut routers feature the new and advanced, high-performance KCC05A grade, ensuring a uniform coating thickness along the tool axis for achieving sharper cutting edges and minimal wear without flaking on the coating edge.

Features & Benefits

- Ideal for machining a wide range of composite materials
- Perfect for side milling, slotting, pocketing, trimming and ramping applications
- Burr routers available in sizes 3mm-12mm and 1/8"-1/2"
- Down-cut routers available in sizes 6mm-12mm and 1/4"-1/2"
- Both burr and down-cut router geometries are designed to reduce delamination, providing high quality surface finishes

Applications

PRIMARY

Side Milling | Slotting | Pocketing | Ramping

SECONDARY

Plunging

Materials

PRIMARY

C Composites

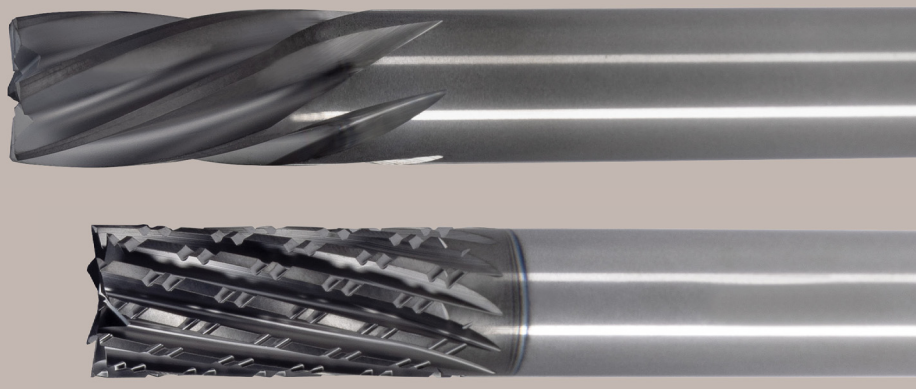
SECONDARY

N Non-Ferrous

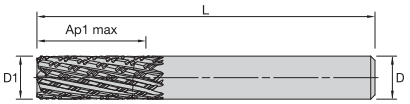
Industries

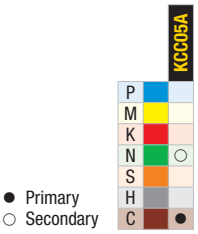
Aerospace | Automotive | General Engineering | Medical | Wind & Solar

THE NEWEST ROUTERS IN COMPOSITE MILLING



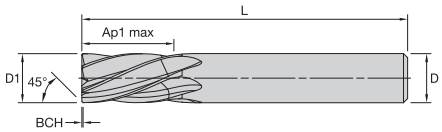
EXPLORE ROCO

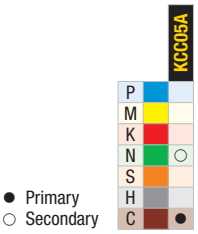




ROCO BR • Square End • Multi Flute • Plain Shank • Metric

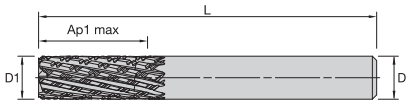
Catalog Number	D1	D	Ap1 Max	[L] Overall Length	Z U	KCC05A
ROBR8SE0300S006HAM	3,00	3,00	6,00	50,00	8	7312435
ROBR8SE0300R009HAM	3,00	3,00	9,00	50,00	8	7312436
ROBR8SE0400L012HAM	4,00	4,00	12,00	50,00	8	7312438
ROBR8SE0500R015HAM	5,00	5,00	15,00	50,00	10	7312439
ROBRMSE0600S006HAM	6,00	6,00	6,00	63,00	10	7312440
ROBRMSE0600R015HAM	6,00	6,00	15,00	50,00	10	7312441
ROBRMSE0600L020HAM	6,00	6,00	20,00	63,00	10	7312442
ROBRMSE0600X026HAM	6,00	6,00	26,00	75,00	10	7312443
ROBRMSE0800R020HAM	8,00	8,00	20,00	63,00	12	7312444
ROBRMSE0800L026HAM	8,00	8,00	26,00	63,00	12	7312445
ROBRMSE1000R015HAM	10,00	10,00	15,00	63,00	12	7312446
ROBRMSE1000L026HAM	10,00	10,00	26,00	63,00	12	7312447
ROBRMSE1000S032HAM	10,00	10,00	32,00	75,00	12	7312448
ROBRMSE1000R035HAM	10,00	10,00	35,00	80,00	12	7312449
ROBRMSE1000L035HAM	10,00	10,00	35,00	100,00	12	7312450
ROBRMSE1200S018HAM	12,00	12,00	18,00	63,00	12	7312451
ROBRMSE1200R026HAM	12,00	12,00	26,00	75,00	12	7312452
ROBRMSE1200L045HAM	12,00	12,00	45,00	100,00	12	7312453





ROCO DC • Chamfered • 6 Flutes • Plain Shank • Metric

Catalog Number	D1	D	Ap1 Max	[L] Overall Length	[BCH] Corner Chamfer Width	KCC05A
RODC6CH0600R020HAM	6.00	6.00	20.00	63.00	0.25	7312234
RODC6CH0600L026HAM	6.00	6.00	26.00	75.00	0.25	7312233
RODC6CH1000R015HAM	10.00	10.00	15.00	63.00	0.25	7312232
RODC6CH1000L032HAM	10.00	10.00	32.00	75.00	0.25	7312231
RODC6CH1200R026HAM	12.00	12.00	26.00	75.00	0.25	7312220
RODC6CH1200L045HAM	12.00	12.00	45.00	100.00	0.25	7312219



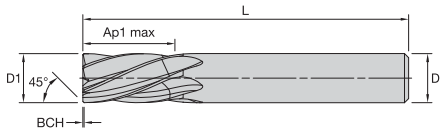
KCC05A

P	
M	
K	
N	○
S	
H	
C	●

● Primary
○ Secondary

ROCO BR • Square End • Multi Flute • Plain Shank • Inch

Catalog Number	D1	D	Ap1 Max	L	Z U	KCC05A
ROBR8SE0125R025HA	1/8	1/8	1/4	1 1/2	8	7312403
ROBR8SE0188R038HA	3/16	3/16	3/8	2	8	7312404
ROBRMSE0250S050HA	1/4	1/4	1/2	2 1/2	10	7312405
ROBRMSE0250R075HA	1/4	1/4	3/4	2 1/2	10	7312406
ROBRMSE0250L100HA	1/4	1/4	1	3	10	7312407
ROBRMSE0250X125HA	1/4	1/4	1 1/4	4	10	7312408
ROBRMSE0313R100HA	5/16	5/16	1	2 1/2	10	7312409
ROBRMSE0375S075HA	3/8	3/8	3/4	2 1/2	12	7312410
ROBRMSE0375R113HA	3/8	3/8	1 1/8	3	12	7312431
ROBRMSE0375L150HA	3/8	3/8	1 1/2	4	12	7312432
ROBRMSE0500R100HA	1/2	1/2	1	3	12	7312433
ROBRMSE0500L200HA	1/2	1/2	2	4	12	7312434



KCC05A

P	
M	
K	
N	○
S	
H	
C	●

● Primary
○ Secondary

ROCO DC • Chamfered • 6 Flutes • Plain Shank • Inch

Catalog Number	D1	D	Ap1 Max	L	BCH	KCC05A
RODC6CH0250R075HA	1/4	1/4	3/4	2 1/2	0.010	7312218
RODC6CH0250L100HA	1/4	1/4	1	3	0.010	7312217
RODC6CH0375R075HA	3/8	3/8	3/4	2 1/2	0.010	7312216
RODC6CH0375L150HA	3/8	3/8	1 1/2	3	0.010	7312215
RODC6CH0500R100HA	1/2	1/2	1	3	0.010	7312214
RODC6CH0500L200HA	1/2	1/2	2	4	0.010	7312213

ROCO BR
Application Data • Metric

Material Group		Side Milling		Slotting	KCC05A Cutting Speed Vc m/min		Recommended Feed per Rev (Fn=mm/rev) is for Side Milling (A). For Slotting (B) Reduce Fn by 20%.							
								D1 - Diameter						
		Ap	Ae	Ap	Min	Max	mm	3.0	4.0	5.0	6.0	8.0	10.0	12.0
N	N6	1.0xD	0.2xD	1.0xD	100	150	Fn	0.058	0.077	0.096	0.144	0.230	0.288	0.346
C	C1	1.0xD	0.2xD	1.0xD	100	150	Fn	0.058	0.077	0.096	0.144	0.230	0.288	0.346

ROCO DC
Application Data • Metric

Material Group		Side Milling		Slotting	KCC05A Cutting Speed Vc m/min		Recommended Feed per Tooth (Fz=mm/th) is for Side Milling (A). For Slotting (B) Reduce Fz by 20%.							
								D1 - Diameter						
		Ap	Ae	Ap	Min	Max	mm	3.0	4.0	5.0	6.0	8.0	10.0	12.0
N	N6	1.0xD	0.5xD	1.0xD	100	150	Fz	0.009	0.012	0.015	0.018	0.024	0.030	0.036
C	C1	1.0xD	0.2xD	1.0xD	100	150	Fz	0.009	0.012	0.015	0.018	0.024	0.030	0.036

ROCO BR
Application Data • Inch

Material Group		Side Milling		Slotting	KCC05A Cutting Speed Vc SFM		Recommended Feed per Rev (Fn=in/rev) is for Side Milling (A). For Slotting (B) Reduce Fn by 20%.						
							Fraction	D1 - Diameter					
		Ap	Ae	Ap	Min	Max	dec.	1/8	3/16	1/4	5/16	3/8	1/2
								0.1250	0.1875	0.2500	0.3125	0.3750	0.5000
N	N6	1.0xD	0.2xD	1.0xD	330	500	IPR	0.0024	0.0036	0.0060	0.0090	0.0108	0.0144
C	C1	1.0xD	0.2xD	1.0xD	330	500	IPR	0.0024	0.0036	0.0060	0.0090	0.0108	0.0144

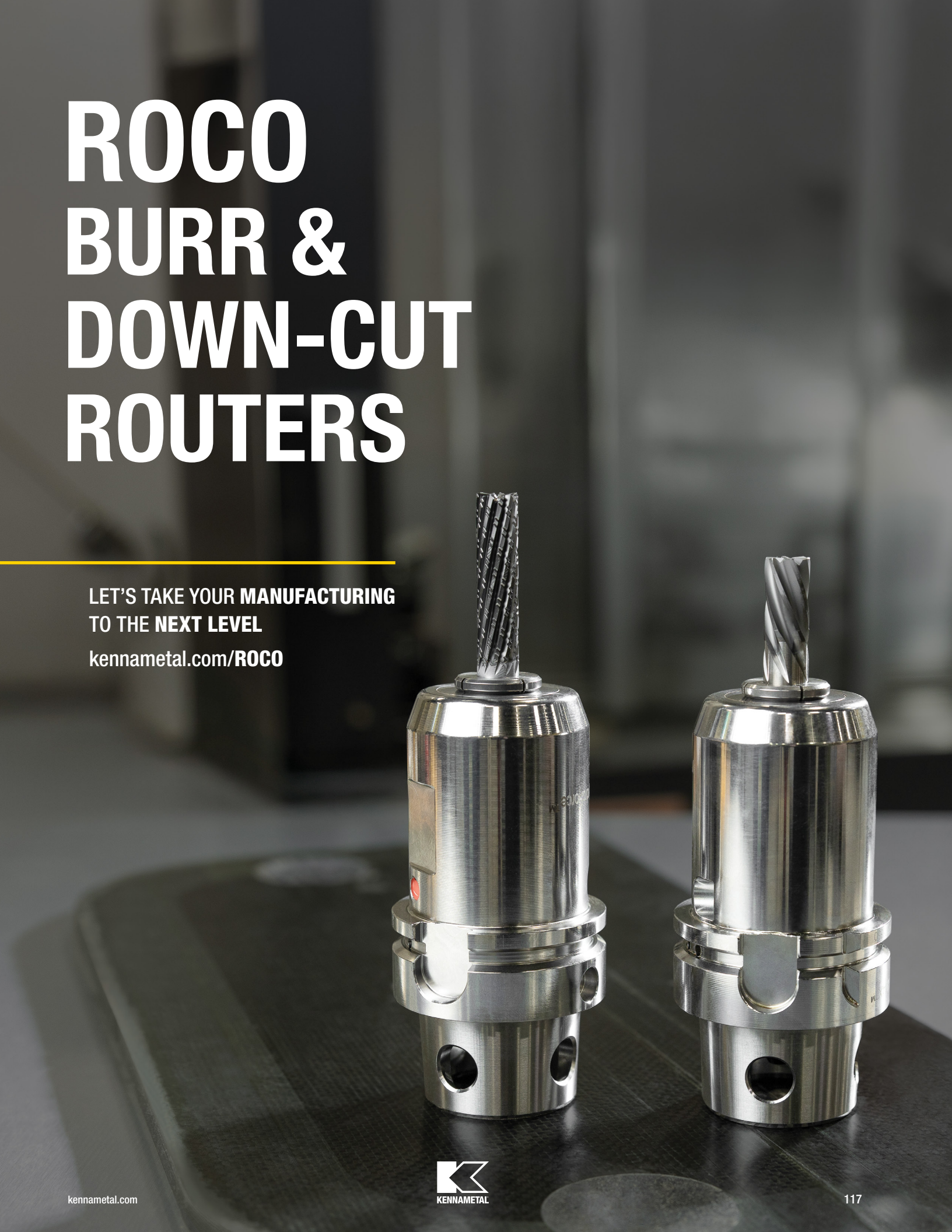
ROCO DC
Application Data • Inch

Material Group		Side Milling		Slotting	KCC05A Cutting Speed Vc SFM		Recommended Feed per Tooth (Fz=in/th) is for Side Milling (A). For Slotting (B) Reduce Fz by 20%.						
							Fraction	D1 - Diameter					
		Ap	Ae	Ap	Min	Max	dec.	1/8	3/16	1/4	5/16	3/8	1/2
								0.1250	0.1875	0.2500	0.3125	0.3750	0.5000
N	N6	1.0xD	0.2xD	1.0xD	330	500	IPT	0.0096	0.0143	0.0191	0.0238	0.0286	0.0381
C	C1	1.0xD	0.2xD	1.0xD	330	500	IPT	0.0096	0.0143	0.0191	0.0238	0.0286	0.0381

ROCO BURR & DOWN-CUT ROUTERS

LET'S TAKE YOUR **MANUFACTURING** TO THE **NEXT LEVEL**

kennametal.com/**ROCO**



KENNAMETAL

HARVI IV™ 8-FLUTE END MILLS

The latest addition to Kennametal's HARVI family of high-performance and versatile end mills

With a unique design that offers higher metal removal rates and feed rates than 7-flute end mills and more versatility than traditional 9-flute end mills, HARVI IV 8-Flute End Mills keep you cutting in difficult-to-machine materials. Rough and finish with one reliable tool in high-temp alloys, stainless steels, steels and hardened materials while achieving powerful chip evacuation from internal coolant channels.

- Diameter range 10-25mm
- Length range 1.8-4xD
- Internal through coolant
- Chip splitters featured on versions greater than 2xD length of cut
- Plain and SAFE-λOCK™ shanks
- Now available in Weldon Shanks for price effective pullout protection

The incredibly versatile HARVI IV 8-Flute End Mills are complemented by our new stainless steels, titanium and other high-temp alloys solid end milling grade KCSM15A. This new grade features an innovative coating technology that's delivering extended tool life for users and the best wear resistance in Kennametal's history of solid carbide end milling.

Applications

- HEM
- Dynamic Milling
- Side Milling
- Trochoidal Milling
- Ramping up to 2°
- Helical Ramping up to 2°

Materials

PRIMARY

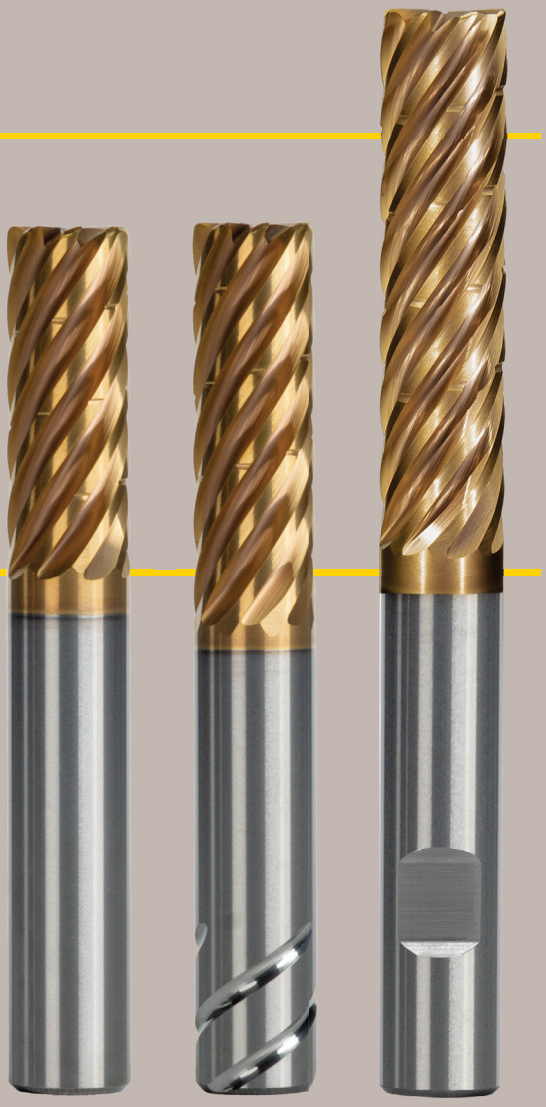
- **S** High-Temp Alloys
- **M** Stainless Steels

SECONDARY

- **P** Steels
- **H** Hardened Steels

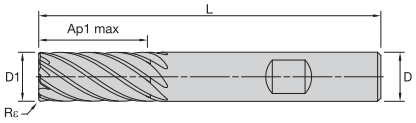
Industries

- Aerospace
- Wind & Solar
- Medical
- General Engineering



WE DON'T CUT CORNERS. WE CUT METAL.

EXPLORE HARVI IV

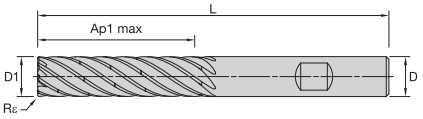


HARVI IV • Radiused • 8 Flutes • Internal Coolant • Weldon Shank • Metric

● Primary
○ Secondary

KCSM15A	
P	○
M	●
K	
N	
S	●
H	○

Catalog Number	D1	D	Ap1 Max	L	Rε	KCSM15A
HA4R8RA1000R022HBR050IM	10,00	10,00	22,00	72,00	0,50	7321395
HA4R8RA1000R022HBR100IM	10,00	10,00	22,00	72,00	1,00	7321396
HA4R8RA1000R022HBR200IM	10,00	10,00	22,00	72,00	2,00	7321399
HA4R8RA1000R022HBR300IM	10,00	10,00	22,00	72,00	3,00	7321449
HA4R8RA1200R026HBR050IM	12,00	12,00	26,00	83,00	0,50	7321454
HA4R8RA1200R026HBR100IM	12,00	12,00	26,00	83,00	1,00	7321455
HA4R8RA1200R026HBR200IM	12,00	12,00	26,00	83,00	2,00	7321456
HA4R8RA1200R026HBR300IM	12,00	12,00	26,00	83,00	3,00	7321457
HA4R8RA1600R032HBR050IM	16,00	16,00	32,00	92,00	0,50	7321458
HA4R8RA1600R032HBR100IM	16,00	16,00	32,00	92,00	1,00	7321459
HA4R8RA1600R032HBR200IM	16,00	16,00	32,00	92,00	2,00	7321460
HA4R8RA1600R032HBR300IM	16,00	16,00	32,00	92,00	3,00	7321461
HA4R8RA2000R038HBR050IM	20,00	20,00	38,00	104,00	0,50	7321462
HA4R8RA2000R038HBR100IM	20,00	20,00	38,00	104,00	1,00	7321463
HA4R8RA2000R038HBR200IM	20,00	20,00	38,00	104,00	2,00	7321464
HA4R8RA2000R038HBR300IM	20,00	20,00	38,00	104,00	3,00	7321465
HA4R8RA2500R045HBR050IM	25,00	25,00	45,00	121,00	0,50	7321466
HA4R8RA2500R045HBR100IM	25,00	25,00	45,00	121,00	1,00	7321467
HA4R8RA2500R045HBR200IM	25,00	25,00	45,00	121,00	2,00	7321468
HA4R8RA2500R045HBR300IM	25,00	25,00	45,00	121,00	3,00	7321469



HARVI IV • Radiused • 8 Flutes • Internal Coolant • Chipbreaker • Weldon Shank • Metric

● Primary
○ Secondary

Catalog Number	D1	D	Ap1 Max	L	Rε	KCSM15A
HA4R8RA1000X040HBR050DM	10,00	10,00	40,00	90,00	0,50	7321140
HA4R8RA1000X040HBR100DM	10,00	10,00	40,00	90,00	1,00	7321481
HA4R8RA1000X040HBR200DM	10,00	10,00	40,00	90,00	2,00	7321482
HA4R8RA1000X040HBR300DM	10,00	10,00	40,00	90,00	3,00	7321483
HA4R8RA1200X048HBR050DM	12,00	12,00	48,00	105,00	0,50	7321484
HA4R8RA1200X048HBR100DM	12,00	12,00	48,00	105,00	1,00	7321485
HA4R8RA1200X048HBR200DM	12,00	12,00	48,00	105,00	2,00	7321486
HA4R8RA1200X048HBR300DM	12,00	12,00	48,00	105,00	3,00	7321487
HA4R8RA1600X064HBR050DM	16,00	16,00	64,00	125,00	0,50	7321488
HA4R8RA1600X064HBR100DM	16,00	16,00	64,00	125,00	1,00	7321489
HA4R8RA1600X064HBR200DM	16,00	16,00	64,00	125,00	2,00	7321490
HA4R8RA1600X064HBR300DM	16,00	16,00	64,00	125,00	3,00	7321501
HA4R8RA2000X080HBR050DM	20,00	20,00	80,00	145,00	0,50	7321502
HA4R8RA2000X080HBR100DM	20,00	20,00	80,00	145,00	1,00	7321503
HA4R8RA2000X080HBR200DM	20,00	20,00	80,00	145,00	2,00	7321504
HA4R8RA2000X080HBR300DM	20,00	20,00	80,00	145,00	3,00	7321505
HA4R8RA2500X100HBR050DM	25,00	25,00	100,00	175,00	0,50	7321506
HA4R8RA2500X100HBR100DM	25,00	25,00	100,00	175,00	1,00	7321507
HA4R8RA2500X100HBR200DM	25,00	25,00	100,00	175,00	2,00	7321508
HA4R8RA2500X100HBR300DM	25,00	25,00	100,00	175,00	3,00	7321509


HARVI IV
Application Data

Material Group		Max Ae Factor (KAp)	KCSM15A Base Cutting Speed Vc m/min	Feed per Tooth (fz=mm/th) D1 - Diameter (mm)				
				10	12	16	20	25
P	3	1	130	0,049	0,044	0,067	0,080	0,095
	4	1	100	0,044	0,049	0,059	0,069	0,081
	5	0,8	65	0,038	0,043	0,053	0,063	0,076
	6	0,7	50	0,032	0,036	0,043	0,050	0,060
M	1	1	80	0,049	0,055	0,067	0,080	0,095
	2	0,8	60	0,038	0,043	0,053	0,063	0,076
	3	0,8	60	0,032	0,036	0,043	0,050	0,060
S	1	0,5	50	0,049	0,055	0,067	0,080	0,095
	2	0,5	30	0,038	0,043	0,053	0,063	0,076
	3	0,5	25	0,026	0,030	0,036	0,043	0,051
	4	0,7	45	0,041	0,051	0,061	0,069	0,081
H	1	0,8	80	0,044	0,049	0,059	0,069	0,081
	2	0,5	70	0,037	0,041	0,050	0,059	0,070

NOTE: These guidelines may require variations to achieve optimum results. Above parameters are based on ideal conditions. For smaller taper machining centers, please adjust parameters accordingly on >12 mm diameter. Maximum ramp angle is 2°. Tools with chip splitters can be used as finishers.

HARVI IV
Maximum Cutting Width and Adjustment Factors for Speed & Feed Calculation

Maximum cutting width (Ae) for given cutting depth (Ap)

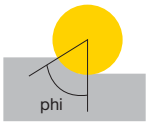
Ap	≤0,125 x D1	>0,125xD1 ≤ 0,5xD1	>0,5xD1 ≤ 1xD1	>1xD1 ≤ 2xD1	>2xD1 ≤ 3xD1	>3xD1 ≤ 4xD1	>4 x D1
Max Ae	100% x D1	50% x D1 x KAp	40% x D1 x KAp	30% x D1 x KAp	20% x D1 x KAp	15% x D1 x KAp	10% x D1 x KAp

Adjustment factors for speed (Vc) and feed (Fz)

Ae/D1	≤2%	>2% ≤ 5%	>5 ≤ 7,5%	>7,5% ≤ 10%	>10% ≤ 15%	>15% ≤ 20%	>20% ≤ 30%	>30% ≤ 40%	>40% ≤ 50%	>50% ≤ 100%
Kv	3	2,5	1,9	1,4	1,35	1,3	1,2	1,1	1	0,9
KFz	3,28	2,3	1,95	1,7	1,5	1,25	1,09	1,02	1	1

Angle of engagement (phi°) relative to cutting width (Ae)

Ae	2%	5%	7,50%	10%	15%	20%	30%	40%	50%	100%
Angle of Engagement - (phi°)	16,26	25,84	31,79	36,87	45,57	53,13	66,42	78,46	90	180



To calculate application specific cutting data, please use KAp, Kv, and Kfz from tables above for adaption of cutting speeds and feeds respectively:

Maximum Ae= KAp * D1 * Ap1Max/D1
Vc new = Vc * Kv
Fz new = Fz * KFz

Sample Calculation
Material: S4
D1: 25 mm
Ap: 2xD1

Max Ae: 30% x Kap x D1	30% x 0,7 x D1 = 21%xD1
M/Min: Base x Kv	45 x 1,2 = 54
Fz: Base x KFz	0,081 x 1,09 = 0,088

Final cutting data recommendation:

Max Ae = 30% * 0,7 * 25 = 5,25 mm
Vc new = 45 * 1,2 = 54 m/min
Fz new = 0,081 * 1,09 = 0,088 mm/th

HARVI IV
Application Data • Minimum Helical Interpolation Diameter

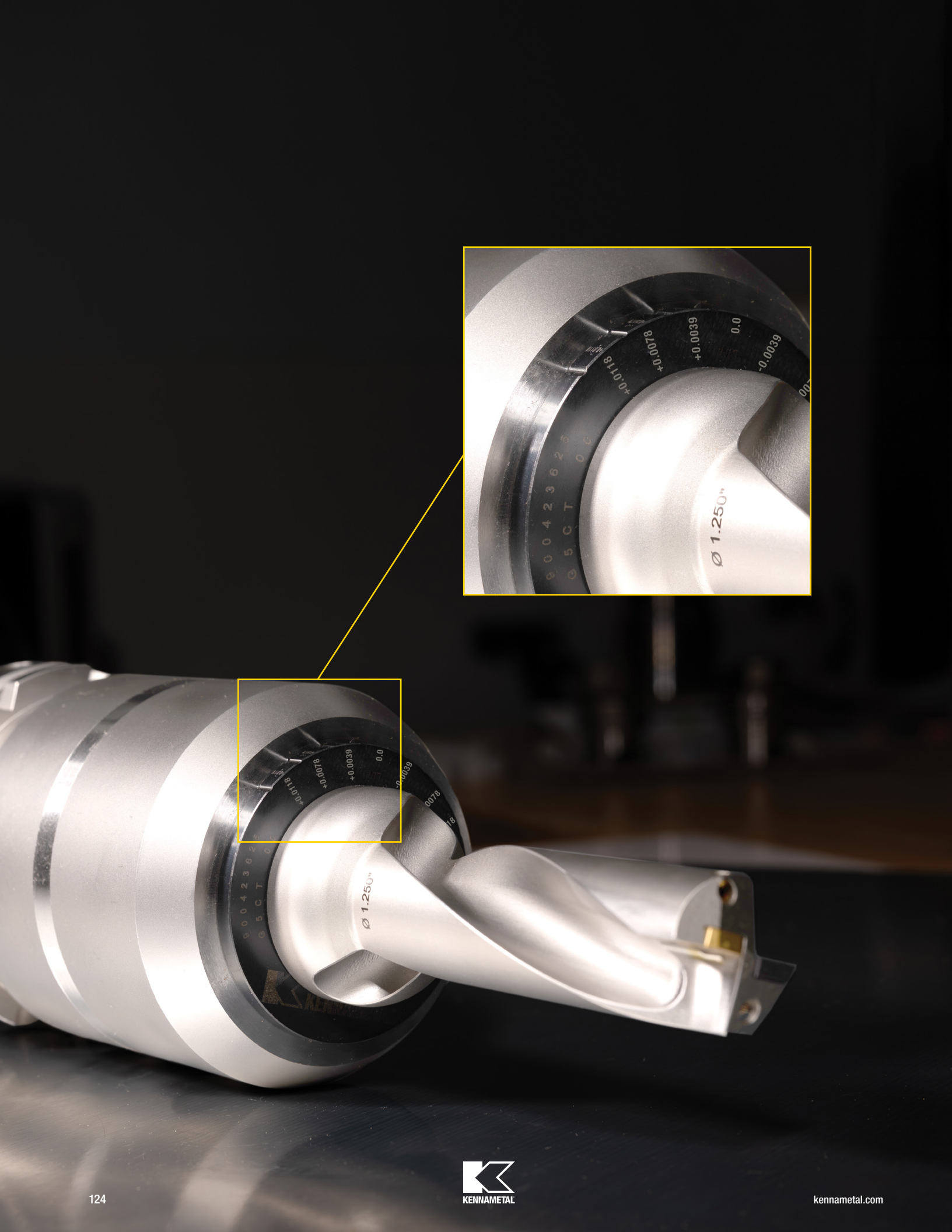
Tool. Dia. Mm	Interpolation Dia. Mm
10	14,25
12	16,25
16	21,31
20	26,38
25	32,44

Maximum ramp angle is 2° on centerline.

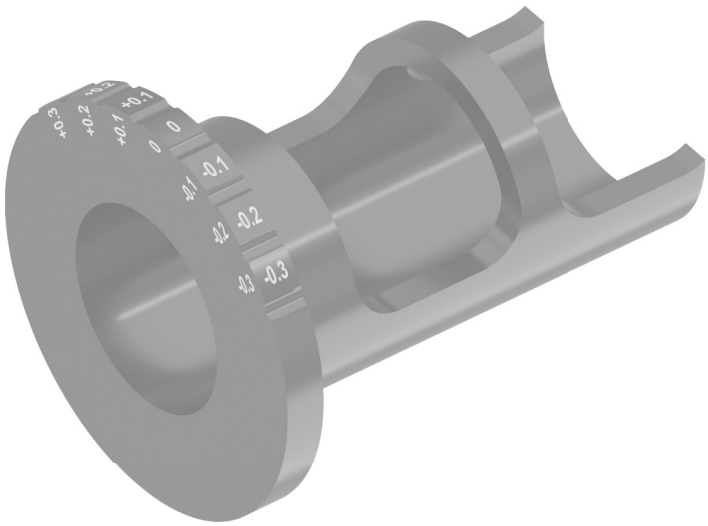
HARVI IV 8-FLUTE END MILLS

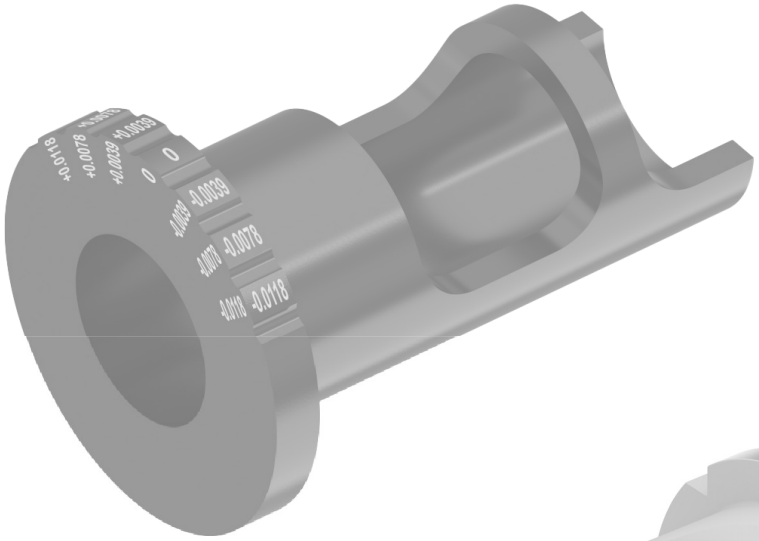
LET'S TAKE YOUR **MANUFACTURING** TO THE **NEXT LEVEL**

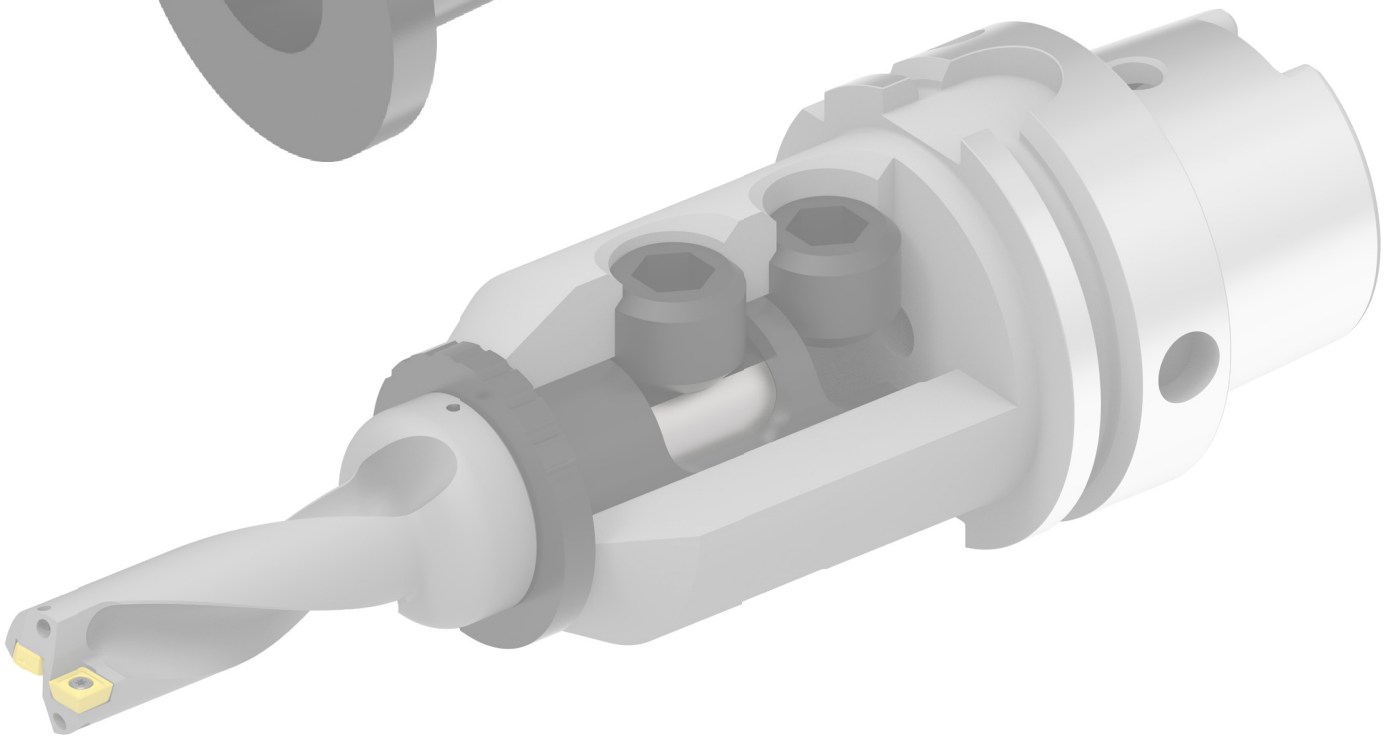
kennametal.com/**HARVI-IV**


+0.0078
+0.0039
0.0
-0.0039
Ø 1.250"

HOLEMAKING





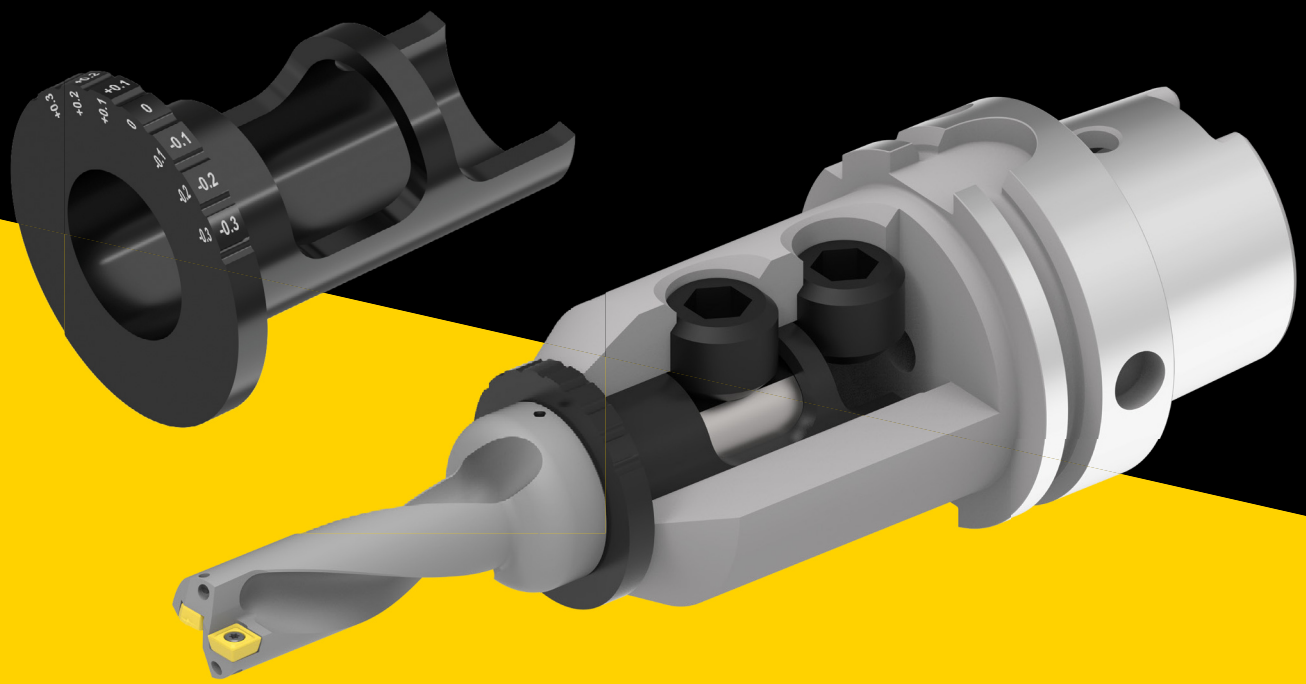


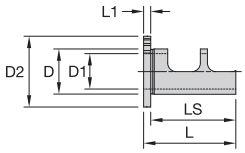
ECCENTRIC SLEEVES

Easily adjust cutting diameters with eccentric sleeves for Drill Fix PRO™ indexable drills. By rotating the sleeve within the adapter, precise and controlled drill movement is enabled for high accuracy and reliability.

Features & Benefits

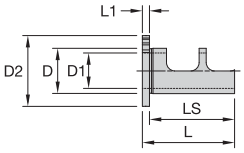
- Ideal for use up to a length-to-diameter (L/D) ratio of 3xD on rotary applications
- Adjusts both upward and downward to attain larger or smaller diameters
- Achieves a diameter range of plus/minus 0.3mm or plus/minus 0.0118"
- Available in sizes 0.75", 1", 1.25", 1.5" and 20mm, 25mm, 32mm, 40mm
- Compatible with Kennametal adapters





Eccentric Sleeves for Drill Fix PRO • Diameter Adjustment Range: ±0.3mm • Metric

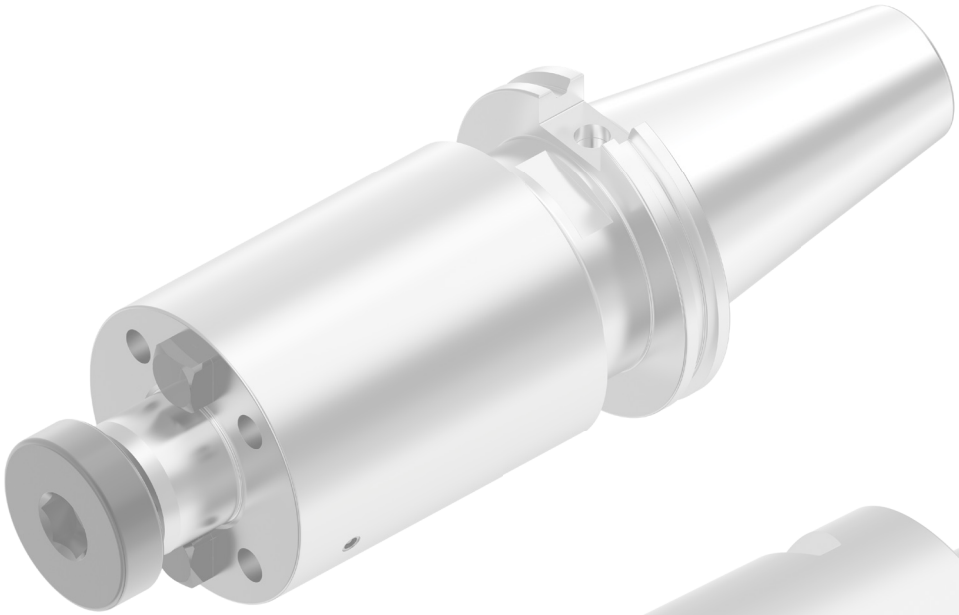
Order Number	Catalog Number	D (mm)	D1 (mm)	D2 (mm)	LS (mm)	L1 (mm)	L (mm)
7315984	25ECCSL20M	25	20	40	56	5	61
7315985	32ECCSL25M	32	25	50	60	5	65
7315986	40ECCSL32M	40	32	58	70	5	75
7315987	50ECCSL40M	50	40	69	80	5	85

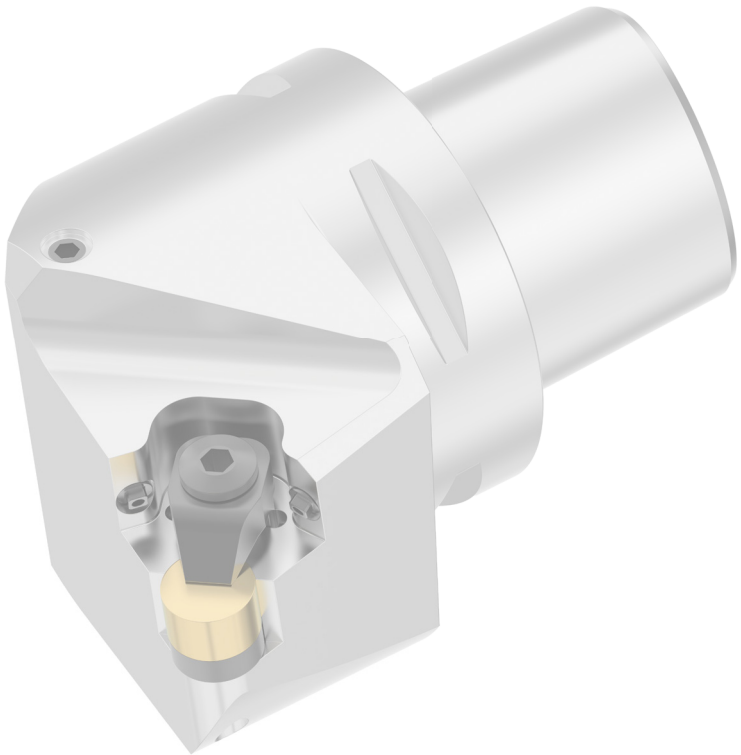


Eccentric Sleeves for Drill Fix PRO • Diameter Adjustment Range: ±0.0118" • Inch

Order Number	Catalog Number	D (inch)	D1 (inch)	D2 (mm)	LS (mm)	L1 (mm)	L (mm)
7315960	100ECCSL075	1.00	0.75	40	56	5	61
7315981	125ECCSL100	1.25	1.00	50	60	5	65
7315982	150ECCSL125	1.50	1.25	58	70	5	75
7315983	200ECCSL150	2.00	1.50	69	80	5	85

SYSTEMS





FACE COOLANT END MILL ADAPTERS

Maximize cooling efficiency with the new face coolant end mill adapters for Weldon™ shanks. Designed to deliver two coolant solutions directly to the cutting edges, these adapters prevent chip overcutting and jamming by efficiently clearing the cutting zone, reducing fan-out enhancing process stability and component quality in milling applications.

Applications

PRIMARY

Milling

SECONDARY

Drilling

Materials

UNIVERSAL

P M K N S H

Industries

General Engineering

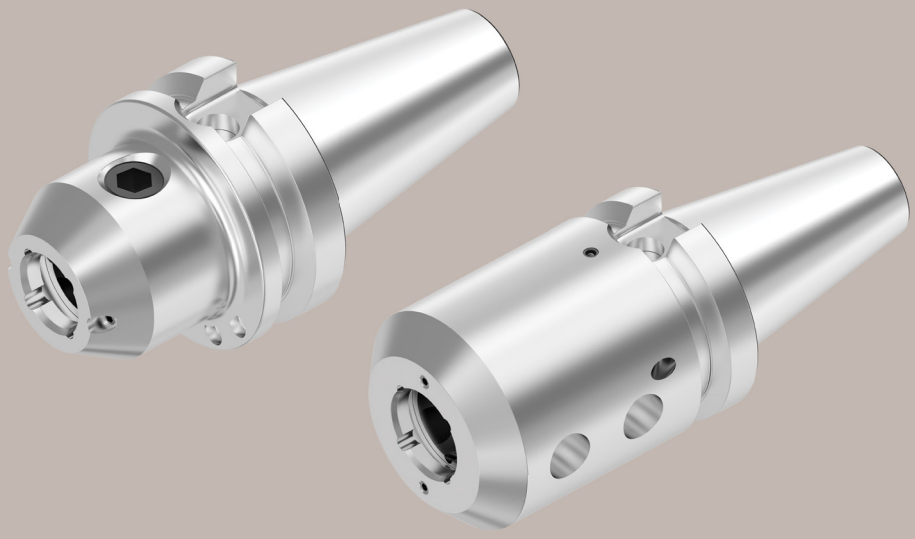
Aerospace

Automotive

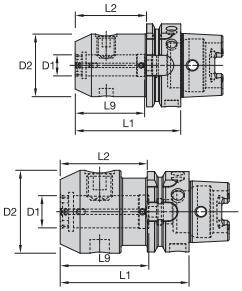
Medical

Oil & Gas

Earthworks

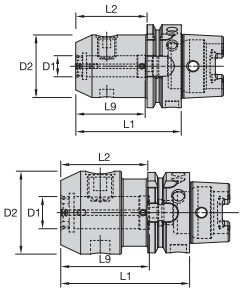


THE COOLEST CHANNELS IN MILLING ADAPTERS NOW DELIVER TWICE THE PERFORMANCE



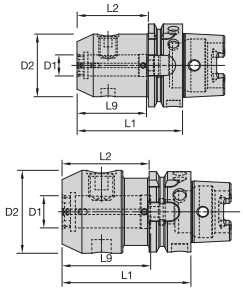
HSK50A • End Mill Adapters • Face Coolant Form AD • Metric

Order Number	ANSI Catalog Number	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	L9 (mm)	kg
7291790	HSK50AEMFC10065M	10	34,50	65,00	39,05	38,50	0,61
7291831	HSK50AEMFC12080M	12	41,50	80,00	54,05	43,50	0,86
7291833	HSK50AEMFC16080M	16	47,50	80,00	54,05	46,50	0,94
7291834	HSK50AEMFC20080M	20	51,50	80,00	54,05	48,50	0,97
7291835	HSK50AEMFC25110M	25	64,50	110,00	84,05	53,50	1,94



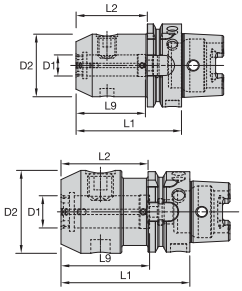
HSK50A • End Mill Adapters • Face Coolant Form AD • Inch

Order Number	ANSI Catalog Number	D1 (inch)	D2 (inch)	L1 (inch)	L2 (inch)	L9 (inch)	lbs (inch)
7291648	HSK50AEMFC038300	0.375	1.000	3.000	2.958	1.530	1.180
7291649	HSK50AEMFC050300	0.500	1.375	3.000	2.958	2.323	1.440
7291650	HSK50AEMFC062375	0.625	1.625	3.750	3.708	2.323	2.110
7291731	HSK50AEMFC075375	0.750	1.750	3.750	3.708	2.323	2.090
7291732	HSK50AEMFC100425	1.000	2.000	4.250	4.208	2.323	2.800



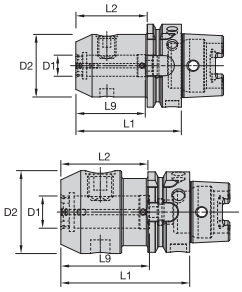
HSK63A • End Mill Adapters • Face Coolant Form AD • Metric

Order Number	ANSI Catalog Number	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	L9 (mm)	kg
7291813	HSK63AEMFC10065M	10	34,50	65,00	39,05	38,50	0,86
7291814	HSK63AEMFC12080M	12	41,50	80,00	54,05	43,50	1,12
7291815	HSK63AEMFC16080M	16	47,50	80,00	54,05	46,50	1,24
7291816	HSK63AEMFC20080M	20	51,50	80,00	54,05	48,50	1,32
7291817	HSK63AEMFC25110M	25	64,50	110,00	84,05	38,50	2,29



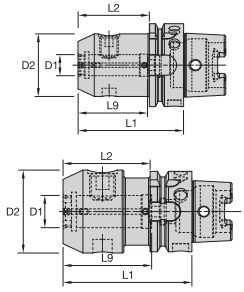
HSK63A • End Mill Adapters • Face Coolant Form AD • Inch

Order Number	ANSI Catalog Number	D1 (inch)	D2 (inch)	L1 (inch)	L2 (inch)	L9 (inch)	lbs
7291687	HSK63AEMFC038300	0.375	1.000	3.000	3.234	1.530	1.740
7291688	HSK63AEMFC050300	0.500	1.375	3.000	3.234	1.770	2.010
7291689	HSK63AEMFC062375	0.625	1.625	3.750	3.984	1.890	2.670
7291690	HSK63AEMFC075375	0.750	1.750	3.750	3.984	2.020	2.810
7291741	HSK63AEMFC100375	1.000	2.000	3.750	4.038	2.323	3.060



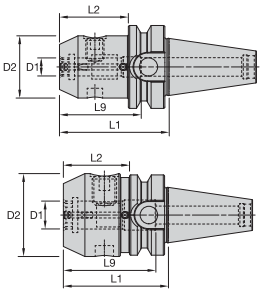
HSK100A • End Mill Adapters • Face Coolant Form AD • Metric

Order Number	ANSI Catalog Number	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	L9 (mm)	kg
7291708	HSK100AEMFC10080M	10	34,50	80,00	51,05	38,50	2,30
7291709	HSK100AEMFC12080M	12	41,50	80,00	51,05	43,50	2,44
7291710	HSK100AEMFC16100M	16	47,50	100,00	71,05	46,50	2,82
7291751	HSK100AEMFC20100M	20	51,50	100,00	71,05	48,50	2,93
7291752	HSK100AEMFC25100M	25	64,50	100,00	71,05	53,50	3,45



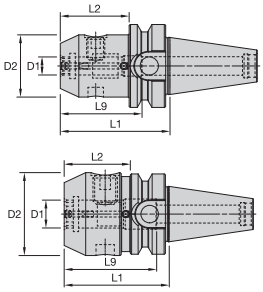
HSK100A • End Mill Adapters • Face Coolant Form AD • Inch

Order Number	ANSI Catalog Number	D1 (inch)	D2 (inch)	L1 (inch)	L2 (inch)	L9 (inch)	lbs
7291529	HSK100AEMFC038300	0.375	1.000	3.000	3.825	3.323	1.740
7291530	HSK100AEMFC050325	0.500	1.375	3.250	4.075	4.323	5.030
7291761	HSK100AEMFC062375	0.625	1.625	3.750	4.575	5.323	5.570
7291762	HSK100AEMFC075375	0.750	1.750	3.750	4.575	6.323	5.700
7291763	HSK100AEMFC100425	1.000	2.000	4.250	5.075	7.323	6.370



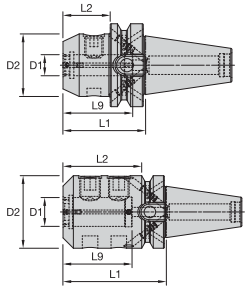
BT30 • End Mill Adapters • Face Coolant Form AD • Metric

Order Number	ANSI Catalog Number	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	L9 (mm)	kg
7291769	BT30EMFC10060M	10	34,50	60,00	37,90	38,50	0,59
7291770	BT30EMFC12060M	12	41,50	60,00	37,90	43,50	0,68
7291811	BT30EMFC16060M	16	47,50	60,00	37,90	53,00	0,74
7291812	BT30EMFC20080M	20	51,50	80,00	57,90	55,00	1,01



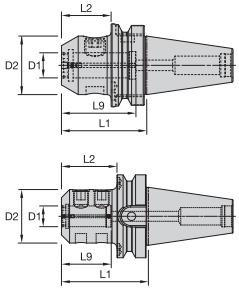
BT30 • End Mill Adapters • Face Coolant Form AD • Inch

Order Number	ANSI Catalog Number	D1 (inch)	D2 (inch)	L1 (inch)	L2 (inch)	L9 (inch)	lbs
7291451	BT30EMFC038236	0.375	1.000	2.362	1.490	1.736	1.030
7291452	BT30EMFC050236	0.500	1.375	2.362	1.490	1.974	1.220
7291453	BT30EMFC062236	0.625	1.625	2.362	1.490	2.095	1.380
7291456	BT30EMFC075236	0.750	1.750	2.362	1.490	2.224	1.400



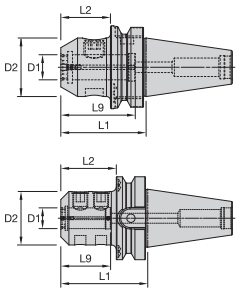
BT40 • End Mill Adapters • Face Coolant Form B/AD • Metric

Order Number	ANSI Catalog Number	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	L9 (mm)	kg
7350591	BT40BEMFC10063M	10	34,50	63,00	36,00	45,00	1,16
7350593	BT40BEMFC12063M	12	41,50	63,00	36,00	43,50	1,24
7350594	BT40BEMFC16063M	16	47,50	63,00	36,00	46,50	1,31
7350595	BT40BEMFC20063M	20	51,50	63,00	36,00	48,50	1,33
7350596	BT40BEMFC25090M	25	62,95	90,00	36,00	60,00	2,14



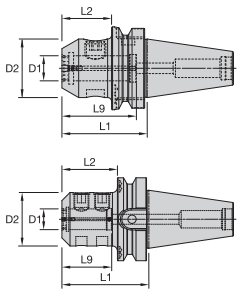
BT40 • End Mill Adapters • Face Coolant Form AD • Inch

Order Number	ANSI Catalog Number	D1 (inch)	D2 (inch)	L1 (inch)	L2 (inch)	L9 (inch)	lbs
7353404	BT40EMFC038255	0.375	1.000	2.550	1.487	1.734	2.370
7353405	BT40EMFC050255	0.500	1.375	2.550	1.487	1.974	2.550
7353406	BT40EMFC062255	0.625	1.625	2.550	1.487	2.094	2.710
7353407	BT40EMFC075255	0.750	1.750	2.550	1.487	2.224	2.730
7353408	BT40EMFC100374	1.000	2.000	3.740	2.677	2.559	3.750



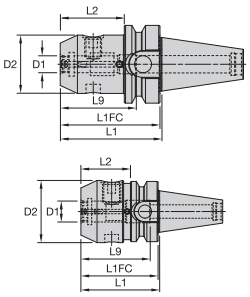
BT50 • End Mill Adapters • Face Coolant Form AD • Metric

Order Number	ANSI Catalog Number	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	L9 (mm)	kg
7353387	BT50EMFC10080M	10	34,50	80,00	55,00	45,00	3,87
7353388	BT50EMFC12080M	12	41,50	80,00	55,00	50,00	3,96
7353389	BT50EMFC16080M	16	47,50	80,00	55,00	53,00	4,06
7353390	BT50EMFC20080M	20	51,50	80,00	55,00	55,00	4,11
7353451	BT50EMFC25105M	25	64,50	105,00	70,00	60,00	4,97



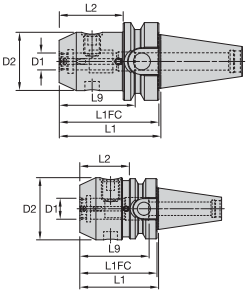
BT50 • End Mill Adapters • Face Coolant Form AD • Inch

Order Number	ANSI Catalog Number	D1 (inch)	D2 (inch)	L1 (inch)	L2 (inch)	L9 (inch)	lbs
7353452	BT50EMFC050295	0.500	1.375	2.950	1.454	1.974	8.370
7353453	BT50EMFC075295	0.750	1.750	2.950	1.454	2.224	8.530
7353454	BT50EMFC100413	1.000	2.000	4.130	2.634	2.559	9.510



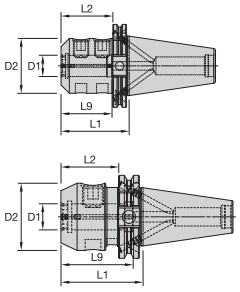
BTKV30 • End Mill Adapters • Face Coolant Form AD • Metric

Order Number	ANSI Catalog Number	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	L9 (mm)	kg
7291778	BTKV30EMFC10060M	10	34,50	60,00	37,90	45,00	0,59
7291779	BTKV30EMFC12060M	12	41,50	60,00	37,90	50,00	0,68
7291780	BTKV30EMFC16060M	16	47,50	60,00	37,90	46,50	0,75
7291821	BTKV30EMFC20080M	20	51,50	80,00	57,90	48,50	1,01



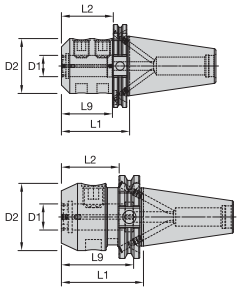
BTKV30 • End Mill Adapters • Face Coolant Form AD • Inch

Order Number	ANSI Catalog Number	D1 (inch)	D2 (inch)	L1 (inch)	L2 (inch)	L9 (inch)	lbs
7291455	BTKV30EMFC038236	0.375	1.000	2.362	1.492	1.520	1.060
7291457	BTKV30EMFC050236	0.500	1.375	2.362	1.492	1.770	1.230
7291458	BTKV30EMFC062236	0.625	1.625	2.362	1.492	1.890	1.390
7291459	BTKV30EMFC075236	0.750	1.750	2.362	1.492	2.020	1.410



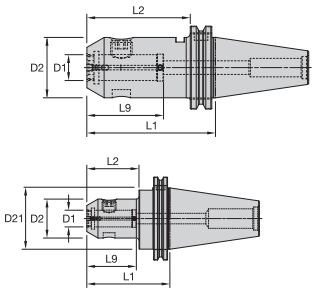
DV40 • End Mill Adapters • Face Coolant Form B/AD • Metric

Order Number	ANSI Catalog Number	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	L9 (mm)	kg
7354098	DV40BEMFC10050M	10	34,50	50,00	30,95	45,00	0,97
7354099	DV40BEMFC12050M	12	41,50	50,00	30,95	50,00	1,03
7354100	DV40BEMFC16063M	16	47,50	63,00	43,95	53,00	1,26
7354141	DV40BEMFC20063M	20	51,50	63,00	43,95	55,00	1,24
7354142	DV40BEMFC25100M	25	64,50	100,00	80,95	60,00	2,30



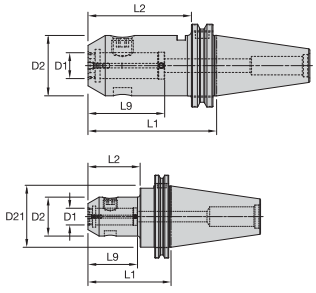
DV50 • End Mill Adapters • Face Coolant Form B/AD • Metric

Order Number	ANSI Catalog Number	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	L9 (mm)	kg
7354026	DV50BEMFC16063M	16	47,50	63,00	43,95	53,00	3,07
7354027	DV50BEMFC20063M	20	51,50	63,00	43,95	55,00	3,12
7354030	DV50BEMFC25080M	25	64,50	80,00	60,95	60,00	3,80



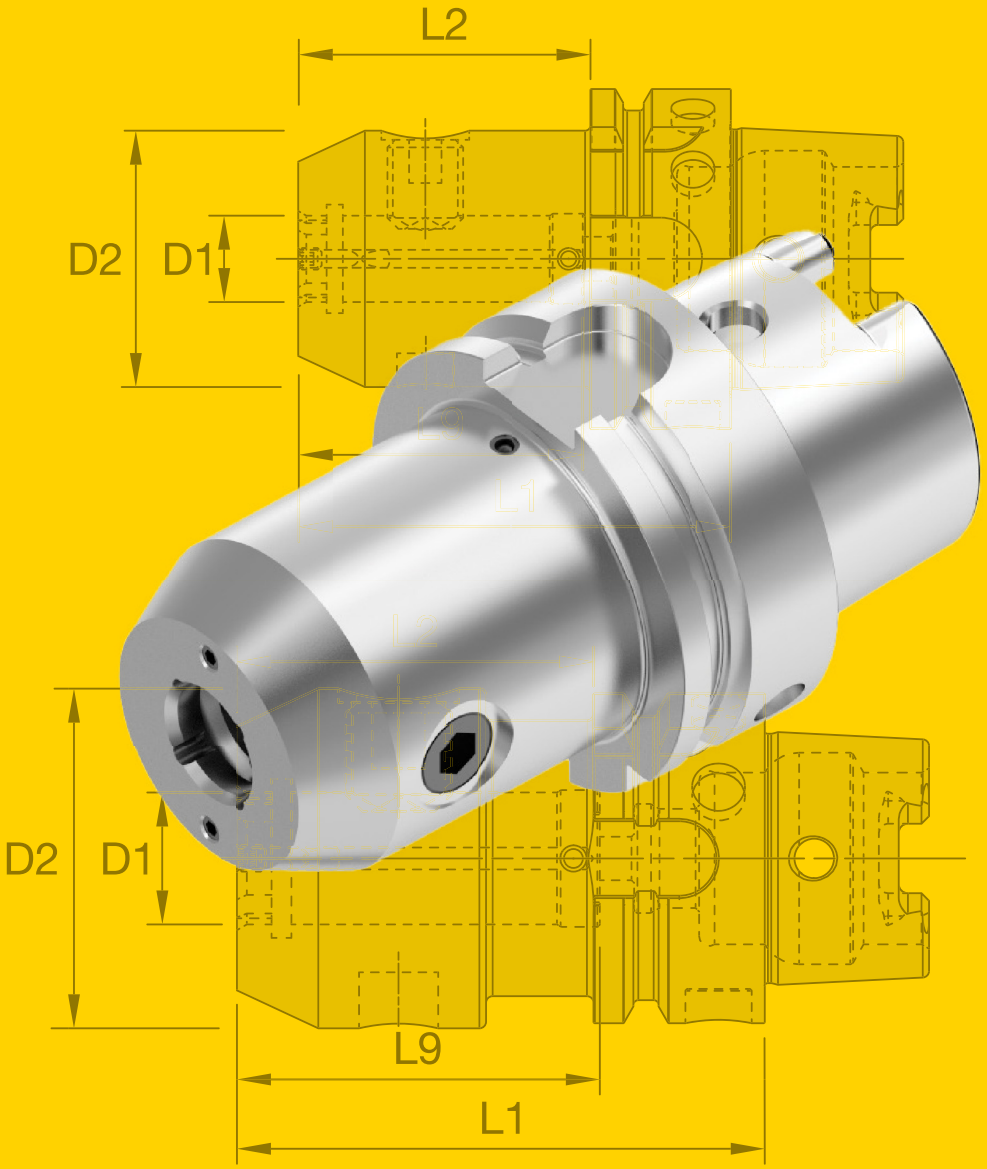
CV40 • End Mill Adapters • Face Coolant Form AD • Inch

Order Number	ANSI Catalog Number	D1 (inch)	D2 (inch)	L1 (inch)	L2 (inch)	L9 (inch)	lbs
7353433	CV40EMFC038250	0.375	1.000	2.500	1.093	1.734	2.390
7353434	CV40EMFC050262	0.500	1.375	2.620	1.213	1.974	2.520
7353435	CV40EMFC062375	0.625	1.625	3.750	2.343	2.095	3.260
7353436	CV40EMFC075375	0.750	1.750	3.750	3.000	2.224	3.370
7353437	CV40EMFC100400	1.000	2.000	4.000	3.250	2.559	3.750



CV50 • End Mill Adapters • Face Coolant Form AD • Inch

Order Number	ANSI Catalog Number	D1 (inch)	D2 (inch)	L1 (inch)	L2 (inch)	L9 (inch)	lbs
7354132	CV50EMFC038250	0.375	1.000	2.500	1.093	1.734	7.010
7354133	CV50EMFC050262	0.500	1.375	2.620	1.213	1.974	7.160
7354134	CV50EMFC062375	0.625	1.625	3.750	2.343	2.095	7.900
7354136	CV50EMFC075375	0.750	1.750	3.750	2.343	2.224	8.000
7354137	CV50EMFC100400	1.000	2.000	4.000	2.593	2.559	8.380


L2
D2
D1
L1
L2
D2
D1
L9
L1

FACE COOLANT END MILL ADAPTERS

LET'S TAKE YOUR **MANUFACTURING** TO THE **NEXT LEVEL**

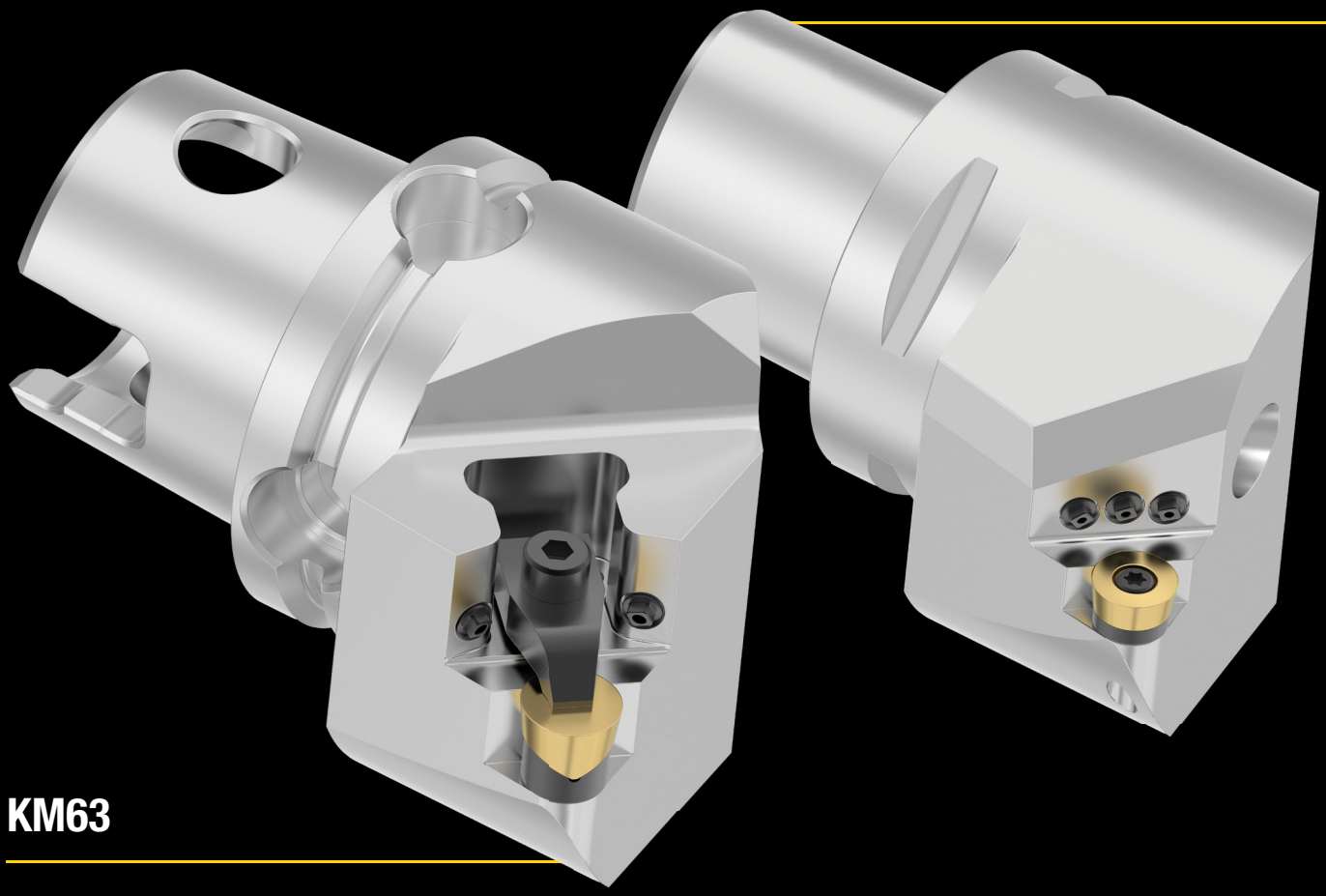
kennametal.com

KM™ & PSC MODULAR ADAPTERS

Give Machining a New Altitude!

Introducing KM63, KM80, PSC63 and PSC80 adapters for aerospace and heavy machining. These modular adapters feature high-pressure coolant nozzles that optimize chip control, extend tool life and reduce costs.

PSC63



KM63

Features & Benefits

- Increases productivity with easier setups and less downtime
- Compatible with standard ISO inserts for increased versatility
- Great for holding round inserts in high-temp alloy applications
- Provides flexibility, rigidity and stability for demanding machining operations

Applications

PRIMARY

O.D. Turning

SECONDARY

Facing

Profiling

Materials

UNIVERSAL

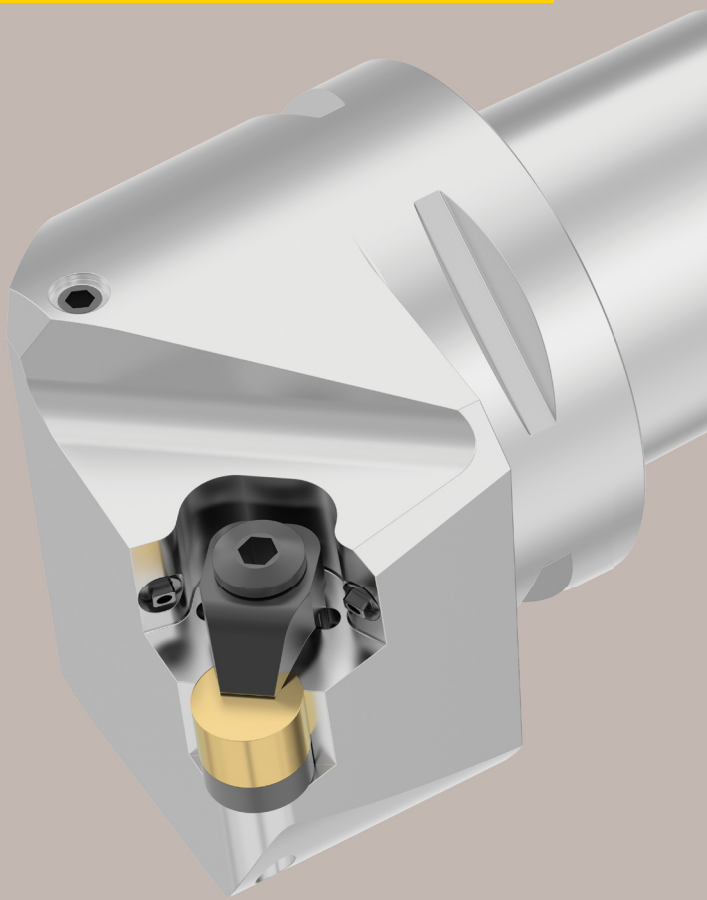
P M K N S H

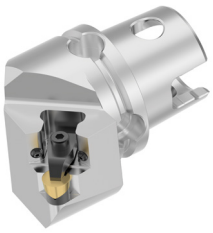
Industries

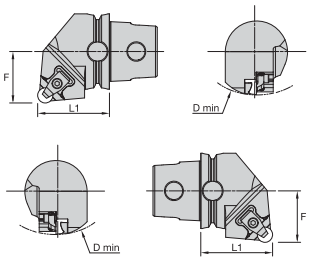
Aerospace

General Engineering

MAKE A QUICK CONNECTION FOR AEROSPACE MACHINING

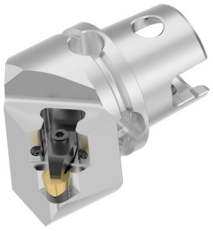


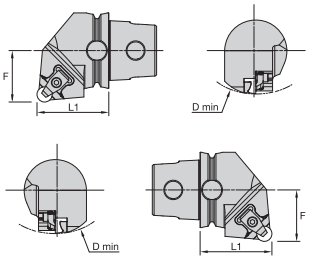




KM63TS Cutting Units • Kendex™ CRSC 45º • RC_ Style Inserts • High Pressure Coolant

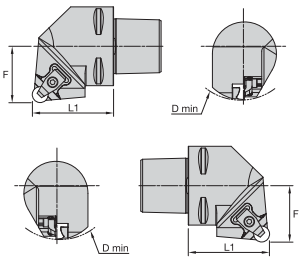
	L1		F		D min		
Order Number	mm	in	mm	in	mm	in	Gage Insert
Right Hand							
7326326	60	2.362	43	1.693	180	7.087	RCGX090700__
7326324	60	2.362	43	1.693	180	7.087	RCGX120700__
Left Hand							
7326327	60	2.362	43	1.693	180	7.087	RCGX090700__
7326325	60	2.362	43	1.693	180	7.087	RCGX120700__





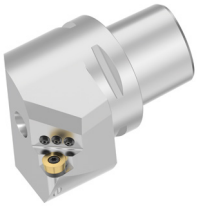
KM80TS Cutting Units • Kendex CRSC 45º • RC_ Style Inserts • High Pressure Coolant

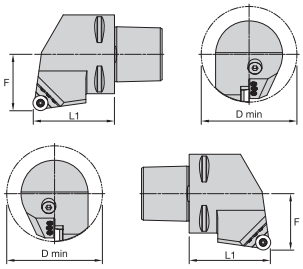
	L1		F		D min		
Order Number	mm	in	mm	in	mm	in	Gage Insert
Right Hand							
7326330	70	2.756	53	2.087	180	7.087	RCGX090700__
7326328	70	2.756	53	2.087	180	7.087	RCGX120700__
Left Hand							
7326651	70	2.756	53	2.087	180	7.087	RCGX090700__
7326329	70	2.756	53	2.087	180	7.087	RCGX120700__



PSC63 Cutting Units • Kendex CRSC 45º • RC_ Style Inserts • High Pressure Coolant

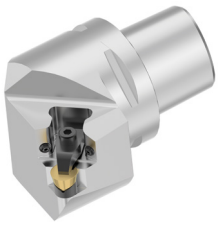
		L1		F		D min		
Order Number	Catalog Number	mm	in	mm	in	mm	in	Gage Insert
Right Hand								
7326934	PSC63CRSCR09HPC	65	2.559	45	1.772	180	7.087	RCGX090700E
7326932	PSC63CRSCR12HPC	65	2.559	45	1.772	180	7.087	RCGX120700
Left Hand								
7326935	PSC63CRSCL09HPC	65	2.559	45	1.772	180	7.087	RCGX090700E
7326933	PSC63CRSCL12HPC	65	2.559	45	1.772	180	7.087	RCGX120700

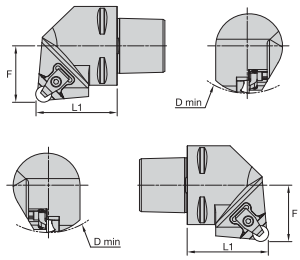




PSC80 Cutting Units • Screw-On SRSC 45º • RC_ Style Inserts • High Pressure Coolant

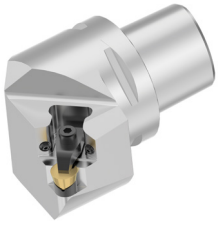
		L1		F		D min		
Order Number	Catalog Number	mm	in	mm	in	mm	in	Gage Insert
Right Hand								
7327037	PSC80SRSCR10HPC	80	3.150	55	2.165	125	4.921	RCMT1004M0
7327035	PSC80SRSCR12HPC	80	3.150	55	2.165	110	4.331	RCMT1204M0
Left Hand								
7327038	PSC80SRSCL10HPC	80	3.150	55	2.165	125	4.921	RCMT1004M0
7327036	PSC80SRSCL12HPC	80	3.150	55	2.165	110	4.331	RCMT1204M0

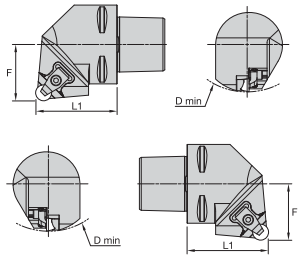




PSC63 Cutting Units • Kendex CRSP 45º • RP_ Style Inserts • High Pressure Coolant

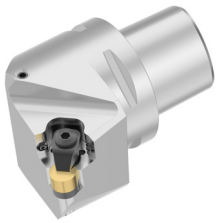
		L1		F		D min		
Order Number	Catalog Number	mm	in	mm	in	mm	in	Gage Insert
Right Hand								
7327008	PSC63CRSPR09HPC	65	2.559	45	1.772	180	7.087	RPGX090700E
7327005	PSC63CRSPR12HPC	65	2.559	45	1.772	180	7.087	RPGX120700E
Left Hand								
7327009	PSC63CRSPL09HPC	65	2.559	45	1.772	180	7.087	RPGX090700E
7327006	PSC63CRSPL12HPC	65	2.559	45	1.772	180	7.087	RPGX120700E

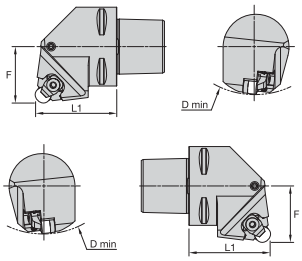




PSC80 Cutting Units • Kendex CRSP 45º • RP_ Style Inserts • High Pressure Coolant

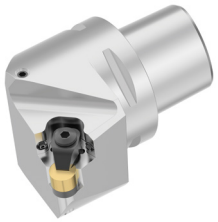
		L1		F		D min		
Order Number	Catalog Number	mm	in	mm	in	mm	in	Gage Insert
Right Hand								
7327022	PSC80CRSPR09HPC	80	3.150	55	2.165	180	7.087	RPGX090700E
7327010	PSC80CRSPR12HPC	80	3.150	55	2.165	180	7.087	RPGX120700E
Left Hand								
7327023	PSC80CRSPL09HPC	80	3.150	55	2.165	180	7.087	RPGX090700E
7327021	PSC80CRSPL12HPC	80	3.150	55	2.165	180	7.087	RPGX120700E

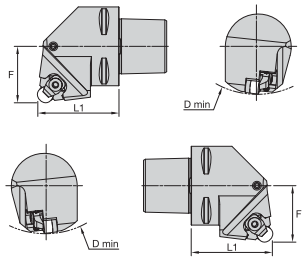




PSC63 Cutting Units • Kendex CRSN 45º • RN_ Style Inserts • High Pressure Coolant

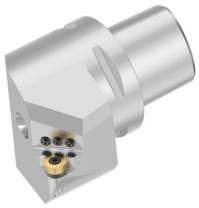
		L1		F		D min		
Order Number	Catalog Number	mm	in	mm	in	mm	in	Gage Insert
Right Hand								
7326998	PSC63CRSNR12HPC	65	2.559	45	1.772	130	5.118	RNGN120700__
Left Hand								
7326999	PSC63CRSNL12HPC	65	2.559	45	1.772	130	5.118	RNGN120700__

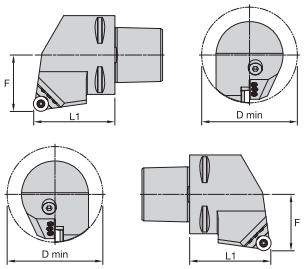




PSC80 Cutting Units • Kendex CRSN 45º • RN_ Style Inserts • High Pressure Coolant

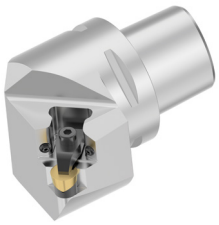
		L1		F		D min		
Order Number	Catalog Number	mm	in	mm	in	mm	in	Gage Insert
Right Hand								
7327000	PSC80CRSNR12HPC	80	3.150	55	2.165	180	7.087	RNGN120700__
Left Hand								
7327051	PSC80CRSNL12HPC	80	3.150	55	2.165	180	7.087	RNGN120700__

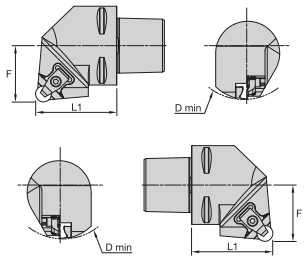




PSC63 Cutting Units • Screw-On SRSC 45º • RC_ Style Inserts • High Pressure Coolant

		L1		F		D min		
Order Number	Catalog Number	mm	in	mm	in	mm	in	Gage Insert
Right Hand								
7327033	PSC63SRSCR10HPC	65	2.559	45	1.772	115	4.528	RCMT10T3M0
7327031	PSC63SRSCR12HPC	65	2.559	45	1.772	90	3.543	RCMT1204M0
Left Hand								
7327034	PSC63SRSCL10HPC	65	2.559	45	1.772	115	4.528	RCMT10T3M0
7327032	PSC63SRSCL12HPC	65	2.559	45	1.772	90	3.543	RCMT1204M0





PSC80 Cutting Units • Kendex CRSC 45º • RC_ Style Inserts • High Pressure Coolant

		L1		F		D min		
Order Number	Catalog Number	mm	in	mm	in	mm	in	Gage Insert
Right Hand								
7326938	PSC80CRSCR09HPC	80	3.150	55	2.165	180	7.087	RCGX090700E
7326936	PSC80CRSCR12HPC	80	3.150	55	2.165	180	7.087	RCGX120700
Left Hand								
7326940	PSC80CRSCL09HPC	80	3.150	55	2.165	180	7.087	RCGX090700E
7326937	PSC80CRSCL12HPC	80	3.150	55	2.165	180	7.087	RCMT10T3M0

CV AND CVKV 40 & 50 ADAPTERS

Introducing the newest adapters for machining setups. These shell mills, shrink fit and screw-on adapters allow for the use of a broader range of metric milling cutters and drills. Compatible with the steep taper (CV 40 & 50) and face contact (CVKV 40 & 50) spindle interfaces, this upgrade ensures greater flexibility and efficiency in your operations.

Features & Benefits

Shell Mill Adapters (Metric CV40, CV50, CVKV40, CVKV50)

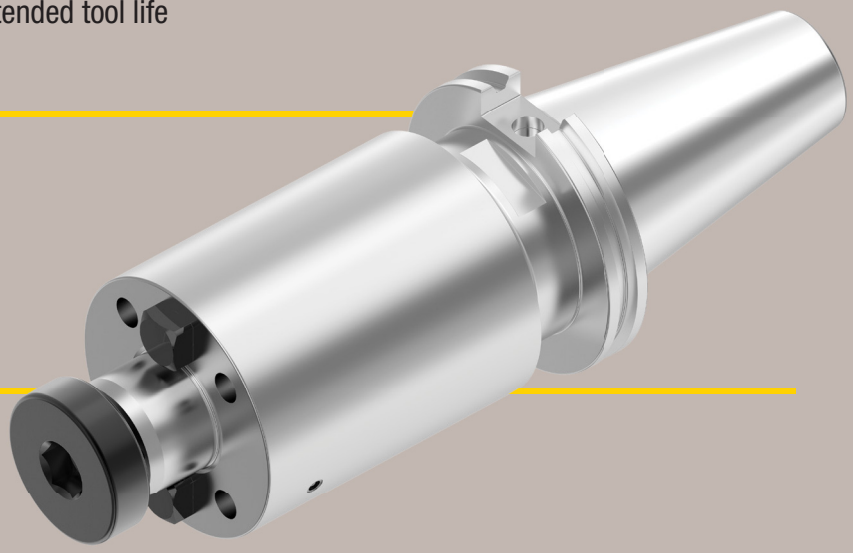
- Seamless integration into common machining centers
- Enhances milling reliability and surface finish, especially in heavy-duty operations
- Improves coolant flow and increases axial load capacity
- Enhances tool life and ensures part quality during high-speed machining

Shrink Fit Adapters Extended Gauge Length (Inch & Metric CVKV40 and CVKV50)

- Ideal for deep cavities and 5-axis machining without compromising stability
- Supports high-speed machining with less vibration and better surface finish
- Fine balancing supports smooth operations at high speeds
- Seamless integration with global tooling standards
- Reliable performance in long-reach and high-load applications
- Enhanced rigidity and precision for demanding applications

Screw-On Adapters (Metric CVKV40, CVKV50)

- Expand application range with flexible tool combinations
- Increase stability and rigidity during heavy and interrupted cuts
- Improve performance in tight machining areas and high-speed operations
- Supports smooth, high-RPM cutting with extended tool life



Applications

PRIMARY

Milling

SECONDARY

Drilling

Materials

UNIVERSAL

P M K N S H

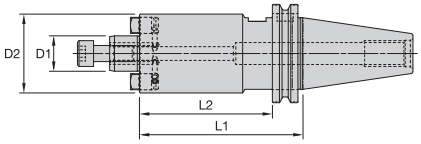
Industries

Aerospace

General Engineering

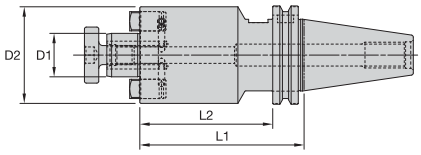
Oil & Gas

Wind & Solar



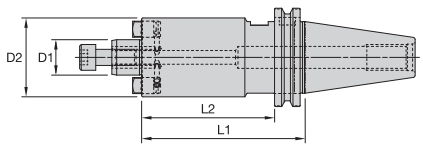
CV40 • Shell Mill Adapters • Cap Lock Screw • Coolant Through AD • Metric

Order Number	Catalog Number	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	kg
7134016	CV40SMC16M350	16,0	44,0	88,90	71,43	1.61
7134017	CV40SMC22M400	22,0	49,0	101,60	80,35	1.97



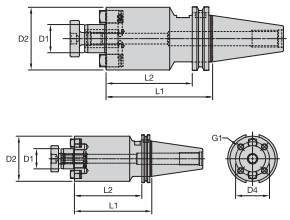
CV40 • Shell Mill Adapters • Flange Lock Screw • Coolant Through AD • Metric

Order Number	Catalog Number	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	kg
7134018	CV40SMC27M400	27,0	60,0	101,60	80,35	2.49



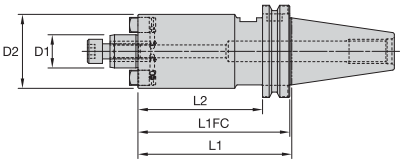
CV50 • Shell Mill Adapters • Cap Screw • Coolant Through AD • Metric

Order Number	Catalog Number	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	kg
7134019	CV50SMC22M400	22,0	49,0	101,60	84,13	3.71



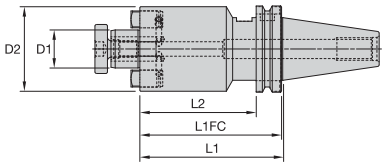
CV50 • Shell Mill Adapters • Flange Lock Screw • Coolant Through AD • Metric

Order Number	Catalog Number	D1 (mm)	D2 (mm)	D4 (mm)	G1 (mm)	L1 (mm)	L2 (mm)	kg
7134020	CV50SMC27M550	27,0	60,0	—	—	139,70	122,23	5.19
7134031	CV50SMC32M550	32,0	78,0	—	—	139,70	122,73	6.95
7134032	CV50SMC40M600	40,0	89,3	66,7	M12,0 X 1,75	152,40	134,93	8.75



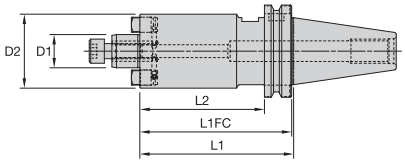
CVKV40 • Shell Mill Adapters • Cap Lock Screw • Coolant Through AD • Metric

Order Number	Catalog Number	D1 (mm)	D2 (mm)	L1 (mm)	L1FC (mm)	L2 (mm)	kg
7229130	CVKV40SMC16M350	16,0	44,0	88,90	87,89	69,85	1.63
7229151	CVKV40SMC22M400	22,0	49,0	101,60	100,59	82,55	2.00



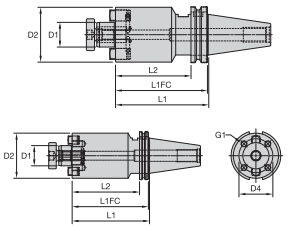
CVKV40 • Shell Mill Adapters • Flange Lock Screw • Coolant Through AD • Metric

Order Number	Catalog Number	D1 (mm)	D2 (mm)	L1 (mm)	L1FC (mm)	L2 (mm)	kg
7229152	CVKV40SMC27M400	27,0	60,0	101,60	100,59	82,55	2.52



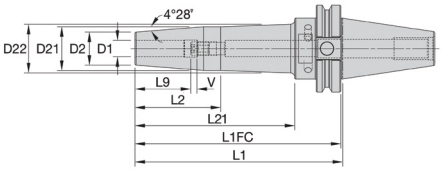
CVKV50 • Shell Mill Adapters • Cap Lock Screw • Coolant Through AD • Metric

Order Number	Catalog Number	D1 (mm)	D2 (mm)	L1 (mm)	L1FC (mm)	L2 (mm)	kg
7229153	CVKV50SMC22M400	22,0	49,0	101,60	100,10	82,55	3.74



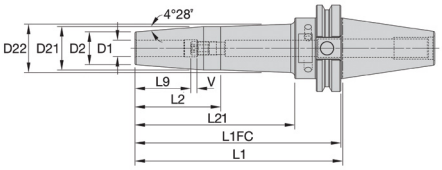
CVKV50 • Shell Mill Adapters • Flange Lock Screw • Coolant Through AD • Metric

Order Number	Catalog Number	D1 (mm)	D2 (mm)	D4 (mm)	G1 (mm)	L1 (mm)	L1FC (mm)	L2 (mm)	kg
7229154	CVKV50SMC27M550	27,0	60,0	—	—	139,70	138,20	120,65	5.23
7229155	CVKV50SMC32M550	32,0	78,0	—	—	139,70	138,20	120,65	6.99
7229156	CVKV50SMC40M600	40,0	89,3	66,7	M12,0 X 1,75	152,40	150,90	133,35	8.90



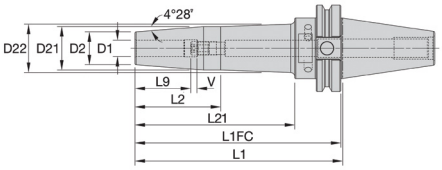
CVKV40 • Shrink Fit Adapters • GP Line • Coolant Through AD • Metric

Order Number	Catalog Number	D1 (mm)	D2 (mm)	D21 (mm)	D22 (mm)	L1 (mm)	L1FC (mm)	L2 (mm)	L21 (mm)	L9 (mm)	V (mm)	kg
7229104	CVKV40HPVTT06M600	6	21	27	32	152	151	50	117	26	10	1.51
7229105	CVKV40HPVTT08M600	8	21	27	32	152	151	50	117	26	10	1.50
7229106	CVKV40HPVTT10M600	10	24	32	36	152	151	50	117	31	10	1.65
7229107	CVKV40HPVTT12M600	12	24	32	36	152	151	63	117	36	10	1.59
7229108	CVKV40HPVTT16M600	16	27	34	38	152	151	63	117	44	10	1.66
7229109	CVKV40HPVTT20M600	20	33	42	44	152	151	57	117	46	10	1.91



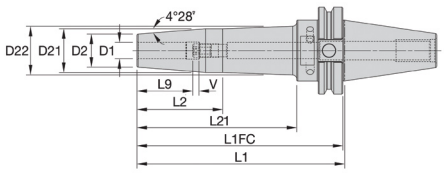
CVKV40 • Shrink Fit Adapters • GP Line • Coolant Through AD • Inch

Order Number	Catalog Number	D1 (inch)	D2 (inch)	D21 (inch)	D22 (inch)	L1 (inch)	L1FC (inch)	L2 (inch)	L21 (inch)	L9 (inch)	V (inch)	lbs
7228839	CVKV40HPVTT025600	.250	.827	1.059	1.245	6.000	5.960	1.969	4.625	1.024	.394	3.330
7228840	CVKV40HPVTT031600	.313	1.059	.827	1.245	6.000	5.960	1.969	4.625	1.024	.394	3.310
7229061	CVKV40HPVTT038600	.375	.945	1.256	1.406	6.000	5.960	2.480	4.625	1.221	.394	3.650
7229062	CVKV40HPVTT050600	.500	.945	1.256	1.406	6.000	5.960	2.480	4.625	1.417	.394	3.470
7229063	CVKV40HPVTT062600	.625	1.063	1.335	1.484	6.000	5.960	2.480	4.625	1.535	.394	3.670
7229064	CVKV40HPVTT075600	.750	1.299	1.650	1.649	6.000	5.960	2.239	4.625	1.614	.394	4.300
7229065	CVKV40HPVTT100600	1.000	1.730	2.083	1.750	6.000	5.960	2.240	5.250	1.850	.394	5.120



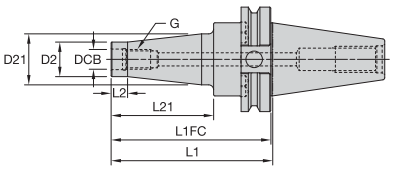
CVKV50 • Shrink Fit Adapters • GP Line • Coolant Through AD • Metric

Order Number	Catalog Number	D1 (mm)	D2 (mm)	D21 (mm)	D22 (mm)	L1 (mm)	L1FC (mm)	L2 (mm)	L21 (mm)	L9 (mm)	V (mm)	kg
7229110	CVKV50HPVTT06M800	6	21	27	35	203	202	50	168	26	10	3.79
7229121	CVKV50HPVTT08M800	8	21	27	35	203	202	50	168	26	10	3.79
7229122	CVKV50HPVTT10M800	10	24	32	39	203	202	63	168	31	10	4.04
7229123	CVKV50HPVTT12M800	12	24	32	39	203	202	63	168	36	10	3.94
7229124	CVKV50HPVTT14M800	14	27	34	41	203	202	63	168	39	10	4.04
7229125	CVKV50HPVTT16M800	16	27	34	41	203	202	63	168	39	10	4.01
7229126	CVKV50HPVTT20M800	20	33	42	49	203	202	70	168	41	10	4.49
7229128	CVKV50HPVTT25M800	25	44	53	60	203	202	70	168	47	10	5.50



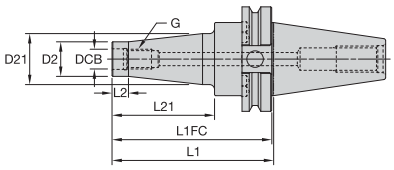
CVKV50 • Shrink Fit Adapters • GP Line • Coolant Through AD • Inch

Order Number	Catalog Number	D1 (inch)	D2 (inch)	D21 (inch)	D22 (inch)	L1 (inch)	L1FC (inch)	L2 (inch)	L21 (inch)	L9 (inch)	V (inch)	lbs
7229066	CVKV50HPVTT025800	.250	.827	1.059	1.384	8.000	7.941	1.969	6.625	1.020	.394	8.360
7229067	CVKV50HPVTT038800	.375	.945	1.256	1.545	8.000	5.960	2.480	6.625	1.221	.394	8.900
7229068	CVKV50HPVTT050800	.500	.945	1.256	1.545	8.000	5.960	1.969	6.625	1.417	.394	8.640
7229069	CVKV50HPVTT062800	.625	1.063	1.335	1.624	8.000	5.960	2.480	6.625	1.535	.394	8.840
7229070	CVKV50HPVTT075800	.750	1.299	1.650	1.920	8.000	5.960	2.756	6.625	1.610	.394	9.930
7229101	CVKV50HPVTT100800	1.000	1.732	2.083	2.353	8.000	5.960	2.756	6.625	1.850	.394	12.090



CVKV40 • Screw-On Adapters • Coolant Through AD • Metric

Order Number	Catalog Number	DCB (mm)	G (mm)	D2 (mm)	D21 (mm)	L1 (mm)	L1FC (mm)	L2 (mm)	L21 (mm)	kg
7229051	CVKV40ST12M228	12,5	M12 X 1,75	21,0	24,00	57,91	56,90	10,00	22,16	1.07
7229052	CVKV40ST12M386	12,5	M12 X 1,75	21,0	31,00	98,05	97,04	10,00	62,29	1.25
7229053	CVKV40ST16M228	17,0	M16 X 2	29,0	—	57,91	56,90	21,15	—	1.09
7229054	CVKV40ST16M386	17,0	M16 X 2	29,0	34,00	98,04	97,03	10,00	62,29	1.34



CVKV50 • Screw-On Adapters • Coolant Through AD • Metric

Order Number	Catalog Number	DCB (mm)	G (mm)	D2 (mm)	D21 (mm)	L1 (mm)	L1FC (mm)	L2 (mm)	L21 (mm)	kg
7229055	CVKV50ST12M343	12,5	M12 X 1,75	21,0	24,00	87,12	85,62	10,00	49,87	3.23
7229056	CVKV50ST12M539	12,5	M12 X 1,75	21,0	31,00	136,91	135,41	10,00	99,66	3.48
7229057	CVKV50ST12M736	12,5	M12 X 1,75	21,0	39,00	186,94	185,44	10,00	151,19	3.89
7229058	CVKV50ST16M343	17,0	M16 X 2	29,0	34,00	87,12	85,62	10,00	51,37	3.36
7229059	CVKV50ST16M539	17,0	M16 X 2	29,0	39,00	136,91	135,41	10,00	99,66	3.76
7229060	CVKV50ST16M736	17,0	M16 X 2	29,0	39,00	186,94	185,44	10,00	151,19	4.10

COOLANT THROUGH ER COLLET SETS

Our steel sealed ER collets are now available in sets, providing more flexibility and supporting a variety of machining applications, reducing the need for additional tooling options. These sealed collets enable through coolant while maintaining the expected grip and runout, taking your operations to the next level.

Features & Benefits

- Industry standard grip for process security
- Industry standard runout for better tool life and application
- Through coolant for better tool life and part quality
- Compatible with standard adapters, requiring less optional tooling inventory

ER Through-Coolant Collet Set • Metric

Order Number	Catalog Number	Series	Quantity	Dimensional Range	Incremental Division
7291764	16ERSSS000MSET	ER16	8	3 mm - 10 mm	1
7291765	20ERSSS000MSET	ER20	8	3 mm - 13 mm	1
7291766	25ERSSS000MSET	ER25	14	3 mm - 16 mm	1
7291767	32ERSSS000MSET	ER32	18	3 mm - 20 mm	1
7291768	40ERSSS000MSET	ER40	20	6 mm - 25 mm	1

ER Through-Coolant Collet Set • Inch

Order Number	Catalog Number	Series	Quantity	Dimensional Range	Incremental Division
7291725	16ERSSS000SET	ER16	10	3/32 - 3/8	1/32
7291726	20ERSSS000SET	ER20	12	1/8 - 1/2	1/32
7291727	25ERSSS000SET	ER25	14	7/32 - 5/8	1/32
7291729	32ERSSS000SET	ER32	18	7/32 - 3/4	1/32
7291730	40ERSSS000SET	ER40	15	1/8 - 1	1/32

WE'VE BEEN CUTTING METAL **SINCE 1938.**




Our Story Is One of Continuous Innovation

It starts in 1938 with our founder, metallurgist Philip M. McKenna, who after years of research created revolutionary tungsten-titanium carbide alloy cutting tools specifically for working with steel. That single development not only led to a new class of machining tools that cut faster, lasted longer and drove productivity in everything from the automobile to the airplane, but also led to the opening of McKenna Metals Company in Latrobe, Pennsylvania, United States. Today, that company is Kennametal Inc.—a recognized leader in metalworking serving customers across continents and industries including transportation, construction, aerospace and defense, machining and cutting, energy and general engineering. We have a reputation for building innovative solutions for our customers' most challenging applications. The name Kennametal is synonymous for high-quality, high-performance tools that can withstand the most strenuous conditions and bring ease to a wide range of machining operations. We help our customers' operations run longer, faster and with greater precision.

WE DON'T CUT CORNERS. WE CUT METAL. **YOUR TOUGHEST MATERIALS DON'T STAND A CHANCE.**

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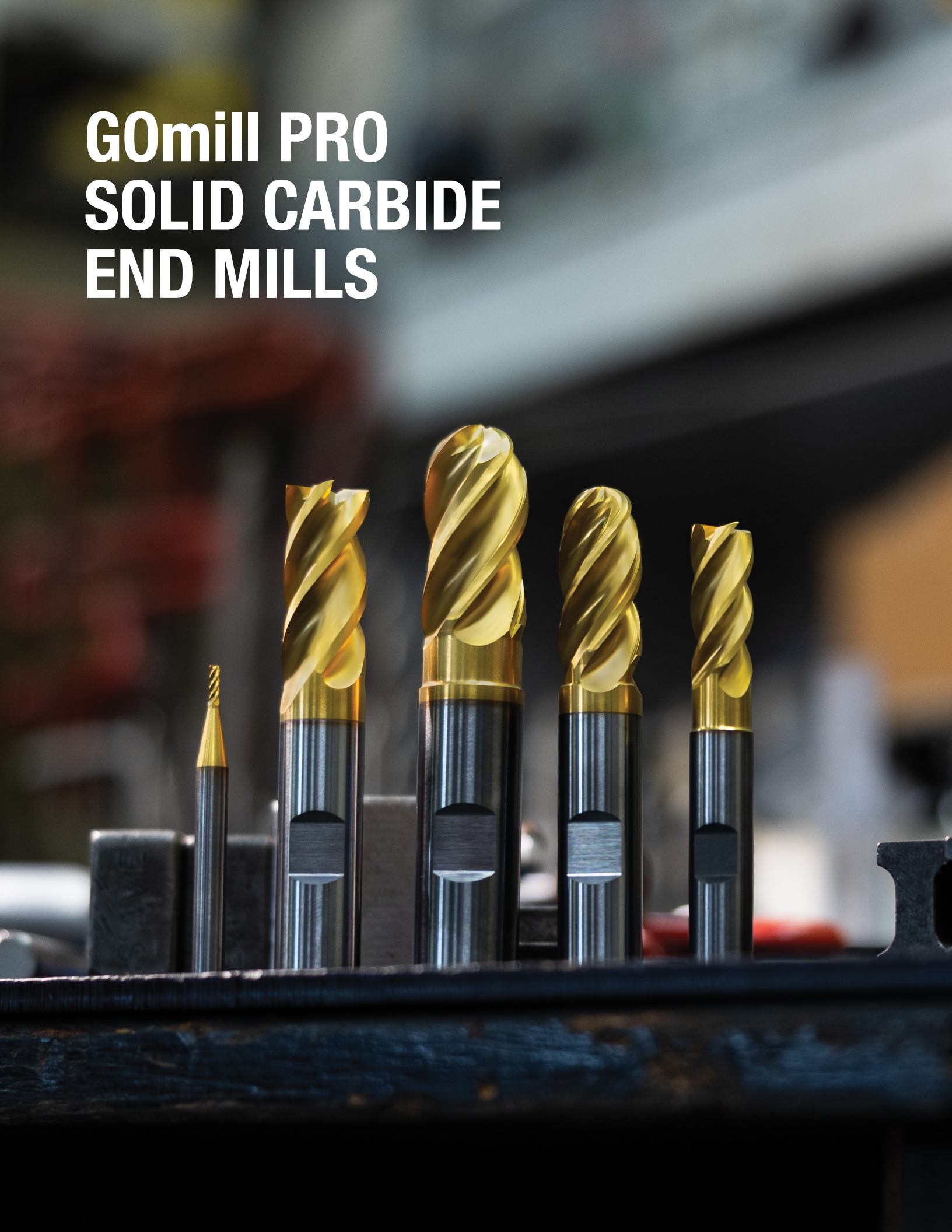

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