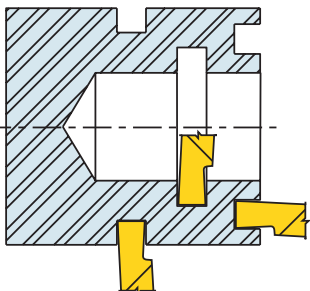


What you need to know:

- groove depth, width, and profile
- material to be machined
- application to be performed (face, OD, or ID grooving)
- toolholder requirements (ie: KM, square shank, right/left)

1st Step – Choose Your System Based on the Groove Depth Required

TOP NOTCH

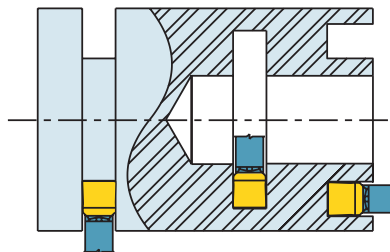


Grooving

grooving depth $\leq 1.5 \times$ grooving width

Review system capability chart and proceed to step 2.

A3 or A4



Deep Grooving

grooving depth $\geq 1.5 \times$ grooving width

See A3 Deep Grooving page B64 or A4 Groove & Turn page B38.

TOP NOTCH Grooving for internal, external, and face grooving applications

System Capabilities



		inch (mm)	
		minimum	maximum
OD / ID Grooving	width	.031 (0,79)	.375 (9,53)
	depth	.050 (1,27)	.375 (9,53)
Face Grooving	width	.125 (3,18)	.375 (9,53)
	depth	.150 (3,81)	.250 (6,35)
Internal Grooving Dia.		.440 (11,2)	–
Face Grooving Diameter	standard	.940 (23,9)	–
	deep	1.875 (47,6)	–
Deep OD / ID Grooving	width	.062 (1,57)	.250 (6,35)
	depth	.125 (3,18)	.500 (12,70)
Deep Face Grooving	width	.125 (3,18)	.250 (6,35)
	depth	.250 (6,35)	.500 (12,70)

2nd Step – Choose Your Toolholder Based on the Application

Note: Toolholders are available as conventional square shank versions as well as quick-change versions. The insert size must match the gage insert of your toolholder selection.

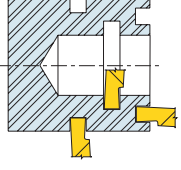
OD and face grooving applications
ID grooving applications

-> see pages B24-B27
-> see pages B29-B33



3rd Step – Select Chipbreaker Style and Feed Rate

Chipbreaker and Feed Rates – in/rev (mm/rev)

Workpiece Material and Application		Steel	Stainless Steel	Cast Iron	Non-Ferrous Metals	High-Temp Alloys	Hardened Material
			First Choice	NG-K .003 - .011 (0,08 - 0,28)	NG-K .0025 - .008 (0,07 - 0,20)	NG .004 - .012 (0,01 - 0,30)	NGP .004 - .012 (0,01 - 0,30)
	Alternative Choice	NG .004 - .012 (0,10 - 0,30)	NGP .004 - .009 (0,10 - 0,23)	NG-K .003 - .011 (0,08 - 0,28)	NG-K .003 - .012 (0,08 - 0,30)	NGP .004 - .008 (0,10 - 0,20)	–

-K Chipbreaker inserts



Flat-top inserts



Positive rake inserts



4th Step – Select Grade and Speed

Recommendations for Grade and Speed Selection – sfm (m/min)

Machining Condition	Workpiece Material					
	Steel	Stainless Steel	Cast Iron	Non-Ferrous Metals	High-Temp Alloys	Hardened Material
KENNA PERFECT high-performance for optimal conditions (clean cuts, good machine condition, higher speed capability) general purpose (first choice for general machining) unfavorable conditions (roughing, poor machine condition, interrupted cuts, low speed, I.D. grooving)	KC9110 400 - 1200 (120 - 370)	KC5010 250 - 750 (80 - 230)	KC9110 400 - 1200 (120 - 370)	KD1405 800 - 10000 (240 - 3050)	KC5010 50 - 400 (20 - 120)	KD081 300 - 500 (90 - 150)
	KT315 330 - 750 (100 - 230)	KT315 230 - 650 (70 - 200)	KC5010 250 - 750 (80 - 230)	KD100 600 - 5000 (180 - 1520)	–	–
	KC9110 400 - 1000 (120 - 300)	KC5025 160 - 400 (50 - 120)	KC9110 400 - 1000 (120 - 300)	KC5410 500 - 3000 (150 - 910)	KC5025 35 - 200 (10 - 60)	KD081 250 - 450 (80 - 140)
	KC5025 180 - 450 (50 - 140)	KC5025 130 - 300 (40 - 90)	KC5025 200 - 500 (60 - 150)	KC5025 200 - 1000 (60 - 300)	KC5025 35 - 150 (10 - 50)	KD120 200 - 350 (60 - 110)
KENNA UNIVERSAL	KU30T 200 - 650 (60 - 200)	KU10T 150 - 550 (50 - 170)	KU30T 200 - 650 (60 - 200)	KU10T 500 - 2400 (150 - 730)	KU10T 50 - 360 (20 - 110)	–

5th Step – Select Insert and Holder from Catalog Pages

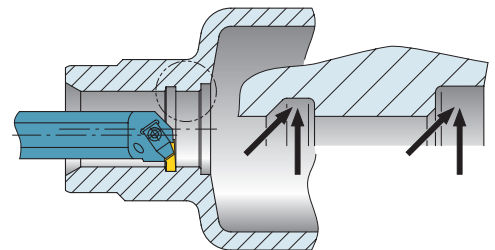
Note: The insert size must match the gage insert size of your toolholder selection.

Example for TOP NOTCH – Grooving: Recommendation:

material: low-alloyed steel
groove depth: .079 in. (2 mm)
groove width: .118 in. (3 mm)
Operation: I.D. cut, limited speed capability, plunge groove and chamfer

insert: NG2M300RK
grade: KC5025
insert width: .118 in. (3 mm)
insert size: 2

toolholder: A12NEL2 (inch)
A20QNTOL2 (metric)
N.2R
gage insert: N.2R



speed: 400 sfm (120 m/min)
feed: .006 ipr (0,15 mm)

Congratulations!

You have successfully maximized your productivity by selecting the best TOP NOTCH insert geometry, grade, and cutting specifications for your application!