

KENNA PERFECT – TOP NOTCH Threading



4 Easy Steps to Improve Productivity

What you need to know:

- external/internal operation
- spindle rotation/hand of thread
- feed direction

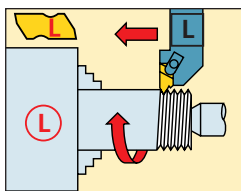
1st Step – Select Threading Method and Hand of Tooling

(L) or (R) – hand of thread

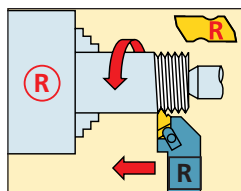
(L) or (R) – hand of toolholder

(L) or (R) – hand of insert

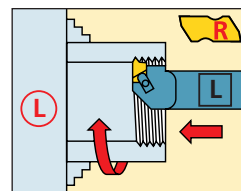
• Feed direction toward the chuck – standard helix



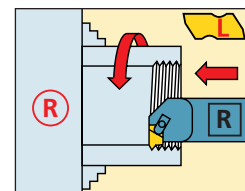
external left-hand thread



external right-hand thread

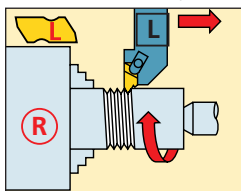


internal left-hand thread

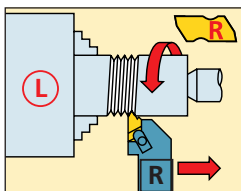


internal right-hand thread

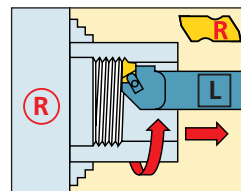
• Feed direction away from the chuck – reverse helix



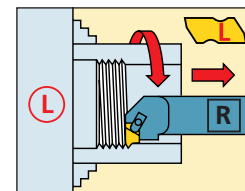
external right-hand thread



external left-hand thread



internal right-hand thread



internal left-hand thread

2nd Step – Choose Insert for Application

- See threading insert overview on page C35.
- Select cresting inserts for fully controlled thread form including diameter control. Cresting inserts eliminate the need for deburring.
- Non-cresting partial profile inserts can cut a variety of thread pitches. Chip control is only available with partial profile inserts.
- Note insert size for toolholder selection.

	Insert Size	catalog number	KC5025	KC5010
	2	NT-2RK	●	●
	3	NT-3RK	●	●
	4	NT-4RK	●	●

3rd Step – Select Grade and Speed

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

	Workpiece Material	Steel	Stainless Steel	Cast Iron	Non-Ferrous Metals	High-Temp Alloys
KENNA PERFECT	Insert Style	chip control or neutral	chip control or positive	neutral	positive	positive
	Optimum Cutting Conditions	KC5010* 160 - 750 (50 - 230)	KC5010* 160 - 600 (50 - 185)	KC5010 230 - 700 (70 - 210)	KC5410 230 - 1300 (70 - 390)	KC5010 65 - 400 (20 - 120)
	First Choice	KC5025 130 - 650 (40 - 200)	KC5025 130 - 450 (40 - 135)	KC5025 200 - 475 (60 - 145)	KC5025 160 - 1150 (50 - 360)	KC5025 35 - 330 (10 - 100)
KENNA UNIVERSAL	Insert Style	chip control or neutral				
	Selection	KU25T 80 - 450 (25 - 140)	KU25T 80 - 350 (25 - 100)	KU25T 100 - 360 (30 - 110)	KU25T 100 - 1000 (30 - 300)	KU25T 35 - 280 (10 - 85)

* Note: KT315 is also available as an optimum cutting tool for steel and stainless steel for partial profile threading. Increase speed by 15% over the recommendations above.

Examples: Chip Control: NT-K or NT-CK (partial profile only)
Neutral: NT, NT-C, NTF, NTC, NJ, NJF, NDC-V, NA, NDC, NTB-A/B
Positive: NTP, NTK, NJP, NJK



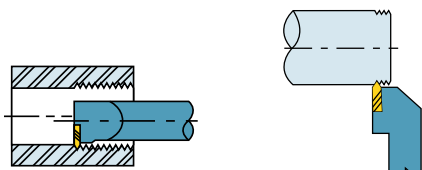
4th Step – Select Holder from Catalog Page

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

Required information:

- external/internal operation
- minimum bore diameter (for internal operations)
- hand of tool
- insert size (gage insert)

Select the appropriate holder for the insert size and hand



catalog number	gage insert
NSR-163D	N.3R
NSR-164D	N.4R

NOTE: TOP NOTCH toolholders and boring bars are listed with a gage insert to indicate the size and hand required. They are compatible with both grooving and threading inserts of the same size.

NOTE: Optimize your threading operation by using the proper infeed angle and the recommended infeed values. See the Technical section on pages C58-C60 of this catalog. For internal threading, min. bore varies depending on thread type – see C64 for details.

TOP NOTCH Threading Example:

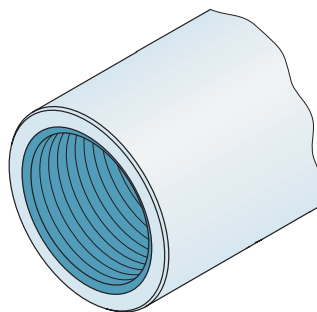
application: 8 TPI Acme internal right-hand thread
material: alloy steel
workpiece dia.: 4.5 inch (114,3 mm)
good cutting conditions
feed toward the chuck

Recommendation:

insert: NA3L8
grade: KC5010
insert size: 3

boring bar: A40NER3 (metric: A50UNNTOR4)
gage insert: N.3L

speed: 500 sfm (150 m/min)
infeed passes*: 12 passes



* Infeed recommendations given in Technical data section on pages C58 - C60.