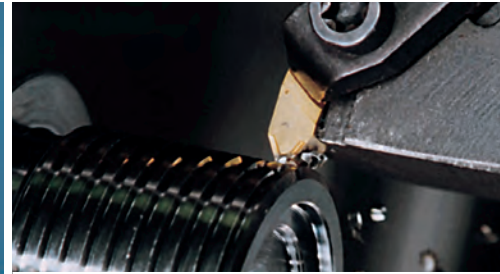
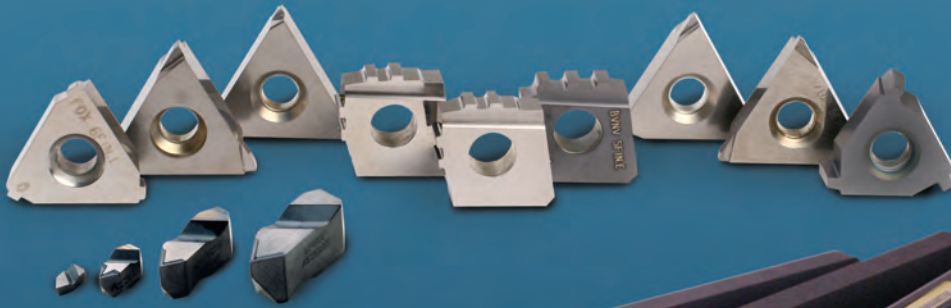


Engineering Your  
Competitive Edge



## On-Edge, Multi-Tooth, Top Notch<sup>®</sup>, and Laydown Inserts

*Standard and Custom Threading Solutions  
for the Energy Industry*

# Optimize Your Oil and Gas Operations with Kennametal's Comprehensive Line of Standard and Custom Threading Inserts

***At Kennametal, we have a single goal: to engineer a competitive edge for our customers, in every major manufacturing industry, in every global market.***

For customers in the Oil, Gas, and Petrochemical markets, Kennametal offers a range of proven tooling solutions, including four standard systems for custom pipe threading applications. Whether you need internal or external threads, fine pitch or coarse pitch, you can rely on Kennametal's platform of threading inserts, bars, and toolholders to deliver quality threads with unmatched consistency.

Let Kennametal's experience and technologies enable you to perform better, faster, and more efficiently than ever before. Choose one of the following standard threading products, or work with our engineering staff to develop a custom solution to meet your specific application needs.



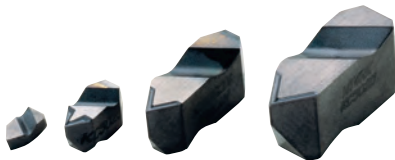
## ***TNEC On-Edge/Laydown Inserts***

Our TNEC On-Edge and Laydown inserts offer three cutting edges per insert and are ideally suited for both internal and external on-edge threading and shallow grooving applications.



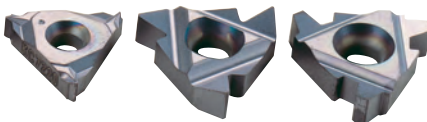
## ***Multi-Tooth Inserts***

The Multi-Tooth insert enables you to use fewer passes to machine a thread, yielding much shorter cycle times and substantial increases in productivity.



## ***Top Notch Inserts***

Superior choice for heavy-duty applications like the machining of Acme, Buttress, and API Threads. Top Notch is also the best system for coarse pitch threading applications.\*



## ***LT Threading***

LT is the system of choice for fine-pitch threads, high-helix/multi-start threads, and single-point threading in small diameter bores.\*

\* For a complete list of Top Notch and LT Threading products, please see Kennametal Lathe Tooling Catalog 4010, or contact or your Kennametal Representative or Authorized Kennametal Distributor.

## Kennametal Grades and Workpiece Materials




	KC9105E <b>NEW! Coming Soon!</b>	KC5110E (SPOGOS)	K1115E (SPOL00)	KC5120E (TLTHM)	KC5125E (KC5025)
<b>application</b>		Semi-finish to finish threading	Semi-finish to finish threading	Semi-finish threading	Roughing and semi-rough threading
<b>coating</b>	New CVD-coated grade!!!	PVD-coated	Uncoated	PVD-coated	PVD-coated
<b>workpiece material</b>	recommended surface speeds – sfm (m/min)				
free-machining carbon steel		300-700 (90-215)		150-500 (45-150)	300-500 (90-150)
plain carbon steel		250-600 (75-185)		150-400 (45-120)	250-500 (75-150)
alloy steels (190-330 BHN)		300-500 (90-150)		150-350 (45-105)	250-400 (75-120)
austenitic stainless steel (ex: 316 stainless steel)			200-350 (60-100)	150-350 (45-105)	200-500 (60-150)
martensitic/ferritic stainless		300-500 (90-150)		100-300 (60-90)	150-400 (45-120)
high-temperature alloys (200-260 BHN) (ex: Inconel 718)			80-120 (25-35)		80-300 (25-90)
high-temperature alloys (260-450 BHN)			80-100 (25-30)		100-200 (30-60)
titanium alloys (Ti 6Al-4V)			110-180 (35-55)		110-250 (35-75)

Note: Grade designations noted in parentheses above are former Kennametal enterprise grades.




## Insert Identification System

	Inscribed Circle Thickness F = Laydown Insert			1 or 2 Digits TPF or %	I = Internal E = External	
	<b>2. Insert Size</b>			<b>4. Taper</b>		<b>6. Cutting Application</b>
TNEC	54	VAMSL		10%	5	I
TNEC	54 F	VAM		75	5	I
CNGA	64	V/ACETOP		75	5	E 2
<b>1. Insert Nomenclature</b>		<b>3. Thread Description</b>			<b>5. Pitch / TPI</b>	<b>7. Number of Teeth</b>
Shape Relief Tolerance Class Hole Type		For Example: VAM BUCA AMS 28 NK 3SB FOX			For Example: 4,5,6, etc.	For Example: 2,3,4, etc.

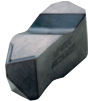
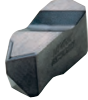
## TNEC Inserts

	order number	catalog number	internal or external	dimensions			grades		
				TPI	TPF	Insert Size	coated		uncoated
							KC5125E	KC5120E	K1115E
<b>TNEC</b> (FOX) 	2159667	TNEC43FOX758I	I	8	3/4	1/2			●
	2164982	TNEC54FOX756I	I	6	3/4	5/8			●
	2164499	TNEC54FOX755E	E	5	3/4	5/8			●
<b>TNEC</b> (VAM ACE, VAM TOP) 	2164599	TNEC54VACETOP755E	E	5	3/4	5/8			●
	2164597	TNEC55VACETOP754E	E	4	3/4	5/8			●
<b>TNEC</b> (VAM TOP) 	2160673	TNEC54VTOP755I	I	5	3/4	5/8			●
	2162496	TNEC55VTOP754I	I	4	3/4	5/8			●

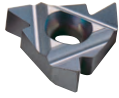

## Multi-Tooth Inserts

	order number	catalog number	internal or external	dimensions			grades		
				TPI	TPF	Insert Size	coated		uncoated
							KC5125E	KC5120E	K1115E
<b>CNGA</b> (VAM ACE, VAM TOP, VAM SLIJ11) 	2163282	CNGA64VACETOP756E2	E	6	3/4	3/4		●	●
	2160993	CNGA64VACETOP756E2	E	6	3/4	3/4			●
	2164986	CNGA64VACETOP755E2	E	5	3/4	3/4		●	
	2160895	CNGA64VACETOP755E2	E	5	3/4	3/4			●
	2165000	CNGA64VACETOP754E2	E	4	3/4	3/4		●	
	2162132	CNGA64VACETOP754E2	E	4	3/4	3/4			●
	2201764	CNGA64VSLIJ116.25%5I2	I	5	6.25%	3/4			●
2201763	CNGA64VSLIJ116.25%5E2	E	5	6.25%	3/4			●	
<b>CNMA</b> (BUTTRESS VAM, NEW VAM) 	2159057	CNMA64BVNV755E3	E	5	3/4	3/4		●	
	2160401	CNMA64BVNV755E3	E	5	3/4	3/4			●
	2199253	CNMA64VNV756E2	E	6	3/4	3/4			●
<b>CNGA</b> (DINO VAM, BEAR) 	2202165	CNGA64KSBEAR755E3	E	5	3/4	3/4		●	
	2265752	CNGA64DVAM13E	E	3	1	3/4		●	
	2164970	CNGA64DVAM13I	I	3	1	3/4		●	

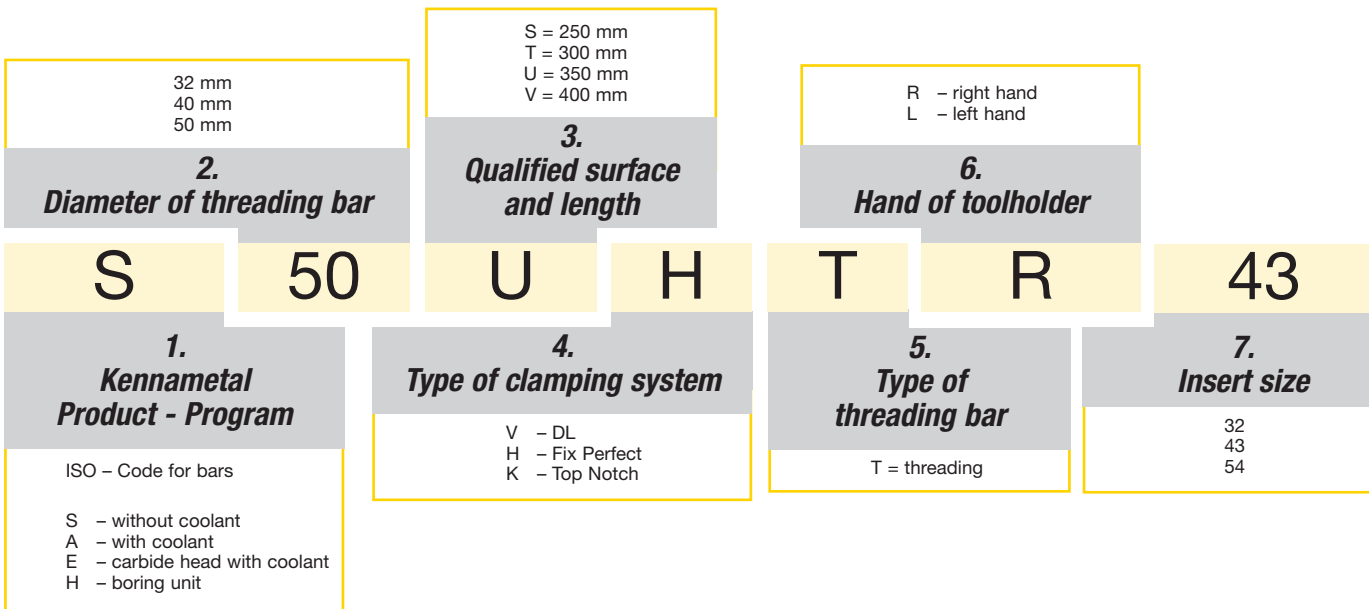
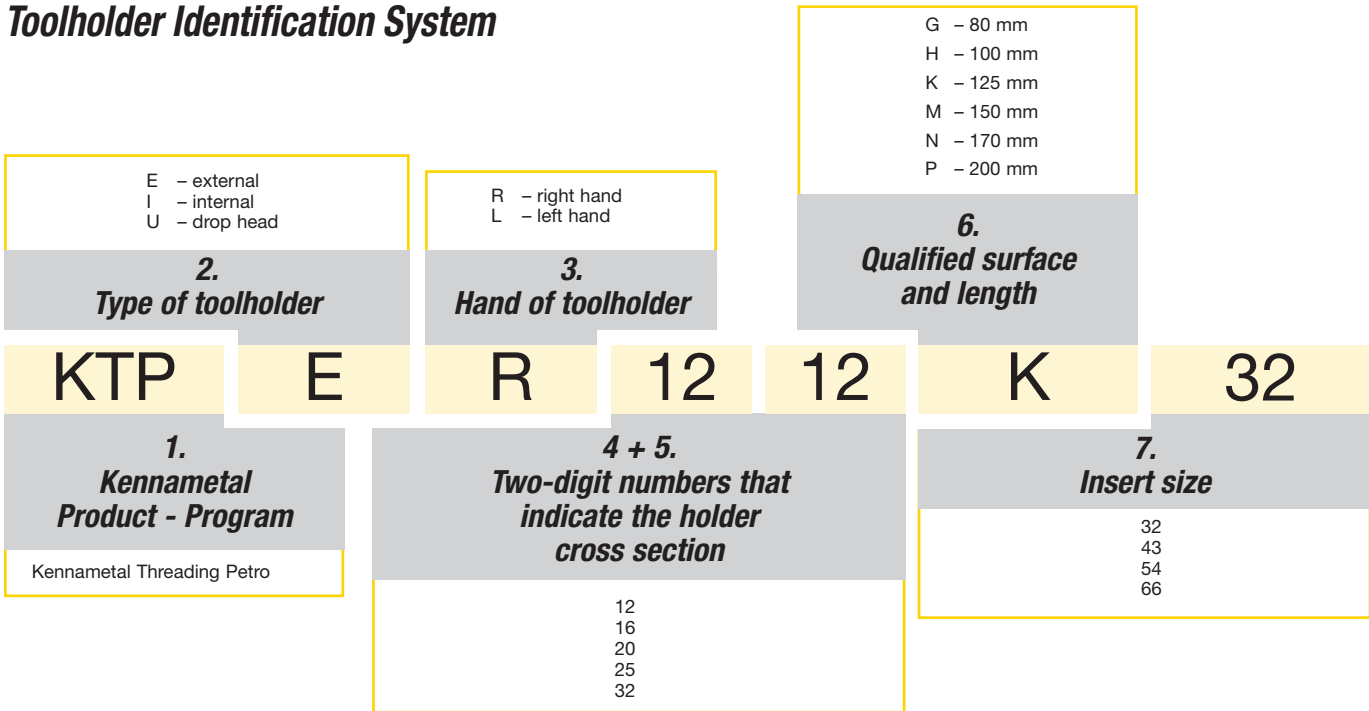
## Top Notch Inserts

	order number	catalog number	dimensions			grades		
			TPI	TPF	Insert Size	coated		uncoated
						KC5125E	KC5120E	K1115E
<b>NA3</b> (ACME) 	3390981	NA3L12 H	12	-	3	●		
	3390984	NA3R12 H	12	-	3	●		
	3390982	NA3L10 H	10	-	3	●		
	3390985	NA3R10 H	10	-	3	●		
	3390983	NA3L8 H	8	-	3	●		
	3390987	NA3R8 H	8	-	3	●		
<b>NAS3</b> (STUB ACME) 	3390988	NAS3L12 H	12	-	3	●		
	3390991	NAS3R12 H	12	-	3	●		
	3390989	NAS3L 10H	10	-	3	●		
	3390992	NAS3R 10H	10	-	3	●		
	3390990	NAS3L8 H	8	-	3	●		
	3390993	NAS3R8 H	8	-	3	●		

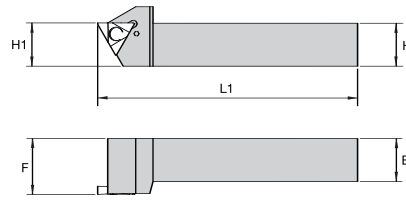
## TNEC Laydown and Laydown Threading Inserts

	order number	catalog number	dimensions			grades		
			TPI	TPF	Insert Size	coated		uncoated
						KC5125E	KC5120E	K1115E
<b>Laydown</b> (H90) 	1917630	L545320DSX	5	2	5/8	●		
	1917629	L544238DSX	4	3	5/8	●		
	1917657	L54H90235	3	2	5/8	●		
	2253637	L54H90335DS	3	3	5/8	●		
<b>TNEC Laydown</b> (VAM TOP, FOX, NEW VAM) 	2164964	TNEC54FVTOP755IA	5	3/4	5/8		●	
	2164957	TNEC54FVTOP754IA	4	3/4	5/8		●	
	2160687	TNEC54FFOX756I	6	3/4	5/8			●
	2164229	TNEC54FNVAM755IA	5	3/4	5/8			●
	2161491	TNEC54FVTOPSTD7504756I	6	3/4	5/8			●

## Toolholder Identification System

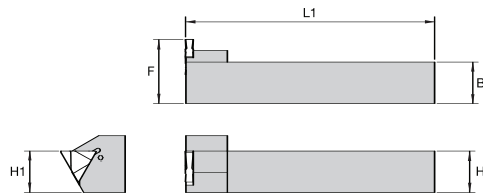


### External Holders for TNEC Inserts



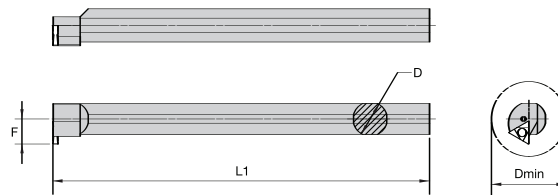
order number	catalog number	hand	H and H1	B	F	L1	insert size
1288720	KTPEL2525M43	L	25	25	32	150	43
1288733	KTPEL3232P43	L	32	32	39	170	43
1288734	KTPEL3232P54	L	32	32	39	170	54
1288746	KTPER2525M43	R	25	25	32	150	43
1288752	KTPER2525M54	R	25	25	32	150	54
1288756	KTPER3225P43	R	32	25	32	170	43
1288758	KTPER3225P54	R	32	25	32	170	54
1288761	KTPER3232P43	R	32	32	39	170	43
1288762	KTPER3232P54	R	32	32	39	170	54

### Internal Holders for TNEC Inserts



order number	catalog number	hand	H and H1	B	F	L1	insert size
1288507	KTPIL2525M43	L	25	25	37.8	150	43
2880388	KTPIL3225P54	L	32	25	37.8	170	54

### Internal Bars for TNEC Inserts



order number	catalog number	hand	D	F	L1	insert size	min bore size
1288383	S32SHTL43	L	32	22	250	43	50
1288385	S32SHTR43	R	32	22	250	43	50
1288400	S40HTL43	L	40	27	300	43	53
1288402	S40HTR43	R	40	27	300	43	53
1288431	S50HTL43	L	50	32	300	43	65
1288433	S50HTL54	L	50	35	300	54	65
1288434	S50UHTR43	R	50	32	350	43	119
1288435	S50UHTR54	R	50	35	350	54	119



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[www.kennametal.com](http://www.kennametal.com)

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