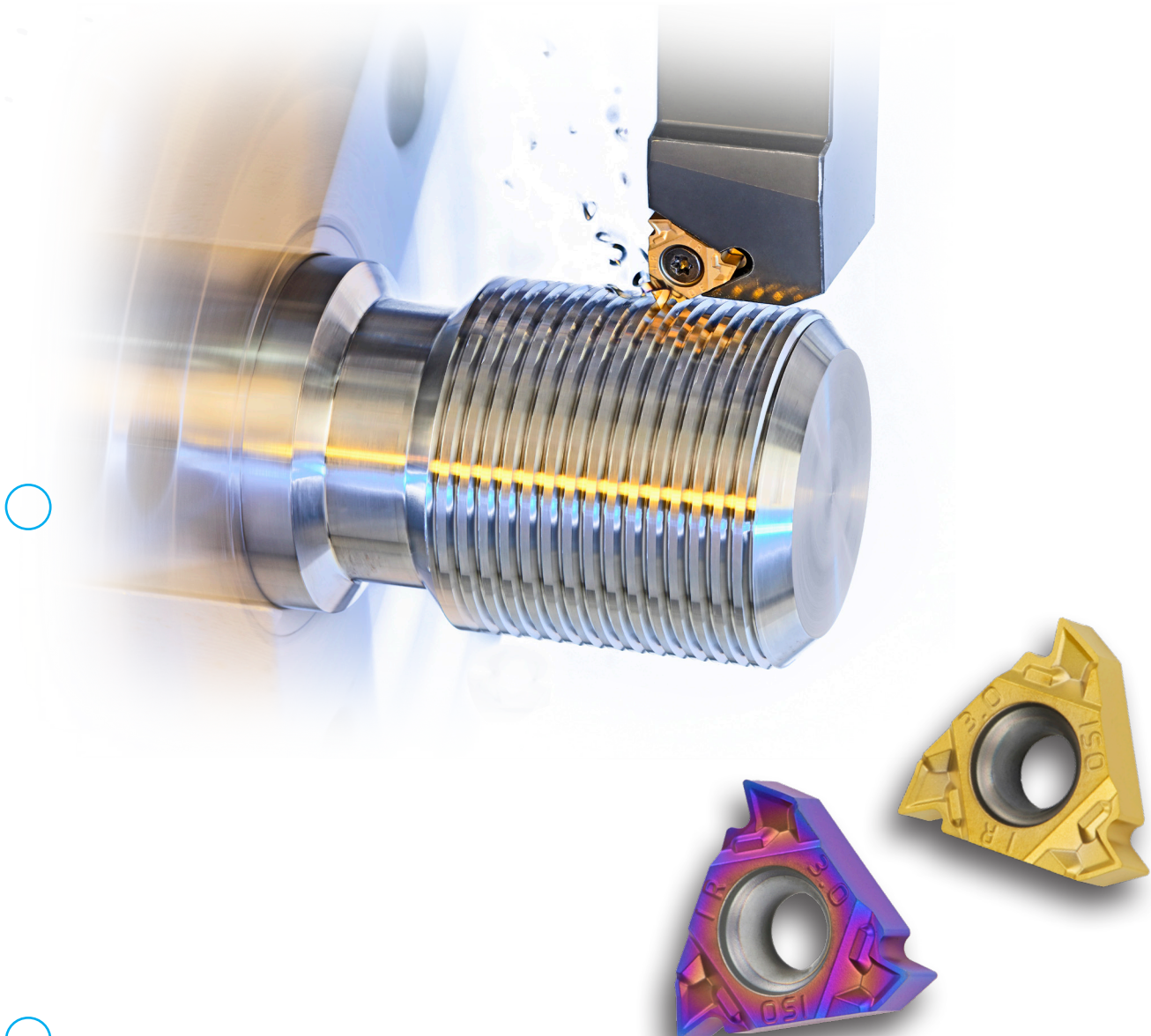


## *Type - K Sintered Threading Inserts*



**Metric**

## Type - K

A new line of Sintered Thread Turning Inserts with chip breaker for high performance in a wide range of materials.

**Type - K** inserts are offered in a wide range of popular thread standards.

- Partial profile 55° and 60°
- ISO- metric
- UN- Unified
- Whitworth - 55°
- BSPT
- NPT

Features:

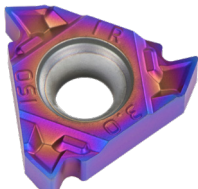
- Effective chip control
- Optimal edge security
- High wear resistance
- Inserts to be used with standard thread turning toolholders

### Carbide grade:



#### KMR

Versatile grade for wide range of materials as steels, stainless steel, super alloys and non-ferrous, best for medium to high cutting conditions. A multi-layer coated grade with high wear resistance.



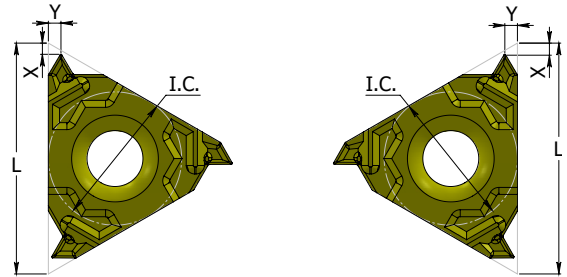
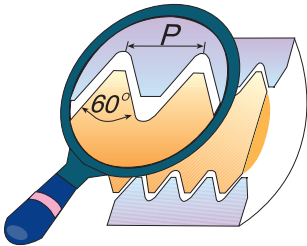
#### KBL

Latest development of carbide grade with our innovative coating ensures a long and stable tool life machining steels, stainless steels, cast iron and hardened materials up to 45 HRC. A combination of high toughness and high heat and wear resistance. For medium to high cutting conditions.

Grade	P	M	K	N	S	H
KMR	●	●	○	●	●	○
KBL	●	●	●	○	○	●

● First choice    ○ Alternative

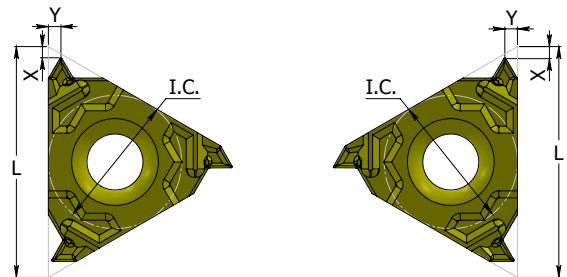
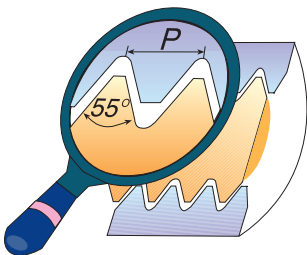
## Partial Profile 60°



L	I.C. in	Pitch Range		<b>EXTERNAL</b>	<b>INTERNAL</b>	X	Y
		mm	TPI	Ordering Code Right Hand	Ordering Code Right Hand		
11	1/4	0.5 - 1.5	48 - 16		<b>11 IR K A60</b>	0.8	0.9
		0.5 - 1.5	48 - 16	<b>16 ER K A60</b>	<b>16 IR K A60</b>	0.8	0.9
16	3/8	1.75 - 3.0	14 - 8	<b>16 ER K G60</b>	<b>16 IR K G60</b>	1.2	1.7
		0.5 - 3.0	48 - 8	<b>16 ER K AG60</b>	<b>16 IR K AG60</b>	1.2	1.7

Order Example: 16 ER K A60 KMR

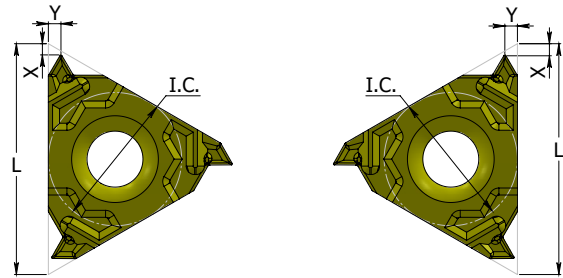
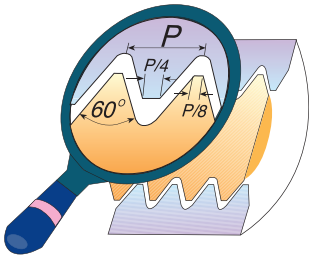
## Partial Profile 55°



L	I.C. in	Pitch Range		<b>EXTERNAL</b>	<b>INTERNAL</b>	X	Y
		mm	TPI	Ordering Code Right Hand	Ordering Code Right Hand		
11	1/4	0.5 - 1.5	48 - 16		<b>11 IR K A55</b>	0.8	0.9
		0.5 - 1.5	48 - 16	<b>16 ER K A55</b>	<b>16 IR K A55</b>	0.8	0.9
16	3/8	1.75 - 3.0	14 - 8	<b>16 ER K G55</b>	<b>16 IR K G55</b>	1.2	1.7
		0.5 - 3.0	48 - 8	<b>16 ER K AG55</b>	<b>16 IR K AG55</b>	1.2	1.7

Order Example: 16 IR K G55 KBL

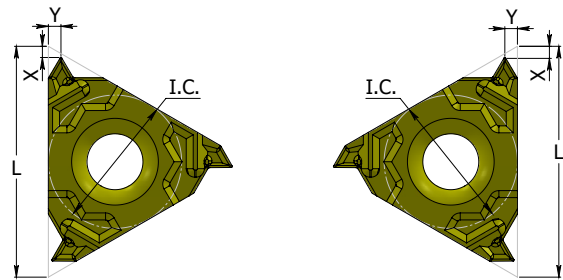
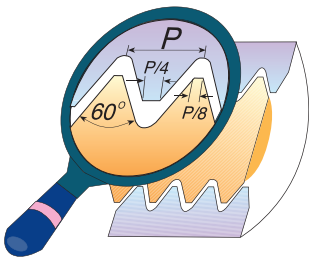
## ISO - metric



Pitch mm	L	I.C. in	<b>EXTERNAL</b>			<b>INTERNAL</b>		
			Ordering Code Right Hand	X	Y	Ordering Code Right Hand	X	Y
1.0	11	1/4				<b>11 IR K 1.0 ISO</b>	0.6	0.7
1.25	11	1/4				<b>11 IR K 1.25 ISO</b>	0.8	0.9
1.5	11	1/4				<b>11 IR K 1.5 ISO</b>	0.8	1.0
1.0	16	3/8	<b>16 ER K 1.0 ISO</b>	0.7	0.7	<b>16 IR K 1.0 ISO</b>	0.6	0.7
1.25	16	3/8	<b>16 ER K 1.25 ISO</b>	0.8	0.9	<b>16 IR K 1.25 ISO</b>	0.8	0.9
1.5	16	3/8	<b>16 ER K 1.5 ISO</b>	0.8	1.0	<b>16 IR K 1.5 ISO</b>	0.8	1.0
1.75	16	3/8	<b>16 ER K 1.75 ISO</b>	0.9	1.2	<b>16 IR K 1.75 ISO</b>	0.9	1.2
2.0	16	3/8	<b>16 ER K 2.0 ISO</b>	1.0	1.3	<b>16 IR K 2.0 ISO</b>	1.0	1.3
2.5	16	3/8	<b>16 ER K 2.5 ISO</b>	1.1	1.5	<b>16 IR K 2.5 ISO</b>	1.1	1.5
3.0	16	3/8	<b>16 ER K 3.0 ISO</b>	1.2	1.6	<b>16 IR K 3.0 ISO</b>	1.1	1.5

Order Example: 16 ER K 1.75 ISO KMR

## UN - Unified **UNC, UNF, UNEF, UNS**

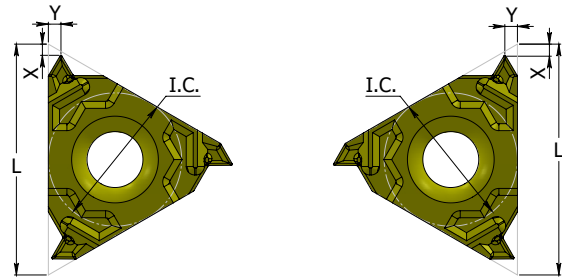
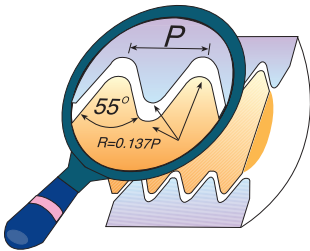


Pitch TPI	L	I.C. in	<b>EXTERNAL</b>			<b>INTERNAL</b>		
			Ordering Code Right Hand	X	Y	Ordering Code Right Hand	X	Y
24	16	3/8	<b>16 ER K 24 UN</b>	0.7	0.8			
20	16	3/8	<b>16 ER K 20 UN</b>	0.8	0.9	<b>16 IR K 20 UN</b>	0.8	0.9
18	16	3/8	<b>16 ER K 18 UN</b>	0.8	1.0	<b>16 IR K 18 UN</b>	0.8	1.0
16	16	3/8	<b>16 ER K 16 UN</b>	0.9	1.1	<b>16 IR K 16 UN</b>	0.9	1.1
14	16	3/8	<b>16 ER K 14 UN</b>	1.0	1.2	<b>16 IR K 14 UN</b>	0.9	1.2
12	16	3/8	<b>16 ER K 12 UN</b>	1.1	1.4	<b>16 IR K 12 UN</b>	1.1	1.4
8	16	3/8	<b>16 ER K 8 UN</b>	1.2	1.6			

Order Example: 16 IR K 14 UN KBL

# Type-K Threading Inserts

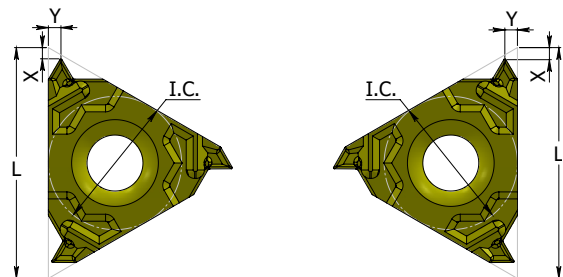
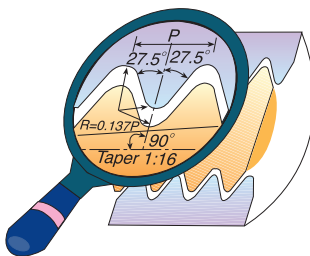
## Whitworth - 55° BSW, BSF, BSP, BSB



Pitch TPI	L	I.C. in	<b>EXTERNAL</b>			<b>INTERNAL</b>		
			Ordering Code Right Hand	X	Y	Ordering Code Right Hand	X	Y
19	16	3/8	<b>16 ER K 19 W</b>	0.8	1.0	<b>16 IR K 19 W</b>	0.8	1.0
14	16	3/8	<b>16 ER K 14 W</b>	1.0	1.2	<b>16 IR K 14 W</b>	1.0	1.2
11	16	3/8	<b>16 ER K 11 W</b>	1.1	1.5	<b>16 IR K 11 W</b>	1.1	1.5

Order Example: 16 ER K 11 W KMR

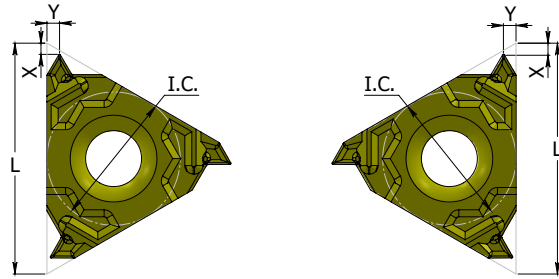
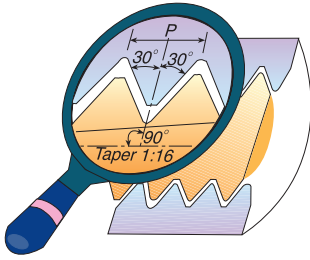
## BSPT



Pitch TPI	L	I.C. in	<b>EXTERNAL</b>			<b>INTERNAL</b>		
			Ordering Code Right Hand	X	Y	Ordering Code Right Hand	X	Y
19	16	3/8	<b>16 ER K 19 BSPT</b>	0.8	0.9	<b>16 IR K 19 BSPT</b>	0.8	0.9
14	16	3/8	<b>16 ER K 14 BSPT</b>	1.0	1.2	<b>16 IR K 14 BSPT</b>	1.0	1.2
11	16	3/8	<b>16 ER K 11 BSPT</b>	1.1	1.5	<b>16 IR K 11 BSPT</b>	1.1	1.5

Order Example: 16 ER K 11 BSPT KBL

## NPT



Pitch TPI	L	I.C. in	<b>EXTERNAL</b>		<b>INTERNAL</b>			
			Ordering Code Right Hand	X	Y	Ordering Code Right Hand	X	Y
18	16	3/8	<b>16 ER K 18 NPT</b>	0.8	1.0			
14	16	3/8	<b>16 ER K 14 NPT</b>	0.9	1.2	<b>16 IR K 14 NPT</b>	0.9	1.2
11.5	16	3/8	<b>16 ER K 11.5 NPT</b>	1.1	1.5	<b>16 IR K 11.5 NPT</b>	1.1	1.5
8	16	3/8				<b>16 IR K 8 NPT</b>	1.3	1.8

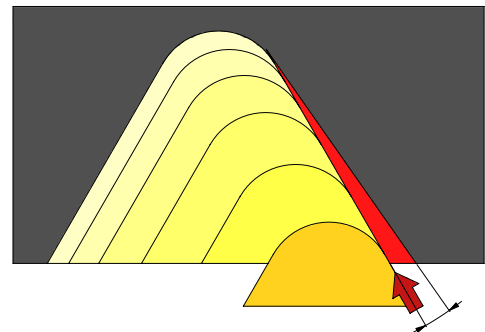
Order Example: 16 ER K 11.5 NPT KBL

## Technical Section

Recommended cutting speed

ISO Standard	Cutting speed (m/min)	
	KMR	KBL
<b>P</b>	70-180	70-180
<b>M</b>	110-160	110-160
<b>K</b>	90-140	110-150
<b>S</b>	30-70	30-60
<b>H</b>	20-50	30-70

In order to achieve the best chip control during the thread turning operation, a modified flank infeed should be used.



Modified flank infeed has many advantages:

- Fewer passes can be used compared to radial infeed.
- Chip is easier to control during process.
- Chip is thicker but created along one side of the insert making it easier to cut.
- Heat created during the cutting operation mostly transferred to the workpiece not to insert.

Recommended for all operations and insert types.

For CNC programming use Carmex tool wizard.



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TYPE - K Threading Inserts 04/2022