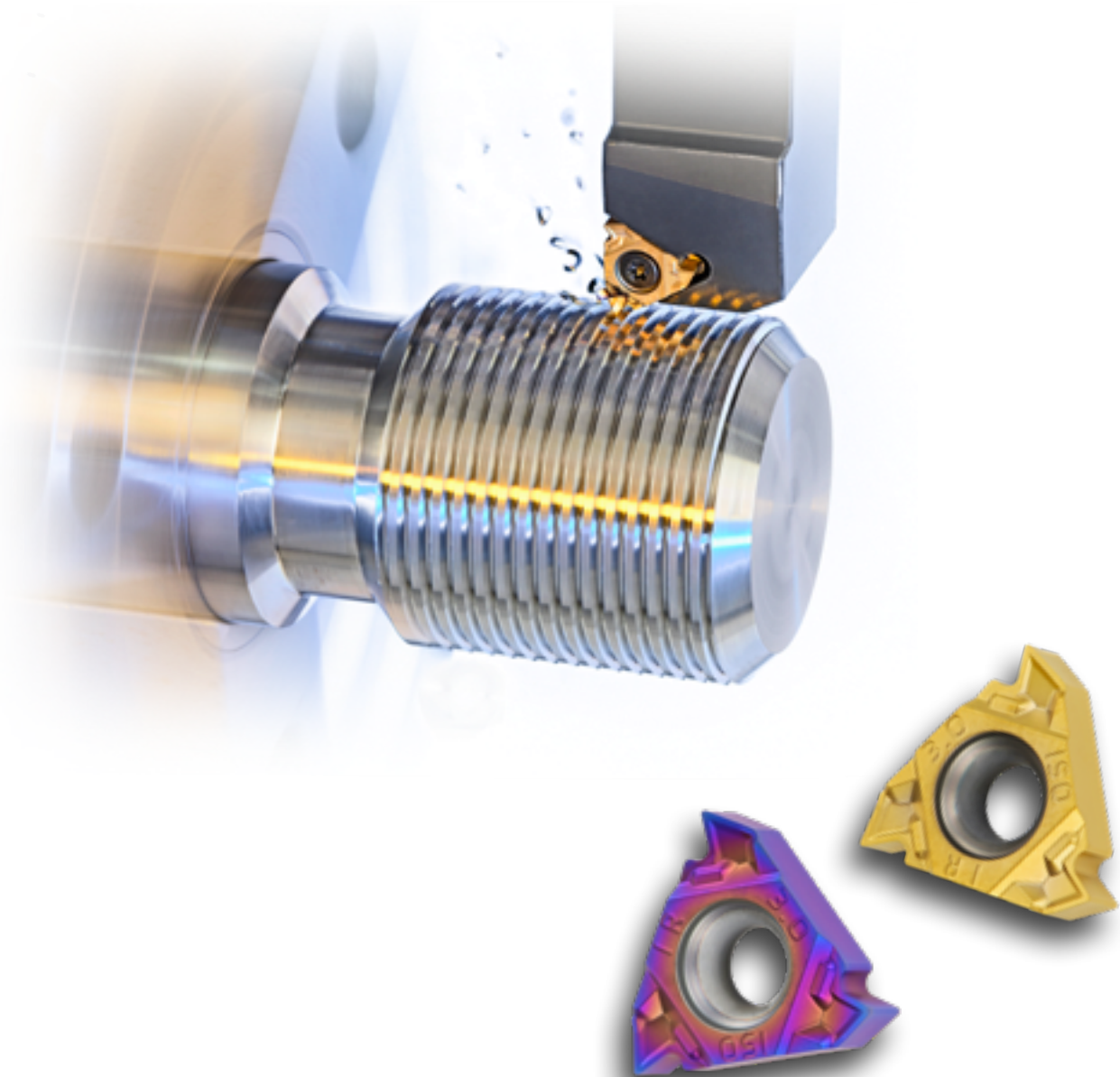


Type - K Sintered Threading Inserts



Inch

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:

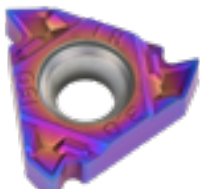
- Effective chip control
- Optimal edge security
- High wear resistance
- Inserts to be used with standard thread turning toolholders

Carbide grade:



KMR (P20-P30, M10-M30, N10-N30, S05-S30)

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 (P20-P40, M05-M25, K05-K20, H05-H20)

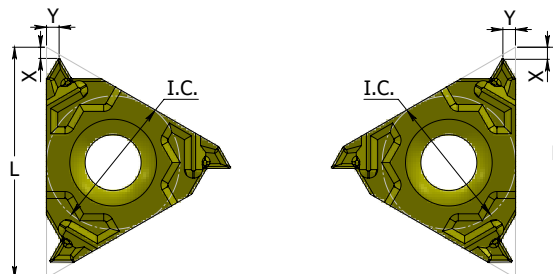
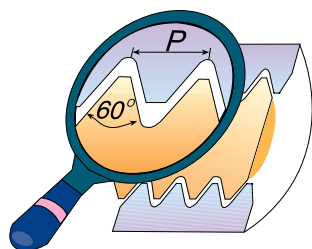
Latest development of carbide grade with our innovative coating ensures a long and stable tool life machining steels, stainless steels, cast iron and hardened materials up to 45 HRc.

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

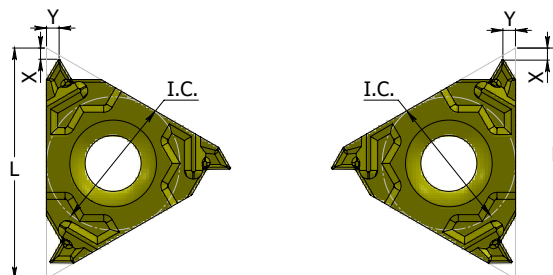
Partial Profile 60°



| L mm | I.C. | Pitch Range | | EXTERNAL | INTERNAL | X | Y |
|---------|------|-------------|---------|-----------------------------|-----------------------------|-----|-----|
| | | mm | TPI | Ordering Code Right Hand | Ordering Code Right Hand | | |
| 11 | 1/4 | 0.5 - 1.5 | 48 - 16 | | 11 IR K A60 | .03 | .04 |
| | | 0.5 - 1.5 | 48 - 16 | 16 ER K A60 | 16 IR K A60 | .03 | .04 |
| 16 | 3/8 | 1.75 - 3.0 | 14 - 8 | 16 ER K G60 | 16 IR K G60 | .05 | .07 |
| | | 0.5 - 3.0 | 48 - 8 | 16 ER K AG60 | 16 IR K AG60 | .05 | .07 |

Order Example: 16 ER K A60 KMR

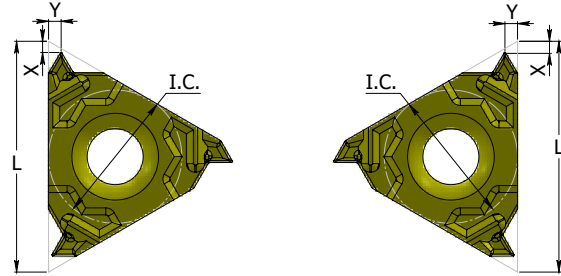
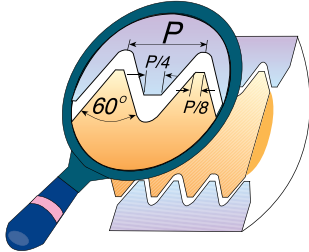
Partial Profile 55°



| L mm | I.C. | Pitch Range | | EXTERNAL | INTERNAL | X | Y |
|---------|------|-------------|---------|-----------------------------|-----------------------------|-----|-----|
| | | mm | TPI | Ordering Code Right Hand | Ordering Code Right Hand | | |
| 11 | 1/4 | 0.5 - 1.5 | 48 - 16 | | 11 IR K A55 | .03 | .04 |
| | | 0.5 - 1.5 | 48 - 16 | 16 ER K A55 | 16 IR K A55 | .03 | .04 |
| 16 | 3/8 | 1.75 - 3.0 | 14 - 8 | 16 ER K G55 | 16 IR K G55 | .05 | .07 |
| | | 0.5 - 3.0 | 48 - 8 | 16 ER K AG55 | 16 IR K AG55 | .05 | .07 |

Order Example: 16 IR K G55 KBL

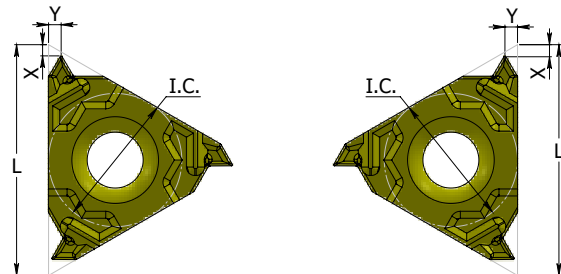
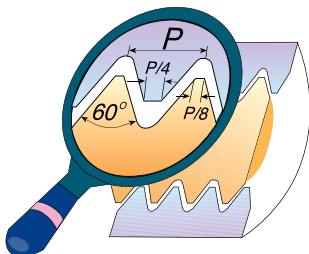
ISO - metric



| Pitch mm | L mm | I.C. | EXTERNAL | | | INTERNAL | | |
|----------|------|------|--------------------------|-----|-----|--------------------------|-----|-----|
| | | | Ordering Code Right Hand | X | Y | Ordering Code Right Hand | X | Y |
| 1.0 | 11 | 1/4 | | | | 11 IR K 1.0 ISO | .02 | .03 |
| 1.25 | 11 | 1/4 | | | | 11 IR K 1.25 ISO | .03 | .04 |
| 1.5 | 11 | 1/4 | | | | 11 IR K 1.5 ISO | .03 | .04 |
| 1.0 | 16 | 3/8 | 16 ER K 1.0 ISO | .03 | .03 | 16 IR K 1.0 ISO | .02 | .03 |
| 1.25 | 16 | 3/8 | 16 ER K 1.25 ISO | .03 | .04 | 16 IR K 1.25 ISO | .03 | .04 |
| 1.5 | 16 | 3/8 | 16 ER K 1.5 ISO | .03 | .04 | 16 IR K 1.5 ISO | .03 | .04 |
| 1.75 | 16 | 3/8 | 16 ER K 1.75 ISO | .04 | .05 | 16 IR K 1.75 ISO | .04 | .05 |
| 2.0 | 16 | 3/8 | 16 ER K 2.0 ISO | .04 | .05 | 16 IR K 2.0 ISO | .04 | .05 |
| 2.5 | 16 | 3/8 | 16 ER K 2.5 ISO | .04 | .06 | 16 IR K 2.5 ISO | .04 | .06 |
| 3.0 | 16 | 3/8 | 16 ER K 3.0 ISO | .05 | .06 | 16 IR K 3.0 ISO | .04 | .06 |

Order Example: 16 ER K 1.75 ISO KMR

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

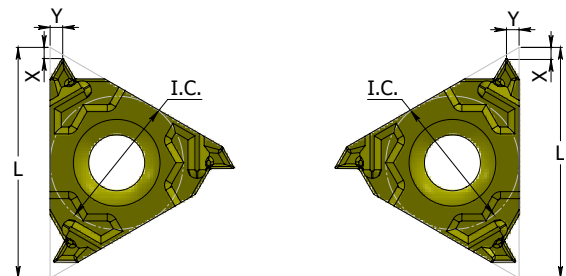
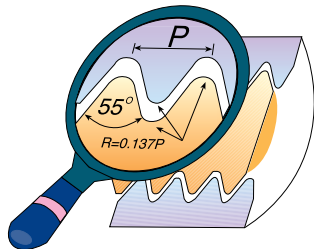


| Pitch TPI | L mm | I.C. | EXTERNAL | | | INTERNAL | | |
|-----------|------|------|--------------------------|-----|-----|--------------------------|-----|-----|
| | | | Ordering Code Right Hand | X | Y | Ordering Code Right Hand | X | Y |
| 24 | 16 | 3/8 | 16 ER K 24 UN | .03 | .03 | | | |
| 20 | 16 | 3/8 | 16 ER K 20 UN | .03 | .04 | 16 IR K 20 UN | .03 | .04 |
| 18 | 16 | 3/8 | 16 ER K 18 UN | .03 | .04 | 16 IR K 18 UN | .03 | .04 |
| 16 | 16 | 3/8 | 16 ER K 16 UN | .04 | .04 | 16 IR K 16 UN | .04 | .04 |
| 14 | 16 | 3/8 | 16 ER K 14 UN | .04 | .05 | 16 IR K 14 UN | .04 | .05 |
| 12 | 16 | 3/8 | 16 ER K 12 UN | .04 | .06 | 16 IR K 12 UN | .04 | .06 |

Order Example: 16 IR K 14 UN KBL

Type-K Threading Inserts

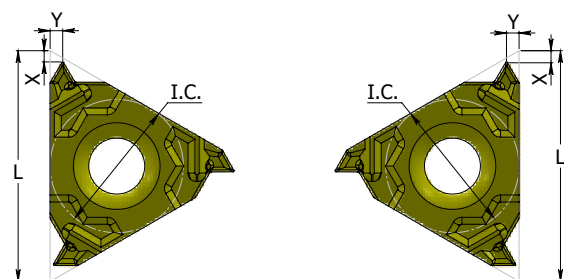
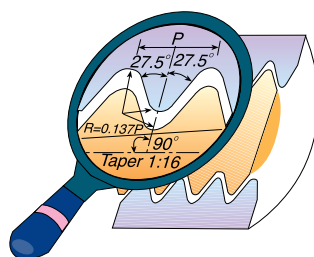
Whitworth - 55° BSW, BSF, BSP, BSB



| Pitch TPI | L mm | I.C. | EXTERNAL | | | INTERNAL | | |
|--------------|---------|------|-----------------------------|-----|-----|-----------------------------|-----|-----|
| | | | Ordering Code Right Hand | X | Y | Ordering Code Right Hand | X | Y |
| 19 | 16 | 3/8 | 16 ER K 19 W | .03 | .04 | 16 IR K 19 W | .03 | .04 |
| 14 | 16 | 3/8 | 16 ER K 14 W | .04 | .05 | 16 IR K 14 W | .04 | .05 |
| 11 | 16 | 3/8 | 16 ER K 11 W | .04 | .06 | 16 IR K 11 W | .04 | .06 |

Order Example: 16 ER K 11 W KMR

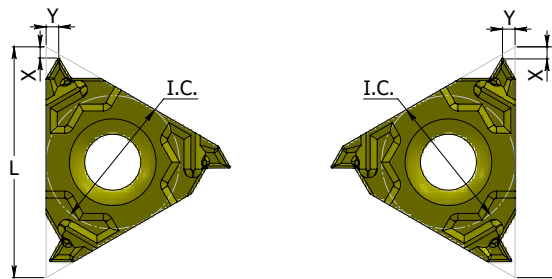
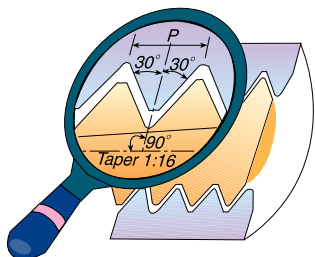
BSPT



| Pitch TPI | L mm | I.C. | EXTERNAL | | | INTERNAL | | |
|--------------|---------|------|-----------------------------|-----|-----|-----------------------------|-----|-----|
| | | | Ordering Code Right Hand | X | Y | Ordering Code Right Hand | X | Y |
| 19 | 16 | 3/8 | 16 ER K 19 BSPT | .03 | .04 | 16 IR K 19 BSPT | .03 | .04 |
| 14 | 16 | 3/8 | 16 ER K 14 BSPT | .04 | .05 | 16 IR K 14 BSPT | .04 | .05 |
| 11 | 16 | 3/8 | 16 ER K 11 BSPT | .04 | .06 | 16 IR K 11 BSPT | .04 | .06 |

Order Example: 16 ER K 11 BSPT KBL

NPT



| Pitch TPI | L mm | I.C. | EXTERNAL | | | INTERNAL | | |
|--------------|---------|------|-----------------------------|-----|-----|-----------------------------|-----|-----|
| | | | Ordering Code Right Hand | X | Y | Ordering Code Right Hand | X | Y |
| 18 | 16 | 3/8 | 16 ER K 18 NPT | .03 | .04 | 16 IR K 14 NPT | .04 | .05 |
| 14 | 16 | 3/8 | 16 ER K 14 NPT | .04 | .05 | 16 IR K 11.5 NPT | .04 | .06 |
| 11.5 | 16 | 3/8 | 16 ER K 11.5 NPT | .04 | .06 | 16 IR K 8 NPT | .05 | .07 |
| 8 | 16 | 3/8 | | | | | | |

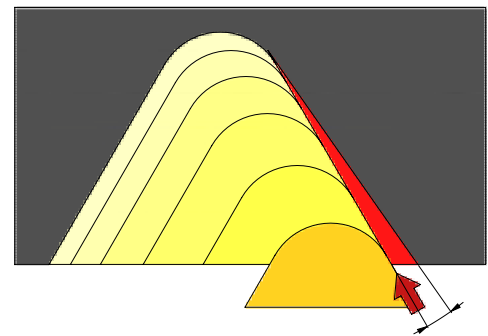
Order Example: 16 ER K 11.5 NPT KBL

Technical Section

Recommended cutting speed

| ISO Standard | Cutting speed (ft/min) | |
|--------------|------------------------|----------|
| | KMR | KBL |
| P | 230-590 | 230-590 |
| M | 360-520 | 360-520 |
| K | 290-460 | 360-490 |
| N | 620-1150 | 620-1150 |
| S | 100-230 | 100-200 |
| H | 65-160 | 100-230 |

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 04/2023 - Inch

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