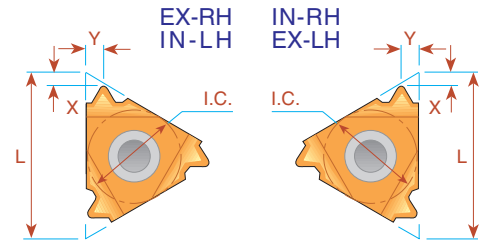
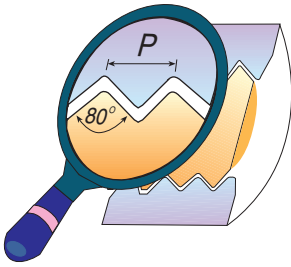


## PG - DIN 40430

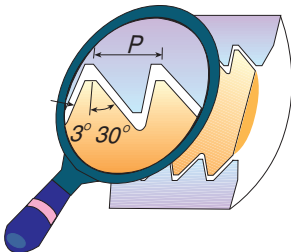


Pitch TPI	L	I.C. in	EXTERNAL Ordering Code		INTERNAL Ordering Code		X	Y
			Right Hand	Standard	Right Hand	Standard		
20	8	3/16	<i>MINIATURE</i> →		<b>*08 IR 20 PG</b>	(PG 7)	0.6	0.7
18	11	1/4			<b>11 IR 18 PG</b>	(PG 9)	0.8	0.9
20	16	3/8	<b>16 ER 20 PG</b>	(PG 7)			0.7	0.8
18	16	3/8	<b>16 ER 18 PG</b>	(PG 9,11,13.5, 16)	<b>16 IR 18 PG</b>	(PG 11,13.5, 16)	0.8	0.9
16	16	3/8	<b>16 ER 16 PG</b>	(PG 21, 29, 36, 42, 48)	<b>16 IR 16 PG</b>	(PG 21, 29, 36, 42, 48)	0.8	1.0

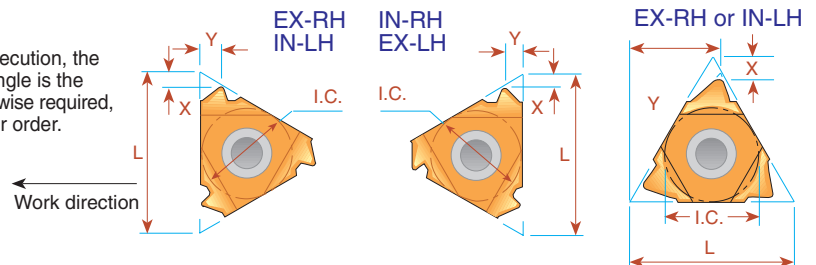
Order example: 16 ER 16 PG BMA

\* Available only in BXC grade

## Sagengewinde - DIN 513



**IMPORTANT NOTE:**  
In C.P.T. standard execution, the flank with the large angle is the leading edge. If otherwise required, please specify in your order.



Pitch mm	L	I.C. in	EXTERNAL Ordering Code		X	Y	INTERNAL Ordering Code		X	Y
			Right Hand	Left Hand			Right Hand	Left Hand		
2.0	16	3/8	<b>16 ER 2 SAGE</b>	<b>16 EL 2 SAGE</b>	1.1	1.6	<b>16 IR 2 SAGE</b>	<b>16 IL 2 SAGE</b>	1.2	1.7
3.0	22	1/2	<b>22 ER 3 SAGE</b>	<b>22 EL 3 SAGE</b>	1.5	2.4	<b>22 IR 3 SAGE</b>	<b>22 IL 3 SAGE</b>	1.9	2.9
4.0	22	1/2	<b>22 ER 4 SAGE</b>	<b>22 EL 4 SAGE</b>	1.9	3.1	<b>22 IR 4 SAGE</b>	<b>22 IL 4 SAGE</b>	2.3	3.5
* 5.0	22U	1/2U	<b>22U ER 5 SAGE</b>	<b>22U EL 5 SAGE</b>	1.2	11.6	<b>22U IR 5 SAGE</b>	<b>22U IL 5 SAGE</b>	1.9	11.7
* 6.0	22U	1/2U	<b>22U ER 6 SAGE</b>	<b>22U EL 6 SAGE</b>	1.2	11.7	<b>22U IR 6 SAGE</b>	<b>22U IL 6 SAGE</b>	2.1	11.9

Order example: 22 IR 4 SAGE BMA

\* Requires a special anvil

## Carbide Grade Selection

Choose the C.P.T. grade specifically formulated for your application from the following list:

### Uncoated Grades

**P30\***  
(P20-P30) Carbide grade for carbon and cast steels, works well at medium to low cutting speeds.

**K20\***  
(K10-K30) Carbide grade for non ferrous metals, aluminum and cast iron.

### Coated Grades

**P25C**  
(P15-P35) PVD TiN coated grade for treated and hard alloy steels (25 HRC & up) at medium to low cutting speeds.

**MXC**  
(K10-K20)  
(P10-P25) PVD TiN coated micrograin for free cutting untreated alloy steels (below 30 HRC), for stainless steels and cast iron.

**BMA**  
(P20-P40)  
(K20-K30) PVD TiAlN coated sub-micrograin grade for stainless steels and exotic materials at medium to high cutting speeds.

**BXC\*\***  
(P30-P50)  
(K25-K40) PVD TiN coated grade for low cutting speed. Works well with wide range of stainless steels.

**Note:** Due to our unique and specialized production techniques, C.P.T. coated inserts provide superior cutting performance and exceptionally long tool life.

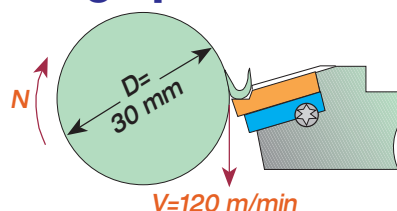
## Recommended cutting speed (m/min) for thread turning inserts

ISO Standard	Materials	Coated				Uncoated	
		P25C*	MXC	BMA	BXC**	P30*	K20*
<b>P</b>	Steel: Low & Medium Carbon Steels	80-160	90-160	100-180	20-100	70-120	
	High Carbon Steels	80-120	80-150	90-160	30-80	60-100	
	Alloy Steels, Treated Steels	50-100	80-120	90-120	40-90	50-80	
	Cast Steel	80-140	100-140	120-160	30-80	50-100	
<b>M</b>	Stainless steel: Cast steels Stainless austenitic and austenitic ferritic steel and cast steel		70-120	90-130	30-90	70-100	80-100
<b>K</b>	Cast iron: Grey cast iron, cast iron with spherical graphite, malleable cast iron		80-130	80-150	30-90		60-100
<b>N</b>	Nonferrous Metal: Aluminium and other nonferrous metals, copper alloys non metallic		300-600		20-200		120-200
<b>S</b>	Super-alloys and Titanium: Heat resistant special alloys based on iron, nickel and cobalt, titanium and titanium alloys		40-80	50-100	15-30		
<b>H</b>	Hard Materials: Hardened steel, hardened cast iron materials, chilled cast iron		20-40	30-50	15-30		

- Upon request
- For miniature and ultra miniature insert

## Conversion of Cutting Speed to Rotational Speed

Conversion of a selected cutting speed to rotational speed is calculated by the following formula:

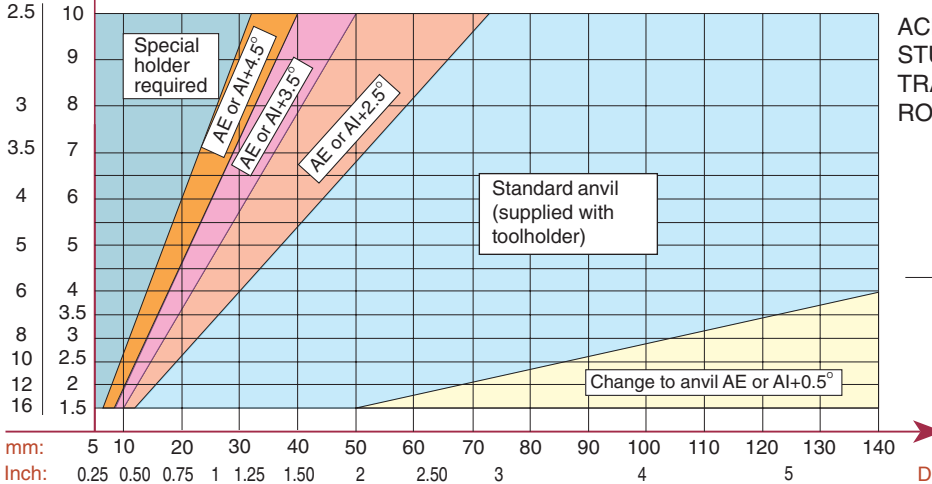


**Example**

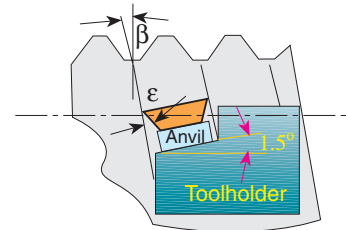
$$N = \frac{V \times 1000}{\pi \times D} = \frac{120 \times 1000}{3.14 \times 30} = 1274 \text{ RPM}$$

## Anvil Change Recommendation

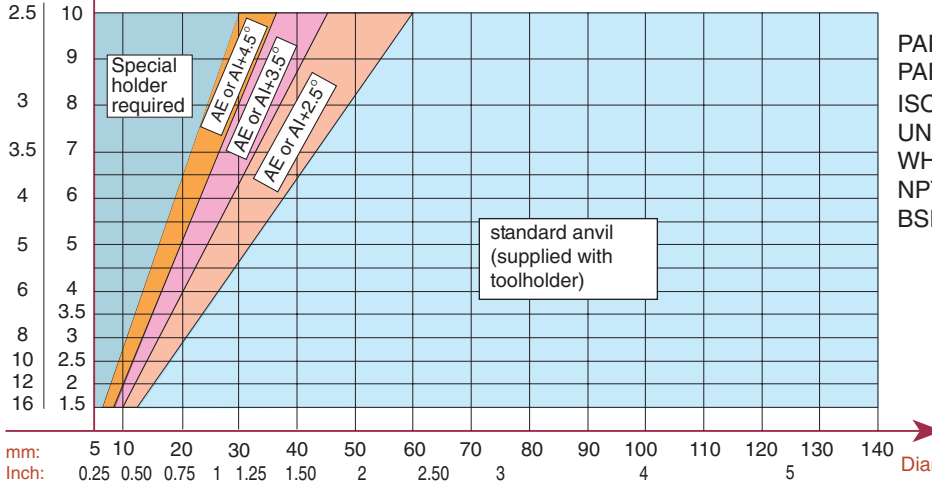
As can be seen from the chart, some Pitch to Diameter combinations require an anvil change. If change is required, use AE anvils for EX-RH and IN-LH toolholders and AI anvils for IN-RH and EX-LH toolholders.



ACME  
STUB ACME  
TRAPEZ (DIN 103)  
ROUND (DIN 405)

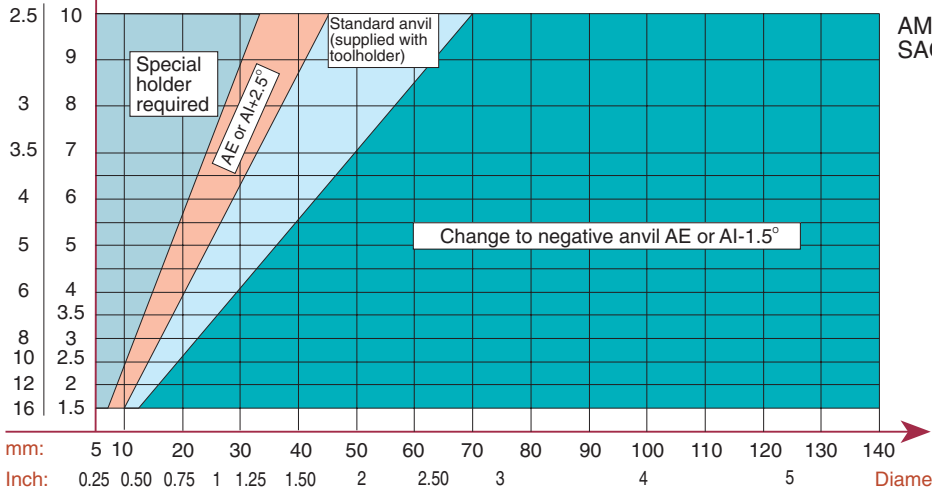


As can be seen from the chart, most applications do not require an anvil change. If change is required, use AE anvils for EX-RH and IN-LH toolholders and AI anvils for IN-RH and EX-LH toolholders

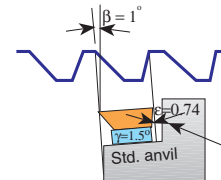


PARTIAL PROFILES 60°  
PARTIAL PROFILES 55°  
ISO  
UN  
WHIT.  
NPT  
BSPT

As can be seen from the chart, most applications require an anvil change. In most cases a negative anvil is required. use AE anvils for EX-RH

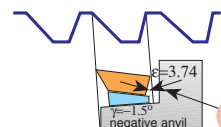


AMERICAN BUTTRESS  
SAGENGWINDE (DIN 513)



Before Anvil change

Replacing the standard anvil with an anvil with negative angle, will eliminate side rubbing



After Anvil Change