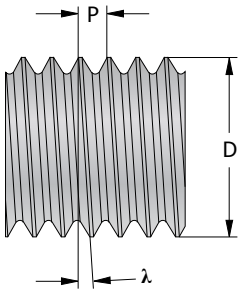
THREAD TURNING

helix angle

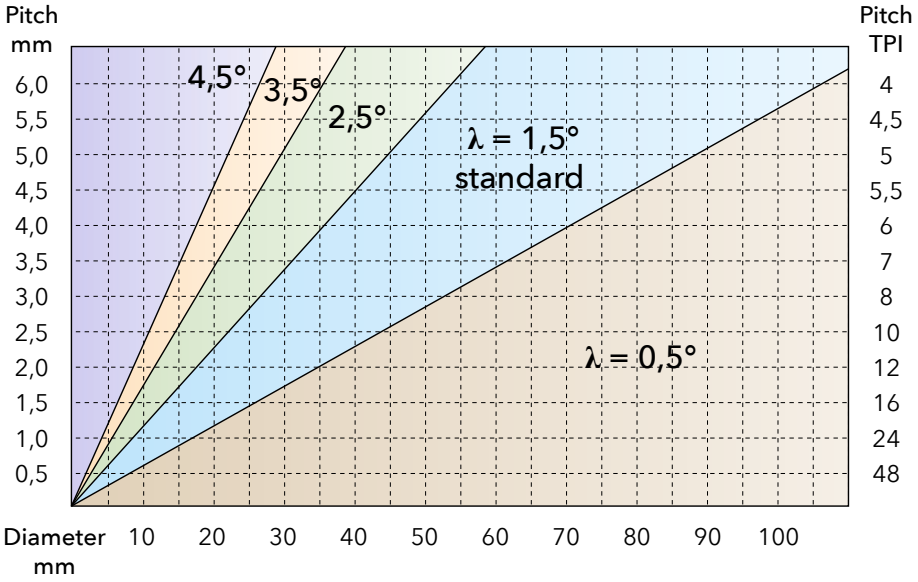
To get good cutting conditions the threading insert has to be inclined into the toolholder at approximately the same angle as the helix angle of the thread.

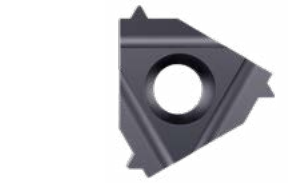
$$\tan \lambda = \frac{P}{\pi \times D}$$



Triangular Insert

When using triangular inserts, it's important that the holder's setup matches the thread's helix angle. The standard holder for triangular inserts has a preset angle of 1.5°. If you need to adapt the tool for a different helix angle, you can switch to a suitable anvil to match the thread's helix angle and ensure optimal machining.





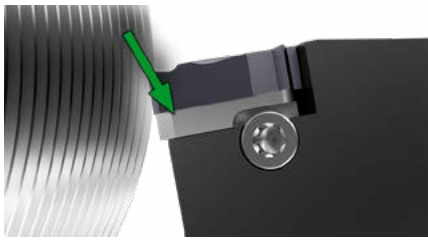


Table for Anvils

Select the right anvil based on the threading insert you're using and the angle you need. In the table, you'll find the part number to use when ordering. Negative angles on anvils are used when producing a right-hand thread with a left-hand tool or a left-hand thread with a right-hand tool.

Insert mm	4,5°	3,5°	2,5°	Standard 1,5°	0,5°	-0,5°	-1,5°
16 ER / IL	AE16+4.5	AE16+3.5	AE16+2.5	**AE16**	AE16+0.5	AE16-0.5	AE16-1.5
16 IR / EL	AI16+4.5	AI16+3.5	AI16+2.5	**AI16**	AI16+0.5	AI16-0.5	AI16-1.5
22 ER / IL	AE22+4.5	AE22+3.5	AE22+2.5	**AE22**	AE22+0.5	AE22-0.5	AE22-1.5
22 IR / EL	AI22+4.5	AI22+3.5	AI22+2.5	**AI22**	AI22+0.5	AI22-0.5	AI22-1.5
22U ER / IL	AE22U+4.5	AE22U+3.5	AE22U+2.5	**AE22U**	AE22U+0.5	AE22U-0.5	AE22U-1.5
22U IR / EL	AI22U+4.5	AI22U+3.5	AI22U+2.5	**AI22U**	AI22U+0.5	AI22U-0.5	AI22U-1.5
27 ER / IL	AE27+4.5	AE27+3.5	AE27+2.5	**AE27**	AE27+0.5	AE27-0.5	AE27-1.5
27 IR / EL	AI27+4.5	AI27+3.5	AI27+2.5	**AI27**	AI27+0.5	AI27-0.5	AI27-1.5
27U ER / IL	AE27U+4.5	AE27U+3.5	AE27U+2.5	**AE27U**	AE27U+0.5	AE27U-0.5	AE27U-1.5
27U IR / EL	AI27U+4.5	AI27U+3.5	AI27U+2.5	**AI27U**	AI27U+0.5	AI27U-0.5	AI27U-1.5

FourCut: No Anvils – Only One Holder

A major advantage of FourCut inserts is their extra flank clearance. This eliminates the need to precisely match the thread's helix angle. The standard holder has a preset angle of 2°, allowing almost all threads to be made with the same holder. This offers enormous flexibility and enables the use of the same holder for different helix angles.

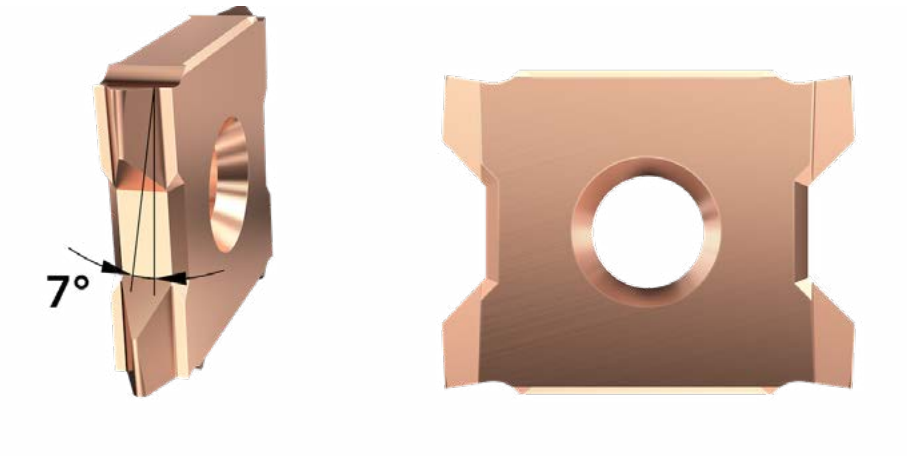
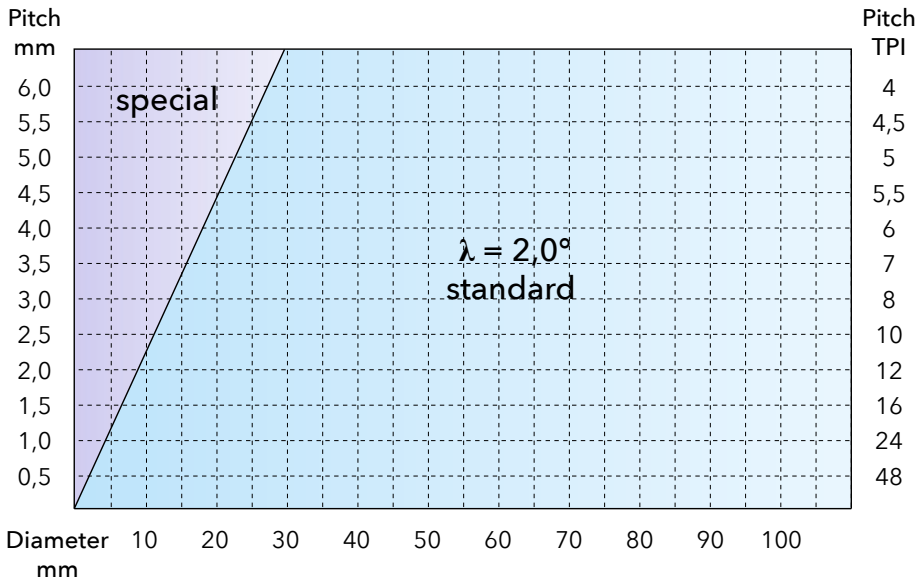


Diagram for FourCut Thread Turning

The diagram illustrates how FourCut uses the same holder for many different diameters and pitches. This threading tool, which doesn't require anvils, is a smart and flexible choice because almost all threads can be manufactured with the standard holder.



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