

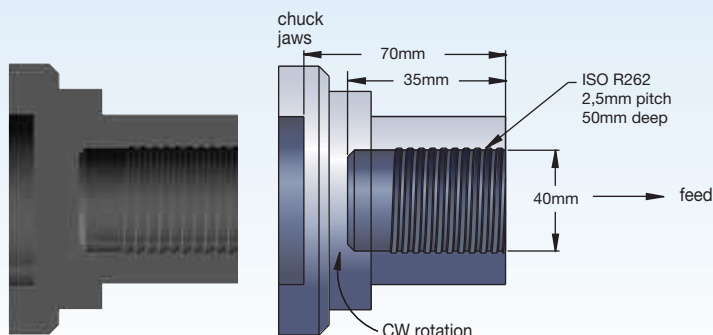
Required Information

From Part Drawing:

- material: 4140 steel
- thread form: ISO R262 2,5mm pitch
- tolerance: ISO Metric Class 6G/6H
- operation: internal threading
- pitch diameter: 40mm x 35mm deep

From Machine Setup Data:

- tooling: 20mm boring bar
- spindle rotation: clockwise
- feed: away from chuck

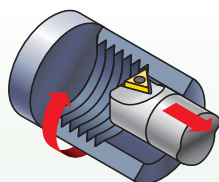


Steps for a Successful Threading Operation

Step 1 • Determine Threading Method

Need to Know:

- Operation (internal).
- Spindle rotation (CW).
Clockwise rotation.
- Feed direction (away from chuck).
- Left-hand toolholder.
- Left-hand insert (NL).
- Reverse helix method.



Step 2 • Select Insert



Need to Know:

- Thread form (ISO Metric Class 6G/6H).
- Hand of insert (left hand — NL).

Choose the High-Performance Solution

catalogue number	insert size	TN6025
3IL25ISO	3	•

High-Performance Selection

NOTE: Use insert with largest possible insert size to go into the bore.
insert: 3IL25ISO
grade: TN6025
speed: 130 m/min

Step 3 • Select the Grade and Speed

Need to Know:

- Workpiece material (4010 steel).
- Operation (internal).

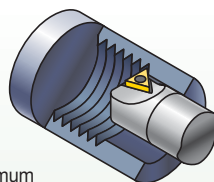
Options: Grade and Speed Selection Guidelines

threading operation	steel
internal	general purpose and high performance
	TN6025
	40–200 m/min

Step 4 • Select Toolholder

Need to Know:

- External or internal operation (internal).
- Pitch diameter to determine minimum bore diameter for internal operations (40mm).
- Type of tooling — toolholder, boring bar (boring bar).
- Hand of tool (left hand).
- Insert size (16).



Options:

catalogue number	insert size	shim
AVR32D3R	3	SM-YE3

Step 5 • Select Shim

Need to Know:

- Thread form — TPI or pitch (2,5mm pitch).
- Pitch diameter (40mm).
- Helix method (reverse). See Laydown Threading (LT) shim selection chart.

Select SM-YE3

NOTE: For this application, the standard shim supplied should be replaced with the recommended shim, SM-YE3.