Example No. 3:

Step 1: Choose Thread Turning Method from page 63
We chose EX-RH Insert & Toolholder.

Step 2: Choose Insert from page 33: **16 ER 12 ABUT**

Step 3: Choose Toolholder from page 39: **SER 2525 M16**

Step 4: Choose Insert Grade from selection on page 60
Our choice for Stainless Steel is Grade **BMA**

Step 5: Choose Thread Turning Speed from chart on page 61
We chose 120 m/min.
Rotational Speed calculation: $N = \frac{120 \times 1000}{\pi \times 40} = 954$ RPM

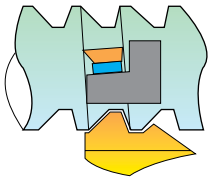
Step 6: Choose Number of Threading passes
from table on page 63. We chose **13 passes**

Step 7: Find Thread Helix Angle: on page 48
for Pitch of 12 TPI and 40 Diameter
Helix Angle as shown in the chart is 1°

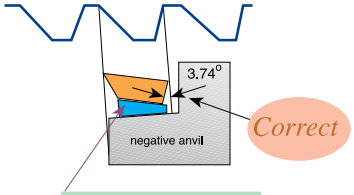
Step 8: Choose correct Anvil: As can be seen
from the chart on page 65, for AMERICAN
BUTTRESS Thread, for 12 TPI and 40 Diameter
a negative anvil **AE16-1.5** should replace the
standard anvil supplied with the toolholder

EX-RH. AMERICAN BUTTRESS
12 TPI on 40 mm diameter.

Stainless Steel 304



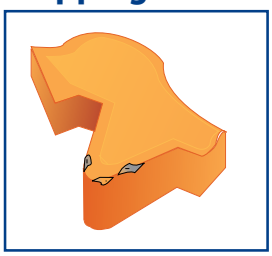
Replacing the standard anvil with an anvil with negative angle will eliminate side rubbing



Anvil chosen: AE16-1.5

Troubleshooting

Chipping



1. Use a tougher carbide grade
2. Eliminate tool overhang
3. Check if insert is correctly clamped
4. Eliminate vibration

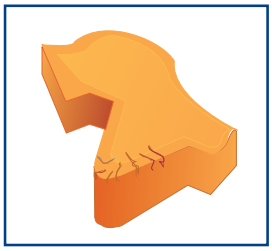
Crater Wear

1. Reduce cutting speed
2. Apply coolant fluid
3. Use a harder carbide grade

Build-up Edge

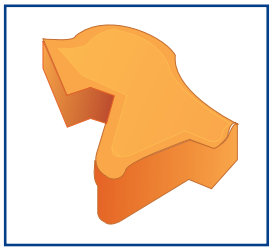
1. Increase cutting speed
2. Use a tougher carbide grade

Thermal Cracking



1. Reduce cutting speed
2. Apply coolant fluid
3. Use a tougher carbide grade

Deformation



1. Use a harder carbide grade
2. Reduce cutting speed
3. Reduce depth of cut
4. Apply coolant fluid

Fracture

1. Use a tougher carbide grade
2. Reduce depth of cut
3. Index insert sooner
4. Check machine and tool stability