### Recommended Cutting Speeds/Feeds

#### 90° SQUARE SHOULDER Cutters

<table>
<thead>
<tr>
<th>1018, 1211, 1041, 1046</th>
<th>4140, 4150, 4340, H13, P20, A2, D2</th>
<th>4140, 4150, 4340, H13, P20, A2, D2 (54x60)</th>
<th>4140, 4150, 4340, H13, P20, A2, D2 (54x60)</th>
<th>APET/XPET</th>
<th>SINGLE-SIDED</th>
<th>800-243-3344</th>
<th>860-242-8539</th>
<th><a href="http://www.dapra.com">www.dapra.com</a></th>
</tr>
</thead>
</table>

- **Recommended Cutting Speeds** for Dapra Square Shoulder Cutters
- **First choice grade shown in bold text.**
- For heavy WOC and/or DOC, use the lower end of the FPT range.
- For light WOC and DOC, the higher end of the FPT range may be possible.

The parameters provided are suggested operating parameters. Actual speeds and feeds will depend on many variables, such as rigidity, workpiece hardness, tool extension, machine accuracy, Depth of Cut, etc. Start at the middle of the SFM range and the low end of the IPT range. Next, increase IPT to optimize productivity and tool life. Higher SFM will provide higher output but will reduce tool life. Try different combinations to find the parameters that best suit your needs.

#### Recommended Cutting Speeds

- **1ST CHOICE GEOMETRY**: XPET/APET
- **APET**: APET
- **APET**: APET
- **XPET**: XPET
- **XPET**: APET
- **XPET-ALU**: XPET
- **XPET**: XPET
- **XPET**: XPET
- **XPET-ALU**: XPET

- **FPT** – 10MM: 0.003–0.008, 0.003–0.005, 0.003–0.005, 0.003–0.008, 0.003–0.007, 0.003–0.010, 0.003–0.020, 0.003–0.010, 0.003–0.005, 0.002–0.005, 0.003–0.025
- **FPT** – 12MM: 0.004–0.012, 0.004–0.010, 0.004–0.008, 0.003–0.010, 0.003–0.010, 0.004–0.012, 0.003–0.020, 0.003–0.015, 0.003–0.007, 0.002–0.006, 0.003–0.025
- **FPT** – 16MM: 0.006–0.015, 0.006–0.012, 0.004–0.008, 0.003–0.008, 0.005–0.012, 0.004–0.010, 0.006–0.015, 0.003–0.025, 0.003–0.020, 0.003–0.008, 0.003–0.007, 0.003–0.025

- **Recommended Cutting Speeds** for Dapra Square Shoulder Cutters
- **Low to Medium Carbon Steels**
- **Tool Steels, High-Alloy Steels (Soft)**
- **Tool Steels, High-Alloy Steels (Mid-Hardness)**
- **Tool Steels, High-Alloy Steels (Hardened)**
- **Free Machining Stainless**
- **Tougher Stainless**
- **Cast Irons**
- **Aluminum Alloys**
- **Copper Alloys**
- **High-Temp. Alloys**
- **Titanium**
- **Plastics, Non-Ferrous**

- **Toughest Shock Resistance**
  - DMP35 300-450 250-400 150-300 125-250 300-450 200-600 50-150 100-150
  - DMP35-TCI 500-800 400-700 250-450 480-880 300-800 600-1200 55-90 120-180

- **Tough Shock & Wear**
  - DMK35 200-320 140-275 300-600 50-80 100-150
  - DMK35-TCI 500-900 400-800 350-550 250-500 600-900 400-1200 50-110 140-200

- **Medium Shock Resistance**
  - DMP30 400-700 300-600 200-320 140-275 350-550 50-75 100-150
  - DMP30-TCI 500-900 400-800 350-550 200-500

- **Medium Shock & Wear**
  - DMK25 250-400 125-250 350-600 50-75 100-150 1000+ 250-500 FINISHING 100-150 1000+
  - DMK25-TCI 500-900 400-800 250-500 600-900 400-900 1000+

- **Hardest Wear Resistance**
  - DMK25 250-400 125-250 350-600 50-75 100-150 1000+ 250-500 FINISHING 100-150 1000+
  - DMK25-TCI 500-900 400-800 250-500 600-900 400-900 1000+

- **PCD**
  - XPET/XPET 2000+