

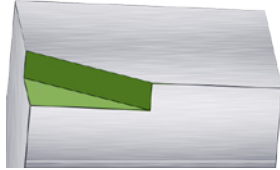
I M T S 2 0 1 4

Tooling Demonstration

Workpiece Material: 4140 Pre-Heat

OPERATIONS

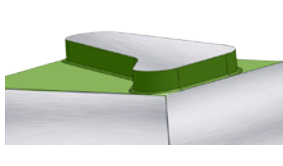
1. MSR Monster Mill Heavy Roughing Cutter



Tool Description: MSR3000-R1 **Insert:** APMT250616ER-NB3/NB4 **Grade:** PR1230

| RPM | IPM | SFM | IPT | WOC | DOC | Passes |
|-----|-----|-----|-------|------|--------|--------|
| 500 | 8 | 400 | 0.004 | 1.5" | 0.700" | 1 |

2. MFH-Raptor High Feed Mill



Tool Description: MFH3000R-14-6T **Insert:** SOMT140520ER-GM **Grade:** PR1525

| RPM | IPM | SFM | IPT | WOC | DOC | Passes |
|-----|-----|-----|-------|--------|--------|--------|
| 900 | 300 | 706 | 0.056 | ≤ 3.0" | 0.050" | 14 |

3. M-Six (MFWN) 6-Edge Face Mill



Tool Description: MFWN902500R-5T **Insert:** WNMU080608EN-GM **Grade:** PR1525

| RPM | IPM | SFM | IPT | WOC | DOC | Passes |
|-----|-----|-----|-------|--------|--------|--------|
| 900 | 40 | 589 | 0.009 | ≤ 2.5" | 0.150" | 1 |

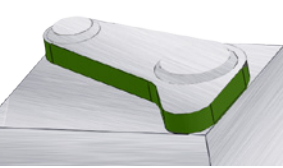
4. RAD-6 (MRX) 6-Edge Radius Cutter



Tool Description: MRX1000-W100-08-4T **Insert:** RDGT0803M0ER-GM **Grade:** PR1525

| RPM | IPM | SFM | IPT | WOC | DOC | Passes |
|------|-----|-----|--------|--------|--------|--------|
| 1910 | 35 | 500 | 0.0046 | 0.157" | 0.150" | 1 |

5. M-Four (MEW) 4-Edge Face Mill

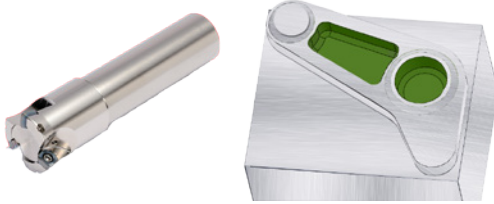


Tool Description: MEW2000R15-4T **Insert:** LOMU150508ER-GM **Grade:** PR1525

| RPM | IPM | SFM | IPT | WOC | DOC | Passes |
|------|-----|-----|-------|--------|--------|--------|
| 1050 | 34 | 550 | 0.008 | 0.125" | 0.700" | 1 |

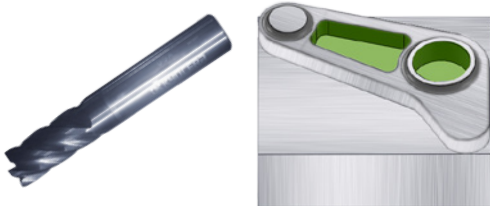
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6. MFH-Raptor High Feed Mill



| Tool Description: MFH1000-W100-10-2T Insert: SOMT100429ER-GM Grade: PR1525 | | | | | | |
|---|---------------------------|-----|---------------------------------|------|-----------------------------------|---------------------------|
| RPM | IPM | SFM | IPT | WOC | DOC | Passes |
| 2475 | 60 (Ramp) 80 (Helical) | 647 | 0.012 (Ramp) 0.016 (Helical) | 1.0" | 0.047" (Ramp) 0.025" (Helical) | 15 (Ramp) 28 (Helical) |

7. Apollo Series Solid Carbide Endmill



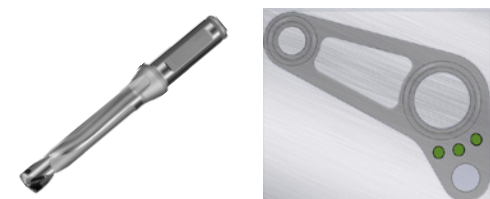
| Tool Description: AP4-5000.1000 (4 Flute AlCrN Coated Solid Endmill) | | | | | | |
|---|-----|-----|-------|--------|--------|--------|
| RPM | IPM | SFM | IPT | WOC | DOC | Passes |
| 1146 | 18 | 150 | 0.004 | 0.006" | 0.700" | 2 |

8. DRZ Magic Drill



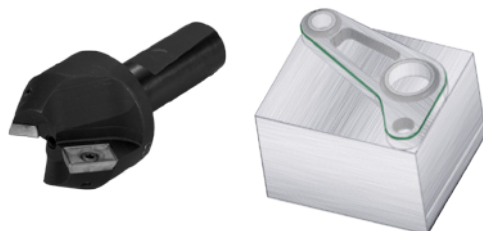
| Tool Description: S100-DRZ-7502250-06G Insert: ZCMT06T204 Grade: PR1225 | | | | | | |
|--|-----|-----|-------|--------|--------|--------|
| RPM | IPM | SFM | IPT | WOC | DOC | Passes |
| 3565 | 14 | 700 | 0.004 | 0.750" | 0.700" | 2 |

9. DRC Magic Drill



| Tool Description: SS10-DRC080M-3 Insert: DC0800M-SC Grade: PR0315 | | | | | | |
|--|-----|-----|--------|--------|--------|--------|
| RPM | IPM | SFM | IPT | WOC | DOC | Passes |
| 3000 | 20 | 247 | 0.0034 | 0.315" | 0.700" | 3 |

10. Chamfer Mill CM



| Tool Description: CM1000-45 Insert: XPMT15T308 Grade: TC60 | | | | | | |
|---|-----|-----|--------|--------|--------|--------|
| RPM | IPM | SFM | IPT | WOC | DOC | Passes |
| 2000 | 50 | 523 | 0.0125 | 0.030" | 0.030" | 1 |

11. Engraver Solid Carbide



| Tool Description: HR125SSS025A (Solid Carbide Half Round Engraver) | | | | | | |
|---|-----|-----|--------|--------|--------|--------|
| RPM | IPM | SFM | IPT | WOC | DOC | Passes |
| 6000 | 6.6 | 146 | 0.0011 | 0.030" | 0.030" | 1 |

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