| Series S-Carb APF Fractional | | Ae x $D_1$ | Ap x $D_1$ | Vc (sfm) | | Diameter ($D_1$) (inch) | |
|---|---|---|---|---|---|---|---|
| | | | | | | 1/2 | 3/4 |
| **N** ALUMINUM ALLOYS 2024, 5052, 5086, 6061, 6063, 7075 | Profile | ≤ 0.1 | ≤ 2.5 | 2625 (2100-3150) | RPM | 20055 | 13370 |
| | | | | | Fz | 0.0030 | 0.0050 |
| | | | | | Feed (IPM) | 241 | 267 |
| | Profile | ≤ 0.1 | ≤ 4 | 2625 (2100-3150) | RPM | 20055 | 13370 |
| | | | | | Fz | 0.0020 | 0.0040 |
| | | | | | Feed (IPM) | 160 | 214 |
| **N** ALUMINUM ALLOYS (LITHIUM)* 2090, 2091, 2099, 2195, 2199, 2297, 8090 | Profile | ≤ 0.1 | ≤ 2.5 | 1970 (1576-2364) | RPM | 15051 | 10034 |
| | | | | | Fz | 0.0030 | 0.0050 |
| | | | | | Feed (IPM) | 181 | 201 |
| | Profile | ≤ 0.1 | ≤ 4 | 1970 (1576-2364) | RPM | 15051 | 10034 |
| | | | | | Fz | 0.0020 | 0.0040 |
| | | | | | Feed (IPM) | 120 | 161 |

**Note:**
- surface speed is dependent on machine spindle & fixturing*
- balancing is recommended at ultra high surface speeds
- tool life may be reduced when machining Lithium Alloys
- rpm = sfm x 3.82 / $D_1$
- ipm = (inch / flute) x number of flutes x rpm
- maximum recommended depths shown
- reduce speed and feed for materials harder than listed
- finish cuts typically require reduced feed and cutting depths of 0.02 x $D_1$ maximum
- ramp angle = 6° (feed rate = 30%)
- maximum ramp depth = .25 x $D_1$
- plunging not recommended
- 

**Tool Wizard**
CALCULATE APPLICATION PARAMETERS

| Series S-Carb APF Metric | | Ae x $D_1$ | Ap x $D_1$ | Vc (m/min) | | Diameter ($D_1$) (mm) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 6 | 8 | 10 | 12 | 16 | 20 | 25 |
| **N** ALUMINUM ALLOYS 2024, 5052, 5086, 6061, 6063, 7075 | Profile | ≤ 0.1 | ≤ 2.5 | 800 (640-960) | RPM | 42440 | 31830 | 25464 | 21220 | 15915 | 12732 | 10186 |
| | | | | | Fz | 0.050 | 0.055 | 0.060 | 0.070 | 0.100 | 0.140 | 0.170 |
| | | | | | Feed (mm/min) | 8488 | 7003 | 6111 | 5942 | 6366 | 7130 | 6926 |
| | Profile | ≤ 0.1 | ≤ 4 | 800 (640-960) | RPM | 42440 | 31830 | 25464 | 21220 | 15915 | 12732 | 10186 |
| | | | | | Fz | 0.040 | 0.045 | 0.050 | 0.050 | 0.070 | 0.100 | 0.120 |
| | | | | | Feed (mm/min) | 6790 | 5729 | 5093 | 4244 | 4456 | 5093 | 4889 |
| **N** ALUMINUM ALLOYS (LITHIUM)* 2090, 2091, 2099, 2195, 2199, 2297, 8090 | Profile | ≤ 0.1 | ≤ 2.5 | 600 (480-720) | RPM | 31830 | 23873 | 19098 | 15915 | 11936 | 9549 | 7639 |
| | | | | | Fz | 0.050 | 0.055 | 0.060 | 0.070 | 0.100 | 0.140 | 0.170 |
| | | | | | Feed (mm/min) | 6366 | 5252 | 4584 | 4456 | 4774 | 5347 | 5195 |
| | Profile | ≤ 0.1 | ≤ 4 | 600 (480-720) | RPM | 31830 | 23873 | 19098 | 15915 | 11936 | 9549 | 7639 |
| | | | | | Fz | 0.040 | 0.045 | 0.050 | 0.050 | 0.070 | 0.100 | 0.120 |
| | | | | | Feed (mm/min) | 5093 | 4297 | 3820 | 3183 | 3342 | 3820 | 3667 |

**Note:**
- surface speed is dependent on machine spindle & fixturing*
- balancing is recommended at ultra high surface speeds
- tool life may be reduced when machining Lithium Alloys
- rpm = (1000 x m/min) / (3.14 x $D_1$)
- mm/min = (mm / flute) x rpm
- maximum recommended depths shown
- reduce speed and feed for materials harder than listed
- finish cuts typically require reduced feed and cutting depths of 0.02 x $D_1$ maximum
- ramp angle = 6° (feed rate = 30%)
- maximum ramp depth = .25 x $D_1$
- plunging not recommended
- 

**Tool Wizard**
CALCULATE APPLICATION PARAMETERS