Amana Tool®

INDUSTRIAL

# 4 Facet Solid Carbide Fractional Drill Recommendations

| | | Feed Rate (IPR)* | | | | |
|---|---|---|---|---|---|---|
| **Material Group** | **Speed SFM** | **1/16"** | **1/8"** | **1/4"** | **1/2"** | **3/4"** |
| **Aluminum/Aluminum Alloys** | 300-600 | .0008 | .003 | .007 | .012 | .015 |
| **Aluminum Alloyed Si > 10%** | 150-400 | .0008 | .002 | .006 | .010 | .012 |
| **Soft Cast Irons** | 200-300 | .001 | .003 | .005 | .010 | .012 |
| **Medium Cast Irons** | 125-225 | .001 | .003 | .005 | .008 | .010 |
| **Malleable Cast Irons** | 65-200 | .0005 | .002 | .004 | .007 | .010 |
| **Brass** | 200-300 | .0007 | .002 | .003 | .004 | .006 |
| **Bronze** | 150-250 | .0007 | .002 | .003 | .004 | .006 |
| **Coppers/Copper Alloys** | 150-300 | .001 | .003 | .006 | .010 | .012 |
| **Magnesium** | 300-600 | .001 | .003 | .007 | .012 | .015 |
| **Nickel Alloys** | 75-200 | .001 | .003 | .005 | .009 | .012 |
| **Free Machining Stainless Steels** | 100-150 | .001 | .003 | .005 | .008 | .012 |
| **Work Hardening Stainless Steels** | 50-100 | .0005 | .002 | .004 | .006 | .010 |
| **Low Carbon Steels** | 150-300 | .001 | .002 | .004 | .007 | .012 |
| **Medium Carbon Steels** | 100-200 | .001 | .002 | .003 | .006 | .010 |
| **High Tensile (35-40 Rc) Steels** | 75-150 | .001 | .002 | .003 | .004 | .005 |
| **High Tensile (40-45 Rc) Steels** | 50-100 | .0007 | .001 | .002 | .003 | .004 |
| **High Tensile (45 Rc+) Steels** | 25-75 | .0005 | .0007 | .001 | .002 | .003 |
| **Tool Steels** | 40-100 | .001 | .0015 | .003 | .005 | .008 |
| **Soft Titanium** | 80-125 | .001 | .002 | .004 | .006 | .010 |
| **Titanium Alloys Hard Titanium** | 40-100 | .0007 | .001 | .002 | .005 | .008 |

***IPR:** Inches Per Revolution
Inches Per Revolution: Chip Load x # of Flutes

Simple Machining Calculations:
To find **RPM:** (SFM x 3.82) / diameter of tool
To find **SFM:** 0.262 x diameter of tool x RPM

*Replace or Resharpen drills at first sign of dulling or rounding.*

**Disclaimer:** It is important to understand that these values are only recommendations.