

COUNTERSINKS

Speed Data - Applications in Various Materials

| Material | COUNTERSINK TYPE | | |
|----------------------------------|------------------|-------------------------------|----------------|
| | HSS SFM | M42 8% COBALT WITH TiN SFM | CARBIDE SFM |
| Aluminum Alloys | 150-250 | 180-300 | 300-500 |
| Brass (Bronze) | 75-125 | 95-150 | 150-250 |
| Cast Iron | 75-125 | 95-150 | 125-225 |
| Malleable Iron | 80-90 | 100-115 | 90-150 |
| Magnesium | 125-250 | 150-300 | 250-400 |
| Inconel/Monel | 30-50 | 40-65 | 50-75 |
| Plastic | 100-250 | 125-300 | 250-400 |
| Mild Steel | 70-100 | 85-125 | 80-170 |
| Steel - Annealed | 40-50 | 50-65 | 50-80 |
| Steel - Rc 18-24 | 30-40 | 40-50 | 40-60 |
| Steel - Rc 25-37 | 25-35 | 30-45 | 35-55 |
| Stainless Steel - Free Machining | 30-80 | 40-100 | 80-125 |
| Stainless Steel - Other | 15-50 | 20-65 | 50-75 |
| Titanium | 50-60 | 60-75 | 60-90 |

Note: All speeds are suggested starting points. You may have to change either by increasing or decreasing speed depending on machine condition, finish required, and/or if coolant is used.

Feed on single flute countersinks should not exceed .005" per revolution on large diameters. Multiple flute countersinks are designed for increased feed rates. A controlled feed rate will result in better surface finish.

All Melin countersinks are manufactured on CNC grinders to insure consistent and accurate flute spacing. Carbide countersinks should be used in rigid tool holders to maximize tool life.

COUNTERSINKS

Nose Diameter for Pre-setting CNC Precision Countersinks

| SIZE | NC POINT DIA. | | | | | |
|-------|---------------|-------|-------|-------|-------|-------|
| | 60° | 82° | 90° | 100° | 110° | 120° |
| 0.188 | 0.058 | 0.032 | 0.032 | 0.032 | 0.032 | 0.032 |
| 0.250 | 0.078 | 0.046 | 0.046 | 0.046 | 0.046 | 0.046 |
| 0.313 | 0.080 | 0.047 | 0.047 | 0.047 | 0.047 | 0.047 |
| 0.375 | 0.125 | 0.078 | 0.078 | 0.078 | 0.062 | 0.062 |
| 0.438 | 0.140 | 0.096 | 0.096 | 0.096 | 0.070 | 0.070 |
| 0.500 | 0.156 | 0.109 | 0.109 | 0.109 | 0.078 | 0.078 |
| 0.625 | 0.203 | 0.125 | 0.125 | 0.125 | 0.109 | 0.109 |
| 0.750 | 0.250 | 0.156 | 0.156 | 0.156 | 0.125 | 0.125 |
| 0.875 | 0.281 | 0.172 | 0.172 | 0.172 | 0.140 | 0.140 |
| 1.000 | 0.328 | 0.203 | 0.203 | 0.203 | 0.171 | 0.171 |