# Carbide Slitting Saws (FP - Fine Pitch) / (CP - Coarse Pitch)

| MATERIAL GROUP | MATERIAL TO BE MACHINED | Feed Per Tooth (fz) | | | | | |
|---|---|---|---|---|---|---|---|
| | | CARBIDE Vc [m/min] | Ø15-30 | Ø30-50 | Ø50-80 | Ø80-125 | Ø125-160 |
| P | Unalloyed steel / Low alloyed steel | 80 - 140 | 0.002 - 0.004 | 0.003 - 0.007 | 0.004 - 0.008 | 0.004 - 0.012 | 0.004 - 0.012 |
| | Unalloyed steel / Low alloyed steel | 50 - 80 | 0.001 - 0.004 | 0.002 - 0.005 | 0.002 - 0.008 | 0.003 - 0.012 | 0.003 - 0.012 |
| | Lead alloyed cutting steel | 120 - 160 | 0.003 - 0.007 | 0.004 - 0.008 | 0.005 - 0.010 | 0.005 - 0.010 | 0.005 - 0.012 |
| | High alloyed steel | 50 - 80 | 0.001 - 0.004 | 0.002 - 0.005 | 0.002 - 0.008 | 0.003 - 0.012 | 0.003 - 0.012 |
| M | Stainless steel | 80 - 120 | 0.001 - 0.004 | 0.002 - 0.005 | 0.002 - 0.008 | 0.003 - 0.012 | 0.003 - 0.012 |
| | DUPLEX stainless steel | 50 - 80 | 0.001 - 0.004 | 0.002 - 0.005 | 0.002 - 0.008 | 0.003 - 0.012 | 0.003 - 0.012 |
| K | Grey cast iron / Nodular pearlitic iron | 80 - 140 | 0.002 - 0.004 | 0.003 - 0.007 | 0.004 - 0.01 | 0.004 - 0.01 | 0.004 - 0.01 |
| | Alloyed cast iron / Nodular pearlitic iron | 50 - 80 | 0.001 - 0.004 | 0.002 - 0.005 | 0.002 - 0.008 | 0.003 - 0.012 | 0.003 - 0.012 |
| | Nodular ferritic cast iron / Malleable cast iron | 50 - 80 | 0.002 - 0.004 | 0.003 - 0.007 | 0.004 - 0.01 | 0.004 - 0.01 | 0.004 - 0.01 |
| S | Special alloys / Heat resistant stainless steel | 20 - 30 | 0.001 - 0.004 | 0.002 - 0.005 | 0.002 - 0.008 | 0.003 - 0.012 | 0.003 - 0.012 |
| | Titanium, Titanium alloys | 30 - 70 | 0.001 - 0.004 | 0.002 - 0.005 | 0.002 - 0.008 | 0.003 - 0.012 | 0.003 - 0.012 |
| N | Copper alloys - Easy to machine (Brass - Bronze) | 200 - 450 | 0.003 - 0.007 | 0.004 - 0.008 | 0.005 - 0.010 | 0.005 - 0.010 | 0.005 - 0.012 |
| | Copper alloys - Difficult to machine / Aluminium bronze | 150 - 300 | 0.001 - 0.004 | 0.002 - 0.005 | 0.002 - 0.008 | 0.003 - 0.012 | 0.003 - 0.012 |
| | Aluminium alloys | 200 - 500 | 0.003 - 0.007 | 0.004 - 0.008 | 0.005 - 0.010 | 0.005 - 0.010 | 0.005 - 0.012 |
| | Cast aluminium | 200 - 450 | 0.003 - 0.007 | 0.004 - 0.008 | 0.005 - 0.010 | 0.005 - 0.010 | 0.005 - 0.012 |
| | Plastic | 130 - 200 | 0.003 - 0.010 | 0.004 - 0.010 | 0.005 - 0.012 | 0.005 - 0.012 | 0.005 - 0.015 |
| | Gold, Silver | 140 - 180 | 0.003 - 0.007 | 0.004 - 0.008 | 0.005 - 0.010 | 0.005 - 0.010 | 0.005 - 0.012 |

| Key | |
|---|---|
| Vc | Cutting speed (m/min) |
| n | RPM (rev/min) |
| Fz | Feed rate (mm/tooth) |
| f | Feed rate (mm/rev) |
| z | No. of teeth |

To calculate RPM from cutting speed: $n = \frac{v_c * 1000}{\pi * ø}$

To calculate cutting speed from RPM: $v_c = \frac{n * \pi * ø}{1000}$

All recommendations are based on ideal machining conditions. Adjustments may need to be made according to your set-up. The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.