



# FULLERTON

## S P E E D S / F E E D S

### Two RH Spiral Flutes | Cam Relieved | Solid Carbide NC Spotting Drills

|                                     |     | Imperial (in) |       |       |       |       |       | Metric (mm) |       |       |       |       |       |
|-------------------------------------|-----|---------------|-------|-------|-------|-------|-------|-------------|-------|-------|-------|-------|-------|
|                                     |     | 1/8           | 1/4   | 3/8   | 1/2   | 3/4   | 1     | 3           | 6     | 10    | 12    | 19    | 25    |
| Brass & Copper                      | RPM | 8,251         | 4,126 | 2,750 | 2,063 | 1,375 | 1,031 | 8,732       | 4,366 | 2,619 | 2,183 | 1,379 | 1,048 |
|                                     | IPM | 25            | 21    | 19    | 19    | 14    | 12    | 629         | 524   | 489   | 472   | 349   | 314   |
|                                     | SFM | 270           | 270   | 270   | 270   | 270   | 270   | 82          | 82    | 82    | 82    | 82    | 82    |
|                                     | IPR | .003          | .005  | .007  | .009  | .010  | .012  | 0.07        | 0.12  | 0.19  | 0.22  | 0.25  | 0.30  |
| Graphite                            | RPM | 10,696        | 5,348 | 3,565 | 2,674 | 1,783 | 1,337 | 11,319      | 5,659 | 3,396 | 2,830 | 1,787 | 1,358 |
|                                     | IPM | 32            | 27    | 23    | 21    | 16    | 13    | 815         | 679   | 589   | 543   | 407   | 340   |
|                                     | SFM | 350           | 350   | 350   | 350   | 350   | 350   | 107         | 107   | 107   | 107   | 107   | 107   |
|                                     | IPR | .003          | .005  | .007  | .008  | .009  | .010  | 0.07        | 0.12  | 0.17  | 0.19  | 0.23  | 0.25  |
| Cast Iron                           | RPM | 3,667         | 1,834 | 1,222 | 917   | 611   | 458   | 3,881       | 1,940 | 1,164 | 970   | 613   | 466   |
|                                     | IPM | 11            | 9     | 8     | 7     | 6     | 5     | 279         | 233   | 202   | 186   | 140   | 116   |
|                                     | SFM | 120           | 120   | 120   | 120   | 120   | 120   | 37          | 37    | 37    | 37    | 37    | 37    |
|                                     | IPR | .003          | .005  | .007  | .008  | .009  | .010  | 0.07        | 0.12  | 0.17  | 0.19  | 0.23  | 0.25  |
| Hardened Steels >48RC               | RPM | 1,834         | 917   | 611   | 458   | 306   | 229   | 1,940       | 970   | 582   | 485   | 306   | 233   |
|                                     | IPM | 4             | 3     | 2     | 3     | 2     | 2     | 93          | 81    | 62    | 64    | 50    | 44    |
|                                     | SFM | 60            | 60    | 60    | 60    | 60    | 60    | 18          | 18    | 18    | 18    | 18    | 18    |
|                                     | IPR | .002          | .004  | .004  | .006  | .007  | .008  | 0.05        | 0.08  | 0.11  | 0.13  | 0.16  | 0.19  |
| Steels                              | RPM | 3,362         | 1,681 | 1,121 | 840   | 560   | 420   | 3,557       | 1,779 | 1,067 | 889   | 562   | 427   |
|                                     | IPM | 8             | 7     | 6     | 5     | 4     | 4     | 213         | 171   | 157   | 139   | 107   | 91    |
|                                     | SFM | 110           | 110   | 110   | 110   | 110   | 110   | 34          | 34    | 34    | 34    | 34    | 34    |
|                                     | IPR | .003          | .004  | .006  | .007  | .008  | .009  | 0.06        | 0.10  | 0.15  | 0.16  | 0.19  | 0.21  |
| Stainless Steels                    | RPM | 2,445         | 1,222 | 815   | 611   | 407   | 306   | 2,587       | 1,294 | 776   | 647   | 408   | 310   |
|                                     | IPM | 5             | 4     | 4     | 3     | 3     | 2     | 124         | 109   | 93    | 85    | 67    | 58    |
|                                     | SFM | 80            | 80    | 80    | 80    | 80    | 80    | 24          | 24    | 24    | 24    | 24    | 24    |
|                                     | IPR | .002          | .004  | .005  | .006  | .007  | .008  | 0.05        | 0.08  | 0.12  | 0.13  | 0.16  | 0.19  |
| Super Alloys (Nickel based Inconel) | RPM | 1,222         | 611   | 407   | 306   | 204   | 153   | 1,294       | 647   | 388   | 323   | 204   | 155   |
|                                     | IPM | 1             | 2     | 1     | 1     | 1     | 1     | 31          | 39    | 31    | 31    | 26    | 25    |
|                                     | SFM | 40            | 40    | 40    | 40    | 40    | 40    | 12          | 12    | 12    | 12    | 12    | 12    |
|                                     | IPR | .001          | .003  | .003  | .004  | .005  | .007  | 0.02        | 0.06  | 0.08  | 0.10  | 0.13  | 0.16  |
| Titanium                            | RPM | 1,375         | 688   | 458   | 344   | 229   | 172   | 1,455       | 728   | 437   | 364   | 230   | 175   |
|                                     | IPM | 3             | 2     | 2     | 2     | 1     | 1     | 70          | 61    | 47    | 48    | 38    | 33    |
|                                     | SFM | 45            | 45    | 45    | 45    | 45    | 45    | 14          | 14    | 14    | 14    | 14    | 14    |
|                                     | IPR | .002          | .004  | .004  | .006  | .007  | .008  | 0.05        | 0.08  | 0.11  | 0.13  | 0.16  | 0.19  |

**Not Recommended for High Si Aluminum >10%, Low Si Aluminum <10%, or Plastics. Composites are only recommended in unique situations.** The parameters listed for tool series that are stocked uncoated are based on running an uncoated tool. If a coating is applied to the tools, the SFM can be increased by approximately 25%. All speed and feed recommendations should be considered only as a starting point. Start with conservative speeds and feeds while analyzing the rigidity of the process. Then cautiously progress incrementally to achieve optimum performance.