



List 7471: DG-LN-CR-EML

Contouring

| Work Material | Graphite | | | | |
|---------------|----------|-----------|-------------|-----------|-------------|
| | Roughing | | Finishing | | |
| Cutting Speed | 123 SFM | | 123 SFM | | |
| Depth of Cut | | | | | |
| Mill Dia. | | Speed RPM | Feed in/min | Speed RPM | Feed in/min |
| Inch | CR | | | | |
| 1/32 | 0.005 | 15,000 | 47 | 15,000 | 39 |
| 3/64 | 0.010 | 10,000 | 31 | 10,000 | 26 |
| 1/16 | 0.010 | 7,500 | 23 | 7,500 | 17 |
| 3/32 | 0.015 | 5,000 | 16 | 5,000 | 11 |
| 3/32 | 0.020 | 5,000 | 16 | 5,000 | 11 |
| 1/8 | 0.015 | 3,760 | 12 | 3,760 | 8 |
| 1/8 | 0.020 | 3,760 | 12 | 3,760 | 8 |
| 1/8 | 0.030 | 3,760 | 12 | 3,760 | 8 |
| 3/16 | 0.030 | 2,500 | 8 | 2,500 | 6 |
| 3/16 | 0.060 | 2,500 | 8 | 2,500 | 6 |
| 1/4 | 0.015 | 1,930 | 6 | 1,930 | 4 |
| 1/4 | 0.020 | 1,930 | 6 | 1,930 | 4 |
| 1/4 | 0.030 | 1,930 | 6 | 1,930 | 4 |
| 1/4 | 0.060 | 1,930 | 6 | 1,930 | 4 |

Set the ramping angle to be approximately between 0.3° and 0.5°.

1. Adjust the speed, the feed rate, and the depth of cut to suit your operating conditions, such as the milling shape, machine rigidity, tool holder rigidity, and work holding force.
2. If you are unable to reach the speed and feed rate indicated in the table above, lower the speed and feed rate using the same ratio.
3. If the workpiece gets chipped or if the operation requires a higher level of milling precision, lower the feed rate as necessary.
4. Depending on the shape, if the workpiece chatters, lower the speed and feed rate using the same ratio.
5. To mill graphite, use a dedicated milling machine. To prevent inhalation of dust, use a dust collector and a dust mask when working around graphite.
6. During milling, keep the runout at the tip of the end mill to be less than 0.0004 inches (0.01 mm).
7. When making a rough cut with a 3/16" or greater end mill, you can feed as high as triple the recommended feed rate provided the stepdown is less than the corner radius.
8. If a cut involves the shaping of a corner during side milling, use the corner radius process of the program, or adjust the speed so that it will not cause chattering, and reduce the speed at the corner at the same time (approximately 60%).

