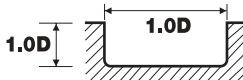
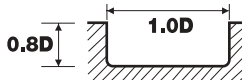
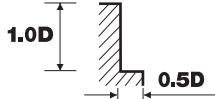
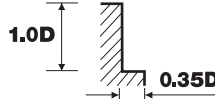


## 4 &amp; 5 FLUTE CORNER RADIUS CARBIDE ROUGHER

G9D67, G9D68, G9D75, G9D76, G9D77 &amp; G9D69 Series

## CUTTING DATA

Slotting &amp; Side Cutting

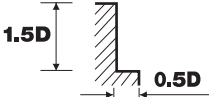
| MATERIAL                                                                            | ALLOYED STEELS, CARBON STEELS & TOOL STEELS |      |     |       | ALLOYED STEELS, CARBON STEELS, TOOL STEELS & PRE HARDENED STEELS                      |      |     |       |
|-------------------------------------------------------------------------------------|---------------------------------------------|------|-----|-------|---------------------------------------------------------------------------------------|------|-----|-------|
|                                                                                     | CAST IRON                                   |      |     |       | CAST IRON                                                                             |      |     |       |
| Hardness                                                                            | ~ HRc 35                                    |      |     |       | HRc 35 ~ HRc 45                                                                       |      |     |       |
| Dia.                                                                                | RPM                                         | Feed | Vc  | Fz    | RPM                                                                                   | Feed | Vc  | Fz    |
| SLOTTING                                                                            |                                             |      |     |       |                                                                                       |      |     |       |
| 6                                                                                   | 12000                                       | 1550 | 225 | 0.032 | 10600                                                                                 | 1100 | 200 | 0.026 |
| 8                                                                                   | 9000                                        | 1650 | 225 | 0.046 | 8100                                                                                  | 1180 | 205 | 0.036 |
| 10                                                                                  | 7200                                        | 1650 | 225 | 0.057 | 6400                                                                                  | 1180 | 200 | 0.046 |
| 12                                                                                  | 6000                                        | 1540 | 225 | 0.064 | 5400                                                                                  | 1140 | 205 | 0.053 |
| 16                                                                                  | 4500                                        | 1500 | 225 | 0.067 | 4100                                                                                  | 1050 | 205 | 0.051 |
| 20                                                                                  | 3600                                        | 1330 | 225 | 0.074 | 3200                                                                                  | 900  | 200 | 0.056 |
|    |                                             |      |     |       |    |      |     |       |
| SIDE CUTTING                                                                        |                                             |      |     |       |                                                                                       |      |     |       |
| 6                                                                                   | 15800                                       | 2570 | 300 | 0.041 | 14300                                                                                 | 1850 | 270 | 0.032 |
| 8                                                                                   | 11900                                       | 2700 | 300 | 0.057 | 10700                                                                                 | 1950 | 270 | 0.046 |
| 10                                                                                  | 9500                                        | 2700 | 300 | 0.071 | 8500                                                                                  | 1950 | 265 | 0.057 |
| 12                                                                                  | 8000                                        | 2570 | 300 | 0.080 | 7100                                                                                  | 1850 | 270 | 0.065 |
| 16                                                                                  | 6000                                        | 2450 | 300 | 0.082 | 5400                                                                                  | 1750 | 270 | 0.065 |
| 20                                                                                  | 4800                                        | 2140 | 300 | 0.089 | 4300                                                                                  | 1500 | 270 | 0.070 |
|  |                                             |      |     |       |  |      |     |       |

## 4 &amp; 5 FLUTE CORNER RADIUS HSS-PM ROUGHER

GAE53 Series

## CUTTING DATA

Side Cutting

| MATERIAL                                                                            | STRUCTURAL STEEL & CARBON STEEL |      |    |       | STRUCTURAL STEEL, & CARBON STEEL |      |    |       | CARBON STEEL ALLOY STEEL & TOOL STEEL |      |    |       | PRE HARDENED STEEL, ALLOY STEEL & TOOL STEEL |      |    |       | STAINLESS STEEL |      |    |       |
|-------------------------------------------------------------------------------------|---------------------------------|------|----|-------|----------------------------------|------|----|-------|---------------------------------------|------|----|-------|----------------------------------------------|------|----|-------|-----------------|------|----|-------|
|                                                                                     |                                 |      |    |       | CAST IRON                        |      |    |       |                                       |      |    |       |                                              |      |    |       |                 |      |    |       |
| Hardness                                                                            | -                               |      |    |       | ~ HRc 20                         |      |    |       | HRc 20 ~ 30                           |      |    |       | HRc 30 ~ 40                                  |      |    |       | -               |      |    |       |
| Strength                                                                            | ~ 500N/mm <sup>2</sup>          |      |    |       | 500 ~ 800N/mm <sup>2</sup>       |      |    |       | 800 ~ 1000N/mm <sup>2</sup>           |      |    |       | 1000 ~ 1300N/mm <sup>2</sup>                 |      |    |       | -               |      |    |       |
| Dia.                                                                                | RPM                             | Feed | Vc | Fz    | RPM                              | Feed | Vc | Fz    | RPM                                   | Feed | Vc | Fz    | RPM                                          | Feed | Vc | Fz    | RPM             | Feed | Vc | Fz    |
| 6                                                                                   | 3250                            | 240  | 60 | 0.019 | 2500                             | 185  | 48 | 0.018 | 1800                                  | 120  | 34 | 0.017 | 1500                                         | 110  | 28 | 0.018 | 1750            | 130  | 33 | 0.019 |
| 8                                                                                   | 2750                            | 300  | 70 | 0.027 | 2150                             | 240  | 54 | 0.028 | 1550                                  | 170  | 38 | 0.027 | 1200                                         | 130  | 32 | 0.028 | 1450            | 170  | 36 | 0.029 |
| 10                                                                                  | 2150                            | 430  | 70 | 0.050 | 1700                             | 330  | 54 | 0.049 | 1200                                  | 205  | 38 | 0.043 | 1000                                         | 170  | 32 | 0.041 | 1150            | 200  | 36 | 0.045 |
| 12                                                                                  | 1800                            | 430  | 70 | 0.060 | 1400                             | 350  | 54 | 0.063 | 1000                                  | 240  | 38 | 0.059 | 850                                          | 190  | 32 | 0.055 | 950             | 245  | 36 | 0.064 |
| 14                                                                                  | 1550                            | 430  | 70 | 0.055 | 1200                             | 350  | 54 | 0.073 | 850                                   | 240  | 38 | 0.069 | 700                                          | 190  | 32 | 0.065 | 850             | 245  | 36 | 0.074 |
| 16                                                                                  | 1400                            | 430  | 70 | 0.063 | 1100                             | 350  | 54 | 0.081 | 750                                   | 240  | 38 | 0.080 | 600                                          | 190  | 32 | 0.075 | 700             | 245  | 36 | 0.085 |
| 18                                                                                  | 1200                            | 430  | 70 | 0.072 | 1000                             | 350  | 54 | 0.085 | 700                                   | 240  | 38 | 0.086 | 550                                          | 190  | 32 | 0.082 | 650             | 245  | 36 | 0.093 |
| 20                                                                                  | 1100                            | 445  | 70 | 0.080 | 850                              | 350  | 54 | 0.101 | 600                                   | 240  | 38 | 0.100 | 500                                          | 190  | 32 | 0.092 | 600             | 245  | 36 | 0.107 |
|  |                                 |      |    |       |                                  |      |    |       |                                       |      |    |       |                                              |      |    |       |                 |      |    |       |

RPM: revolutions per minute Feed: mm per minute Vc: surface speed (metres per minute) Fz: feed per tooth