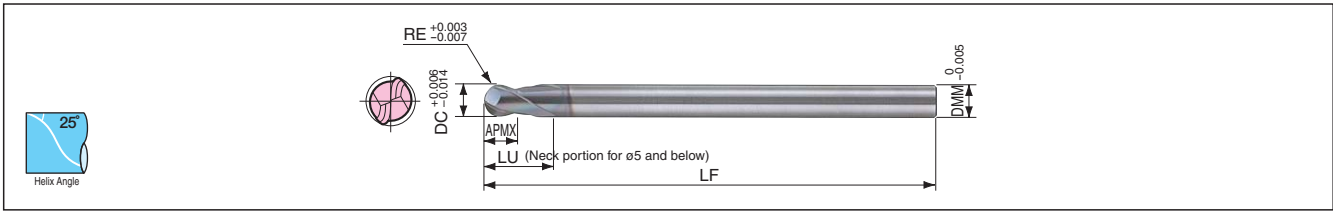


GSBH 20000SF Type



| | | | | | | | | | | | | |
|----------------|--------------|-------------|--------------------|----------------|----------------|-----------------|--------------|-----------|----------------|--------------|----------|------|
| Coated Carbide | Carbon Steel | Alloy Steel | Pre-hardened Steel | Tempered Steel | Hardened Steel | Stainless Steel | Ti Alloy | Cast Iron | Aluminum Alloy | Copper Alloy | Graphite | CFRP |
| ⊙ | ⊙ | ⊙ | ⊙ | ⊙ | 45 to 55 HRC | 55 to 60 HRC | 60 to 65 HRC | ⊙ | ⊙ | ⊙ | ⊙ | ⊙ |



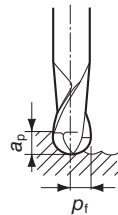
Body

| Cat. No. | Stock | Dimensions (mm) | | | | | |
|---------------------|-------|-----------------|---------------------|-------------------|------------------------|-----------------|--------------------|
| | | Radius RE | Cutting diameter DC | Depth of cut APMX | Cutting Edge Length LU | Total Length LF | Shank diameter DMM |
| GSBH 20020SF | ● | 0.20 | 0.4 | 0.4 | 0.6 | 50 | 4 |
| 20030SF | ● | 0.30 | 0.6 | 0.6 | 0.9 | 50 | 4 |
| 20050SF | ● | 0.50 | 1.0 | 1.0 | 1.5 | 50 | 4 |
| 20075SF | ● | 0.75 | 1.5 | 1.5 | 2.3 | 50 | 4 |
| 20100SF | ● | 1.00 | 2.0 | 2.0 | 3.0 | 60 | 6 |
| GSBH 20125SF | ● | 1.25 | 2.5 | 2.5 | 3.8 | 60 | 6 |
| 20150SF | ● | 1.50 | 3.0 | 3.0 | 4.5 | 60 | 6 |
| 20200SF | ● | 2.00 | 4.0 | 4.0 | 6.0 | 70 | 6 |
| 20250SF | ● | 2.50 | 5.0 | 5.0 | 7.5 | 80 | 6 |
| 20300SF | ● | 3.00 | 6.0 | 6.0 | — | 80 | 6 |
| GSBH 20400SF | ● | 4.00 | 8.0 | 8.0 | — | 90 | 8 |
| 20500SF | ● | 5.00 | 10.0 | 10.0 | — | 100 | 10 |
| 20600SF | ● | 6.00 | 12.0 | 12.0 | — | 110 | 12 |

Grade: ACF07D

Recommended Cutting Conditions

- When depth of cut is lowered, feed rate can be increased further.
- If the machine cannot achieve the recommended spindle speed, please use the max. spindle speed available. In this case, lower the feed rate by the same ratio.
- If cutting noise and vibration are present, please change the cutting conditions accordingly.



Radius Milling

| Work Material | Middle Hardened Steel Pre-hardened Steel, Die Steel (40 to 50HRC) | | Hardened Steel SKD61 (50 to 55HRC) | | Hardened Steel SKD11 (55 to 60HRC) | | Hardened Steel SKH55 (60 to 65HRC) | | |
|----------------------|---|-----------------------|--|-----------------------|--|-----------------------|--|-----------------------|--|
| | Spindle Speed (min ⁻¹) | Feed Rate (mm/min) | Spindle Speed (min ⁻¹) | Feed Rate (mm/min) | Spindle Speed (min ⁻¹) | Feed Rate (mm/min) | Spindle Speed (min ⁻¹) | Feed Rate (mm/min) | |
| Square | Cutting Conditions | | | | | | | | |
| | RE (mm) | | | | | | | | |
| 2 Flutes | 0.20 | 50,000 | 500 | 50,000 | 500 | 50,000 | 500 | 50,000 | |
| | 0.30 | 50,000 | 800 | 50,000 | 800 | 50,000 | 800 | 50,000 | |
| 3 Flutes | 0.50 | 50,000 | 1,400 | 50,000 | 1,400 | 50,000 | 1,300 | 42,000 | |
| | 0.75 | 50,000 | 2,000 | 50,000 | 2,000 | 37,300 | 1,400 | 28,000 | |
| 4 Flutes | 1.00 | 38,100 | 2,100 | 38,100 | 2,100 | 28,000 | 1,400 | 21,000 | |
| | 1.25 | 30,500 | 2,100 | 30,500 | 2,100 | 22,400 | 1,400 | 16,800 | |
| 6 Flutes 8 Flutes | 1.50 | 25,400 | 2,100 | 25,400 | 2,100 | 18,700 | 1,400 | 14,000 | |
| | 2.00 | 19,100 | 2,100 | 19,100 | 2,100 | 14,000 | 1,400 | 10,500 | |
| Radius | 2.50 | 15,300 | 2,100 | 15,300 | 2,100 | 11,200 | 1,400 | 8,400 | |
| | 3.00 | 12,700 | 2,100 | 12,700 | 2,100 | 9,300 | 1,400 | 7,000 | |
| Ballnose | 4.00 | 9,500 | 2,100 | 9,500 | 2,100 | 7,000 | 1,400 | 5,300 | |
| | 5.00 | 7,600 | 2,100 | 7,600 | 2,100 | 5,600 | 1,400 | 4,200 | |
| DLC | 6.00 | 6,400 | 2,100 | 6,400 | 2,100 | 4,700 | 1,400 | 3,500 | |
| | Standard Depth-of-cut | a_p 0.08DC | | | | 0.05DC | | | |
| | | p_f 0.25DC | | | | 0.15DC | | | |

Long Neck

Uncoated

CBN PCD