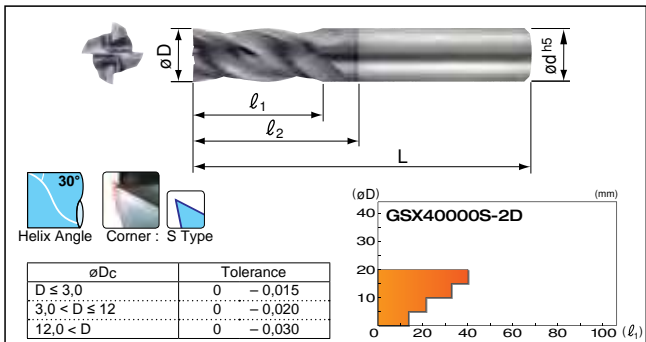


GSX MILL Endmills

GSX 40000S-2D Type

| | | | | | | | | | | | | | | | | |
|----------------|---------|------------------|--------------|-------------|--------------------|-------------------|----------------|-----------|-----------|-----------|-----------------|---------------------------------|-----------|----------|----------|----------|
| Coated Carbide | GSX | Structural Steel | Carbon Steel | Alloy Steel | Pre-hardened Steel | Tempered D2 Steel | Hardened Steel | 45-55 HRC | 55-60 HRC | 60-65 HRC | Stainless Steel | Ti Alloy / Heat Resistant Alloy | Cast Iron | Al Alloy | Cu Alloy | Graphite |
| Grades | Coating | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |



Grade: ACF20

Endmills

(mm)

| Cat. No. | Stock | øD | l ₁ | l ₂ | L | ød |
|---------------|-------|------|----------------|----------------|-----|----|
| GSX 40100S-2D | ● | 1,0 | 2,5 | 3,5 | 40 | 4 |
| GSX 40150S-2D | ● | 1,5 | 3,8 | 4,8 | 40 | 4 |
| GSX 40200S-2D | ● | 2,0 | 5,0 | 6,0 | 40 | 4 |
| GSX 40250S-2D | ● | 2,5 | 6,3 | 7,3 | 40 | 4 |
| GSX 40300S-2D | ● | 3,0 | 7,5 | 9,0 | 45 | 6 |
| GSX 40350S-2D | ● | 3,5 | 8,8 | 10,0 | 45 | 6 |
| GSX 40400S-2D | ● | 4,0 | 11,0 | 14,0 | 45 | 6 |
| GSX 40450S-2D | ● | 4,5 | 11,3 | 12,8 | 50 | 6 |
| GSX 40500S-2D | ● | 5,0 | 13,0 | 19,6 | 50 | 6 |
| GSX 40550S-2D | ● | 5,5 | 13,0 | 19,6 | 50 | 6 |
| GSX 40600S-2D | ● | 6,0 | 13,0 | - | 50 | 6 |
| GSX 40700S-2D | ● | 7,0 | 16,0 | 21,1 | 60 | 8 |
| GSX 40800S-2D | ● | 8,0 | 19,0 | - | 60 | 8 |
| GSX 40900S-2D | ● | 9,0 | 19,0 | 24,1 | 70 | 10 |
| GSX 41000S-2D | ● | 10,0 | 22,0 | - | 70 | 10 |
| GSX 41200S-2D | ● | 12,0 | 26,0 | - | 75 | 12 |
| GSX 41600S-2D | ● | 16,0 | 32,0 | - | 90 | 16 |
| GSX 42000S-2D | ● | 20,0 | 40,0 | - | 100 | 20 |

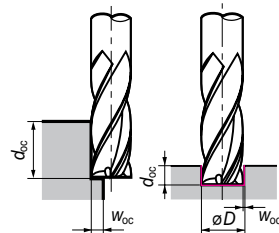
Endmill Identification (GSX MILL Series)

GSX 4 1000 S - 2D

- ① Series Code
 - ② No. of Teeth
 - ③ Diameter
 - ④ Cutting Edge
 - ⑤ Cutting Edge Length
- (S: Sharp Edge
C: Gash Land Drilling)

Recommended cutting conditions

- For stable machining performance use rigid, high-precision machines and holders.
- Use air blowing when dry machining.
- Use wet machining for stainless steel, heat resistant alloy, and titanium alloy applications.
- If chattering is a problem, reduce the spindle speed and feed rate indicated in the table below by the same ratio, or reduce the depth of cut.
- This series is not recommended for grooving.
- If the machine cannot achieve the recommended spindle speed, please use the max. spindle speed available.



Shoulder Milling

| Work Material Cond. | Structural Steel | | Carbon Steel (150 to 250HB) | | Cast Iron | | Alloy Steel (25 to 35HRC) | | Tempered Steel, Hardened Steel (35 to 45HRC) | | Hardened Steel (45 to 55HRC) | | Stainless Steel | | Heat Resistant Steel, Titanium Alloy | |
|------------------------|---------------------|--------------------|-----------------------------|--------------------|---------------------|--------------------|---------------------------|--------------------|--|--------------------|------------------------------|--------------------|---------------------|--------------------|--------------------------------------|--------------------|
| | Spindle Speed (rpm) | Feed Rate (mm/min) | Spindle Speed (rpm) | Feed Rate (mm/min) | Spindle Speed (rpm) | Feed Rate (mm/min) | Spindle Speed (rpm) | Feed Rate (mm/min) | Spindle Speed (rpm) | Feed Rate (mm/min) | Spindle Speed (rpm) | Feed Rate (mm/min) | Spindle Speed (rpm) | Feed Rate (mm/min) | Spindle Speed (rpm) | Feed Rate (mm/min) |
| øD (mm) | | | | | | | | | | | | | | | | |
| 1,0 | 22.000 | 360 | 22.000 | 360 | 22.000 | 360 | 19.000 | 220 | 13.000 | 140 | 9.500 | 90 | 11.300 | 90 | 9.500 | 65 |
| 2,0 | 11.500 | 440 | 11.500 | 440 | 11.500 | 440 | 11.000 | 290 | 7.500 | 180 | 5.400 | 110 | 6.500 | 120 | 5.400 | 85 |
| 4,0 | 6.000 | 560 | 6.000 | 560 | 6.000 | 560 | 6.000 | 370 | 4.000 | 230 | 2.900 | 150 | 3.400 | 160 | 2.900 | 100 |
| 6,0 | 4.200 | 600 | 4.200 | 600 | 4.200 | 600 | 4.000 | 400 | 2.700 | 240 | 2.000 | 160 | 2.400 | 170 | 2.000 | 120 |
| 8,0 | 3.000 | 600 | 3.000 | 600 | 3.000 | 600 | 2.800 | 400 | 2.000 | 240 | 1.450 | 160 | 1.800 | 170 | 1.450 | 120 |
| 10,0 | 2.500 | 600 | 2.500 | 600 | 2.500 | 600 | 2.350 | 400 | 1.600 | 240 | 1.200 | 160 | 1.450 | 170 | 1.200 | 120 |
| 12,0 | 2.100 | 600 | 2.100 | 600 | 2.100 | 600 | 2.000 | 400 | 1.350 | 240 | 1.000 | 160 | 1.200 | 170 | 1.000 | 120 |
| 16,0 | 1.500 | 500 | 1.500 | 500 | 1.500 | 500 | 1.450 | 320 | 1.000 | 210 | 750 | 130 | 900 | 140 | 750 | 90 |
| 20,0 | 1.200 | 460 | 1.200 | 460 | 1.200 | 460 | 1.150 | 290 | 800 | 200 | 600 | 110 | 700 | 120 | 600 | 75 |
| Shoulder cutting | d _{cc} | | W _{cc} | | 2,0 D | | | | | | | | | | | |
| | | | | | 0,03 D | | | | | | | | | | | |
| | | | | | 0,01 D | | | | | | | | | | | |

Groove Finishing

| Work Material Cond. | Structural Steel | | Carbon Steel (150 to 250HB) | | Cast Iron | | Alloy Steel (25 to 35HRC) | | Tempered Steel, Hardened Steel (35 to 45HRC) | | Hardened Steel (45 to 55HRC) | | Stainless Steel | | Heat Resistant Steel, Titanium Alloy | |
|------------------------|---------------------|--------------------|-----------------------------|--------------------|---------------------|--------------------|---------------------------|--------------------|--|--------------------|------------------------------|--------------------|---------------------|--------------------|--------------------------------------|--------------------|
| | Spindle Speed (rpm) | Feed Rate (mm/min) | Spindle Speed (rpm) | Feed Rate (mm/min) | Spindle Speed (rpm) | Feed Rate (mm/min) | Spindle Speed (rpm) | Feed Rate (mm/min) | Spindle Speed (rpm) | Feed Rate (mm/min) | Spindle Speed (rpm) | Feed Rate (mm/min) | Spindle Speed (rpm) | Feed Rate (mm/min) | Spindle Speed (rpm) | Feed Rate (mm/min) |
| øD (mm) | | | | | | | | | | | | | | | | |
| 1,0 | 22.000 | 360 | 22.000 | 360 | 22.000 | 360 | 19.000 | 220 | 13.000 | 140 | 9.500 | 90 | 11.300 | 90 | 9.500 | 65 |
| 2,0 | 11.500 | 440 | 11.500 | 440 | 11.500 | 440 | 11.000 | 290 | 7.500 | 180 | 5.400 | 110 | 6.500 | 120 | 5.400 | 85 |
| 4,0 | 6.000 | 560 | 6.000 | 560 | 6.000 | 560 | 6.000 | 370 | 4.000 | 230 | 2.900 | 150 | 3.400 | 160 | 2.900 | 100 |
| 6,0 | 4.200 | 600 | 4.200 | 600 | 4.200 | 600 | 4.000 | 400 | 2.700 | 240 | 2.000 | 160 | 2.400 | 170 | 2.000 | 120 |
| 8,0 | 3.000 | 600 | 3.000 | 600 | 3.000 | 600 | 2.800 | 400 | 2.000 | 240 | 1.450 | 160 | 1.800 | 170 | 1.450 | 120 |
| 10,0 | 2.500 | 600 | 2.500 | 600 | 2.500 | 600 | 2.350 | 400 | 1.600 | 240 | 1.200 | 160 | 1.450 | 170 | 1.200 | 120 |
| 12,0 | 2.100 | 600 | 2.100 | 600 | 2.100 | 600 | 2.000 | 400 | 1.350 | 240 | 1.000 | 160 | 1.200 | 170 | 1.000 | 120 |
| 16,0 | 1.500 | 500 | 1.500 | 500 | 1.500 | 500 | 1.450 | 320 | 1.000 | 210 | 750 | 130 | 900 | 140 | 750 | 90 |
| 20,0 | 1.200 | 460 | 1.200 | 460 | 1.200 | 460 | 1.150 | 290 | 800 | 200 | 600 | 110 | 700 | 120 | 600 | 75 |
| Groove finishing | d _{cc} | | W _{cc} | | 1,5 D | | | | | | | | | | | |
| | | | | | ~ 0,02 D | | | | | | | | | | | |

● = Euro stock