

TYPHOON GA-HGA

EN

High performance carbide
drills 3xD, 5xD, 8xD



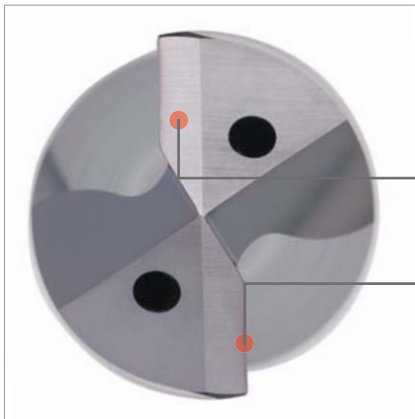
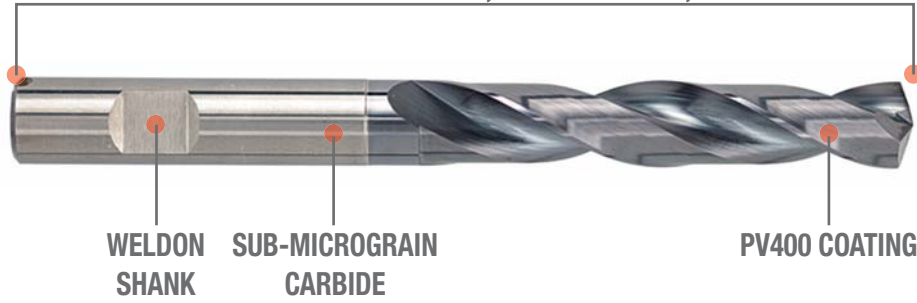
SORMA | ST
SOLID TOOLS - OSAWA

GA-HGA

High performance - general application

Features of GA-HGA drills

GENERAL DIMENSIONS: 3xD DIN 6537K, 5xD DIN 6537L, 8xD OSAWA NORM



GA-HGA

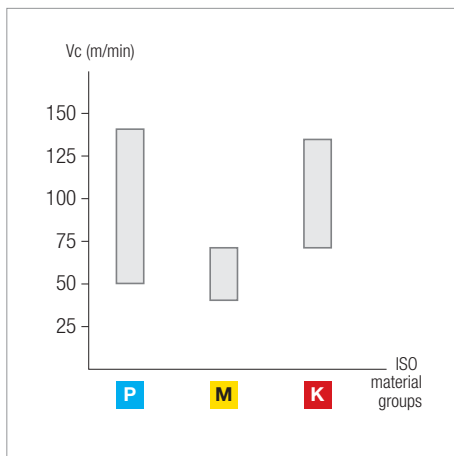
High performance - general application

Features and Benefits

- Self-centering geometry for accurate holes
- Made of sub-microngrain carbide and new PV400 coating for better wear resistance (lower cost per hole).
- Straight cutting edge design and unique edge treatment technology allow higher reliability.
- Wide flutes design for smooth chip ejection
- Optimized core diameter guarantees the straightness of the hole

Application range - ISO 513

P M K

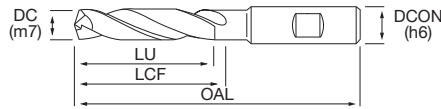


Use case

| | |
|------------------------|-----------------------------|
| Tool Type | 373HGA |
| Workpiece | W.-Nr 1.0401 C15 |
| Parameters | Vc 85 m/min, fn 0,18 mm/rev |
| Diameter | 6,6 mm |
| Coolant | internal |
| Hole depth | 12 mm |
| Machining time: | |
| OSAWA | +60% |
| Competitor A | |
| Competitor B | |
| Competitor C | |

373GA

- General application
- Weldon shank
- Small 45° chamfer for edge protection



| | | | | | |
|----------|----------|----------|----------|----------|----------|
| P | M | K | N | S | H |
| ★ | ☆ | ★ | | | |

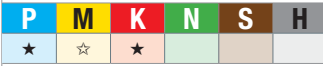
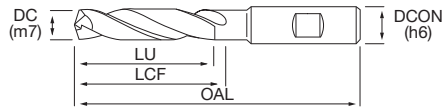
| | | | | | | |
|------------|------------------|-----------|-----------------|-----------------|----------------|---------------|
| 3xD | DIN 6537K | GA | MG PV400 | SIG 140° | FHA 30° | CH-45° |
|------------|------------------|-----------|-----------------|-----------------|----------------|---------------|

| DC | DC tol. | DCON | TCDCON | LU | LCF | OAL | EDP no. | Stock |
|-----|---------------|------|--------|----|-----|-----|------------|-------|
| 3 | +0.012/+0.002 | 6 | h6 | 14 | 20 | 62 | 373GA0300N | ● |
| 3.1 | +0.016/+0.004 | 6 | h6 | 14 | 20 | 62 | 373GA0310N | ● |
| 3.2 | +0.016/+0.004 | 6 | h6 | 14 | 20 | 62 | 373GA0320N | ● |
| 3.3 | +0.016/+0.004 | 6 | h6 | 14 | 20 | 62 | 373GA0330N | ● |
| 3.4 | +0.016/+0.004 | 6 | h6 | 14 | 20 | 62 | 373GA0340N | ● |
| 3.5 | +0.016/+0.004 | 6 | h6 | 14 | 20 | 62 | 373GA0350N | ● |
| 3.6 | +0.016/+0.004 | 6 | h6 | 14 | 20 | 62 | 373GA0360N | ● |
| 3.7 | +0.016/+0.004 | 6 | h6 | 14 | 20 | 62 | 373GA0370N | ● |
| 3.8 | +0.016/+0.004 | 6 | h6 | 17 | 24 | 66 | 373GA0380N | ● |
| 3.9 | +0.016/+0.004 | 6 | h6 | 17 | 24 | 66 | 373GA0390N | ● |
| 4 | +0.016/+0.004 | 6 | h6 | 17 | 24 | 66 | 373GA0400N | ● |
| 4.1 | +0.016/+0.004 | 6 | h6 | 17 | 24 | 66 | 373GA0410N | ● |
| 4.2 | +0.016/+0.004 | 6 | h6 | 17 | 24 | 66 | 373GA0420N | ● |
| 4.3 | +0.016/+0.004 | 6 | h6 | 17 | 24 | 66 | 373GA0430N | ● |
| 4.4 | +0.016/+0.004 | 6 | h6 | 17 | 24 | 66 | 373GA0440N | ● |
| 4.5 | +0.016/+0.004 | 6 | h6 | 17 | 24 | 66 | 373GA0450N | ● |
| 4.6 | +0.016/+0.004 | 6 | h6 | 17 | 24 | 66 | 373GA0460N | ● |
| 4.7 | +0.016/+0.004 | 6 | h6 | 17 | 24 | 66 | 373GA0470N | ● |
| 4.8 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373GA0480N | ● |
| 4.9 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373GA0490N | ● |
| 5 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373GA0500N | ● |
| 5.1 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373GA0510N | ● |
| 5.2 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373GA0520N | ● |
| 5.3 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373GA0530N | ● |
| 5.4 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373GA0540N | ● |
| 5.5 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373GA0550N | ● |
| 5.6 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373GA0560N | ● |
| 5.7 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373GA0570N | ● |
| 5.8 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373GA0580N | ● |
| 5.9 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373GA0590N | ● |
| 6 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373GA0600N | ● |
| 6.1 | +0.021/+0.006 | 8 | h6 | 24 | 34 | 79 | 373GA0610N | ● |
| 6.2 | +0.021/+0.006 | 8 | h6 | 24 | 34 | 79 | 373GA0620N | ● |
| 6.3 | +0.021/+0.006 | 8 | h6 | 24 | 34 | 79 | 373GA0630N | ● |
| 6.4 | +0.021/+0.006 | 8 | h6 | 24 | 34 | 79 | 373GA0640N | ● |
| 6.5 | +0.021/+0.006 | 8 | h6 | 24 | 34 | 79 | 373GA0650N | ● |
| 6.6 | +0.021/+0.006 | 8 | h6 | 24 | 34 | 79 | 373GA0660N | ● |
| 6.7 | +0.021/+0.006 | 8 | h6 | 24 | 34 | 79 | 373GA0670N | ● |
| 6.8 | +0.021/+0.006 | 8 | h6 | 24 | 34 | 79 | 373GA0680N | ● |
| 6.9 | +0.021/+0.006 | 8 | h6 | 24 | 34 | 79 | 373GA0690N | ● |
| 7 | +0.021/+0.006 | 8 | h6 | 24 | 34 | 79 | 373GA0700N | ● |
| 7.1 | +0.021/+0.006 | 8 | h6 | 29 | 41 | 79 | 373GA0710N | ● |
| 7.2 | +0.021/+0.006 | 8 | h6 | 29 | 41 | 79 | 373GA0720N | ● |
| 7.3 | +0.021/+0.006 | 8 | h6 | 29 | 41 | 79 | 373GA0730N | ● |
| 7.4 | +0.021/+0.006 | 8 | h6 | 29 | 41 | 79 | 373GA0740N | ● |

★ 1st choice, ☆ suitable, ● stock standard, ◎ non-stock standard (no MOQ), ○ non-stock standard (MOQ), ▲ upcoming product, ▽ stock exhaustion

373GA

- General application
- Weldon shank
- Small 45° chamfer for edge protection

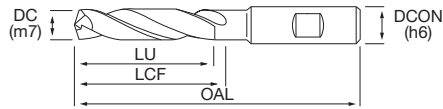


| DC | DC tol. | DCON | TCDCON | LU | LCF | OAL | EDP no. | Stock |
|------|---------------|------|--------|----|-----|-----|------------|-------|
| 7.5 | +0.021/+0.006 | 8 | h6 | 29 | 41 | 79 | 373GA0750N | ● |
| 7.6 | +0.021/+0.006 | 8 | h6 | 29 | 41 | 79 | 373GA0760N | ● |
| 7.7 | +0.021/+0.006 | 8 | h6 | 29 | 41 | 79 | 373GA0770N | ● |
| 7.8 | +0.021/+0.006 | 8 | h6 | 29 | 41 | 79 | 373GA0780N | ● |
| 7.9 | +0.021/+0.006 | 8 | h6 | 29 | 41 | 79 | 373GA0790N | ● |
| 8 | +0.021/+0.006 | 8 | h6 | 29 | 41 | 79 | 373GA0800N | ● |
| 8.1 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373GA0810N | ● |
| 8.2 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373GA0820N | ● |
| 8.3 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373GA0830N | ● |
| 8.4 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373GA0840N | ● |
| 8.5 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373GA0850N | ● |
| 8.6 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373GA0860N | ● |
| 8.7 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373GA0870N | ● |
| 8.8 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373GA0880N | ● |
| 8.9 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373GA0890N | ● |
| 9 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373GA0900N | ● |
| 9.1 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373GA0910N | ● |
| 9.2 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373GA0920N | ● |
| 9.3 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373GA0930N | ● |
| 9.4 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373GA0940N | ● |
| 9.5 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373GA0950N | ● |
| 9.6 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373GA0960N | ● |
| 9.7 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373GA0970N | ● |
| 9.8 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373GA0980N | ● |
| 9.9 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373GA0990N | ● |
| 10 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373GA1000N | ● |
| 10.1 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373GA1010N | ● |
| 10.2 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373GA1020N | ● |
| 10.3 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373GA1030N | ● |
| 10.4 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373GA1040N | ● |
| 10.5 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373GA1050N | ● |
| 10.6 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373GA1060N | ● |
| 10.7 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373GA1070N | ● |
| 10.8 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373GA1080N | ● |
| 10.9 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373GA1090N | ● |
| 11 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373GA1100N | ● |
| 11.1 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373GA1110N | ● |
| 11.2 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373GA1120N | ● |
| 11.3 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373GA1130N | ● |
| 11.4 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373GA1140N | ● |
| 11.5 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373GA1150N | ● |
| 11.6 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373GA1160N | ● |
| 11.7 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373GA1170N | ● |
| 11.8 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373GA1180N | ● |
| 11.9 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373GA1190N | ● |

★ 1st choice, ☆ suitable, ● stock standard, ◎ non-stock standard (no MOQ), ○ non-stock standard (MOQ), ▲ upcoming product, ▽ stock exhaustion

373GA

- General application
- Weldon shank
- Small 45° chamfer for edge protection




| | | | | | |
|---|---|---|---|---|---|
| P | M | K | N | S | H |
| ★ | ☆ | ★ | ● | ● | ● |

| | | | | | | |
|------------|------------------|--|-----------------|--|--|--|
| 3xD | DIN 6537K | | MG PV400 | | | |
|------------|------------------|--|-----------------|--|--|--|


| DC | DC tol. | DCON | TCDCON | LU | LCF | OAL | EDP no. | Stock |
|------|---------------|------|--------|----|-----|-----|-------------------|-------|
| 12 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373GA1200N | ● |
| 12.1 | +0.025/+0.007 | 14 | h6 | 40 | 55 | 102 | 373GA1210N | ◎ |
| 12.2 | +0.025/+0.007 | 14 | h6 | 43 | 60 | 107 | 373GA1220N | ● |
| 12.3 | +0.025/+0.007 | 14 | h6 | 43 | 60 | 107 | 373GA1230N | ◎ |
| 12.4 | +0.025/+0.007 | 14 | h6 | 43 | 60 | 107 | 373GA1240N | ◎ |
| 12.5 | +0.025/+0.007 | 14 | h6 | 43 | 60 | 107 | 373GA1250N | ● |
| 12.6 | +0.025/+0.007 | 14 | h6 | 43 | 60 | 107 | 373GA1260N | ◎ |
| 12.7 | +0.025/+0.007 | 14 | h6 | 43 | 60 | 107 | 373GA1270N | ● |
| 12.8 | +0.025/+0.007 | 14 | h6 | 43 | 60 | 107 | 373GA1280N | ● |
| 12.9 | +0.025/+0.007 | 14 | h6 | 43 | 60 | 107 | 373GA1290N | ◎ |
| 13 | +0.025/+0.007 | 14 | h6 | 43 | 60 | 107 | 373GA1300N | ● |
| 13.5 | +0.025/+0.007 | 14 | h6 | 43 | 60 | 107 | 373GA1350N | ● |
| 13.7 | +0.025/+0.007 | 14 | h6 | 43 | 60 | 107 | 373GA1370N | ● |
| 13.8 | +0.025/+0.007 | 14 | h6 | 43 | 60 | 107 | 373GA1380N | ● |
| 14 | +0.025/+0.007 | 14 | h6 | 43 | 60 | 107 | 373GA1400N | ● |
| 14.2 | +0.025/+0.007 | 16 | h6 | 45 | 65 | 115 | 373GA1420N | ● |
| 14.5 | +0.025/+0.007 | 16 | h6 | 45 | 65 | 115 | 373GA1450N | ● |
| 14.7 | +0.025/+0.007 | 16 | h6 | 45 | 65 | 115 | 373GA1470N | ● |
| 14.8 | +0.025/+0.007 | 16 | h6 | 45 | 65 | 115 | 373GA1480N | ● |
| 15 | +0.025/+0.007 | 16 | h6 | 45 | 65 | 115 | 373GA1500N | ● |
| 15.2 | +0.025/+0.007 | 16 | h6 | 49 | 65 | 115 | 373GA1520N | ● |
| 15.3 | +0.025/+0.007 | 16 | h6 | 49 | 65 | 115 | 373GA1530N | ● |
| 15.5 | +0.025/+0.007 | 16 | h6 | 49 | 65 | 115 | 373GA1550N | ● |
| 15.7 | +0.025/+0.007 | 16 | h6 | 49 | 65 | 115 | 373GA1570N | ● |
| 15.8 | +0.025/+0.007 | 16 | h6 | 49 | 65 | 115 | 373GA1580N | ● |
| 16 | +0.025/+0.007 | 16 | h6 | 49 | 65 | 115 | 373GA1600N | ● |
| 16.5 | +0.025/+0.007 | 18 | h6 | 52 | 73 | 123 | 373GA1650N | ● |
| 16.8 | +0.025/+0.007 | 18 | h6 | 52 | 73 | 123 | 373GA1680N | ◎ |
| 17 | +0.025/+0.007 | 18 | h6 | 52 | 73 | 123 | 373GA1700N | ● |
| 17.5 | +0.025/+0.007 | 18 | h6 | 52 | 73 | 123 | 373GA1750N | ● |
| 17.7 | +0.025/+0.007 | 18 | h6 | 52 | 73 | 123 | 373GA1770N | ◎ |
| 17.8 | +0.025/+0.007 | 18 | h6 | 52 | 73 | 123 | 373GA1780N | ◎ |
| 18 | +0.025/+0.007 | 18 | h6 | 52 | 73 | 123 | 373GA1800N | ● |
| 18.5 | +0.029/+0.008 | 20 | h6 | 55 | 79 | 131 | 373GA1850N | ● |
| 18.8 | +0.029/+0.008 | 20 | h6 | 55 | 79 | 131 | 373GA1880N | ◎ |
| 19 | +0.029/+0.008 | 20 | h6 | 55 | 79 | 131 | 373GA1900N | ● |
| 19.5 | +0.029/+0.008 | 20 | h6 | 55 | 79 | 131 | 373GA1950N | ● |
| 19.8 | +0.029/+0.008 | 20 | h6 | 55 | 79 | 131 | 373GA1980N | ◎ |
| 20 | +0.029/+0.008 | 20 | h6 | 55 | 79 | 131 | 373GA2000N | ● |

★ 1st choice, ☆ suitable, ● stock standard, ◎ non-stock standard (no MOQ), ○ non-stock standard (MOQ), ▲ upcoming product, ▽ stock exhaustion


373GA

|  | Material Group ISO 513 | P1 | P2 | P3 P4 | P5 P6 | P5 | P7 P8 |
|---|------------------------|------------------------|---------------------------|----------------------------|----------------------------|------------------------|----------------------------|
| | Hardness/Rm | <500 N/mm ² | 500÷700 N/mm ² | 600÷1000 N/mm ² | 900÷1480 N/mm ² | <750 N/mm ² | 850÷1200 N/mm ² |
| | Vc (m/min) | 80÷120 | 70÷110 | 60÷100 | 55÷80 | 40÷60 | 35÷55 |
| | DC (mm) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) |
| | 3 | 0.143 | 0.143 | 0.124 | 0.105 | 0.076 | 0.057 |
| | 4 | 0.143 | 0.143 | 0.124 | 0.105 | 0.076 | 0.057 |
| | 6 | 0.181 | 0.181 | 0.162 | 0.133 | 0.114 | 0.095 |
| | 8 | 0.209 | 0.209 | 0.190 | 0.152 | 0.133 | 0.124 |
| | 10 | 0.209 | 0.209 | 0.190 | 0.152 | 0.133 | 0.124 |
| | 12 | 0.266 | 0.266 | 0.219 | 0.181 | 0.171 | 0.171 |
| 14 | 0.304 | 0.304 | 0.238 | 0.209 | 0.190 | 0.190 | |
| 16 | 0.304 | 0.304 | 0.238 | 0.209 | 0.190 | 0.190 | |
| 18 | 0.361 | 0.361 | 0.285 | 0.228 | 0.228 | 0.228 | |
| 20 | 0.361 | 0.361 | 0.285 | 0.228 | 0.228 | 0.228 | |

373GA

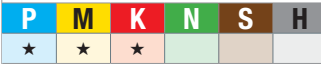
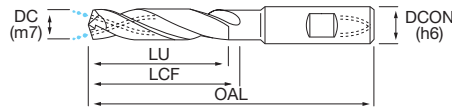
|  | Material Group ISO 513 | M1 | M2 | M3 | | | |
|---|------------------------|------------------------|---------------------------|---------------------------|--|--|--|
| | Hardness/Rm | <750 N/mm ² | 550÷850 N/mm ² | 650÷950 N/mm ² | | | |
| | Vc (m/min) | 40÷60 | 35÷55 | 25÷45 | | | |
| | DC (mm) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | | | |
| | 3 | 0.072 | 0.054 | 0.054 | | | |
| | 4 | 0.090 | 0.072 | 0.072 | | | |
| | 6 | 0.108 | 0.072 | 0.072 | | | |
| | 8 | 0.117 | 0.090 | 0.090 | | | |
| | 10 | 0.135 | 0.099 | 0.099 | | | |
| | 12 | 0.153 | 0.117 | 0.117 | | | |
| 14 | 0.162 | 0.117 | 0.117 | | | | |
| 16 | 0.180 | 0.126 | 0.126 | | | | |
| 18 | 0.198 | 0.126 | 0.126 | | | | |
| 20 | 0.216 | 0.144 | 0.144 | | | | |

373GA

|  | Material Group ISO 513 | K1 | K2 | K3 | | | |
|---|------------------------|-------------|-------------|-------------|--|--|--|
| | Hardness/Rm | 150÷250 HB | 150÷350 HB | 250÷500 HB | | | |
| | Vc (m/min) | 90÷110 | 70÷90 | 60÷80 | | | |
| | DC (mm) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | | | |
| | 3 | 0.162 | 0.143 | 0.086 | | | |
| | 4 | 0.190 | 0.162 | 0.095 | | | |
| | 6 | 0.238 | 0.190 | 0.124 | | | |
| | 8 | 0.257 | 0.238 | 0.152 | | | |
| | 10 | 0.285 | 0.266 | 0.190 | | | |
| | 12 | 0.314 | 0.285 | 0.209 | | | |
| 14 | 0.342 | 0.314 | 0.228 | | | | |
| 16 | 0.380 | 0.333 | 0.247 | | | | |
| 18 | 0.399 | 0.361 | 0.266 | | | | |
| 20 | 0.428 | 0.380 | 0.266 | | | | |

373HGA

- General application
- Weldon shank
- Small 45° chamfer for edge protection

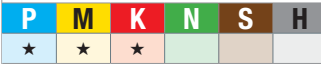
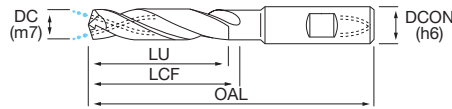


| DC | DC tol. | DCON | TCDCON | LU | LCF | OAL | EDP no. | Stock |
|-----|---------------|------|--------|----|-----|-----|-------------|-------|
| 3 | +0.012/+0.002 | 6 | h6 | 14 | 20 | 62 | 373HGA0300N | ● |
| 3.1 | +0.016/+0.004 | 6 | h6 | 14 | 20 | 62 | 373HGA0310N | ● |
| 3.2 | +0.016/+0.004 | 6 | h6 | 14 | 20 | 62 | 373HGA0320N | ● |
| 3.3 | +0.016/+0.004 | 6 | h6 | 14 | 20 | 62 | 373HGA0330N | ● |
| 3.4 | +0.016/+0.004 | 6 | h6 | 14 | 20 | 62 | 373HGA0340N | ● |
| 3.5 | +0.016/+0.004 | 6 | h6 | 14 | 20 | 62 | 373HGA0350N | ● |
| 3.6 | +0.016/+0.004 | 6 | h6 | 14 | 20 | 62 | 373HGA0360N | ● |
| 3.7 | +0.016/+0.004 | 6 | h6 | 14 | 20 | 62 | 373HGA0370N | ● |
| 3.8 | +0.016/+0.004 | 6 | h6 | 17 | 24 | 66 | 373HGA0380N | ● |
| 3.9 | +0.016/+0.004 | 6 | h6 | 17 | 24 | 66 | 373HGA0390N | ● |
| 4 | +0.016/+0.004 | 6 | h6 | 17 | 24 | 66 | 373HGA0400N | ● |
| 4.1 | +0.016/+0.004 | 6 | h6 | 17 | 24 | 66 | 373HGA0410N | ● |
| 4.2 | +0.016/+0.004 | 6 | h6 | 17 | 24 | 66 | 373HGA0420N | ● |
| 4.3 | +0.016/+0.004 | 6 | h6 | 17 | 24 | 66 | 373HGA0430N | ● |
| 4.4 | +0.016/+0.004 | 6 | h6 | 17 | 24 | 66 | 373HGA0440N | ● |
| 4.5 | +0.016/+0.004 | 6 | h6 | 17 | 24 | 66 | 373HGA0450N | ● |
| 4.6 | +0.016/+0.004 | 6 | h6 | 17 | 24 | 66 | 373HGA0460N | ● |
| 4.7 | +0.016/+0.004 | 6 | h6 | 17 | 24 | 66 | 373HGA0470N | ● |
| 4.8 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373HGA0480N | ● |
| 4.9 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373HGA0490N | ● |
| 5 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373HGA0500N | ● |
| 5.1 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373HGA0510N | ● |
| 5.2 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373HGA0520N | ● |
| 5.3 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373HGA0530N | ● |
| 5.4 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373HGA0540N | ● |
| 5.5 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373HGA0550N | ● |
| 5.6 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373HGA0560N | ● |
| 5.7 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373HGA0570N | ● |
| 5.8 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373HGA0580N | ● |
| 5.9 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373HGA0590N | ● |
| 6 | +0.016/+0.004 | 6 | h6 | 20 | 28 | 66 | 373HGA0600N | ● |
| 6.1 | +0.021/+0.006 | 8 | h6 | 24 | 34 | 79 | 373HGA0610N | ● |
| 6.2 | +0.021/+0.006 | 8 | h6 | 24 | 34 | 79 | 373HGA0620N | ● |
| 6.3 | +0.021/+0.006 | 8 | h6 | 24 | 34 | 79 | 373HGA0630N | ● |
| 6.4 | +0.021/+0.006 | 8 | h6 | 24 | 34 | 79 | 373HGA0640N | ● |
| 6.5 | +0.021/+0.006 | 8 | h6 | 24 | 34 | 79 | 373HGA0650N | ● |
| 6.6 | +0.021/+0.006 | 8 | h6 | 24 | 34 | 79 | 373HGA0660N | ● |
| 6.7 | +0.021/+0.006 | 8 | h6 | 24 | 34 | 79 | 373HGA0670N | ● |
| 6.8 | +0.021/+0.006 | 8 | h6 | 24 | 34 | 79 | 373HGA0680N | ● |
| 6.9 | +0.021/+0.006 | 8 | h6 | 24 | 34 | 79 | 373HGA0690N | ● |
| 7 | +0.021/+0.006 | 8 | h6 | 24 | 34 | 79 | 373HGA0700N | ● |
| 7.1 | +0.021/+0.006 | 8 | h6 | 29 | 41 | 79 | 373HGA0710N | ● |
| 7.2 | +0.021/+0.006 | 8 | h6 | 29 | 41 | 79 | 373HGA0720N | ● |
| 7.3 | +0.021/+0.006 | 8 | h6 | 29 | 41 | 79 | 373HGA0730N | ● |
| 7.4 | +0.021/+0.006 | 8 | h6 | 29 | 41 | 79 | 373HGA0740N | ● |

★ 1st choice, ☆ suitable, ● stock standard, ◎ non-stock standard (no MOQ), ○ non-stock standard (MOQ), ▲ upcoming product, ▽ stock exhaustion

373HGA

- General application
- Weldon shank
- Small 45° chamfer for edge protection

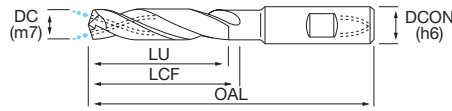


| DC | DC tol. | DCON | TCDCON | LU | LCF | OAL | EDP no. | Stock |
|------|---------------|------|--------|----|-----|-----|-------------|-------|
| 7.5 | +0.021/+0.006 | 8 | h6 | 29 | 41 | 79 | 373HGA0750N | ● |
| 7.6 | +0.021/+0.006 | 8 | h6 | 29 | 41 | 79 | 373HGA0760N | ● |
| 7.7 | +0.021/+0.006 | 8 | h6 | 29 | 41 | 79 | 373HGA0770N | ● |
| 7.8 | +0.021/+0.006 | 8 | h6 | 29 | 41 | 79 | 373HGA0780N | ● |
| 7.9 | +0.021/+0.006 | 8 | h6 | 29 | 41 | 79 | 373HGA0790N | ● |
| 8 | +0.021/+0.006 | 8 | h6 | 29 | 41 | 79 | 373HGA0800N | ● |
| 8.1 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373HGA0810N | ● |
| 8.2 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373HGA0820N | ● |
| 8.3 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373HGA0830N | ● |
| 8.4 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373HGA0840N | ● |
| 8.5 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373HGA0850N | ● |
| 8.6 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373HGA0860N | ● |
| 8.7 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373HGA0870N | ● |
| 8.8 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373HGA0880N | ● |
| 8.9 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373HGA0890N | ● |
| 9 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373HGA0900N | ● |
| 9.1 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373HGA0910N | ● |
| 9.2 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373HGA0920N | ● |
| 9.3 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373HGA0930N | ● |
| 9.4 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373HGA0940N | ● |
| 9.5 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373HGA0950N | ● |
| 9.6 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373HGA0960N | ● |
| 9.7 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373HGA0970N | ● |
| 9.8 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373HGA0980N | ● |
| 9.9 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373HGA0990N | ● |
| 10 | +0.021/+0.006 | 10 | h6 | 35 | 47 | 89 | 373HGA1000N | ● |
| 10.1 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373HGA1010N | ● |
| 10.2 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373HGA1020N | ● |
| 10.3 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373HGA1030N | ● |
| 10.4 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373HGA1040N | ● |
| 10.5 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373HGA1050N | ● |
| 10.6 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373HGA1060N | ● |
| 10.7 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373HGA1070N | ● |
| 10.8 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373HGA1080N | ● |
| 10.9 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373HGA1090N | ● |
| 11 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373HGA1100N | ● |
| 11.1 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373HGA1110N | ● |
| 11.2 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373HGA1120N | ● |
| 11.3 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373HGA1130N | ● |
| 11.4 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373HGA1140N | ● |
| 11.5 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373HGA1150N | ● |
| 11.6 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373HGA1160N | ● |
| 11.7 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373HGA1170N | ● |
| 11.8 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373HGA1180N | ● |
| 11.9 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373HGA1190N | ● |

★ 1st choice, ☆ suitable, ● stock standard, ◎ non-stock standard (no MOQ), ○ non-stock standard (MOQ), ▲ upcoming product, ▽ stock exhaustion

373HGA

- General application
- Weldon shank
- Small 45° chamfer for edge protection




| | | | | | |
|----------|----------|----------|----------|----------|----------|
| P | M | K | N | S | H |
| ★ | ★ | ★ | ★ | ★ | ★ |

| | | | | | | | |
|------------|-------------------------|------------------|------------|-----------------|-----------------|----------------|---------------|
| 3xD | INTERNAL COOLANT | DIN 6537K | HGA | MG PV400 | SIG 140° | FHA 30° | CH-45° |
|------------|-------------------------|------------------|------------|-----------------|-----------------|----------------|---------------|


| DC | DC tol. | DCON | TCDCON | LU | LCF | OAL | EDP no. | Stock |
|------|---------------|------|--------|----|-----|-----|--------------------|-------|
| 12 | +0.025/+0.007 | 12 | h6 | 40 | 55 | 102 | 373HGA1200N | ● |
| 12.1 | +0.025/+0.007 | 14 | h6 | 43 | 60 | 107 | 373HGA1210N | ● |
| 12.2 | +0.025/+0.007 | 14 | h6 | 43 | 60 | 107 | 373HGA1220N | ● |
| 12.5 | +0.025/+0.007 | 14 | h6 | 43 | 60 | 107 | 373HGA1250N | ● |
| 12.7 | +0.025/+0.007 | 14 | h6 | 43 | 60 | 107 | 373HGA1270N | ● |
| 12.8 | +0.025/+0.007 | 14 | h6 | 43 | 60 | 107 | 373HGA1280N | ● |
| 13 | +0.025/+0.007 | 14 | h6 | 43 | 60 | 107 | 373HGA1300N | ● |
| 13.5 | +0.025/+0.007 | 14 | h6 | 43 | 60 | 107 | 373HGA1350N | ● |
| 13.7 | +0.025/+0.007 | 14 | h6 | 43 | 60 | 107 | 373HGA1370N | ◎ |
| 13.8 | +0.025/+0.007 | 14 | h6 | 43 | 60 | 107 | 373HGA1380N | ● |
| 14 | +0.025/+0.007 | 14 | h6 | 43 | 60 | 107 | 373HGA1400N | ● |
| 14.2 | +0.025/+0.007 | 16 | h6 | 45 | 65 | 115 | 373HGA1420N | ● |
| 14.5 | +0.025/+0.007 | 16 | h6 | 45 | 65 | 115 | 373HGA1450N | ● |
| 14.7 | +0.025/+0.007 | 16 | h6 | 45 | 65 | 115 | 373HGA1470N | ◎ |
| 14.8 | +0.025/+0.007 | 16 | h6 | 45 | 65 | 115 | 373HGA1480N | ● |
| 15 | +0.025/+0.007 | 16 | h6 | 49 | 65 | 115 | 373HGA1500N | ● |
| 15.2 | +0.025/+0.007 | 16 | h6 | 49 | 65 | 115 | 373HGA1520N | ● |
| 15.3 | +0.025/+0.007 | 16 | h6 | 49 | 65 | 115 | 373HGA1530N | ● |
| 15.5 | +0.025/+0.007 | 16 | h6 | 49 | 65 | 115 | 373HGA1550N | ● |
| 15.7 | +0.025/+0.007 | 16 | h6 | 49 | 65 | 115 | 373HGA1570N | ◎ |
| 15.8 | +0.025/+0.007 | 16 | h6 | 49 | 65 | 115 | 373HGA1580N | ● |
| 16 | +0.025/+0.007 | 16 | h6 | 49 | 65 | 115 | 373HGA1600N | ● |
| 16.5 | +0.025/+0.007 | 18 | h6 | 52 | 73 | 123 | 373HGA1650N | ● |
| 16.8 | +0.025/+0.007 | 18 | h6 | 52 | 73 | 123 | 373HGA1680N | ◎ |
| 17 | +0.025/+0.007 | 18 | h6 | 52 | 73 | 123 | 373HGA1700N | ● |
| 17.5 | +0.025/+0.007 | 18 | h6 | 52 | 73 | 123 | 373HGA1750N | ● |
| 17.7 | +0.025/+0.007 | 18 | h6 | 52 | 73 | 123 | 373HGA1770N | ◎ |
| 17.8 | +0.025/+0.007 | 18 | h6 | 52 | 73 | 123 | 373HGA1780N | ◎ |
| 18 | +0.025/+0.007 | 18 | h6 | 52 | 73 | 123 | 373HGA1800N | ● |
| 18.5 | +0.029/+0.008 | 20 | h6 | 55 | 79 | 131 | 373HGA1850N | ● |
| 18.8 | +0.029/+0.008 | 20 | h6 | 55 | 79 | 131 | 373HGA1880N | ◎ |
| 19 | +0.029/+0.008 | 20 | h6 | 55 | 79 | 131 | 373HGA1900N | ● |
| 19.5 | +0.029/+0.008 | 20 | h6 | 55 | 79 | 131 | 373HGA1950N | ● |
| 19.8 | +0.029/+0.008 | 20 | h6 | 55 | 79 | 131 | 373HGA1980N | ◎ |
| 20 | +0.029/+0.008 | 20 | h6 | 55 | 79 | 131 | 373HGA2000N | ● |

★ 1st choice, ☆ suitable, ● stock standard, ◎ non-stock standard (no MOQ), ○ non-stock standard (MOQ), ▲ upcoming product, ▽ stock exhaustion


373HGA

|  | Material Group ISO 513 | P1 | P2 | P3 P4 | P5 P6 | P5 | P7 P8 |
|---|------------------------|------------------------|---------------------------|----------------------------|----------------------------|------------------------|----------------------------|
| | Hardness/Rm | <500 N/mm ² | 500÷700 N/mm ² | 600÷1000 N/mm ² | 900÷1480 N/mm ² | <700 N/mm ² | 850÷1200 N/mm ² |
| | Vc (m/min) | 100÷140 | 90÷130 | 80÷120 | 65÷95 | 55÷80 | 40÷65 |
| | DC (mm) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) |
| | 3 | 0.150 | 0.150 | 0.130 | 0.110 | 0.080 | 0.060 |
| | 4 | 0.150 | 0.150 | 0.130 | 0.110 | 0.080 | 0.060 |
| | 6 | 0.190 | 0.190 | 0.170 | 0.140 | 0.120 | 0.100 |
| | 8 | 0.220 | 0.220 | 0.200 | 0.160 | 0.140 | 0.130 |
| | 10 | 0.220 | 0.220 | 0.200 | 0.160 | 0.140 | 0.130 |
| | 12 | 0.280 | 0.280 | 0.230 | 0.190 | 0.180 | 0.180 |
| 14 | 0.320 | 0.320 | 0.250 | 0.220 | 0.200 | 0.200 | |
| 16 | 0.320 | 0.320 | 0.250 | 0.220 | 0.200 | 0.200 | |
| 18 | 0.380 | 0.380 | 0.300 | 0.240 | 0.240 | 0.240 | |
| 20 | 0.380 | 0.380 | 0.300 | 0.240 | 0.240 | 0.240 | |

373HGA

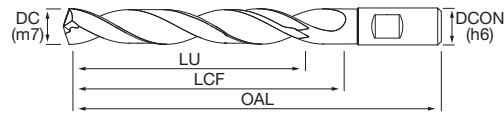
|  | Material Group ISO 513 | M1 | M2 | M3 | | | |
|---|------------------------|------------------------|---------------------------|---------------------------|--|--|--|
| | Hardness/Rm | <750 N/mm ² | 550÷850 N/mm ² | 650÷950 N/mm ² | | | |
| | Vc (m/min) | 50÷70 | 45÷65 | 35÷55 | | | |
| | DC (mm) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | | | |
| | 3 | 0.080 | 0.060 | 0.060 | | | |
| | 4 | 0.100 | 0.080 | 0.080 | | | |
| | 6 | 0.120 | 0.080 | 0.080 | | | |
| | 8 | 0.130 | 0.100 | 0.100 | | | |
| | 10 | 0.150 | 0.110 | 0.110 | | | |
| | 12 | 0.170 | 0.130 | 0.130 | | | |
| 14 | 0.180 | 0.130 | 0.130 | | | | |
| 16 | 0.200 | 0.140 | 0.140 | | | | |
| 18 | 0.220 | 0.140 | 0.140 | | | | |
| 20 | 0.240 | 0.160 | 0.160 | | | | |

373HGA

|  | Material Group ISO 513 | K1 | K2 | K3 | | | |
|---|------------------------|-------------|-------------|-------------|--|--|--|
| | Hardness/Rm | 150÷250 HB | 150÷350 HB | 250÷500 HB | | | |
| | Vc (m/min) | 110÷140 | 90÷120 | 70÷100 | | | |
| | DC (mm) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | | | |
| | 3 | 0.170 | 0.150 | 0.090 | | | |
| | 4 | 0.200 | 0.170 | 0.100 | | | |
| | 6 | 0.250 | 0.200 | 0.130 | | | |
| | 8 | 0.270 | 0.250 | 0.160 | | | |
| | 10 | 0.300 | 0.280 | 0.200 | | | |
| | 12 | 0.330 | 0.300 | 0.220 | | | |
| 14 | 0.360 | 0.330 | 0.240 | | | | |
| 16 | 0.400 | 0.350 | 0.260 | | | | |
| 18 | 0.420 | 0.380 | 0.280 | | | | |
| 20 | 0.450 | 0.400 | 0.280 | | | | |

375GA

- General application
- Weldon shank
- Small 45° chamfer for edge protection

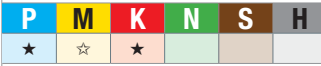
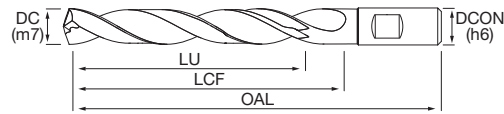


| DC | DC tol. | DCON | TCDCON | LU | LCF | OAL | EDP no. | Stock |
|-----|---------------|------|--------|----|-----|-----|------------|-------|
| 3 | +0.012/+0.002 | 6 | h6 | 23 | 28 | 66 | 375GA0300N | ● |
| 3.1 | +0.016/+0.004 | 6 | h6 | 23 | 28 | 66 | 375GA0310N | ● |
| 3.2 | +0.016/+0.004 | 6 | h6 | 23 | 28 | 66 | 375GA0320N | ● |
| 3.3 | +0.016/+0.004 | 6 | h6 | 23 | 28 | 66 | 375GA0330N | ● |
| 3.4 | +0.016/+0.004 | 6 | h6 | 23 | 28 | 66 | 375GA0340N | ● |
| 3.5 | +0.016/+0.004 | 6 | h6 | 23 | 28 | 66 | 375GA0350N | ● |
| 3.6 | +0.016/+0.004 | 6 | h6 | 23 | 28 | 66 | 375GA0360N | ● |
| 3.7 | +0.016/+0.004 | 6 | h6 | 23 | 28 | 66 | 375GA0370N | ● |
| 3.8 | +0.016/+0.004 | 6 | h6 | 29 | 36 | 74 | 375GA0380N | ● |
| 3.9 | +0.016/+0.004 | 6 | h6 | 29 | 36 | 74 | 375GA0390N | ● |
| 4 | +0.016/+0.004 | 6 | h6 | 29 | 36 | 74 | 375GA0400N | ● |
| 4.1 | +0.016/+0.004 | 6 | h6 | 29 | 36 | 74 | 375GA0410N | ● |
| 4.2 | +0.016/+0.004 | 6 | h6 | 29 | 36 | 74 | 375GA0420N | ● |
| 4.3 | +0.016/+0.004 | 6 | h6 | 29 | 36 | 74 | 375GA0430N | ● |
| 4.4 | +0.016/+0.004 | 6 | h6 | 29 | 36 | 74 | 375GA0440N | ● |
| 4.5 | +0.016/+0.004 | 6 | h6 | 29 | 36 | 74 | 375GA0450N | ● |
| 4.6 | +0.016/+0.004 | 6 | h6 | 29 | 36 | 74 | 375GA0460N | ● |
| 4.7 | +0.016/+0.004 | 6 | h6 | 29 | 36 | 74 | 375GA0470N | ● |
| 4.8 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375GA0480N | ● |
| 4.9 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375GA0490N | ● |
| 5 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375GA0500N | ● |
| 5.1 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375GA0510N | ● |
| 5.2 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375GA0520N | ● |
| 5.3 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375GA0530N | ● |
| 5.4 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375GA0540N | ● |
| 5.5 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375GA0550N | ● |
| 5.6 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375GA0560N | ● |
| 5.7 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375GA0570N | ● |
| 5.8 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375GA0580N | ● |
| 5.9 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375GA0590N | ● |
| 6 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375GA0600N | ● |
| 6.1 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375GA0610N | ● |
| 6.2 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375GA0620N | ● |
| 6.3 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375GA0630N | ● |
| 6.4 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375GA0640N | ● |
| 6.5 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375GA0650N | ● |
| 6.6 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375GA0660N | ● |
| 6.7 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375GA0670N | ● |
| 6.8 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375GA0680N | ● |
| 6.9 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375GA0690N | ● |
| 7 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375GA0700N | ● |
| 7.1 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375GA0710N | ● |
| 7.2 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375GA0720N | ● |
| 7.3 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375GA0730N | ● |
| 7.4 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375GA0740N | ● |

★ 1st choice, ☆ suitable, ● stock standard, ◎ non-stock standard (no MOQ), ○ non-stock standard (MOQ), ▲ upcoming product, ▽ stock exhaustion

375GA

- General application
- Weldon shank
- Small 45° chamfer for edge protection

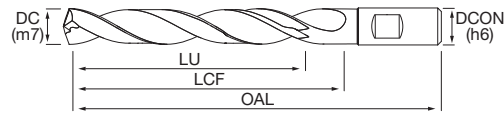


| DC | DC tol. | DCON | TCDCON | LU | LCF | OAL | EDP no. | Stock |
|------|---------------|------|--------|----|-----|-----|------------|-------|
| 7.5 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375GA0750N | ● |
| 7.6 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375GA0760N | ● |
| 7.7 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375GA0770N | ● |
| 7.8 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375GA0780N | ● |
| 7.9 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375GA0790N | ● |
| 8 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375GA0800N | ● |
| 8.1 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375GA0810N | ● |
| 8.2 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375GA0820N | ● |
| 8.3 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375GA0830N | ● |
| 8.4 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375GA0840N | ● |
| 8.5 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375GA0850N | ● |
| 8.6 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375GA0860N | ● |
| 8.7 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375GA0870N | ● |
| 8.8 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375GA0880N | ● |
| 8.9 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375GA0890N | ● |
| 9 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375GA0900N | ● |
| 9.1 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375GA0910N | ● |
| 9.2 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375GA0920N | ● |
| 9.3 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375GA0930N | ● |
| 9.4 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375GA0940N | ● |
| 9.5 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375GA0950N | ● |
| 9.6 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375GA0960N | ● |
| 9.7 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375GA0970N | ● |
| 9.8 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375GA0980N | ● |
| 9.9 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375GA0990N | ● |
| 10 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375GA1000N | ● |
| 10.1 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375GA1010N | ● |
| 10.2 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375GA1020N | ● |
| 10.3 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375GA1030N | ● |
| 10.4 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375GA1040N | ● |
| 10.5 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375GA1050N | ● |
| 10.6 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375GA1060N | ● |
| 10.7 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375GA1070N | ● |
| 10.8 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375GA1080N | ● |
| 10.9 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375GA1090N | ● |
| 11 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375GA1100N | ● |
| 11.1 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375GA1110N | ● |
| 11.2 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375GA1120N | ● |
| 11.3 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375GA1130N | ● |
| 11.4 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375GA1140N | ● |
| 11.5 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375GA1150N | ● |
| 11.6 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375GA1160N | ● |
| 11.7 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375GA1170N | ● |
| 11.8 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375GA1180N | ● |
| 11.9 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375GA1190N | ● |

★ 1st choice, ☆ suitable, ● stock standard, ○ non-stock standard (no MOQ), ○ non-stock standard (MOQ), ▲ upcoming product, ▽ stock exhaustion

375GA

- General application
- Weldon shank
- Small 45° chamfer for edge protection




| | | | | | |
|---|---|---|---|---|---|
| P | M | K | N | S | H |
| ★ | ☆ | ★ | | | |

| | | | | | | |
|------------|------------------|--|-----------------|--|--|--|
| 5xD | DIN 6537L | | MG PV400 | | | |
|------------|------------------|--|-----------------|--|--|--|


| DC | DC tol. | DCON | TCDCON | LU | LCF | OAL | EDP no. | Stock |
|------|---------------|------|--------|----|-----|-----|-------------------|-------|
| 12 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375GA1200N | ● |
| 12.5 | +0.025/+0.007 | 14 | h6 | 63 | 77 | 124 | 375GA1250N | ● |
| 13 | +0.025/+0.007 | 14 | h6 | 63 | 77 | 124 | 375GA1300N | ● |
| 13.5 | +0.025/+0.007 | 14 | h6 | 63 | 77 | 124 | 375GA1350N | ● |
| 14 | +0.025/+0.007 | 14 | h6 | 63 | 77 | 124 | 375GA1400N | ● |
| 14.5 | +0.025/+0.007 | 16 | h6 | 67 | 83 | 133 | 375GA1450N | ● |
| 15 | +0.025/+0.007 | 16 | h6 | 67 | 83 | 133 | 375GA1500N | ● |
| 15.5 | +0.025/+0.007 | 16 | h6 | 67 | 83 | 133 | 375GA1550N | ● |
| 16 | +0.025/+0.007 | 16 | h6 | 67 | 83 | 133 | 375GA1600N | ● |
| 16.5 | +0.025/+0.007 | 18 | h6 | 75 | 93 | 143 | 375GA1650N | ● |
| 17 | +0.025/+0.007 | 18 | h6 | 75 | 93 | 143 | 375GA1700N | ● |
| 17.5 | +0.025/+0.007 | 18 | h6 | 75 | 93 | 143 | 375GA1750N | ● |
| 18 | +0.025/+0.007 | 18 | h6 | 75 | 93 | 143 | 375GA1800N | ● |
| 18.5 | +0.029/+0.008 | 20 | h6 | 81 | 101 | 153 | 375GA1850N | ● |
| 19 | +0.029/+0.008 | 20 | h6 | 81 | 101 | 153 | 375GA1900N | ● |
| 19.5 | +0.029/+0.008 | 20 | h6 | 81 | 101 | 153 | 375GA1950N | ● |
| 20 | +0.029/+0.008 | 20 | h6 | 81 | 101 | 153 | 375GA2000N | ● |

★ 1st choice, ☆ suitable, ● stock standard, ◎ non-stock standard (no MOQ), ○ non-stock standard (MOQ), ▲ upcoming product, ▽ stock exhaustion


375GA

|  | Material Group ISO 513 | P1 | P2 | P3 P4 | P5 P6 | P5 | P7 P8 |
|---|------------------------|------------------------|---------------------------|----------------------------|----------------------------|------------------------|----------------------------|
| | Hardness/Rm | <500 N/mm ² | 500÷700 N/mm ² | 600÷1000 N/mm ² | 900÷1480 N/mm ² | <750 N/mm ² | 850÷1200 N/mm ² |
| | Vc (m/min) | 80÷120 | 70÷110 | 60÷100 | 55÷80 | 40÷60 | 35÷55 |
| | DC (mm) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) |
| | 3 | 0.143 | 0.143 | 0.124 | 0.105 | 0.076 | 0.057 |
| | 4 | 0.143 | 0.143 | 0.124 | 0.105 | 0.076 | 0.057 |
| | 6 | 0.181 | 0.181 | 0.162 | 0.133 | 0.114 | 0.095 |
| | 8 | 0.209 | 0.209 | 0.190 | 0.152 | 0.133 | 0.124 |
| | 10 | 0.209 | 0.209 | 0.190 | 0.152 | 0.133 | 0.124 |
| | 12 | 0.266 | 0.266 | 0.219 | 0.181 | 0.171 | 0.171 |
| 14 | 0.304 | 0.304 | 0.238 | 0.209 | 0.190 | 0.190 | |
| 16 | 0.304 | 0.304 | 0.238 | 0.209 | 0.190 | 0.190 | |
| 18 | 0.361 | 0.361 | 0.285 | 0.228 | 0.228 | 0.228 | |
| 20 | 0.361 | 0.361 | 0.285 | 0.228 | 0.228 | 0.228 | |

375GA

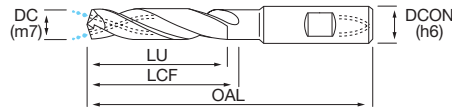
|  | Material Group ISO 513 | M1 | M2 | M3 | | | |
|---|------------------------|------------------------|---------------------------|---------------------------|--|--|--|
| | Hardness/Rm | <750 N/mm ² | 550÷850 N/mm ² | 650÷950 N/mm ² | | | |
| | Vc (m/min) | 40÷60 | 35÷55 | 25÷45 | | | |
| | DC (mm) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | | | |
| | 3 | 0.072 | 0.054 | 0.054 | | | |
| | 4 | 0.090 | 0.072 | 0.072 | | | |
| | 6 | 0.108 | 0.072 | 0.072 | | | |
| | 8 | 0.117 | 0.090 | 0.090 | | | |
| | 10 | 0.135 | 0.099 | 0.099 | | | |
| | 12 | 0.153 | 0.117 | 0.117 | | | |
| 14 | 0.162 | 0.117 | 0.117 | | | | |
| 16 | 0.180 | 0.126 | 0.126 | | | | |
| 18 | 0.198 | 0.126 | 0.126 | | | | |
| 20 | 0.216 | 0.144 | 0.144 | | | | |

375GA

|  | Material Group ISO 513 | K1 | K2 | K3 | | | |
|---|------------------------|-------------|-------------|-------------|--|--|--|
| | Hardness/Rm | 150÷250 HB | 150÷350 HB | 250÷500 HB | | | |
| | Vc (m/min) | 90÷110 | 70÷90 | 60÷80 | | | |
| | DC (mm) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | | | |
| | 3 | 0.162 | 0.143 | 0.086 | | | |
| | 4 | 0.190 | 0.162 | 0.095 | | | |
| | 6 | 0.238 | 0.190 | 0.124 | | | |
| | 8 | 0.257 | 0.238 | 0.152 | | | |
| | 10 | 0.285 | 0.266 | 0.190 | | | |
| | 12 | 0.314 | 0.285 | 0.209 | | | |
| 14 | 0.342 | 0.314 | 0.228 | | | | |
| 16 | 0.380 | 0.333 | 0.247 | | | | |
| 18 | 0.399 | 0.361 | 0.266 | | | | |
| 20 | 0.428 | 0.380 | 0.266 | | | | |

375HGA

- General application
- Weldon shank
- Small 45° chamfer for edge protection

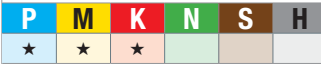
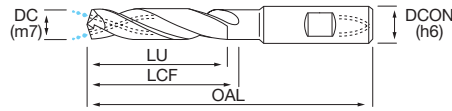


| DC | DC tol. | DCON | TCDCON | LU | LCF | OAL | EDP no. | Stock |
|------|---------------|------|--------|----|-----|-----|-------------|-------|
| 3 | +0.012/+0.002 | 6 | h6 | 23 | 28 | 66 | 375HGA0300N | ● |
| 3.1 | +0.016/+0.004 | 6 | h6 | 23 | 28 | 66 | 375HGA0310N | ● |
| 3.2 | +0.016/+0.004 | 6 | h6 | 23 | 28 | 66 | 375HGA0320N | ● |
| 3.3 | +0.016/+0.004 | 6 | h6 | 23 | 28 | 66 | 375HGA0330N | ● |
| 3.4 | +0.016/+0.004 | 6 | h6 | 23 | 28 | 66 | 375HGA0340N | ● |
| 3.5 | +0.016/+0.004 | 6 | h6 | 23 | 28 | 66 | 375HGA0350N | ● |
| 3.6 | +0.016/+0.004 | 6 | h6 | 23 | 28 | 66 | 375HGA0360N | ● |
| 3.7 | +0.016/+0.004 | 6 | h6 | 23 | 28 | 66 | 375HGA0370N | ● |
| 3.8 | +0.016/+0.004 | 6 | h6 | 29 | 36 | 74 | 375HGA0380N | ● |
| 3.9 | +0.016/+0.004 | 6 | h6 | 29 | 36 | 74 | 375HGA0390N | ● |
| 4 | +0.016/+0.004 | 6 | h6 | 29 | 36 | 74 | 375HGA0400N | ● |
| 4.1 | +0.016/+0.004 | 6 | h6 | 29 | 36 | 74 | 375HGA0410N | ● |
| 4.2 | +0.016/+0.004 | 6 | h6 | 29 | 36 | 74 | 375HGA0420N | ● |
| 4.3 | +0.016/+0.004 | 6 | h6 | 29 | 36 | 74 | 375HGA0430N | ● |
| 4.4 | +0.016/+0.004 | 6 | h6 | 29 | 36 | 74 | 375HGA0440N | ● |
| 4.5 | +0.016/+0.004 | 6 | h6 | 29 | 36 | 74 | 375HGA0450N | ● |
| 4.6 | +0.016/+0.004 | 6 | h6 | 29 | 36 | 74 | 375HGA0460N | ● |
| 4.65 | +0.016/+0.004 | 6 | h6 | 29 | 36 | 74 | 375HGA0465N | ● |
| 4.7 | +0.016/+0.004 | 6 | h6 | 29 | 36 | 74 | 375HGA0470N | ● |
| 4.8 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375HGA0480N | ● |
| 4.9 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375HGA0490N | ● |
| 5 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375HGA0500N | ● |
| 5.1 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375HGA0510N | ● |
| 5.2 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375HGA0520N | ● |
| 5.3 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375HGA0530N | ● |
| 5.4 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375HGA0540N | ● |
| 5.5 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375HGA0550N | ● |
| 5.55 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375HGA0555N | ● |
| 5.6 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375HGA0560N | ● |
| 5.7 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375HGA0570N | ● |
| 5.8 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375HGA0580N | ● |
| 5.9 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375HGA0590N | ● |
| 6 | +0.016/+0.004 | 6 | h6 | 35 | 44 | 82 | 375HGA0600N | ● |
| 6.1 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375HGA0610N | ● |
| 6.2 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375HGA0620N | ● |
| 6.3 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375HGA0630N | ● |
| 6.4 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375HGA0640N | ● |
| 6.5 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375HGA0650N | ● |
| 6.6 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375HGA0660N | ● |
| 6.7 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375HGA0670N | ● |
| 6.8 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375HGA0680N | ● |
| 6.9 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375HGA0690N | ● |
| 7 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375HGA0700N | ● |
| 7.1 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375HGA0710N | ● |
| 7.2 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375HGA0720N | ● |

★ 1st choice, ☆ suitable, ● stock standard, ◎ non-stock standard (no MOQ), ○ non-stock standard (MOQ), ▲ upcoming product, ▽ stock exhaustion

375HGA

- General application
- Weldon shank
- Small 45° chamfer for edge protection

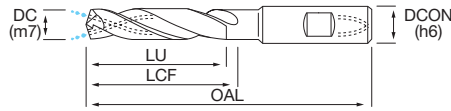


| DC | DC tol. | DCON | TCDCON | LU | LCF | OAL | EDP no. | Stock |
|------|---------------|------|--------|----|-----|-----|-------------|-------|
| 7.3 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375HGA0730N | ● |
| 7.4 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375HGA0740N | ● |
| 7.45 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375HGA0745N | ● |
| 7.5 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375HGA0750N | ● |
| 7.6 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375HGA0760N | ● |
| 7.7 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375HGA0770N | ● |
| 7.8 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375HGA0780N | ● |
| 7.9 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375HGA0790N | ● |
| 8 | +0.021/+0.006 | 8 | h6 | 43 | 53 | 91 | 375HGA0800N | ● |
| 8.1 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375HGA0810N | ● |
| 8.2 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375HGA0820N | ● |
| 8.3 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375HGA0830N | ● |
| 8.4 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375HGA0840N | ● |
| 8.5 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375HGA0850N | ● |
| 8.6 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375HGA0860N | ● |
| 8.7 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375HGA0870N | ● |
| 8.8 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375HGA0880N | ● |
| 8.9 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375HGA0890N | ● |
| 9 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375HGA0900N | ● |
| 9.1 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375HGA0910N | ● |
| 9.2 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375HGA0920N | ● |
| 9.3 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375HGA0930N | ● |
| 9.35 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375HGA0935N | ● |
| 9.4 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375HGA0940N | ● |
| 9.5 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375HGA0950N | ● |
| 9.6 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375HGA0960N | ● |
| 9.7 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375HGA0970N | ● |
| 9.8 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375HGA0980N | ● |
| 9.9 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375HGA0990N | ● |
| 10 | +0.021/+0.006 | 10 | h6 | 49 | 61 | 103 | 375HGA1000N | ● |
| 10.1 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375HGA1010N | ● |
| 10.2 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375HGA1020N | ● |
| 10.3 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375HGA1030N | ● |
| 10.4 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375HGA1040N | ● |
| 10.5 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375HGA1050N | ● |
| 10.6 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375HGA1060N | ● |
| 10.7 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375HGA1070N | ● |
| 10.8 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375HGA1080N | ● |
| 10.9 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375HGA1090N | ● |
| 11 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375HGA1100N | ● |
| 11.1 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375HGA1110N | ● |
| 11.2 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375HGA1120N | ● |
| 11.3 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375HGA1130N | ● |
| 11.4 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375HGA1140N | ● |
| 11.5 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375HGA1150N | ● |

★ 1st choice, ☆ suitable, ● stock standard, ◎ non-stock standard (no MOQ), ○ non-stock standard (MOQ), ▲ upcoming product, ▽ stock exhaustion

375HGA

- General application
- Weldon shank
- Small 45° chamfer for edge protection




| | | | | | |
|----------|----------|----------|----------|----------|----------|
| P | M | K | N | S | H |
| ★ | ★ | ★ | ★ | ★ | ★ |

| | | | | | | | |
|------------|-------------------------|------------------|------------|-----------------|-----------------|----------------|---------------|
| 5xD | INTERNAL COOLANT | DIN 6537L | HGA | MG PV400 | SIG 140° | FHA 30° | CH-45° |
|------------|-------------------------|------------------|------------|-----------------|-----------------|----------------|---------------|


| DC | DC tol. | DCON | TCDCON | LU | LCF | OAL | EDP no. | Stock |
|------|---------------|------|--------|----|-----|-----|--------------------|-------|
| 11.6 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375HGA1160N | ● |
| 11.7 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375HGA1170N | ● |
| 11.8 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375HGA1180N | ● |
| 11.9 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375HGA1190N | ● |
| 12 | +0.025/+0.007 | 12 | h6 | 57 | 71 | 118 | 375HGA1200N | ● |
| 12.1 | +0.025/+0.007 | 14 | h6 | 63 | 77 | 124 | 375HGA1210N | ● |
| 12.2 | +0.025/+0.007 | 14 | h6 | 63 | 77 | 124 | 375HGA1220N | ● |
| 12.3 | +0.025/+0.007 | 14 | h6 | 63 | 77 | 124 | 375HGA1230N | ● |
| 12.4 | +0.025/+0.007 | 14 | h6 | 63 | 77 | 124 | 375HGA1240N | ● |
| 12.5 | +0.025/+0.007 | 14 | h6 | 63 | 77 | 124 | 375HGA1250N | ● |
| 12.6 | +0.025/+0.007 | 14 | h6 | 63 | 77 | 124 | 375HGA1260N | ● |
| 12.7 | +0.025/+0.007 | 14 | h6 | 63 | 77 | 124 | 375HGA1270N | ● |
| 12.8 | +0.025/+0.007 | 14 | h6 | 63 | 77 | 124 | 375HGA1280N | ● |
| 13 | +0.025/+0.007 | 14 | h6 | 63 | 77 | 124 | 375HGA1300N | ● |
| 13.5 | +0.025/+0.007 | 14 | h6 | 63 | 77 | 124 | 375HGA1350N | ● |
| 13.7 | +0.025/+0.007 | 14 | h6 | 63 | 77 | 124 | 375HGA1370N | ● |
| 13.8 | +0.025/+0.007 | 14 | h6 | 63 | 77 | 124 | 375HGA1380N | ● |
| 13.9 | +0.025/+0.007 | 14 | h6 | 63 | 77 | 124 | 375HGA1390N | ● |
| 14 | +0.025/+0.007 | 14 | h6 | 63 | 77 | 124 | 375HGA1400N | ● |
| 14.1 | +0.025/+0.007 | 16 | h6 | 67 | 83 | 133 | 375HGA1410N | ● |
| 14.2 | +0.025/+0.007 | 16 | h6 | 67 | 83 | 133 | 375HGA1420N | ● |
| 14.5 | +0.025/+0.007 | 16 | h6 | 67 | 83 | 133 | 375HGA1450N | ● |
| 14.7 | +0.025/+0.007 | 16 | h6 | 67 | 83 | 133 | 375HGA1470N | ● |
| 14.8 | +0.025/+0.007 | 16 | h6 | 67 | 83 | 133 | 375HGA1480N | ● |
| 15 | +0.025/+0.007 | 16 | h6 | 67 | 83 | 133 | 375HGA1500N | ● |
| 15.1 | +0.025/+0.007 | 16 | h6 | 67 | 83 | 133 | 375HGA1510N | ● |
| 15.2 | +0.025/+0.007 | 16 | h6 | 67 | 83 | 133 | 375HGA1520N | ● |
| 15.3 | +0.025/+0.007 | 16 | h6 | 67 | 83 | 133 | 375HGA1530N | ● |
| 15.5 | +0.025/+0.007 | 16 | h6 | 67 | 83 | 133 | 375HGA1550N | ● |
| 15.7 | +0.025/+0.007 | 16 | h6 | 67 | 83 | 133 | 375HGA1570N | ● |
| 15.8 | +0.025/+0.007 | 16 | h6 | 67 | 83 | 133 | 375HGA1580N | ● |
| 16 | +0.025/+0.007 | 16 | h6 | 67 | 83 | 133 | 375HGA1600N | ● |
| 16.5 | +0.025/+0.007 | 18 | h6 | 75 | 93 | 143 | 375HGA1650N | ● |
| 16.8 | +0.025/+0.007 | 18 | h6 | 75 | 93 | 143 | 375HGA1680N | ◎ |
| 17 | +0.025/+0.007 | 18 | h6 | 75 | 93 | 143 | 375HGA1700N | ● |
| 17.5 | +0.025/+0.007 | 18 | h6 | 75 | 93 | 143 | 375HGA1750N | ● |
| 17.7 | +0.025/+0.007 | 18 | h6 | 75 | 93 | 143 | 375HGA1770N | ◎ |
| 17.8 | +0.025/+0.007 | 18 | h6 | 75 | 93 | 143 | 375HGA1780N | ◎ |
| 18 | +0.025/+0.007 | 18 | h6 | 75 | 93 | 143 | 375HGA1800N | ● |
| 18.5 | +0.029/+0.008 | 20 | h6 | 81 | 101 | 153 | 375HGA1850N | ● |
| 18.8 | +0.029/+0.008 | 20 | h6 | 81 | 101 | 153 | 375HGA1880N | ◎ |
| 19 | +0.029/+0.008 | 20 | h6 | 81 | 101 | 153 | 375HGA1900N | ● |
| 19.5 | +0.029/+0.008 | 20 | h6 | 81 | 101 | 153 | 375HGA1950N | ● |
| 19.8 | +0.029/+0.008 | 20 | h6 | 81 | 101 | 153 | 375HGA1980N | ◎ |
| 20 | +0.029/+0.008 | 20 | h6 | 81 | 101 | 153 | 375HGA2000N | ● |

★ 1st choice, ☆ suitable, ● stock standard, ◎ non-stock standard (no MOQ), ○ non-stock standard (MOQ), ▲ upcoming product, ▽ stock exhaustion


375HGA

|  | Material Group ISO 513 | P1 | P2 | P3 P4 | P5 P6 | P5 | P7 P8 |
|---|------------------------|------------------------|---------------------------|----------------------------|----------------------------|------------------------|----------------------------|
| | Hardness/Rm | <500 N/mm ² | 500÷700 N/mm ² | 600÷1000 N/mm ² | 900÷1480 N/mm ² | <700 N/mm ² | 850÷1200 N/mm ² |
| | Vc (m/min) | 100÷140 | 90÷130 | 80÷120 | 65÷95 | 55÷80 | 40÷65 |
| | DC (mm) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) |
| | 3 | 0.150 | 0.150 | 0.130 | 0.110 | 0.080 | 0.060 |
| | 4 | 0.150 | 0.150 | 0.130 | 0.110 | 0.080 | 0.060 |
| | 6 | 0.190 | 0.190 | 0.170 | 0.140 | 0.120 | 0.100 |
| | 8 | 0.220 | 0.220 | 0.200 | 0.160 | 0.140 | 0.130 |
| | 10 | 0.220 | 0.220 | 0.200 | 0.160 | 0.140 | 0.130 |
| | 12 | 0.280 | 0.280 | 0.230 | 0.190 | 0.180 | 0.180 |
| 14 | 0.320 | 0.320 | 0.250 | 0.220 | 0.200 | 0.200 | |
| 16 | 0.320 | 0.320 | 0.250 | 0.220 | 0.200 | 0.200 | |
| 18 | 0.380 | 0.380 | 0.300 | 0.240 | 0.240 | 0.240 | |
| 20 | 0.380 | 0.380 | 0.300 | 0.240 | 0.240 | 0.240 | |

375HGA

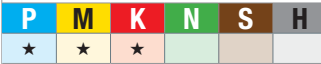
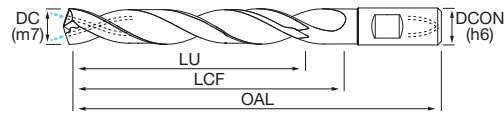
|  | Material Group ISO 513 | M1 | M2 | M3 | | | |
|---|------------------------|------------------------|---------------------------|---------------------------|--|--|--|
| | Hardness/Rm | <750 N/mm ² | 550÷850 N/mm ² | 650÷950 N/mm ² | | | |
| | Vc (m/min) | 50÷70 | 45÷65 | 35÷55 | | | |
| | DC (mm) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | | | |
| | 3 | 0.080 | 0.060 | 0.060 | | | |
| | 4 | 0.100 | 0.080 | 0.080 | | | |
| | 6 | 0.120 | 0.080 | 0.080 | | | |
| | 8 | 0.130 | 0.100 | 0.100 | | | |
| | 10 | 0.150 | 0.110 | 0.110 | | | |
| | 12 | 0.170 | 0.130 | 0.130 | | | |
| 14 | 0.180 | 0.130 | 0.130 | | | | |
| 16 | 0.200 | 0.140 | 0.140 | | | | |
| 18 | 0.220 | 0.140 | 0.140 | | | | |
| 20 | 0.240 | 0.160 | 0.160 | | | | |

375HGA

|  | Material Group ISO 513 | K1 | K2 | K3 | | | |
|---|------------------------|-------------|-------------|-------------|--|--|--|
| | Hardness/Rm | 150÷250 HB | 150÷350 HB | 250÷500 HB | | | |
| | Vc (m/min) | 110÷140 | 90÷120 | 70÷100 | | | |
| | DC (mm) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | | | |
| | 3 | 0.170 | 0.150 | 0.090 | | | |
| | 4 | 0.200 | 0.170 | 0.100 | | | |
| | 6 | 0.250 | 0.200 | 0.130 | | | |
| | 8 | 0.270 | 0.250 | 0.160 | | | |
| | 10 | 0.300 | 0.280 | 0.200 | | | |
| | 12 | 0.330 | 0.300 | 0.220 | | | |
| 14 | 0.360 | 0.330 | 0.240 | | | | |
| 16 | 0.400 | 0.350 | 0.260 | | | | |
| 18 | 0.420 | 0.380 | 0.280 | | | | |
| 20 | 0.450 | 0.400 | 0.280 | | | | |

358HGA

- General application
- Weldon shank
- Small 45° chamfer for edge protection

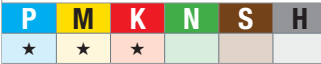
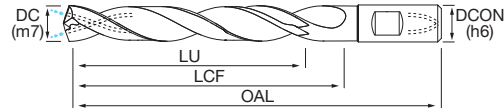


| DC | DC tol. | DCON | TCDCON | LU | LCF | OAL | EDP no. | Stock |
|-----|---------------|------|--------|----|-----|-----|-------------|-------|
| 3 | +0.012/+0.002 | 6 | h6 | 29 | 34 | 72 | 358HGA0300N | ● |
| 3.1 | +0.016/+0.004 | 6 | h6 | 29 | 34 | 72 | 358HGA0310N | ● |
| 3.2 | +0.016/+0.004 | 6 | h6 | 29 | 34 | 72 | 358HGA0320N | ● |
| 3.3 | +0.016/+0.004 | 6 | h6 | 29 | 34 | 72 | 358HGA0330N | ● |
| 3.4 | +0.016/+0.004 | 6 | h6 | 29 | 34 | 72 | 358HGA0340N | ● |
| 3.5 | +0.016/+0.004 | 6 | h6 | 29 | 34 | 72 | 358HGA0350N | ● |
| 3.6 | +0.016/+0.004 | 6 | h6 | 29 | 34 | 72 | 358HGA0360N | ● |
| 3.7 | +0.016/+0.004 | 6 | h6 | 29 | 34 | 72 | 358HGA0370N | ● |
| 3.8 | +0.016/+0.004 | 6 | h6 | 36 | 43 | 81 | 358HGA0380N | ● |
| 3.9 | +0.016/+0.004 | 6 | h6 | 36 | 43 | 81 | 358HGA0390N | ● |
| 4 | +0.016/+0.004 | 6 | h6 | 36 | 43 | 81 | 358HGA0400N | ● |
| 4.1 | +0.016/+0.004 | 6 | h6 | 36 | 43 | 81 | 358HGA0410N | ● |
| 4.2 | +0.016/+0.004 | 6 | h6 | 36 | 43 | 81 | 358HGA0420N | ● |
| 4.3 | +0.016/+0.004 | 6 | h6 | 36 | 43 | 81 | 358HGA0430N | ● |
| 4.4 | +0.016/+0.004 | 6 | h6 | 36 | 43 | 81 | 358HGA0440N | ◎ |
| 4.5 | +0.016/+0.004 | 6 | h6 | 36 | 43 | 81 | 358HGA0450N | ● |
| 4.6 | +0.016/+0.004 | 6 | h6 | 36 | 43 | 81 | 358HGA0460N | ● |
| 4.7 | +0.016/+0.004 | 6 | h6 | 36 | 43 | 81 | 358HGA0470N | ● |
| 4.8 | +0.016/+0.004 | 6 | h6 | 48 | 57 | 95 | 358HGA0480N | ● |
| 4.9 | +0.016/+0.004 | 6 | h6 | 48 | 57 | 95 | 358HGA0490N | ● |
| 5 | +0.016/+0.004 | 6 | h6 | 48 | 57 | 95 | 358HGA0500N | ● |
| 5.1 | +0.016/+0.004 | 6 | h6 | 48 | 57 | 95 | 358HGA0510N | ● |
| 5.2 | +0.016/+0.004 | 6 | h6 | 48 | 57 | 95 | 358HGA0520N | ● |
| 5.3 | +0.016/+0.004 | 6 | h6 | 48 | 57 | 95 | 358HGA0530N | ● |
| 5.4 | +0.016/+0.004 | 6 | h6 | 48 | 57 | 95 | 358HGA0540N | ◎ |
| 5.5 | +0.016/+0.004 | 6 | h6 | 48 | 57 | 95 | 358HGA0550N | ● |
| 5.6 | +0.016/+0.004 | 6 | h6 | 48 | 57 | 95 | 358HGA0560N | ● |
| 5.7 | +0.016/+0.004 | 6 | h6 | 48 | 57 | 95 | 358HGA0570N | ● |
| 5.8 | +0.016/+0.004 | 6 | h6 | 48 | 57 | 95 | 358HGA0580N | ● |
| 5.9 | +0.016/+0.004 | 6 | h6 | 48 | 57 | 95 | 358HGA0590N | ● |
| 6 | +0.016/+0.004 | 6 | h6 | 48 | 57 | 95 | 358HGA0600N | ● |
| 6.1 | +0.021/+0.006 | 8 | h6 | 64 | 76 | 114 | 358HGA0610N | ● |
| 6.2 | +0.021/+0.006 | 8 | h6 | 64 | 76 | 114 | 358HGA0620N | ● |
| 6.3 | +0.021/+0.006 | 8 | h6 | 64 | 76 | 114 | 358HGA0630N | ● |
| 6.4 | +0.021/+0.006 | 8 | h6 | 64 | 76 | 114 | 358HGA0640N | ● |
| 6.5 | +0.021/+0.006 | 8 | h6 | 64 | 76 | 114 | 358HGA0650N | ● |
| 6.6 | +0.021/+0.006 | 8 | h6 | 64 | 76 | 114 | 358HGA0660N | ● |
| 6.7 | +0.021/+0.006 | 8 | h6 | 64 | 76 | 114 | 358HGA0670N | ● |
| 6.8 | +0.021/+0.006 | 8 | h6 | 64 | 76 | 114 | 358HGA0680N | ● |
| 6.9 | +0.021/+0.006 | 8 | h6 | 64 | 76 | 114 | 358HGA0690N | ● |
| 7 | +0.021/+0.006 | 8 | h6 | 64 | 76 | 114 | 358HGA0700N | ● |
| 7.1 | +0.021/+0.006 | 8 | h6 | 64 | 76 | 114 | 358HGA0710N | ● |
| 7.2 | +0.021/+0.006 | 8 | h6 | 64 | 76 | 114 | 358HGA0720N | ● |
| 7.3 | +0.021/+0.006 | 8 | h6 | 64 | 76 | 114 | 358HGA0730N | ● |
| 7.4 | +0.021/+0.006 | 8 | h6 | 64 | 76 | 114 | 358HGA0740N | ● |

★ 1st choice, ☆ suitable, ● stock standard, ◎ non-stock standard (no MOQ), ○ non-stock standard (MOQ), ▲ upcoming product, ▽ stock exhaustion

358HGA

- General application
- Weldon shank
- Small 45° chamfer for edge protection

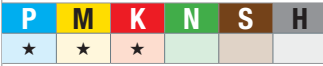
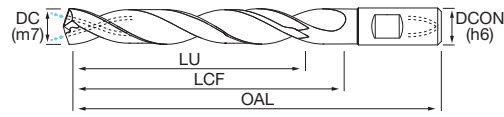


| DC | DC tol. | DCON | TCDCON | LU | LCF | OAL | EDP no. | Stock |
|------|---------------|------|--------|----|-----|-----|-------------|-------|
| 7.5 | +0.021/+0.006 | 8 | h6 | 64 | 76 | 114 | 358HGA0750N | ● |
| 7.6 | +0.021/+0.006 | 8 | h6 | 64 | 76 | 114 | 358HGA0760N | ● |
| 7.7 | +0.021/+0.006 | 8 | h6 | 64 | 76 | 114 | 358HGA0770N | ◎ |
| 7.8 | +0.021/+0.006 | 8 | h6 | 64 | 76 | 114 | 358HGA0780N | ● |
| 7.9 | +0.021/+0.006 | 8 | h6 | 64 | 76 | 114 | 358HGA0790N | ◎ |
| 8 | +0.021/+0.006 | 8 | h6 | 64 | 76 | 114 | 358HGA0800N | ● |
| 8.1 | +0.021/+0.006 | 10 | h6 | 80 | 95 | 142 | 358HGA0810N | ● |
| 8.2 | +0.021/+0.006 | 10 | h6 | 80 | 95 | 142 | 358HGA0820N | ● |
| 8.3 | +0.021/+0.006 | 10 | h6 | 80 | 95 | 142 | 358HGA0830N | ● |
| 8.4 | +0.021/+0.006 | 10 | h6 | 80 | 95 | 142 | 358HGA0840N | ● |
| 8.5 | +0.021/+0.006 | 10 | h6 | 80 | 95 | 142 | 358HGA0850N | ● |
| 8.6 | +0.021/+0.006 | 10 | h6 | 80 | 95 | 142 | 358HGA0860N | ● |
| 8.7 | +0.021/+0.006 | 10 | h6 | 80 | 95 | 142 | 358HGA0870N | ● |
| 8.8 | +0.021/+0.006 | 10 | h6 | 80 | 95 | 142 | 358HGA0880N | ● |
| 8.9 | +0.021/+0.006 | 10 | h6 | 80 | 95 | 142 | 358HGA0890N | ◎ |
| 9 | +0.021/+0.006 | 10 | h6 | 80 | 95 | 142 | 358HGA0900N | ● |
| 9.1 | +0.021/+0.006 | 10 | h6 | 80 | 95 | 142 | 358HGA0910N | ● |
| 9.2 | +0.021/+0.006 | 10 | h6 | 80 | 95 | 142 | 358HGA0920N | ● |
| 9.3 | +0.021/+0.006 | 10 | h6 | 80 | 95 | 142 | 358HGA0930N | ● |
| 9.4 | +0.021/+0.006 | 10 | h6 | 80 | 95 | 142 | 358HGA0940N | ◎ |
| 9.5 | +0.021/+0.006 | 10 | h6 | 80 | 95 | 142 | 358HGA0950N | ● |
| 9.6 | +0.021/+0.006 | 10 | h6 | 80 | 95 | 142 | 358HGA0960N | ◎ |
| 9.7 | +0.021/+0.006 | 10 | h6 | 80 | 95 | 142 | 358HGA0970N | ◎ |
| 9.8 | +0.021/+0.006 | 10 | h6 | 80 | 95 | 142 | 358HGA0980N | ● |
| 9.9 | +0.021/+0.006 | 10 | h6 | 80 | 95 | 142 | 358HGA0990N | ◎ |
| 10 | +0.021/+0.006 | 10 | h6 | 80 | 95 | 142 | 358HGA1000N | ● |
| 10.1 | +0.025/+0.007 | 12 | h6 | 96 | 114 | 162 | 358HGA1010N | ● |
| 10.2 | +0.025/+0.007 | 12 | h6 | 96 | 114 | 162 | 358HGA1020N | ● |
| 10.3 | +0.025/+0.007 | 12 | h6 | 96 | 114 | 162 | 358HGA1030N | ● |
| 10.4 | +0.025/+0.007 | 12 | h6 | 96 | 114 | 162 | 358HGA1040N | ◎ |
| 10.5 | +0.025/+0.007 | 12 | h6 | 96 | 114 | 162 | 358HGA1050N | ● |
| 10.6 | +0.025/+0.007 | 12 | h6 | 96 | 114 | 162 | 358HGA1060N | ◎ |
| 10.7 | +0.025/+0.007 | 12 | h6 | 96 | 114 | 162 | 358HGA1070N | ● |
| 10.8 | +0.025/+0.007 | 12 | h6 | 96 | 114 | 162 | 358HGA1080N | ● |
| 10.9 | +0.025/+0.007 | 12 | h6 | 96 | 114 | 162 | 358HGA1090N | ◎ |
| 11 | +0.025/+0.007 | 12 | h6 | 96 | 114 | 162 | 358HGA1100N | ● |
| 11.1 | +0.025/+0.007 | 12 | h6 | 96 | 114 | 162 | 358HGA1110N | ◎ |
| 11.2 | +0.025/+0.007 | 12 | h6 | 96 | 114 | 162 | 358HGA1120N | ● |
| 11.3 | +0.025/+0.007 | 12 | h6 | 96 | 114 | 162 | 358HGA1130N | ◎ |
| 11.4 | +0.025/+0.007 | 12 | h6 | 96 | 114 | 162 | 358HGA1140N | ◎ |
| 11.5 | +0.025/+0.007 | 12 | h6 | 96 | 114 | 162 | 358HGA1150N | ● |
| 11.6 | +0.025/+0.007 | 12 | h6 | 96 | 114 | 162 | 358HGA1160N | ◎ |
| 11.7 | +0.025/+0.007 | 12 | h6 | 96 | 114 | 162 | 358HGA1170N | ◎ |
| 11.8 | +0.025/+0.007 | 12 | h6 | 96 | 114 | 162 | 358HGA1180N | ● |
| 11.9 | +0.025/+0.007 | 12 | h6 | 96 | 114 | 162 | 358HGA1190N | ◎ |

★ 1st choice, ☆ suitable, ● stock standard, ◎ non-stock standard (no MOQ), ○ non-stock standard (MOQ), ▲ upcoming product, ▽ stock exhaustion

358HGA

- General application
- Weldon shank
- Small 45° chamfer for edge protection




| DC | DC tol. | DCON | TCDCON | LU | LCF | OAL | EDP no. | Stock |
|------|---------------|------|--------|-----|-----|-----|--------------------|-------|
| 12 | +0.025/+0.007 | 12 | h6 | 96 | 114 | 162 | 358HGA1200N | ● |
| 12.2 | +0.025/+0.007 | 14 | h6 | 112 | 133 | 182 | 358HGA1220N | ● |
| 12.5 | +0.025/+0.007 | 14 | h6 | 112 | 133 | 182 | 358HGA1250N | ● |
| 12.8 | +0.025/+0.007 | 14 | h6 | 112 | 133 | 182 | 358HGA1280N | ● |
| 13 | +0.025/+0.007 | 14 | h6 | 112 | 133 | 182 | 358HGA1300N | ● |
| 13.2 | +0.025/+0.007 | 14 | h6 | 112 | 133 | 182 | 358HGA1320N | ● |
| 13.5 | +0.025/+0.007 | 14 | h6 | 112 | 133 | 182 | 358HGA1350N | ● |
| 13.8 | +0.025/+0.007 | 14 | h6 | 112 | 133 | 182 | 358HGA1380N | ◎ |
| 14 | +0.025/+0.007 | 14 | h6 | 112 | 133 | 182 | 358HGA1400N | ● |
| 14.2 | +0.025/+0.007 | 16 | h6 | 128 | 152 | 203 | 358HGA1420N | ● |
| 14.5 | +0.025/+0.007 | 16 | h6 | 128 | 152 | 203 | 358HGA1450N | ● |
| 14.8 | +0.025/+0.007 | 16 | h6 | 128 | 152 | 203 | 358HGA1480N | ◎ |
| 15 | +0.025/+0.007 | 16 | h6 | 128 | 152 | 203 | 358HGA1500N | ● |
| 15.5 | +0.025/+0.007 | 16 | h6 | 128 | 152 | 203 | 358HGA1550N | ● |
| 15.8 | +0.025/+0.007 | 16 | h6 | 128 | 152 | 203 | 358HGA1580N | ◎ |
| 16 | +0.025/+0.007 | 16 | h6 | 128 | 152 | 203 | 358HGA1600N | ● |
| 16.5 | +0.025/+0.007 | 18 | h6 | 144 | 171 | 222 | 358HGA1650N | ● |
| 16.8 | +0.025/+0.007 | 18 | h6 | 144 | 171 | 222 | 358HGA1680N | ◎ |
| 17 | +0.025/+0.007 | 18 | h6 | 144 | 171 | 222 | 358HGA1700N | ● |
| 17.5 | +0.025/+0.007 | 18 | h6 | 144 | 171 | 222 | 358HGA1750N | ● |
| 17.8 | +0.025/+0.007 | 18 | h6 | 144 | 171 | 222 | 358HGA1780N | ◎ |
| 18 | +0.025/+0.007 | 18 | h6 | 144 | 171 | 222 | 358HGA1800N | ● |
| 18.5 | +0.029/+0.008 | 20 | h6 | 160 | 190 | 243 | 358HGA1850N | ● |
| 18.8 | +0.029/+0.008 | 20 | h6 | 160 | 190 | 243 | 358HGA1880N | ◎ |
| 19 | +0.029/+0.008 | 20 | h6 | 160 | 190 | 243 | 358HGA1900N | ● |
| 19.5 | +0.029/+0.008 | 20 | h6 | 160 | 190 | 243 | 358HGA1950N | ● |
| 19.8 | +0.029/+0.008 | 20 | h6 | 160 | 190 | 243 | 358HGA1980N | ◎ |
| 20 | +0.029/+0.008 | 20 | h6 | 160 | 190 | 243 | 358HGA2000N | ● |


★ 1st choice, ☆ suitable, ● stock standard, ◎ non-stock standard (no MOQ), ○ non-stock standard (MOQ), ▲ upcoming product, ▽ stock exhaustion

Cutting Parameters


358HGA

|  | Material Group ISO 513 | P1 | P2 | P3 P4 | P5 P6 | P5 | P7 P8 |
|---|------------------------|------------------------|---------------------------|----------------------------|----------------------------|------------------------|----------------------------|
| | Hardness/Rm | <500 N/mm ² | 500÷700 N/mm ² | 600÷1000 N/mm ² | 900÷1480 N/mm ² | <700 N/mm ² | 850÷1200 N/mm ² |
| | Vc (m/min) | 90÷120 | 80÷120 | 70÷110 | 55÷85 | 45÷70 | 35÷60 |
| | DC (mm) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) |
| | 3 | 0.150 | 0.150 | 0.130 | 0.105 | 0.076 | 0.057 |
| | 4 | 0.150 | 0.150 | 0.130 | 0.105 | 0.076 | 0.057 |
| | 6 | 0.190 | 0.190 | 0.170 | 0.133 | 0.114 | 0.095 |
| | 8 | 0.220 | 0.220 | 0.200 | 0.152 | 0.133 | 0.124 |
| | 10 | 0.220 | 0.220 | 0.200 | 0.152 | 0.133 | 0.124 |
| | 12 | 0.280 | 0.280 | 0.230 | 0.181 | 0.171 | 0.171 |
| 14 | 0.320 | 0.320 | 0.250 | 0.209 | 0.190 | 0.190 | |
| 16 | 0.320 | 0.320 | 0.250 | 0.209 | 0.190 | 0.190 | |
| 18 | 0.380 | 0.380 | 0.300 | 0.228 | 0.228 | 0.228 | |
| 20 | 0.380 | 0.380 | 0.300 | 0.228 | 0.228 | 0.228 | |

358HGA

|  | Material Group ISO 513 | M1 | M2 | M3 | | | |
|---|------------------------|------------------------|---------------------------|---------------------------|--|--|--|
| | Hardness/Rm | <750 N/mm ² | 550÷850 N/mm ² | 650÷950 N/mm ² | | | |
| | Vc (m/min) | 40÷60 | 40÷60 | 30÷50 | | | |
| | DC (mm) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | | | |
| | 3 | 0.800 | 0.060 | 0.060 | | | |
| | 4 | 0.800 | 0.060 | 0.060 | | | |
| | 6 | 0.100 | 0.080 | 0.080 | | | |
| | 8 | 0.100 | 0.080 | 0.080 | | | |
| | 10 | 0.120 | 0.100 | 0.100 | | | |
| | 12 | 0.120 | 0.100 | 0.100 | | | |
| 14 | 0.140 | 0.120 | 0.120 | | | | |
| 16 | 0.140 | 0.120 | 0.120 | | | | |
| 18 | 0.160 | 0.140 | 0.140 | | | | |
| 20 | 0.160 | 0.140 | 0.140 | | | | |

358HGA

|  | Material Group ISO 513 | K1 | K2 | K3 | | | |
|---|------------------------|-------------|-------------|-------------|--|--|--|
| | Hardness/Rm | 150÷250 HB | 150÷350 HB | 250÷500 HB | | | |
| | Vc (m/min) | 100÷120 | 80÷110 | 65÷95 | | | |
| | DC (mm) | fn (mm/rev) | fn (mm/rev) | fn (mm/rev) | | | |
| | 3 | 0.162 | 0.143 | 0.086 | | | |
| | 4 | 0.190 | 0.162 | 0.095 | | | |
| | 6 | 0.238 | 0.190 | 0.124 | | | |
| | 8 | 0.257 | 0.238 | 0.152 | | | |
| | 10 | 0.285 | 0.266 | 0.190 | | | |
| | 12 | 0.314 | 0.285 | 0.209 | | | |
| 14 | 0.342 | 0.314 | 0.228 | | | | |
| 16 | 0.380 | 0.333 | 0.247 | | | | |
| 18 | 0.399 | 0.361 | 0.266 | | | | |
| 20 | 0.428 | 0.380 | 0.266 | | | | |



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