

Indexable Type Drill

TAF Drill

VP15TF
grade
U2 breaker
addition

Economical. 4 cutting edges per insert.

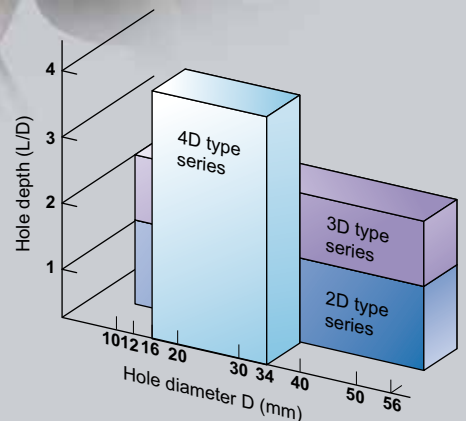
Low drilling noise and tough body.

■ Additional **MIRACLE® Coated VP15TF (U2 breaker)** for stable machining and a wide application area.



JUST FIT SLEEVE Stock

Allows the drill diameter to be increased in increments of 0.1mm up to a maximum of 0.5mm.



Indexable Type Drill

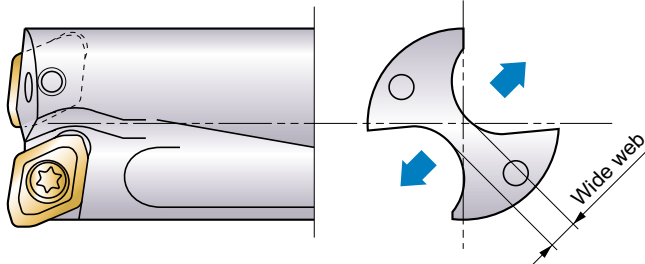
TAF Drill



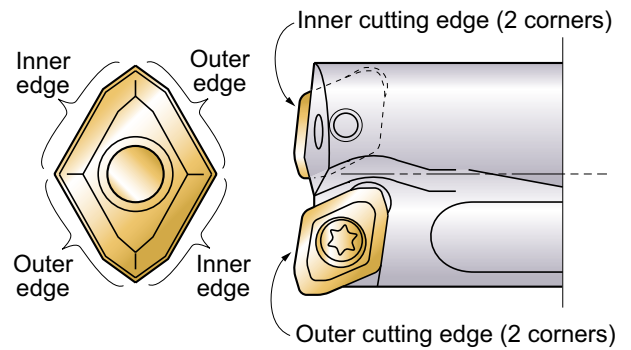
Features

Tough Body

- ① The new, wider web design reduces chattering. Cutting noise is lowered.
- ② High insert seat rigidity for reliable insert location.



Economical Insert



Economical four corner use

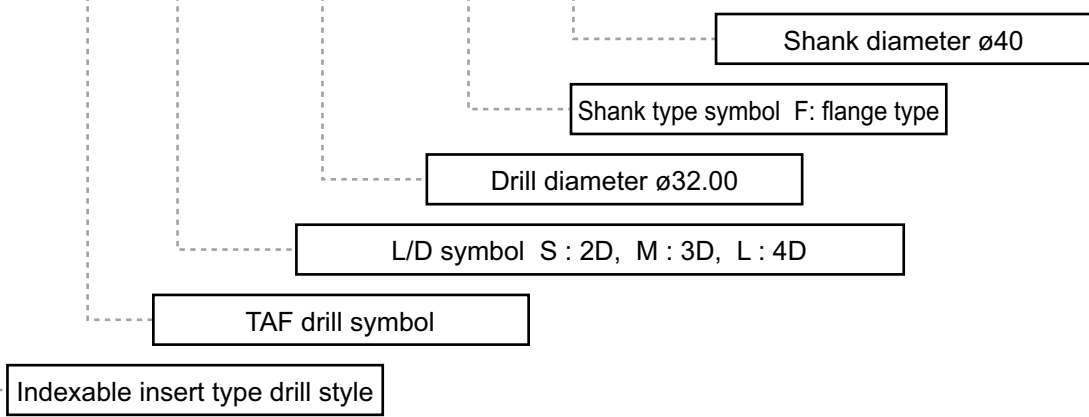
Grade Selection

| Breaker | NEW | | | | | | | | | | | |
|-----------|--|-----------------|------------|-------------------|--|------|--------|-----------------------------|-------|-----------------|-------|--------------------------------|
| | VP15TF | | UP20M | | GP20M | | UE6020 | | U5735 | | F5010 | |
| Grade | GCMT | GPMT | GCMT | GPMT | GCMT | GPMT | GCMT | GPMT | GCMT | GPMT | GCMT | GPMT |
| U1 | | | Mild steel | Mild steel | | | | | | | | |
| U2 | Carbon steel Alloy steel Stainless steel Cast iron Ductile cast iron | Stainless steel | | | Carbon steel Alloy steel Stainless steel Cast iron Ductile cast iron | | | | | Stainless steel | | |
| U3 | | | | Ductile cast iron | | | | Carbon steel Alloy steel | | | | Cast iron Ductile cast iron |

*1st recommendation shown above. Please refer to P.7 for further details.

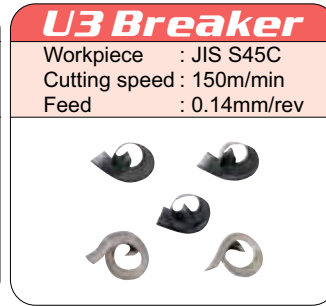
Designation

TA F S 3200 F 40



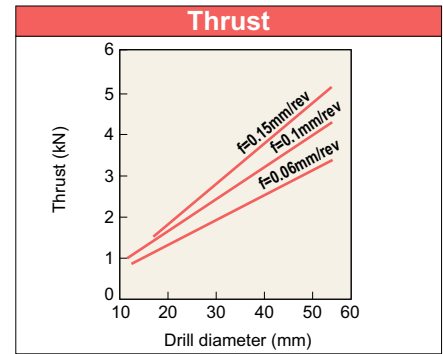
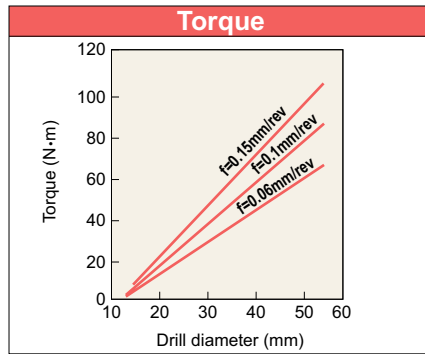
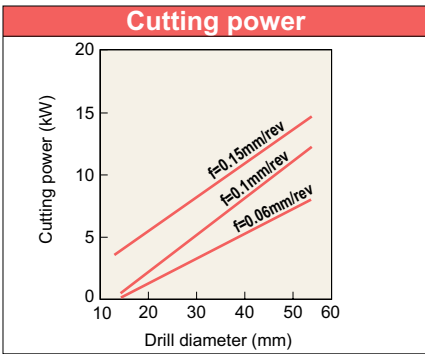
Cutting Performance

● Chip geometry Drill diameter : $\phi 25$



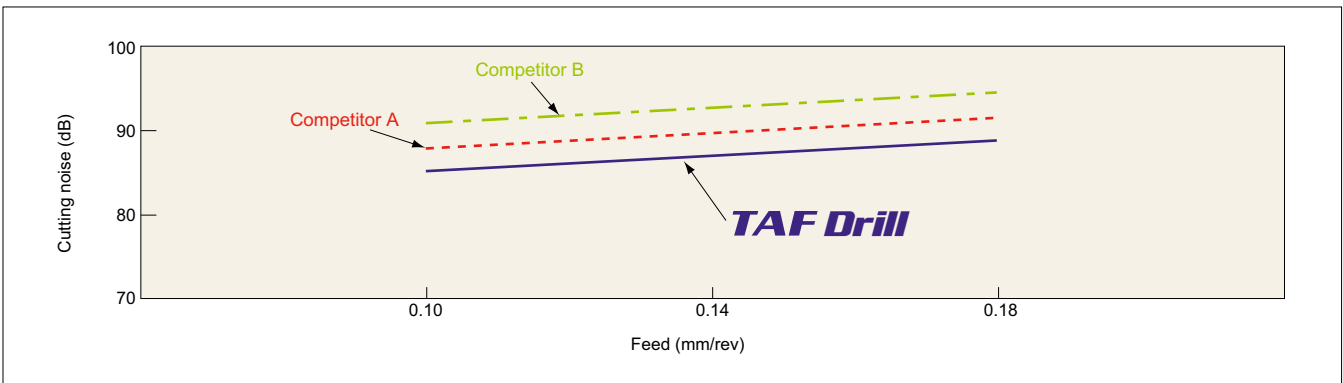
● Cutting resistance

Workpiece : JIS SCM440 (200HB - 220HB) Cutting speed : 150m/min Insert : U2 Breaker



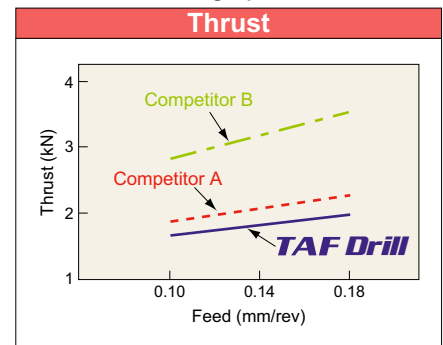
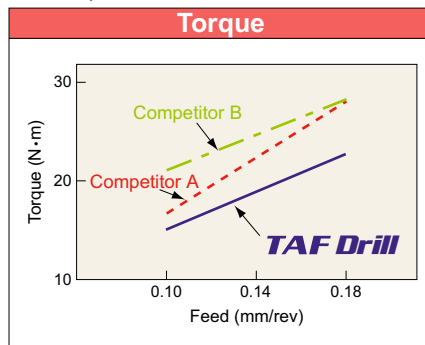
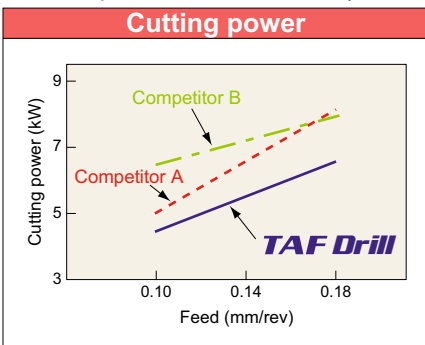
● Cutting noise

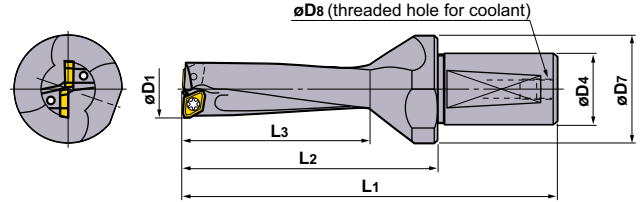
Workpiece : JIS SCM440(200HB - 220HB) Drill diameter : $\phi 25$ Insert : U2 Breaker Cutting speed : 150m/min







● Cutting resistance

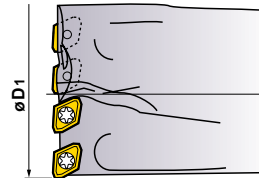
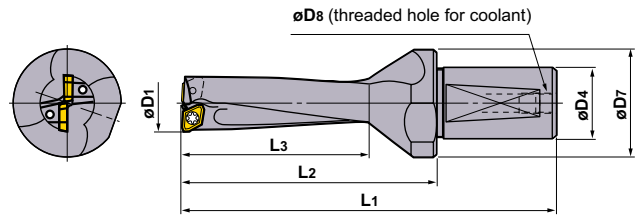
Workpiece : JIS SCM440 (200HB - 220HB) Drill diameter : $\phi 25$ Insert : U3 Breaker Cutting speed : 150m/min









| Drill Diameter D1 (mm) | Hole Depth (l/d) | Order Number | Stock | Number of Inserts | Dimensions (mm) | | | | | | Insert Number |  Clamp Screw |  Wrench |
|------------------------------|---------------------|--------------|-------|-------------------|-----------------|----|-----|----|----|-------|---------------|--|---|
| | | | | | L3 | L2 | L1 | D4 | D7 | D8 | | | |
| 12.0 | 2 | TAFS1200F20 | ● | 2 | 29 | 39 | 82 | 20 | 25 | PT1/8 | GCMT040204-U | TS2 | TKY06F |
| | 3 | TAFM1200F20 | ● | 2 | 41 | 51 | 94 | 20 | 25 | PT1/8 | GCMT040204-U | TS2 | TKY06F |
| 12.5 | 2 | TAFS1250F20 | ● | 2 | 29 | 39 | 82 | 20 | 25 | PT1/8 | GCMT040204-U | TS2 | TKY06F |
| | 3 | TAFM1250F20 | ● | 2 | 41 | 51 | 94 | 20 | 25 | PT1/8 | GCMT040204-U | TS2 | TKY06F |
| 13.0 | 2 | TAFS1300F20 | ● | 2 | 31 | 41 | 84 | 20 | 25 | PT1/8 | GCMT040204-U | TS2 | TKY06F |
| | 3 | TAFM1300F20 | ● | 2 | 44 | 54 | 97 | 20 | 25 | PT1/8 | GCMT040204-U | TS2 | TKY06F |
| 13.5 | 2 | TAFS1350F20 | ● | 2 | 31 | 41 | 84 | 20 | 25 | PT1/8 | GCMT040204-U | TS2 | TKY06F |
| | 3 | TAFM1350F20 | ● | 2 | 44 | 54 | 97 | 20 | 25 | PT1/8 | GCMT040204-U | TS2 | TKY06F |
| 14.0 | 2 | TAFS1400F20 | ● | 2 | 33 | 43 | 86 | 20 | 25 | PT1/8 | GCMT040204-U | TS2 | TKY06F |
| | 3 | TAFM1400F20 | ● | 2 | 47 | 57 | 100 | 20 | 25 | PT1/8 | GCMT040204-U | TS2 | TKY06F |
| 14.5 | 2 | TAFS1450F20 | ● | 2 | 33 | 43 | 86 | 20 | 25 | PT1/8 | GCMT040204-U | TS2 | TKY06F |
| | 3 | TAFM1450F20 | ● | 2 | 47 | 57 | 100 | 20 | 25 | PT1/8 | GCMT040204-U | TS2 | TKY06F |
| 15.0 | 2 | TAFS1500F20 | ● | 2 | 35 | 45 | 88 | 20 | 25 | PT1/8 | GPMT060204-U | TS2 | TKY06F |
| | 3 | TAFM1500F20 | ● | 2 | 50 | 60 | 103 | 20 | 25 | PT1/8 | GPMT060204-U | TS2 | TKY06F |
| 15.5 | 2 | TAFS1550F20 | ● | 2 | 35 | 45 | 88 | 20 | 25 | PT1/8 | GPMT060204-U | TS2 | TKY06F |
| | 3 | TAFM1550F20 | ● | 2 | 50 | 60 | 103 | 20 | 25 | PT1/8 | GPMT060204-U | TS2 | TKY06F |
| 16.0 | 2 | TAFS1600F25 | ● | 2 | 38 | 57 | 107 | 25 | 35 | PT1/8 | GPMT060204-U | TS2 | TKY06F |
| | 3 | TAFM1600F25 | ● | 2 | 54 | 73 | 123 | 25 | 35 | PT1/8 | GPMT060204-U | TS2 | TKY06F |
| | 4 | TAFM1600F25 | ● | 2 | 70 | 89 | 139 | 25 | 35 | PT1/8 | GPMT060204-U | TS2 | TKY06F |
| 16.5 | 2 | TAFS1650F25 | ● | 2 | 38 | 57 | 107 | 25 | 35 | PT1/8 | GPMT060204-U | TS2 | TKY06F |
| | 3 | TAFM1650F25 | ● | 2 | 54 | 73 | 123 | 25 | 35 | PT1/8 | GPMT060204-U | TS2 | TKY06F |
| 17.0 | 2 | TAFS1700F25 | ● | 2 | 41 | 59 | 109 | 25 | 35 | PT1/8 | GPMT060204-U | TS2 | TKY06F |
| | 3 | TAFM1700F25 | ● | 2 | 58 | 76 | 126 | 25 | 35 | PT1/8 | GPMT060204-U | TS2 | TKY06F |
| | 4 | TAFM1700F25 | ● | 2 | 75 | 93 | 143 | 25 | 35 | PT1/8 | GPMT060204-U | TS2 | TKY06F |
| 17.5 | 2 | TAFS1750F25 | ● | 2 | 41 | 59 | 109 | 25 | 35 | PT1/8 | GPMT060204-U | TS2 | TKY06F |
| | 3 | TAFM1750F25 | ● | 2 | 58 | 76 | 126 | 25 | 35 | PT1/8 | GPMT060204-U | TS2 | TKY06F |
| 18.0 | 2 | TAFS1800F25 | ● | 2 | 43 | 61 | 111 | 25 | 35 | PT1/8 | GPMT070204-U | TS25 | TKY08F |
| | 3 | TAFM1800F25 | ● | 2 | 61 | 79 | 129 | 25 | 35 | PT1/8 | GPMT070204-U | TS25 | TKY08F |
| | 4 | TAFM1800F25 | ● | 2 | 79 | 97 | 147 | 25 | 35 | PT1/8 | GPMT070204-U | TS25 | TKY08F |
| 18.5 | 2 | TAFS1850F25 | ● | 2 | 43 | 61 | 111 | 25 | 35 | PT1/8 | GPMT070204-U | TS25 | TKY08F |
| | 3 | TAFM1850F25 | ● | 2 | 61 | 79 | 129 | 25 | 35 | PT1/8 | GPMT070204-U | TS25 | TKY08F |

| Drill Diameter D1 (mm) | Hole Depth (l/d) | Order Number | Stock | Number of Inserts | Dimensions (mm) | | | | | | Insert Number |  |  |
|------------------------------|---------------------|--------------|-------|-------------------|-----------------|-----|-----|----|----|-------|---------------|---|---|
| | | | | | L3 | L2 | L1 | D4 | D7 | D8 | | | |
| 19.0 | 2 | TAFS1900F25 | ● | 2 | 46 | 63 | 113 | 25 | 35 | PT1/8 | GPMT070204-U | TS25 | ①TKY08F |
| | 3 | TAFM1900F25 | ● | 2 | 65 | 82 | 132 | 25 | 35 | PT1/8 | GPMT070204-U | TS25 | ①TKY08F |
| | 4 | T AFL1900F25 | ● | 2 | 84 | 101 | 151 | 25 | 35 | PT1/8 | GPMT070204-U | TS25 | ①TKY08F |
| 19.5 | 2 | TAFS1950F25 | ● | 2 | 46 | 63 | 113 | 25 | 35 | PT1/8 | GPMT070204-U | TS25 | ①TKY08F |
| | 3 | TAFM1950F25 | ● | 2 | 65 | 82 | 132 | 25 | 35 | PT1/8 | GPMT070204-U | TS25 | ①TKY08F |
| 20.0 | 2 | TAFS2000F25 | ● | 2 | 48 | 65 | 115 | 25 | 35 | PT1/8 | GPMT070204-U | TS25 | ①TKY08F |
| | 3 | TAFM2000F25 | ● | 2 | 68 | 85 | 135 | 25 | 35 | PT1/8 | GPMT070204-U | TS25 | ①TKY08F |
| | 4 | T AFL2000F25 | ● | 2 | 88 | 105 | 155 | 25 | 35 | PT1/8 | GPMT070204-U | TS25 | ①TKY08F |
| 20.5 | 2 | TAFS2050F25 | ● | 2 | 48 | 65 | 115 | 25 | 35 | PT1/8 | GPMT070204-U | TS25 | ①TKY08F |
| | 3 | TAFM2050F25 | ● | 2 | 68 | 85 | 135 | 25 | 35 | PT1/8 | GPMT070204-U | TS25 | ①TKY08F |
| 21.0 | 2 | TAFS2100F25 | ● | 2 | 50 | 67 | 117 | 25 | 35 | PT1/8 | GPMT070204-U | TS25 | ①TKY08F |
| | 3 | TAFM2100F25 | ● | 2 | 71 | 88 | 138 | 25 | 35 | PT1/8 | GPMT070204-U | TS25 | ①TKY08F |
| | 4 | T AFL2100F25 | ● | 2 | 92 | 109 | 159 | 25 | 35 | PT1/8 | GPMT070204-U | TS25 | ①TKY08F |
| 21.5 | 2 | TAFS2150F25 | ● | 2 | 50 | 67 | 117 | 25 | 35 | PT1/8 | GPMT070204-U | TS25 | ①TKY08F |
| | 3 | TAFM2150F25 | ● | 2 | 71 | 88 | 138 | 25 | 35 | PT1/8 | GPMT070204-U | TS25 | ①TKY08F |
| 22.0 | 2 | TAFS2200F25 | ● | 2 | 53 | 69 | 119 | 25 | 35 | PT1/8 | GPMT070204-U | TS25 | ①TKY08F |
| | 3 | TAFM2200F25 | ● | 2 | 75 | 91 | 141 | 25 | 35 | PT1/8 | GPMT070204-U | TS25 | ①TKY08F |
| | 4 | T AFL2200F25 | ● | 2 | 97 | 113 | 163 | 25 | 35 | PT1/8 | GPMT070204-U | TS25 | ①TKY08F |
| 22.5 | 2 | TAFS2250F25 | ● | 2 | 53 | 69 | 119 | 25 | 35 | PT1/8 | GPMT070204-U | TS25 | ①TKY08F |
| | 3 | TAFM2250F25 | ● | 2 | 75 | 91 | 141 | 25 | 35 | PT1/8 | GPMT070204-U | TS25 | ①TKY08F |
| 23.0 | 2 | TAFS2300F25 | ● | 2 | 55 | 71 | 121 | 25 | 35 | PT1/8 | GPMT090304-U | TS3 | ①TKY08F |
| | 3 | TAFM2300F25 | ● | 2 | 78 | 94 | 144 | 25 | 35 | PT1/8 | GPMT090304-U | TS3 | ①TKY08F |
| | 4 | T AFL2300F25 | ● | 2 | 101 | 117 | 167 | 25 | 35 | PT1/8 | GPMT090304-U | TS3 | ①TKY08F |
| 23.5 | 2 | TAFS2350F25 | ● | 2 | 55 | 71 | 121 | 25 | 35 | PT1/8 | GPMT090304-U | TS3 | ①TKY08F |
| | 3 | TAFM2350F25 | ● | 2 | 78 | 94 | 144 | 25 | 35 | PT1/8 | GPMT090304-U | TS3 | ①TKY08F |
| 24.0 | 2 | TAFS2400F25 | ● | 2 | 58 | 73 | 123 | 25 | 35 | PT1/8 | GPMT090304-U | TS3 | ①TKY08F |
| | 3 | TAFM2400F25 | ● | 2 | 82 | 97 | 147 | 25 | 35 | PT1/8 | GPMT090304-U | TS3 | ①TKY08F |
| | 4 | T AFL2400F25 | ● | 2 | 106 | 121 | 171 | 25 | 35 | PT1/8 | GPMT090304-U | TS3 | ①TKY08F |
| 24.5 | 2 | TAFS2450F25 | ● | 2 | 58 | 73 | 123 | 25 | 35 | PT1/8 | GPMT090304-U | TS3 | ①TKY08F |
| | 3 | TAFM2450F25 | ● | 2 | 82 | 97 | 147 | 25 | 35 | PT1/8 | GPMT090304-U | TS3 | ①TKY08F |
| 25.0 | 2 | TAFS2500F32 | ● | 2 | 60 | 75 | 130 | 32 | 42 | PT1/8 | GPMT090304-U | TS3 | ①TKY08F |
| | 3 | TAFM2500F32 | ● | 2 | 85 | 100 | 155 | 32 | 42 | PT1/8 | GPMT090304-U | TS3 | ①TKY08F |
| | 4 | T AFL2500F32 | ● | 2 | 110 | 125 | 180 | 32 | 42 | PT1/8 | GPMT090304-U | TS3 | ①TKY08F |
| 25.5 | 2 | TAFS2550F32 | ● | 2 | 60 | 75 | 130 | 32 | 42 | PT1/8 | GPMT090304-U | TS3 | ①TKY08F |
| | 3 | TAFM2550F32 | ● | 2 | 85 | 100 | 155 | 32 | 42 | PT1/8 | GPMT090304-U | TS3 | ①TKY08F |
| 26.0 | 2 | TAFS2600F32 | ● | 2 | 62 | 77 | 132 | 32 | 42 | PT1/8 | GPMT090304-U | TS3 | ①TKY08F |
| | 3 | TAFM2600F32 | ● | 2 | 88 | 103 | 158 | 32 | 42 | PT1/8 | GPMT090304-U | TS3 | ①TKY08F |
| | 4 | T AFL2600F32 | ● | 2 | 114 | 129 | 184 | 32 | 42 | PT1/8 | GPMT090304-U | TS3 | ①TKY08F |
| 26.5 | 2 | TAFS2650F32 | ● | 2 | 62 | 77 | 132 | 32 | 42 | PT1/8 | GPMT090304-U | TS3 | ①TKY08F |
| | 3 | TAFM2650F32 | ● | 2 | 88 | 103 | 158 | 32 | 42 | PT1/8 | GPMT090304-U | TS3 | ①TKY08F |
| 27.0 | 2 | TAFS2700F32 | ● | 2 | 65 | 79 | 134 | 32 | 42 | PT1/8 | GPMT090304-U | TS3 | ①TKY08F |
| | 3 | TAFM2700F32 | ● | 2 | 92 | 106 | 161 | 32 | 42 | PT1/8 | GPMT090304-U | TS3 | ①TKY08F |
| | 4 | T AFL2700F32 | ● | 2 | 119 | 133 | 188 | 32 | 42 | PT1/8 | GPMT090304-U | TS3 | ①TKY08F |
| 27.5 | 2 | TAFS2750F32 | ● | 2 | 65 | 79 | 134 | 32 | 42 | PT1/8 | GPMT090304-U | TS3 | ①TKY08F |
| | 3 | TAFM2750F32 | ● | 2 | 92 | 106 | 161 | 32 | 42 | PT1/8 | GPMT090304-U | TS3 | ①TKY08F |
| 28.0 | 2 | TAFS2800F32 | ● | 2 | 67 | 81 | 136 | 32 | 42 | PT1/8 | GPMT11T308-U | TS4 | ②TKY15D |
| | 3 | TAFM2800F32 | ● | 2 | 95 | 109 | 164 | 32 | 42 | PT1/8 | GPMT11T308-U | TS4 | ②TKY15D |
| | 4 | T AFL2800F32 | ● | 2 | 123 | 137 | 192 | 32 | 42 | PT1/8 | GPMT11T308-U | TS4 | ②TKY15D |

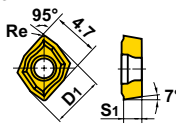
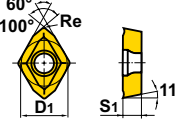
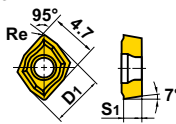
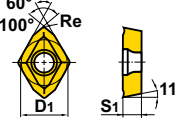
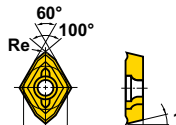


Drills between $\phi 49$ - $\phi 56$ have 4 inserts

| Drill Diameter D_1 (mm) | Hole Depth (l/d) | Order Number | Stock | Number of Inserts | Dimensions (mm) | | | | | | Insert Number |  Clamp Screw |  Wrench |
|---------------------------------|---------------------|--------------|-------|-------------------|-----------------|-----|-----|----|----|-------|---------------|--|---|
| | | | | | L3 | L2 | L1 | D4 | D7 | D8 | | | |
| 28.5 | 2 | TAFS2850F32 | ● | 2 | 67 | 81 | 136 | 32 | 42 | PT1/8 | GPMT11T308-U | TS4 | TKY15D |
| | 3 | TAFM2850F32 | ● | 2 | 95 | 109 | 164 | 32 | 42 | PT1/8 | GPMT11T308-U | TS4 | TKY15D |
| 29.0 | 2 | TAFS2900F32 | ● | 2 | 70 | 83 | 138 | 32 | 42 | PT1/8 | GPMT11T308-U | TS4 | TKY15D |
| | 3 | TAFM2900F32 | ● | 2 | 99 | 112 | 167 | 32 | 42 | PT1/8 | GPMT11T308-U | TS4 | TKY15D |
| | 4 | TAFM2900F32 | ● | 2 | 128 | 141 | 196 | 32 | 42 | PT1/8 | GPMT11T308-U | TS4 | TKY15D |
| 29.5 | 2 | TAFS2950F32 | ● | 2 | 70 | 83 | 138 | 32 | 42 | PT1/8 | GPMT11T308-U | TS4 | TKY15D |
| | 3 | TAFM2950F32 | ● | 2 | 99 | 112 | 167 | 32 | 42 | PT1/8 | GPMT11T308-U | TS4 | TKY15D |
| 30.0 | 2 | TAFS3000F40 | ● | 2 | 72 | 90 | 155 | 40 | 50 | PT1/4 | GPMT11T308-U | TS4 | TKY15D |
| | 3 | TAFM3000F40 | ● | 2 | 102 | 120 | 185 | 40 | 50 | PT1/4 | GPMT11T308-U | TS4 | TKY15D |
| | 4 | TAFM3000F40 | ● | 2 | 132 | 150 | 215 | 40 | 50 | PT1/4 | GPMT11T308-U | TS4 | TKY15D |
| 31.0 | 2 | TAFS3100F40 | ● | 2 | 74 | 92 | 157 | 40 | 50 | PT1/4 | GPMT11T308-U | TS4 | TKY15D |
| | 3 | TAFM3100F40 | ● | 2 | 105 | 123 | 188 | 40 | 50 | PT1/4 | GPMT11T308-U | TS4 | TKY15D |
| | 4 | TAFM3100F40 | ● | 2 | 136 | 154 | 219 | 40 | 50 | PT1/4 | GPMT11T308-U | TS4 | TKY15D |
| 32.0 | 2 | TAFS3200F40 | ● | 2 | 77 | 94 | 159 | 40 | 50 | PT1/4 | GPMT11T308-U | TS4 | TKY15D |
| | 3 | TAFM3200F40 | ● | 2 | 109 | 126 | 191 | 40 | 50 | PT1/4 | GPMT11T308-U | TS4 | TKY15D |
| | 4 | TAFM3200F40 | ● | 2 | 141 | 158 | 223 | 40 | 50 | PT1/4 | GPMT11T308-U | TS4 | TKY15D |
| 33.0 | 2 | TAFS3300F40 | ● | 2 | 79 | 96 | 161 | 40 | 50 | PT1/4 | GPMT11T308-U | TS4 | TKY15D |
| | 3 | TAFM3300F40 | ● | 2 | 112 | 129 | 194 | 40 | 50 | PT1/4 | GPMT11T308-U | TS4 | TKY15D |
| | 4 | TAFM3300F40 | ● | 2 | 145 | 162 | 227 | 40 | 50 | PT1/4 | GPMT11T308-U | TS4 | TKY15D |
| 34.0 | 2 | TAFS3400F40 | ● | 2 | 82 | 98 | 163 | 40 | 50 | PT1/4 | GPMT11T308-U | TS4 | TKY15D |
| | 3 | TAFM3400F40 | ● | 2 | 116 | 132 | 197 | 40 | 50 | PT1/4 | GPMT11T308-U | TS4 | TKY15D |
| | 4 | TAFM3400F40 | ● | 2 | 150 | 166 | 231 | 40 | 50 | PT1/4 | GPMT11T308-U | TS4 | TKY15D |
| 35.0 | 2 | TAFS3500F40 | ● | 2 | 84 | 100 | 165 | 40 | 50 | PT1/4 | GPMT140408-U | TS55 | TKY25D |
| | 3 | TAFM3500F40 | ● | 2 | 119 | 135 | 200 | 40 | 50 | PT1/4 | GPMT140408-U | TS55 | TKY25D |
| 36.0 | 2 | TAFS3600F40 | ● | 2 | 86 | 102 | 167 | 40 | 50 | PT1/4 | GPMT140408-U | TS55 | TKY25D |
| | 3 | TAFM3600F40 | ● | 2 | 122 | 138 | 203 | 40 | 50 | PT1/4 | GPMT140408-U | TS55 | TKY25D |
| 37.0 | 2 | TAFS3700F40 | ● | 2 | 89 | 104 | 169 | 40 | 50 | PT1/4 | GPMT140408-U | TS55 | TKY25D |
| | 3 | TAFM3700F40 | ● | 2 | 126 | 141 | 206 | 40 | 50 | PT1/4 | GPMT140408-U | TS55 | TKY25D |
| 38.0 | 2 | TAFS3800F40 | ● | 2 | 91 | 106 | 171 | 40 | 50 | PT1/4 | GPMT140408-U | TS55 | TKY25D |
| | 3 | TAFM3800F40 | ● | 2 | 129 | 144 | 209 | 40 | 50 | PT1/4 | GPMT140408-U | TS55 | TKY25D |
| 39.0 | 2 | TAFS3900F40 | ● | 2 | 94 | 108 | 173 | 40 | 50 | PT1/4 | GPMT140408-U | TS55 | TKY25D |
| | 3 | TAFM3900F40 | ● | 2 | 133 | 147 | 212 | 40 | 50 | PT1/4 | GPMT140408-U | TS55 | TKY25D |

| Drill Diameter D ₁ (mm) | Hole Depth (l/d) | Order Number | Stock | Number of Inserts | Dimensions (mm) | | | | | | Insert Number |  |  |
|--|---------------------|--------------|-------|-------------------|-----------------|----------------|----------------|----------------|----------------|----------------|---------------------------|---|---|
| | | | | | L ₃ | L ₂ | L ₁ | D ₄ | D ₇ | D ₈ | | | |
| 40.0 | 2 | TAFS4000F40 | ● | 2 | 96 | 110 | 175 | 40 | 50 | PT1/4 | GPMT140408-U [○] | TS55 | ②TKY25D |
| | 3 | TAFM4000F40 | ● | 2 | 136 | 150 | 215 | 40 | 50 | PT1/4 | GPMT140408-U [○] | TS55 | ②TKY25D |
| 41.0 | 2 | TAFS4100F40 | ● | 2 | 98 | 112 | 177 | 40 | 50 | PT1/4 | GPMT140408-U [○] | TS55 | ②TKY25D |
| | 3 | TAFM4100F40 | ● | 2 | 139 | 153 | 218 | 40 | 50 | PT1/4 | GPMT140408-U [○] | TS55 | ②TKY25D |
| 42.0 | 2 | TAFS4200F40 | ● | 2 | 101 | 114 | 179 | 40 | 50 | PT1/4 | GPMT140408-U [○] | TS55 | ②TKY25D |
| | 3 | TAFM4200F40 | ● | 2 | 143 | 156 | 221 | 40 | 50 | PT1/4 | GPMT140408-U [○] | TS55 | ②TKY25D |
| 43.0 | 2 | TAFS4300F40 | ● | 2 | 103 | 116 | 181 | 40 | 50 | PT1/4 | GPMT140408-U [○] | TS55 | ②TKY25D |
| | 3 | TAFM4300F40 | ● | 2 | 146 | 159 | 224 | 40 | 50 | PT1/4 | GPMT140408-U [○] | TS55 | ②TKY25D |
| 44.0 | 2 | TAFS4400F40 | ● | 2 | 106 | 118 | 183 | 40 | 50 | PT1/4 | GPMT140408-U [○] | TS55 | ②TKY25D |
| | 3 | TAFM4400F40 | ● | 2 | 150 | 162 | 227 | 40 | 50 | PT1/4 | GPMT140408-U [○] | TS55 | ②TKY25D |
| 45.0 | 2 | TAFS4500F40 | ● | 2 | 108 | 120 | 185 | 40 | 54 | PT1/4 | GPMT140408-U [○] | TS55 | ②TKY25D |
| | 3 | TAFM4500F40 | ● | 2 | 153 | 165 | 230 | 40 | 54 | PT1/4 | GPMT140408-U [○] | TS55 | ②TKY25D |
| 46.0 | 2 | TAFS4600F40 | ● | 2 | 110 | 122 | 187 | 40 | 54 | PT1/4 | GPMT140408-U [○] | TS55 | ②TKY25D |
| | 3 | TAFM4600F40 | ● | 2 | 156 | 168 | 233 | 40 | 54 | PT1/4 | GPMT140408-U [○] | TS55 | ②TKY25D |
| 47.0 | 2 | TAFS4700F40 | ● | 2 | 113 | 124 | 189 | 40 | 54 | PT1/4 | GPMT140408-U [○] | TS55 | ②TKY25D |
| | 3 | TAFM4700F40 | ● | 2 | 160 | 171 | 236 | 40 | 54 | PT1/4 | GPMT140408-U [○] | TS55 | ②TKY25D |
| 48.0 | 2 | TAFS4800F40 | ● | 2 | 115 | 126 | 191 | 40 | 54 | PT1/4 | GPMT140408-U [○] | TS55 | ②TKY25D |
| | 3 | TAFM4800F40 | ● | 2 | 163 | 174 | 239 | 40 | 54 | PT1/4 | GPMT140408-U [○] | TS55 | ②TKY25D |
| 49.0 | 2 | TAFS4900F40 | ● | 4 | 118 | 133 | 198 | 40 | 58 | PT1/4 | GPMT090304-U [○] | TS3 | ①TKY08F |
| | 3 | TAFM4900F40 | ● | 4 | 167 | 182 | 247 | 40 | 58 | PT1/4 | GPMT090304-U [○] | TS3 | ①TKY08F |
| 50.0 | 2 | TAFS5000F40 | ● | 4 | 120 | 135 | 200 | 40 | 58 | PT1/4 | GPMT090304-U [○] | TS3 | ①TKY08F |
| | 3 | TAFM5000F40 | ● | 4 | 170 | 185 | 250 | 40 | 58 | PT1/4 | GPMT090304-U [○] | TS3 | ①TKY08F |
| 51.0 | 2 | TAFS5100F40 | ● | 4 | 122 | 137 | 202 | 40 | 58 | PT1/4 | GPMT090304-U [○] | TS3 | ①TKY08F |
| | 3 | TAFM5100F40 | ● | 4 | 173 | 188 | 253 | 40 | 58 | PT1/4 | GPMT090304-U [○] | TS3 | ①TKY08F |
| 52.0 | 2 | TAFS5200F40 | ● | 4 | 125 | 139 | 204 | 40 | 58 | PT1/4 | GPMT090304-U [○] | TS3 | ①TKY08F |
| | 3 | TAFM5200F40 | ● | 4 | 177 | 191 | 256 | 40 | 58 | PT1/4 | GPMT090304-U [○] | TS3 | ①TKY08F |
| 53.0 | 2 | TAFS5300F40 | ● | 4 | 127 | 141 | 206 | 40 | 63 | PT1/4 | GPMT090304-U [○] | TS3 | ①TKY08F |
| | 3 | TAFM5300F40 | ● | 4 | 180 | 194 | 259 | 40 | 63 | PT1/4 | GPMT090304-U [○] | TS3 | ①TKY08F |
| 54.0 | 2 | TAFS5400F40 | ● | 4 | 128 | 134 | 208 | 40 | 63 | PT1/4 | GPMT090304-U [○] | TS3 | ①TKY08F |
| | 3 | TAFM5400F40 | ● | 4 | 182 | 197 | 262 | 40 | 63 | PT1/4 | GPMT090304-U [○] | TS3 | ①TKY08F |
| 55.0 | 2 | TAFS5500F40 | ● | 4 | 130 | 145 | 210 | 40 | 63 | PT1/4 | GPMT090304-U [○] | TS3 | ①TKY08F |
| | 3 | TAFM5500F40 | ● | 4 | 185 | 200 | 265 | 40 | 63 | PT1/4 | GPMT090304-U [○] | TS3 | ①TKY08F |
| 56.0 | 2 | TAFS5600F40 | ● | 4 | 132 | 147 | 212 | 40 | 63 | PT1/4 | GPMT090304-U [○] | TS3 | ①TKY08F |
| | 3 | TAFM5600F40 | ● | 4 | 188 | 203 | 268 | 40 | 63 | PT1/4 | GPMT090304-U [○] | TS3 | ①TKY08F |

Inserts

| Geometry | Drill Dia. | Insert Number | Dimensions (mm) | | | Grade | | | | | |
|---|------------------------------|----------------------|-----------------|------|-----|---------------|-------|-------|--------|-------|-------|
| | | | D1 | S1 | Re | NEW VP15TF | UP20M | GP20M | UE6020 | US735 | F5010 |
| U1 Breaker GCMT  GPMT  | φ 12 – φ 14.5 | GCMT040204-U1 | 5.0 | 2.38 | 0.4 | | ● | | | | |
| | φ 15 – φ 17.5 | GPMT060204-U1 | 5.56 | 2.38 | 0.4 | | ● | | ● | ● | ● |
| | φ 18 – φ 22.5 | GPMT070204-U1 | 6.35 | 2.38 | 0.4 | | ● | | ● | ● | ● |
| | φ 23 – φ 27.5 φ 49 – φ 56 | GPMT090304-U1 | 7.94 | 3.18 | 0.4 | | ● | | ● | ● | ● |
| | φ 28 – φ 34 | GPMT11T308-U1 | 9.525 | 3.97 | 0.8 | | ● | | ● | ● | ● |
| | φ 35 – φ 48 | GPMT140408-U1 | 12.70 | 4.76 | 0.8 | | ● | | ● | ● | ● |
| U2 Breaker GCMT  GPMT  | φ 12 – φ 14.5 | GCMT040204-U2 | 5.0 | 2.38 | 0.4 | ● | | ● | | | |
| | φ 15 – φ 17.5 | GPMT060204-U2 | 5.56 | 2.38 | 0.4 | ● | ● | | ● | ● | ● |
| | φ 18 – φ 22.5 | GPMT070204-U2 | 6.35 | 2.38 | 0.4 | ● | ● | | ● | ● | ● |
| | φ 23 – φ 27.5 φ 49 – φ 56 | GPMT090304-U2 | 7.94 | 3.18 | 0.4 | ● | ● | | ● | ● | ● |
| | φ 28 – φ 34 | GPMT11T308-U2 | 9.525 | 3.97 | 0.8 | ● | ● | | ● | ● | ● |
| | φ 35 – φ 48 | GPMT140408-U2 | 12.70 | 4.76 | 0.8 | ● | ● | | ● | ● | ● |
| U3 Breaker GPMT  | φ 15 – φ 17.5 | GPMT060204-U3 | 5.56 | 2.38 | 0.4 | | ● | | ● | ● | ● |
| | φ 18 – φ 22.5 | GPMT070204-U3 | 6.35 | 2.38 | 0.4 | | ● | | ● | ● | ● |
| | φ 23 – φ 27.5 φ 49 – φ 56 | GPMT090304-U3 | 7.94 | 3.18 | 0.4 | | ● | | ● | ● | ● |
| | φ 28 – φ 34 | GPMT11T308-U3 | 9.525 | 3.97 | 0.8 | | ● | | ● | ● | ● |
| | φ 35 – φ 48 | GPMT140408-U3 | 12.70 | 4.76 | 0.8 | | ● | | ● | ● | ● |

Insert Recommendation

Chip breaker recommendation

◎ : 1st recommendation ○ : 2nd recommendation

| Work Material | P | | | | | | M | | K | | | |
|---------------|------------|------|--------------|------|-------------|------|-----------------|------|-----------|------|-------------------|------|
| | Mild Steel | | Carbon Steel | | Alloy Steel | | Stainless Steel | | Cast Iron | | Ductile Cast Iron | |
| | GCMT | GPMT | GCMT | GPMT | GCMT | GPMT | GCMT | GPMT | GCMT | GPMT | GCMT | GPMT |
| U1 | ◎ | ◎ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| U2 | ○ | ○ | ◎ | ○ | ◎ | ○ | ◎ | ◎ | ◎ | ○ | ◎ | ○ |
| U3 | | ○ | | ◎ | | ◎ | | ○ | | ◎ | | ◎ |

Insert Grade Recommendation

◎ : 1st recommendation ○ : 2nd recommendation

| Work Material | P | | | | | | M | | K | | | |
|-------------------|------------|------|--------------|------|-------------|------|-----------------|------|-----------|------|-------------------|------|
| | Mild Steel | | Carbon Steel | | Alloy Steel | | Stainless Steel | | Cast Iron | | Ductile Cast Iron | |
| | GCMT | GPMT | GCMT | GPMT | GCMT | GPMT | GCMT | GPMT | GCMT | GPMT | GCMT | GPMT |
| NEW VP15TF | ○ | ○ | ◎ | ○ | ◎ | ○ | ◎ | ◎ | ◎ | ○ | ◎ | ○ |
| UP20M | ◎ | ◎ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ◎ |
| GP20M | ○ | | ◎ | | ◎ | | ◎ | | ◎ | | ◎ | |
| UE6020 | | ○ | | ◎ | | ◎ | | ○ | | ○ | | ○ |
| US735 | | ○ | | ○ | | ○ | | ◎ | | ○ | | ○ |
| F5010 | | | | | | | | | | ◎ | | ◎ |

Recommended Cutting Conditions

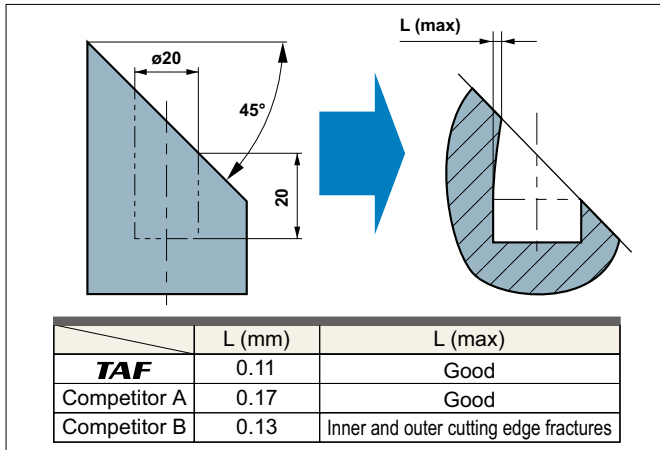
| Work Material | Hardness | Cutting Speed (m/min) | | | Breaker | Feed (mm/rev) | | | | | |
|---|---|-----------------------|------------------|--------------------|-----------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | | l/d = 2 or 3 | | l/d = 4 (φ 16-) | | Drill Diameter (mm) | | | | | |
| | | (φ 12-φ 14.5) | (φ 15-) | | | φ 12-φ 14.5 | φ 15-φ 22.5 | φ 23-φ 34 | φ 35-φ 48 | φ 49-φ 56 | |
| P Mild Steel (JIS SS400 etc.) | ≤180HB | 150 (100-200) | 200 (150-300) | 140 (100-200) | U1 | 0.06 (0.04-0.10) | 0.07 (0.04-0.10) | 0.08 (0.04-0.10) | 0.10 (0.04-0.12) | 0.08 (0.04-0.10) | |
| | | | | | U2 | 0.06 (0.04-0.10) | 0.08 (0.04-0.12) | 0.10 (0.04-0.12) | 0.12 (0.04-0.14) | 0.10 (0.04-0.12) | |
| | | | | | U3 | — | 0.08 (0.04-0.12) | 0.10 (0.04-0.12) | 0.12 (0.04-0.14) | 0.10 (0.04-0.12) | |
| | Carbon Steel (JIS S45C, JIS S48C etc.) | 180-280HB | 120 (80-160) | 150 (120-180) | 100 (80-120) | U1 | 0.06 (0.04-0.10) | 0.09 (0.06-0.12) | 0.12 (0.08-0.14) | 0.15 (0.08-0.18) | 0.12 (0.08-0.14) |
| | | | | | | U2 | 0.06 (0.04-0.10) | 0.12 (0.06-0.14) | 0.14 (0.08-0.18) | 0.17 (0.08-0.20) | 0.14 (0.08-0.18) |
| | | | | | | U3 | — | 0.12 (0.06-0.14) | 0.14 (0.08-0.18) | 0.17 (0.08-0.20) | 0.14 (0.08-0.18) |
| | Alloy Steel (JIS SCM440, JIS SCr420 etc.) | 180-280HB | 120 (80-160) | 150 (120-180) | 100 (80-120) | U1 | 0.06 (0.04-0.10) | 0.08 (0.06-0.10) | 0.09 (0.06-0.12) | 0.11 (0.06-0.14) | 0.09 (0.06-0.12) |
| | | | | | | U2 | 0.06 (0.04-0.10) | 0.10 (0.06-0.12) | 0.12 (0.08-0.16) | 0.14 (0.08-0.18) | 0.12 (0.08-0.16) |
| | | | | | | U3 | — | 0.10 (0.06-0.12) | 0.12 (0.08-0.16) | 0.14 (0.08-0.18) | 0.12 (0.08-0.16) |
| M Stainless Steel (JIS SUS304, JIS SUS316 etc.) | ≤200HB | 100 (80-120) | 150 (120-200) | 110 (80-140) | U1 | 0.07 (0.04-0.10) | 0.07 (0.04-0.10) | 0.08 (0.04-0.10) | 0.10 (0.04-0.12) | 0.08 (0.04-0.10) | |
| | | | | | U2 | 0.07 (0.04-0.10) | 0.08 (0.04-0.12) | 0.10 (0.04-0.14) | 0.12 (0.04-0.16) | 0.10 (0.04-0.14) | |
| | | | | | U3 | — | 0.08 (0.04-0.12) | 0.10 (0.04-0.14) | 0.12 (0.04-0.16) | 0.10 (0.04-0.14) | |
| K Cast Iron (JIS FC250 etc.) | Tensile strength ≤350MPa | 120 (80-160) | 150 (120-180) | 140 (110-160) | U1 | 0.07 (0.06-0.10) | 0.07 (0.06-0.10) | 0.10 (0.04-0.14) | 0.10 (0.06-0.14) | 0.10 (0.06-0.14) | |
| | | | | | U2 | 0.07 (0.06-0.10) | 0.15 (0.10-0.18) | 0.20 (0.10-0.25) | 0.20 (0.10-0.25) | 0.20 (0.10-0.25) | |
| | | | | | U3 | — | 0.15 (0.10-0.18) | 0.20 (0.10-0.25) | 0.20 (0.10-0.25) | 0.20 (0.10-0.25) | |
| Ductile Cast Iron (JIS FCD400 etc.) | Tensile strength ≤450MPa | 120 (80-150) | 150 (120-180) | 100 (80-120) | U1 | 0.06 (0.04-0.10) | 0.07 (0.06-0.10) | 0.10 (0.06-0.14) | 0.10 (0.06-0.14) | 0.10 (0.06-0.14) | |
| | | | | | U2 | 0.06 (0.04-0.10) | 0.12 (0.08-0.14) | 0.15 (0.08-0.20) | 0.18 (0.08-0.20) | 0.15 (0.08-0.20) | |
| | | | | | U3 | — | 0.12 (0.08-0.14) | 0.15 (0.08-0.20) | 0.18 (0.08-0.20) | 0.15 (0.08-0.20) | |

Note : The above feed rates should be reduced to approximately 80% when using the l/d = 4 drill.

Applications

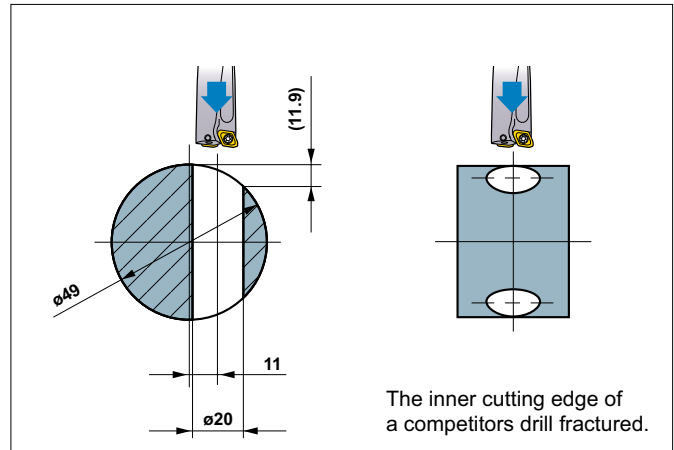
● Angled face drilling

Workpiece : JIS SCM440 (180HB - 280HB)
 Drill $\phi 20$ (3D type), Cutting speed : 80m/min
 Feed : 0.08mm/rev



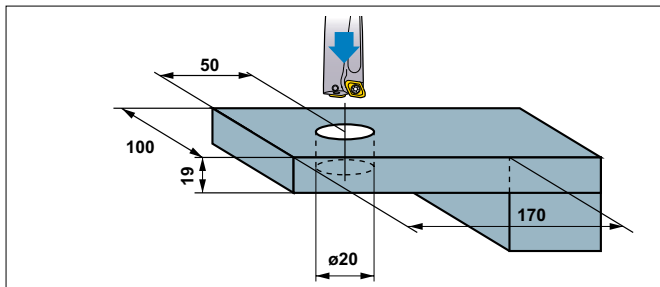
● Round workpiece drilling

Workpiece : JIS SCM440 (180HB - 280HB)
 Drill $\phi 20$ (3D type), Cutting speed : 50, 80, 100m/min
 Feed : 0.08mm/rev (initial cutting 0.05mm/rev)

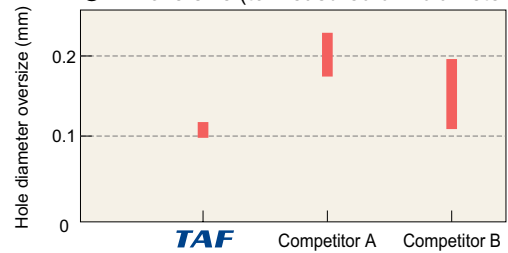


● Open sided drilling

Workpiece : JIS S50C (120HB - 180HB), Drill $\phi 20$ (3D type), Cutting speed : 80m/min Feed : 0.08mm/rev

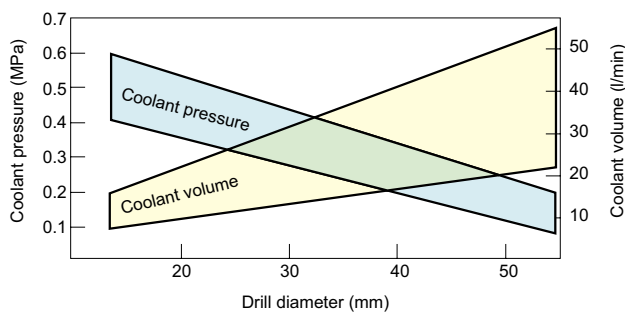


● Drill oversize (to measured drill diameter)



● Please ensure the highest rigidity possible exists in both machine set up and workholding.

● Refer to the following graph for coolant pressure and volume. Coolant is an important factor in the efficient use of these drills.

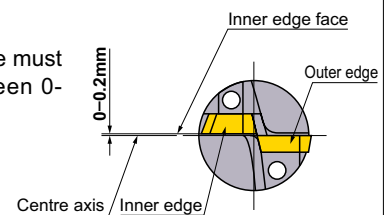


● Cannot be used for stack drilling.

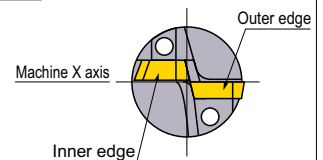
In common with many indexable insert drills, these drills produce a round disc on exit which unless evacuated may cause the drill to fracture.

● Use on a lathe

(1) The inner cutting edge must be positioned between 0-0.2mm over center.

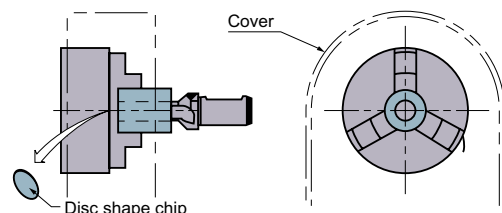


(2) To adjust the hole diameter by off-setting the drill, the outer cutting edge and machine axis must be set parallel.



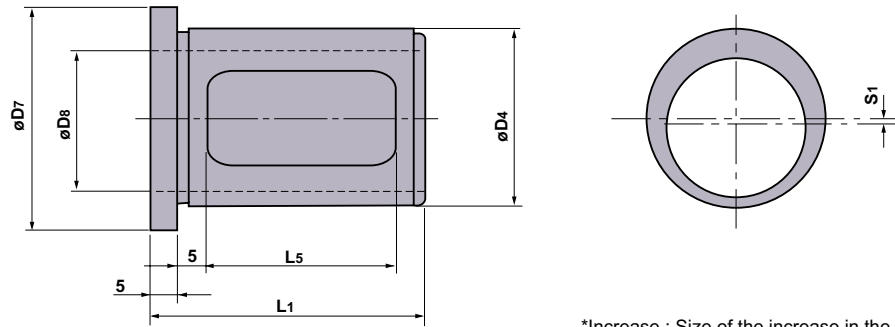
(3) When producing an oversize hole. The drill offset should be no more than 2% of the diameter. It is not possible to produce an undersized hole.

(4) When through hole drilling on a lathe the disc produced by the drill exiting the workpiece may be expelled at high velocity. To reduce the danger of injury or damage a cover guard is highly recommended.



JUST FIT SLEEVE

A sleeve designed to improve the versatility of the TAF drills, allowing the cutting diameter to be increased in increments of 0.1mm.



*Increase : Size of the increase in the cutting diameter

| Set Order Number | Individual Order Number | Stock | Dimensions (mm) | | | | | *Increase (\$1\times 2\$) | Suitable TAF Drill |
|------------------|-------------------------|-------|-----------------|----|----|----|----|---------------------------|---|
| | | | D7 | D4 | D8 | L1 | L5 | | |
| JFS-1 | JFS2520-10 | ● | 33 | 25 | 20 | 43 | 30 | 0.10 | TAFS/M/L1200F20 TAFS/M/L1550F20 |
| | 2520-20 | ● | 33 | 25 | 20 | 43 | 30 | 0.20 | |
| | 2520-30 | ● | 33 | 25 | 20 | 43 | 30 | 0.30 | |
| | 2520-40 | ● | 33 | 25 | 20 | 43 | 30 | 0.40 | |
| | 2520-50 | ● | 33 | 25 | 20 | 43 | 30 | 0.50 | |
| JFS-2 | JFS3225-10 | ● | 40 | 32 | 25 | 50 | 34 | 0.10 | TAFS/M/L1600F25 TAFS/M/L2450F25 |
| | 3225-20 | ● | 40 | 32 | 25 | 50 | 34 | 0.20 | |
| | 3225-30 | ● | 40 | 32 | 25 | 50 | 34 | 0.30 | |
| | 3225-40 | ● | 40 | 32 | 25 | 50 | 34 | 0.40 | |
| | 3225-50 | ● | 40 | 32 | 25 | 50 | 34 | 0.50 | |
| JFS-3 | JFS4032-10 | ● | 48 | 40 | 32 | 55 | 40 | 0.10 | TAFS/M/L2500F32 TAFS/M/L2950F32 |
| | 4032-20 | ● | 48 | 40 | 32 | 55 | 40 | 0.20 | |
| | 4032-30 | ● | 48 | 40 | 32 | 55 | 40 | 0.30 | |
| | 4032-40 | ● | 48 | 40 | 32 | 55 | 40 | 0.40 | |
| | 4032-50 | ● | 48 | 40 | 32 | 55 | 40 | 0.50 | |

● : Inventory maintained.

Guideline for selecting adjust fit sleeve

Desired ϕ = (Drill ϕ + Increase of JFS) + 0.1mm

(Eg.) Desired diameter is 20.3mm (oversize is taken as 0.1mm)

$$\phi 20.3 = (\text{TAS/M/L2000F25} + \text{JFS3225-20}) + 0.1$$



<Tool Selected>
Drill : TAFM2000F25
JUST FIT SLEEVE : JFS3225-20

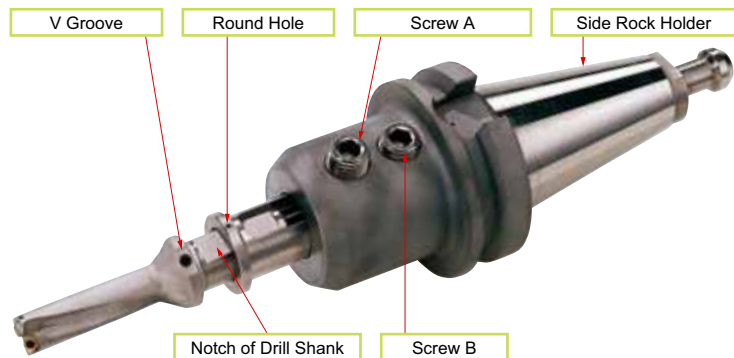
Note : Oversize can vary due to the cutting conditions used, please use the above as a guideline.

Application of the JUST FIT SLEEVE

- When inserting the drill into the side lock holder, align the V groove on the outer peripheral edge of the drill flange, the round holes of the outer peripheral edge of the sleeve flange and the screws of the side lock holder for fixing the drill. (If the drill does not have a V groove, align the notch of the drill shank with the round holes of the sleeve.)
- Insert screw A of the side lock holder directly through the open window of the sleeve to clamp the drill. Tighten screw B to a degree so not to damage the sleeve.

Note:

- Fine adjustments cannot be made for the diameter of the sleeve.
- Cannot be used with collet chuck type holders.



Ordering the JUST FIT SLEEVE

Purchasing Method 1

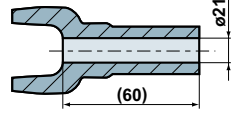
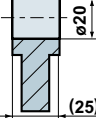
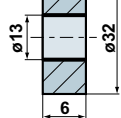
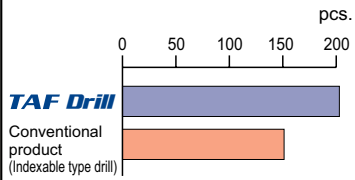
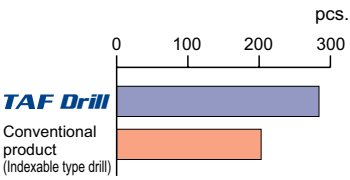
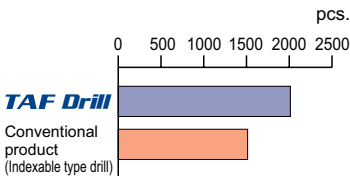
Oversize can vary due to the cutting conditions used. Therefore it is recommended to purchase as a set. When placing an order, please the Set order number. (5 sleeves/set)

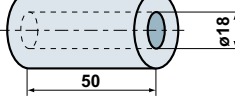
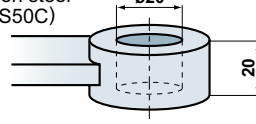
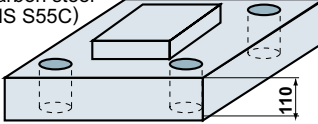
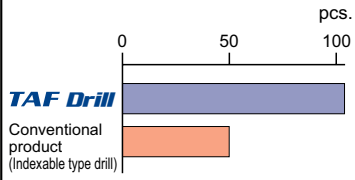
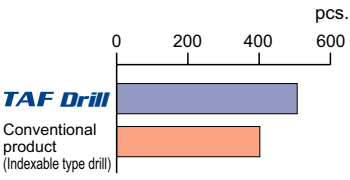
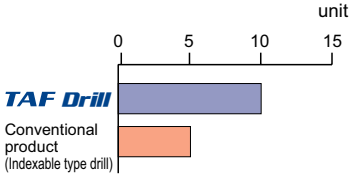
Purchasing Method 2

It is possible to order individually. When placing an order use the individual order number.

TAF Drill

Application Examples

| Tool | | TAFM2100F25 | TAFS2000F25 | TAFS1300F20 |
|--------------------|------------------------------------|--|--|--|
| Insert | | GPMT070204-U2 (VP15TF) | GPMT070204-U2 (VP15TF) | GCMT040204-U2 (GP20M) |
| Machine | | NC lathe | Machining center | NC lathe |
| Workpiece | | Carbon steel (JIS S48C)  | Carbon steel (JIS S30C)  | Carbon steel (JIS S45C)  |
| Cutting Conditions | Cutting Speed (m/min) | 133 | 90 | 102 |
| | Feed (mm/rev) | 0.12 | 0.21 | 0.10 |
| | Spindle Speed (min ⁻¹) | 2016 | 1432 | 2500 |
| | Feed (mm/min) | 242 | 301 | 250 |
| Coolant | | Water soluble oil | Water soluble oil | Oil |
| Results | |  |  |  |

| Tool | | TAFM1800F25 | TAFM2000F25 | TAFS2800F32 |
|--------------------|------------------------------------|---|---|--|
| Insert | | GPMT070204-U2 (UE6020) | GPMT070204-U2 (UP20M) | GPMT11T308-U3 (UP20M) |
| Machine | | NC lathe | Machining center | Machining center |
| Workpiece | | Alloy steel (JIS SCM440)  | Carbon steel (JIS S50C)  | Carbon steel (JIS S55C)  |
| Cutting Conditions | Cutting Speed (m/min) | 150 | 95 | 106 |
| | Feed (mm/rev) | 0.1 | 0.08 | 0.125 |
| | Spindle Speed (min ⁻¹) | 2653 | 1512 | 1205 |
| | Feed (mm/min) | 265 | 121 | 151 |
| Coolant | | Water soluble oil | Water soluble oil | Water soluble oil |
| Results | |  |  |  |

For Your Safety

- Don't touch inserts and chips without gloves.
- Please machine within the recommended application range, and exchange expired tools with new ones in advance of breakage.
- Please use safety cover and wear safety glasses.
- When using compounded cutting oils, please take fire preventions.
- When attaching inserts or spare parts, please use the attached wrench or spanner.
- When using rotating tools, please make a trial run to check run-out, vibration and abnormal sounds etc.

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(Tools specifications subject to change without notice.)