# YG TAP HARDENED

**TB313 SERIES**

## M ISO metric coarse threads DIN 13

Metrisches ISO-Gewinde DIN 13
ISO MÉTRIQUE DIN13
ISO Metrico passo grosso DIN 13

Machine taps
Maschinengewindebohrer

▶ Suitable for tapping blind holes due to special flute geometry and excellent chip evacuation.

▶ Geeignet zum Gewinden von Sacklöchern dank besonderer Nutengeometrie und ausgezeichneter Spanabfuhr.

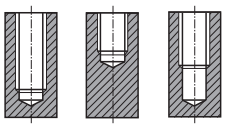
DIN 371

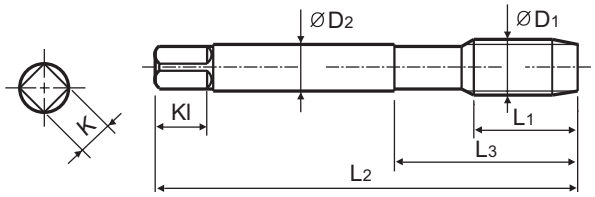


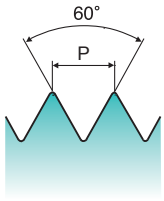
DIN 376

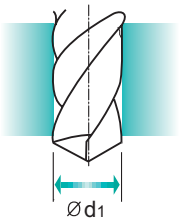


**Hole type**
2.5×D






Material groups **HR** | HSS-E | DIN 371/376 | 6H | 60° | C | R40 | Vap | p.B217

Recommended ToolHolder: Plain Shank — TAPPING ER CHUCK / TAPPING CHUCK / ONE STEP TAPPING CHUCK

Unit : mm

| SIZE | Pitch | EDP No. | Thread Length | Overall Length | Neck Length | Shank Diameter | Square Size | Square Length | No. of Flute | Tapping Drill Diameter |
|---|---|---|---|---|---|---|---|---|---|---|
| ØD1 | P | Vap | L1 | L2 | L3 | ØD2 | K | Kl | Z | Ød1 |
| M2 | × 0.4 | TB313136 | 8 | 45 | 13 | 2.8 | 2.1 | 5 | 3 | 1.6 |
| M2.2 | × 0.45 | TB313156 | 8 | 45 | 13 | 2.8 | 2.1 | 5 | 3 | 1.75 |
| *M2.3 | × 0.4 | TB313196 | 8 | 45 | 13 | 2.8 | 2.1 | 5 | 3 | 1.9 |
| M2.5 | × 0.45 | TB313176 | 9 | 50 | 15 | 2.8 | 2.1 | 5 | 3 | 2.05 |
| *M2.6 | × 0.45 | TB313496 | 9 | 50 | 15 | 2.8 | 2.1 | 5 | 3 | 2.1 |
| M3 | × 0.5 | TB313206 | 6 | 56 | 18 | 3.5 | 2.7 | 6 | 3 | 2.5 |
| M3.5 | × 0.6 | TB313226 | 7 | 56 | 20 | 4 | 3 | 6 | 3 | 2.9 |
| M4 | × 0.7 | TB313246 | 7 | 63 | 21 | 4.5 | 3.4 | 6 | 3 | 3.3 |
| M4.5 | × 0.75 | TB313266 | 8 | 70 | 25 | 6 | 4.9 | 8 | 3 | 3.7 |
| M5 | × 0.8 | TB313286 | 8 | 70 | 25 | 6 | 4.9 | 8 | 3 | 4.2 |
| M6 | × 1.0 | TB313316 | 10 | 80 | 30 | 6 | 4.9 | 8 | 3 | 5 |
| M7 | × 1.0 | TB313346 | 10 | 80 | 30 | 7 | 5.5 | 8 | 3 | 6 |
| M8 | × 1.25 | TB313366 | 13 | 90 | 35 | 8 | 6.2 | 9 | 3 | 6.8 |
| M9 | × 1.25 | TB313396 | 13 | 90 | 35 | 9 | 7 | 10 | 3 | 7.8 |
| M10 | × 1.5 | TB313426 | 15 | 100 | 39 | 10 | 8 | 11 | 3 | 8.5 |
| M11 | × 1.5 | TB313466 | 17 | 100 | 40 | 8 | 6.2 | 9 | 3 | 9.5 |
| M12 | × 1.75 | TB313506 | 18 | 110 | 44 | 9 | 7 | 10 | 3 | 10.2 |
| M14 | × 2.0 | TB313546 | 20 | 110 | 44 | 11 | 9 | 12 | 3 | 12 |
| M16 | × 2.0 | TB313606 | 20 | 110 | 44 | 12 | 9 | 12 | 3 | 14 |
| M18 | × 2.5 | TB313656 | 25 | 125 | 50 | 14 | 11 | 14 | 4 | 15.5 |
| M20 | × 2.5 | TB313706 | 25 | 140 | 54 | 16 | 12 | 15 | 4 | 17.5 |
| M22 | × 2.5 | TB313746 | 25 | 140 | 54 | 18 | 14.5 | 17 | 4 | 19.5 |
| M24 | × 3.0 | TB313786 | 30 | 160 | 60 | 18 | 14.5 | 17 | 4 | 21 |
| M27 | × 3.0 | TB313866 | 30 | 160 | 60 | 20 | 16 | 19 | 4 | 24 |
| M30 | × 3.5 | TB313946 | 35 | 180 | 70 | 22 | 18 | 21 | 4 | 26.5 |

▶ DIN 371(M2~M10) and DIN 376(M11~M30)
▶ * DIN profile not ISO

◎ : Excellent ○ : Good

| ISO | P | | | | | | | | | | | M | | | K | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Material Description | Non-alloy steel | | | | | Low alloy steel | | | | High alloyed steel, and tool steel | | Stainless steel | | | Grey cast iron | | Nodular cast iron | | Malleable cast iron | |
| VDI 3323 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| HRc | | 13 | 25 | 28 | 32 | 10 | 29 | 32 | 38 | 15 | 35 | 15 | 23 | 10 | 10 | 26 | 3 | 25 | | 21 |
| HB | 125 | 190 | 250 | 270 | 300 | 180 | 275 | 300 | 350 | 200 | 325 | 200 | 240 | 180 | 180 | 260 | 160 | 250 | 130 | 230 |
| Recommended | | | | | | | ○ | ○ | ◎ | | | | | ○ | | | | | | |

| ISO | N | | | | | | | | | | S | | | | | | | H | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Material Description | Aluminum-wrought alloy | | Aluminum-cast, alloyed | | | Copper and Copper Alloys (Bronze / Brass) | | | Non Metallic Materials | | Heat Resistant Super Alloys | | | | | Titanium Alloys | | Hardened steel | | Chilled Cast Iron | Hardened Cast Iron |
| VDI 3323 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 |
| HRc | | | | | | | | | | | 15 | 30 | 25 | 38 | 34 | | | 55 | 60 | 42 | 55 |
| HB | 60 | 100 | 75 | 90 | 130 | 110 | 90 | 100 | | | 200 | 280 | 250 | 350 | 320 | 400Rm | 1050Rm | 550 | 630 | 400 | 550 |
| Recommended | | | | | | ○ | | | | | | | | | | | | | | | |