

Garant
Solid carbide milling cutter HPC, TiAlN, Ø DC: 12mm

Order data

| | |
|--------------|---------------|
| Order number | 203212 12 |
| GTIN | 4045197641021 |
| Item class | 11X |

Description
Version:
GARANT Diabolo 70:

Special solid carbide substrate with extremely high tensile strength combined with **outstanding wear resistance** for optimum process reliability. Newly developed **nano-crystalline high-tech coating for hard milling up to 70 HRC**. Very suitable for **continuous use** in tool and mould making.

Sizes 2 – 5: **Recess angle $\alpha = 15^\circ$** .

Tolerance:

- **Size nominal Ø: $D_c \leq$ size 12: 0 / -0.02 mm;**
- **Size nominal Ø: D_c from size 16: 0 / -0.03 mm.**

Application:

Due to the **special hard geometry** ideal for use on hardened materials from 60 HRC to 70 HRC.

For profile milling as finishing.

(Plunge cutting only to shallow depths.)

Note:

For materials > 65 HRC: $a_e = 0.02 \times D$.

Machining strategy: HPC

Tolerance nominal Ø: 0 / -0.02

No. of teeth Z: 6

Helix angle: 45°

Direction of infeed: horizontal and oblique

Shank: DIN 6535 HA to h6

No. of teeth Z: 6

Flute length L_c : 26 mm

Overall length L: 74 mm

Shank Ø D_s : 12 mm

Feed f_z for side milling in steel < 70 HRC: 0.035 mm

Technical description

| | |
|---|-------------------------|
| Cutting edge $\varnothing D_c$ | 12 mm |
| No. of teeth Z | 6 |
| Feed f_z for side milling in steel < 70 HRC | 0.035 mm |
| Shank $\varnothing D_s$ | 12 mm |
| Overall length L | 74 mm |
| Flute length L_c | 26 mm |
| Direction of infeed | horizontal and oblique |
| Shank | DIN 6535 HA to h6 |
| Tolerance nominal \varnothing | 0 / -0.02 |
| Helix angle | 45 ° |
| Corner chamfer angle | 90 ° |
| Series | Diabolo |
| Coating | TiAlN |
| Tool material | Solid carbide |
| Standard | Manufacturer's standard |
| Type | H |
| Cutting width a_e for milling operation | 0.05×D for side milling |
| Through-coolant | no |
| Machining strategy | HPC |
| Colour ring | red |
| Type of product | End / face mill |

User data

| | Suitability | V_c | ISO code |
|----------------|---|-----------|----------|
| Steel < 60 HRC | suitable only under restricted conditions | 145 m/min | H |
| Steel < 65 HRC | suitable | 100 m/min | H |
| Steel < 67 HRC | suitable | 80 m/min | H |

| | | | |
|----------------|---|----------|---|
| Steel < 70 HRC | suitable | 75 m/min | H |
| wet minimum | suitable only under restricted conditions | | |
| dry | suitable | | |
| Air | suitable | | |

Services

| | |
|---|-------------|
| Shank recess Type FRST | 209900 FRST |
| Shank clamping flats for shrink-fit chucks, with retainer function Shank Ø tool 12 mm | SZ2025 12 |
| Shank grinding Type HB | 129100 HB |