

Solid carbide torus cutter HPC, TiAlN, Ø DC / R1: 12/1,0 mm



Order data

| Order number | 206324 12/1,0 |
|--------------|---------------|
| GTIN | 4045197641403 |
| 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.

Tolerances:

· Corner radius: $R_1 = \pm 0.02$ mm.

Application:

Due to the **special hard geometry** ideal for use on hardened materials from 60 HRC to 70 HRC. **For profile milling** as a **finishing operation**.

(Plunge milling only to shallow depths).

No. of teeth Z: 6

Helix angle: 45 degrees Shank: DIN 6535 HA to h6

No. of teeth Z: 6 Flute length L_c: 12 mm Corner radius R₁: 1 mm

Overhang length L₁ incl. recess: 36 mm

Recess Ø D₁: 11.7 mm Overall length L: 75 mm

Technical description

| Corner radius R ₁ | 1 mm |
|---|-------|
| Overhang length L ₁ incl. recess | 36 mm |

| Cutting edge Ø Dc 12 mm Feed f₂ for side milling in steel < 70 HRC 0.08 mm No. of teeth Z 6 Recess Ø D₁ 11.7 mm Shank Ø D₂ 12 mm Flute length L₂ 12 mm Overall length L 75 mm Shank DIN 6535 HA to h6 Helix angle 45 degrees Series Diabolo Coating TiAlN Tool material Solid carbide Standard Manufacturer's standard Type H Tolerance nominal Ø 0 / −0.02 Direction of infeed horizontal, oblique and vertical Cutting width a₂ for milling operation 0.05×D for copy milling Cutting width a₂ for milling operation 0.05×D for side milling Through-coolant no Machining strategy HPC Shank tolerance h6 Colour ring red Type of product End mill | Feed f_z for copy milling in steel < 70 HRC | 0.08 mm |
|--|--|----------------------------------|
| No. of teeth Z Recess \varnothing D ₁ 11.7 mm Shank \varnothing D ₅ 12 mm Flute length L _c 12 mm Overall length L 75 mm Shank DIN 6535 HA to h6 Helix angle 45 degrees Series Diabolo Coating TiAIN Tool material Solid carbide Standard Manufacturer's standard Type H Tolerance nominal \varnothing Direction of infeed Cutting width a _c for milling operation Machining strategy Shank tolerance Colour ring red | Cutting edge Ø D _c | 12 mm |
| Recess \varnothing D111.7 mmShank \varnothing D212 mmFlute length L212 mmOverall length L75 mmShankDIN 6535 HA to h6Helix angle45 degreesSeriesDiaboloCoatingTiAINTool materialSolid carbideStandardManufacturer's standardTypeHTolerance nominal \varnothing 0 / -0.02Direction of infeedhorizontal, oblique and verticalCutting width a_e for milling operation0.05×D for copy millingCutting width a_e for milling operation0.05×D for side millingThrough-coolantnoMachining strategyHPCShank toleranceh6Colour ringred | Feed f_z for side milling in steel < 70 HRC | 0.08 mm |
| Shank Ø D₀ 12 mm Flute length L₀ 12 mm Overall length L 75 mm Shank DIN 6535 HA to h6 Helix angle 45 degrees Series Diabolo Coating TiAIN Tool material Solid carbide Standard Manufacturer's standard Type H Tolerance nominal Ø 0 / −0.02 Direction of infeed horizontal, oblique and vertical Cutting width a₀ for milling operation 0.05×D for copy milling Cutting width a₀ for milling operation 0.05×D for side milling Through-coolant no Machining strategy HPC Shank tolerance h6 Colour ring red | No. of teeth Z | 6 |
| Flute length L _c Overall length L Shank DIN 6535 HA to h6 Helix angle 45 degrees Series Diabolo Coating TiAIN Tool material Solid carbide Standard Manufacturer's standard Type H Tolerance nominal Ø D/ −0.02 Direction of infeed Cutting width a _e for milling operation Cutting width a _e for milling operation Machining strategy HPC Shank tolerance Colour ring 12 mm 12 mm 12 mm 12 mm 15 mm 15 mm 15 mm 16 milling operation Diabolo TiAIN Solid carbide Solid carbide Manufacturer's standard Manufacturer's standard Manufacturer's pandard HPC Shank tolerance | Recess Ø D ₁ | 11.7 mm |
| Overall length L Shank DIN 6535 HA to h6 Helix angle Series Diabolo Coating TiAIN Tool material Solid carbide Standard Manufacturer's standard Type H Tolerance nominal Ø Direction of infeed Cutting width ae for milling operation Cutting width ae for milling operation Through-coolant Machining strategy HPC Shank tolerance Colour ring Tole 75 mm 75 mm DIN 6535 HA to h6 H5 degrees As degrees Diabolo As Joint IIII Tolarance TiAIN Solid carbide Manufacturer's standard Manufacturer's standard Manufacturer's standard Manufacturer's optimize H Tolerance nominal Ø 0 1 − 0.02 Direction of infeed horizontal, oblique and vertical 0.05×D for copy milling Through-coolant no Machining strategy HPC Shank tolerance h6 Colour ring | Shank Ø D _s | 12 mm |
| Shank DIN 6535 HA to h6 Helix angle 45 degrees Series Diabolo Coating TiAIN Tool material Solid carbide Standard Manufacturer's standard Type H Tolerance nominal Ø 0 / −0.02 Direction of infeed horizontal, oblique and vertical Cutting width ae for milling operation 0.05×D for copy milling Cutting width ae for milling operation 0.05×D for side milling Through-coolant no Machining strategy HPC Shank tolerance h6 Colour ring red | Flute length L _c | 12 mm |
| Helix angle Series Diabolo Coating TiAIN Tool material Solid carbide Standard Manufacturer's standard Type H Tolerance nominal Ø 0 / −0.02 Direction of infeed Cutting width a₀ for milling operation Cutting width a₀ for milling operation Tyrough-coolant Machining strategy HPC Shank tolerance Diabolo Analogous Analogous Analogous Analogous Diabolo Machining strategy HPC Shank tolerance h6 Colour ring | Overall length L | 75 mm |
| SeriesDiaboloCoatingTiAINTool materialSolid carbideStandardManufacturer's standardTypeHTolerance nominal Ø0 / −0.02Direction of infeedhorizontal, oblique and verticalCutting width ae for milling operation0.05×D for copy millingCutting width ae for milling operation0.05×D for side millingThrough-coolantnoMachining strategyHPCShank toleranceh6Colour ringred | Shank | DIN 6535 HA to h6 |
| TiAIN Tool material Solid carbide Standard Manufacturer's standard Type H Tolerance nominal Ø 0 / −0.02 Direction of infeed Cutting width ae for milling operation Cutting width ae for milling operation Cutting width ae for milling operation Through-coolant Machining strategy HPC Shank tolerance h6 Colour ring | Helix angle | 45 degrees |
| Tool material Standard Manufacturer's standard Type H Tolerance nominal Ø 0 / −0.02 Direction of infeed Cutting width a _e for milling operation Cutting width a _e for milling operation Cutting width a _e for milling operation Through-coolant no Machining strategy HPC Shank tolerance Colour ring Solid carbide Manufacturer's standard 0 / −0.02 horizontal, oblique and vertical 0.05×D for copy milling 0.05×D for side milling HPC | Series | Diabolo |
| StandardManufacturer's standardTypeHTolerance nominal Ø0 / −0.02Direction of infeedhorizontal, oblique and verticalCutting width ae for milling operation0.05×D for copy millingCutting width ae for milling operation0.05×D for side millingThrough-coolantnoMachining strategyHPCShank toleranceh6Colour ringred | Coating | TiAIN |
| TypeHTolerance nominal \varnothing $0 / -0.02$ Direction of infeedhorizontal, oblique and verticalCutting width a_e for milling operation $0.05 \times D$ for copy millingCutting width a_e for milling operation $0.05 \times D$ for side millingThrough-coolantnoMachining strategyHPCShank toleranceh6Colour ringred | Tool material | Solid carbide |
| Tolerance nominal \varnothing 0 / -0.02 Direction of infeed horizontal, oblique and vertical Cutting width a_e for milling operation 0.05×D for copy milling Cutting width a_e for milling operation 0.05×D for side milling Through-coolant no Machining strategy HPC Shank tolerance h6 Colour ring red | Standard | Manufacturer's standard |
| $\begin{array}{ll} \mbox{Direction of infeed} & \mbox{horizontal, oblique and vertical} \\ \mbox{Cutting width a_e for milling operation} & \mbox{0.05}{\times} \mbox{D for copy milling} \\ \mbox{Cutting width a_e for milling operation} & \mbox{0.05}{\times} \mbox{D for side milling} \\ \mbox{Through-coolant} & \mbox{no} \\ \mbox{Machining strategy} & \mbox{HPC} \\ \mbox{Shank tolerance} & \mbox{h6} \\ \mbox{Colour ring} & \mbox{red} \\ \end{array}$ | Туре | Н |
| Cutting width a _e for milling operation Cutting width a _e for milling operation O.05×D for copy milling O.05×D for side milling Through-coolant no Machining strategy HPC Shank tolerance h6 Colour ring | Tolerance nominal Ø | 0 / -0.02 |
| Cutting width a _e for milling operation O.05×D for side milling Through-coolant no Machining strategy HPC Shank tolerance h6 Colour ring red | Direction of infeed | horizontal, oblique and vertical |
| Through-coolant no Machining strategy HPC Shank tolerance h6 Colour ring red | Cutting width a _e for milling operation | 0.05×D for copy milling |
| Machining strategy HPC Shank tolerance h6 Colour ring red | Cutting width a _e for milling operation | 0.05×D for side milling |
| Shank tolerance h6 Colour ring red | Through-coolant | no |
| Colour ring red | Machining strategy | HPC |
| | Shank tolerance | h6 |
| Type of product End mill | Colour ring | red |
| | Type of product | End mill |

Services

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



Shank grinding Type HB