

**Garant**
**Solid carbide roughing end mill MTC, TiAlN, Ø f8 DC: 4mm**

**Order data**

|              |               |
|--------------|---------------|
| Order number | 202976 4      |
| GTIN         | 4045197431257 |
| Item class   | 11X           |

**Description**
**Version:**

**Significant cutting force reduction** due to 45° helix.

**Application:**

Especially for **MTC (Multi Task Cutting)** use on the new generation of turning / milling centres.

**Note:**

For materials > 55 HRC we recommend reducing the depth of cut to  $a_p=0.25 \times D \dots 0.5 \times D$ .

**Technical description**

|   |                                  |
|---|----------------------------------|
| Corner chamfer width at 45°                   | 0.05 mm                          |
| Feed $f_z$ for side milling in steel < 60 HRC | 0.01 mm                          |
| Cutting edge $\varnothing D_c$                | 4 mm                             |
| No. of teeth Z                                | 4                                |
| Feed $f_z$ for slot milling in steel < 60 HRC | 0.008 mm                         |
| Shank $\varnothing D_s$                       | 6 mm                             |
| Overall length L                              | 54 mm                            |
| Flute length $L_c$                            | 8 mm                             |
| Direction of infeed                           | horizontal, oblique and vertical |
| Shank   | DIN 6535 HB to h6                |
| Tolerance nominal $\varnothing$               | f8                               |
| Helix angle                                   | 45 degrees                       |

|   |                             |
|---|-----------------------------|
| Corner chamfer angle                      | 45 degrees                  |
| Coating                                   | TiAlN                       |
| Tool material                             | Solid carbide               |
| Standard                                  | Manufacturer's standard     |
| Type                                      | H                           |
| Helix angle characteristic                | unequal spacing             |
| Spacing of the cutters                    | unequal spacing             |
| Cutting width $a_e$ for milling operation | 0.3×D for side milling      |
| Cutting width $a_e$ for milling operation | Full slot cutting depth 1×D |
| Through-coolant                           | no                          |
| Machining strategy                        | MTC                         |
| Colour ring                               | red                         |
| Type of product                           | End / face mill             |

## User data

|                                | Suitability                               | $V_c$     | ISO code |
|--------------------------------|---|-----------|----------|
| Steel < 900 N/mm <sup>2</sup>  | suitable                                  | 160 m/min | P        |
| Steel < 1100 N/mm <sup>2</sup> | suitable                                  | 115 m/min | P        |
| Steel < 1400 N/mm <sup>2</sup> | suitable                                  | 115 m/min | P        |
| Steel < 55 HRC                 | suitable                                  | 60 m/min  | H        |
| Steel < 60 HRC                 | suitable                                  | 30 m/min  | H        |
| Steel < 65 HRC                 | suitable                                  | 25 m/min  | H        |
| Steel < 67 HRC                 | suitable only under restricted conditions | 20 m/min  | H        |
| wet maximum                    | suitable only under restricted conditions |           |          |
| wet minimum                    | suitable only under restricted conditions |           |          |
| dry                            | suitable                                  |           |          |
| Air                            | suitable                                  |           |          |

