

## Garant

### Solid carbide milling cutter with chip separators TPC, TiAlN, Ø f8 DC: 20mm



#### Order data

|              |               |
|--------------|---------------|
| Order number | 203106 20     |
| GTIN         | 4045197954084 |
| Item class   | 11X           |

#### Description

##### Version:

High-performance milling cutter with **irregular cutter spacing** and **irregular helical pitch**. Optimised bending strength due to the use of ultra-fine grain substrates. **Chip breakers for controlled chip breaking.**

##### Note:

$h_{max}$ : The values stated in the table are maximum values.

$a_{e max} = 0.07 \times D$  for TPC machining.

Tolerance nominal Ø: f8

No. of teeth Z: 7

Helix angle: 40°

Direction of infeed: horizontal and oblique

Shank: DIN 6535 HB to h6

Balance quality with shank: G 2.5 with HB

No. of teeth Z: 7

Flute length  $L_c$ : 60 mm

Overhang length  $L_1$  incl. recess: 70 mm

Recess Ø  $D_1$ : 19.8 mm

Overall length L: 126 mm

Shank Ø  $D_s$ : 20 mm

#### Technical description

|                  |                   |
|------------------|-------------------|
| Shank Ø $D_s$    | 20 mm             |
| Shank            | DIN 6535 HB to h6 |
| Overall length L | 126 mm            |

|   |                         |
|---|-------------------------|
| No. of teeth Z  | 7                       |
| Direction of infeed   | horizontal and oblique  |
| Balance quality with shank  | G 2.5 with HB           |
| Average chip thickness $h_{\max}$ for TPC milling in INOX < 900 N/mm <sup>2</sup> | 0.097 mm                |
| Corner chamfer width at 45°   | 0.4 mm                  |
| Helix angle   | 40 °                    |
| Cutting edge $\varnothing D_c$  | 20 mm                   |
| Tolerance nominal $\varnothing$   | f8                      |
| Recess $\varnothing D_1$  | 19.8 mm                 |
| Overhang length $L_1$ incl. recess  | 70 mm                   |
| Flute length $L_c$  | 60 mm                   |
| Corner chamfer angle  | 45 °                    |
| Number of chip separators   | 2                       |
| Coating   | TiAlN                   |
| Tool material   | Solid carbide           |
| Standard  | Manufacturer's standard |
| Type  | N                       |
| Helix angle characteristic  | unequal spacing         |
| Spacing of the cutters  | unequal spacing         |
| Cutting width $a_e$ for milling operation   | 0.07×D                  |
| Through-coolant   | no                      |
| Machining strategy  | TPC                     |
| Colour ring   | blue                    |
| Type of product   | End / face mill         |

## User data

|                               | Suitability | $V_c$     | ISO code |
|-------------------------------|-------------|-----------|----------|
| Steel < 500 N/mm <sup>2</sup> | suitable    | 380 m/min | P        |

|                                |   |           |   |
|--------------------------------|---|-----------|---|
| Steel < 750 N/mm <sup>2</sup>  | suitable                                  | 340 m/min | P |
| Steel < 900 N/mm <sup>2</sup>  | suitable                                  | 300 m/min | P |
| Steel < 1100 N/mm <sup>2</sup> | suitable                                  | 230 m/min | P |
| INOX < 900 N/mm <sup>2</sup>   | suitable                                  | 240 m/min | M |
| INOX > 900 N/mm <sup>2</sup>   | suitable                                  | 170 m/min | M |
| wet maximum                    | Suitable                                  |           |   |
| wet minimum                    | Suitable only under restricted conditions |           |   |
| Air                            | suitable                                  |           |   |