

Garant
Solid carbide milling cutter with chip separators TPC, TiAlN, Ø f8 DC: 10mm

Order data

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|--------------|---------------|
| Order number | 203093 10 |
| GTIN | 4045197953957 |
| Item class | 11X |

Description
Version:

High-performance end mill for general-purpose applications, **specially designed for TPC applications.**

Strengthened core.

Optimised bending strength due to the use of ultra-fine grain substrates.

Offset chip breakers for controlled chip breaking.

Note:

$a_{e\max} = 0.05 \times D$ for TPC machining.

h_{\max} : The values stated in the table are maximum values. For finishing operations we recommend items No. 204016, 204018 and 204019.

Successor product to No. 203090.

Technical description

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|---------------------------------|------------------------|
| Flute length L_c | 40 mm |
| Tolerance nominal \varnothing | f8 |
| Helix angle | 40 degrees |
| Overall length L | 89 mm |
| Shank $\varnothing D_s$ | 10 mm |
| Direction of infeed | horizontal and oblique |
| Balance quality with shank | G 2.5 with HB |
| Corner chamfer width at 45° | 0.2 mm |

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|--|-------------------------|
| Average chip thickness h_{\max} for TPC milling in Toolox 44 HRC | 0.046 mm |
| Shank | DIN 6535 HB to h6 |
| Cutting edge $\varnothing D_c$ | 10 mm |
| No. of teeth Z | 5 |
| Corner chamfer angle | 45 degrees |
| 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 | $0.05 \times D$ |
| Through-coolant | no |
| Machining strategy | TPC |
| Colour ring | green |
| Type of product | End / face mill |

User data

| | Suitability | V_c | ISO code |
|--------------------------------|-------------|-----------|----------|
| Steel < 500 N/mm ² | suitable | 380 m/min | P |
| Steel < 750 N/mm ² | suitable | 340 m/min | P |
| Steel < 900 N/mm ² | suitable | 300 m/min | P |
| Steel < 1100 N/mm ² | suitable | 230 m/min | P |
| Steel < 1400 N/mm ² | suitable | 150 m/min | P |
| TOOLOX 33 | suitable | 60 m/min | H |
| TOOLOX 44 | suitable | 40 m/min | H |

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|-------------------------------------|---|-----------|---|
| HARDOX 500 < 1600 N/mm ² | suitable | 25 m/min | H |
| INOX < 900 N/mm ² | suitable | 220 m/min | M |
| INOX > 900 N/mm ² | suitable only under restricted conditions | 150 m/min | M |
| Uni | suitable | | |
| wet maximum | Suitable | | |
| dry | Suitable only under restricted conditions | | |
| Air | suitable | | |