

**Garant**
**Roughing end mill MTC HSS-E-SPM, TiAlN, Ø k12 DC: 14mm**

**Order data**

|              |               |
|--------------|---------------|
| Order number | 192895 14     |
| GTIN         | 4045197274779 |
| Item class   | 11W           |

**Description**
**Version:**

**SPM** substrate with very high cobalt content. Combines the **hardness of solid carbide** with the **toughness of PM steel**. **Dynamic special knuckle profile for roughing**.

**For use as a** universal roughing end mill Centre cutting edge geometry for plunging.

**Application:**

**For very high metal removal rates and increased machining volumes**. Especially for **MTC (Multi Task Cutting)** use on the new generation of turning / milling centres.

**Technical description**

|   |                                  |
|---|----------------------------------|
| Feed $f_z$ for side milling in steel < 1100 N/mm <sup>2</sup> | 0.051 mm                         |
| No. of teeth Z  | 4                                |
| Cutting edge Ø $D_c$  | 14 mm                            |
| Corner chamfer width at 45°                                   | 0.2 mm                           |
| Shank Ø $D_s$   | 12 mm                            |
| Overall length L  | 83 mm                            |
| Flute length $L_c$  | 26 mm                            |
| Direction of infeed   | horizontal, oblique and vertical |
| Shank   | DIN 1835 B to h6                 |
| Tolerance nominal Ø   | k12                              |
| Helix angle   | 45 degrees                       |

|                      |                 |
|----------------------|-----------------|
| Corner chamfer angle | 45 degrees      |
| Coating              | TiAlN           |
| Tool material        | HSS E SPM       |
| Standard             | DIN 844         |
| Milling profile      | HRF             |
| Through-coolant      | no              |
| Machining strategy   | MTC             |
| Colour ring          | green           |
| Type of product      | End / face mill |

### User data

|                                | Suitability                               | V <sub>c</sub> | ISO code |
|--------------------------------|---|----------------|----------|
| Steel < 500 N/mm <sup>2</sup>  | suitable only under restricted conditions | 95 m/min       | P        |
| Steel < 750 N/mm <sup>2</sup>  | suitable                                  | 75 m/min       | P        |
| Steel < 900 N/mm <sup>2</sup>  | suitable                                  | 75 m/min       | P        |
| Steel < 1100 N/mm <sup>2</sup> | suitable                                  | 40 m/min       | P        |
| Steel < 1400 N/mm <sup>2</sup> | suitable only under restricted conditions | 35 m/min       | P        |
| INOX < 900 N/mm <sup>2</sup>   | suitable                                  | 25 m/min       | M        |
| INOX > 900 N/mm <sup>2</sup>   | suitable only under restricted conditions | 20 m/min       | M        |
| Ti > 850 N/mm <sup>2</sup>     | suitable only under restricted conditions | 14 m/min       | S        |
| Uni                            | suitable                                  |                |          |
| wet maximum                    | suitable                                  |                |          |
| wet minimum                    | suitable                                  |                |          |
| dry                            | suitable only under restricted conditions |                |          |
| Air                            | suitable                                  |                |          |

