

**Garant**
**Solid carbide milling cutter, TiAlN, Ø e8 DC: 12mm**

**Order data**

Order number	202815 12
GTIN	4045197947772
Item class	11X

**Description**
**Version:**

Double relief ground side clearance angle.

With **high-performance coating** for general-purpose use.

**Technical description**

No. of teeth Z	4
Direction of infeed	horizontal, oblique and vertical
Shank Ø D <sub>s</sub>	12 mm
Overall length L	120 mm
Helix angle	35 degrees
Tolerance nominal Ø	e8
Feed f <sub>z</sub> for side milling in steel < 900 N/mm <sup>2</sup>	0.08 mm
Shank	DIN 6535 HB to h6
Cutting edge Ø D <sub>c</sub>	12 mm
Corner chamfer width at 45°	0.1 mm
Shank form	HB
Flute length L <sub>c</sub>	48 mm
Corner chamfer angle	45 degrees
Coating	TiAlN

Tool material	Solid carbide
Standard	Manufacturer's standard
Type	N
Cutting width $a_e$ for milling operation	0.3×D for side milling
Through-coolant	no
Colour ring	without
Type of product	End / face mill

### User data

	Suitability	$V_c$	ISO code
Aluminium (short chipping)	suitable only under restricted conditions	280 m/min	N
Alu > 10% Si	suitable only under restricted conditions	200 m/min	N
Steel < 500 N/mm <sup>2</sup>	suitable	120 m/min	P
Steel < 750 N/mm <sup>2</sup>	suitable	105 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	100 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	70 m/min	P
Steel < 1400 N/mm <sup>2</sup>	suitable	60 m/min	P
Steel < 55 HRC	suitable	35 m/min	H
INOX < 900 N/mm <sup>2</sup>	suitable	80 m/min	M
INOX > 900 N/mm <sup>2</sup>	suitable only under restricted conditions	60 m/min	M
GG(G)	suitable	90 m/min	K
Uni	suitable		
wet maximum	suitable		
wet minimum	suitable only under restricted conditions		
dry	suitable only under restricted conditions		

Air

suitable only under  
restricted conditions