

**Garant**
**Solid carbide milling cutter HPC, ZOx, Ø f8 DC: 12mm**

**Order data**

Order number	202251 12
GTIN	4045197538604
Item class	11X

**Description**
**Version:**

Sturdy roughing end mill **without** knuckle profile.

With strong core, **special chip breaker recesses** and **large polished flutes**.

**Application:**

For roughing milling with high demands on the component surface.

**Note:**

**NEW GENERATION AVAILABLE!**

**Recommended successor product is No. 202017.**

**Technical description**

Cutting edge Ø D <sub>c</sub>	12 mm
No. of teeth Z	3
Shank form	HA
Overhang length L <sub>1</sub> incl. recess	73 mm
Feed f <sub>z</sub> for side milling in short-chipping aluminium	0.09 mm
Corner chamfer width at 45°	0.2 mm
Recess Ø D <sub>1</sub>	11 mm
Feed f <sub>z</sub> for slot milling in short-chipping aluminium	0.07 mm
Shank Ø D <sub>s</sub>	12 mm
Overall length L	120 mm
Flute length L <sub>c</sub>	19 mm

Direction of infeed	horizontal, oblique and vertical
Shank	DIN 6535 HA to h6
Tolerance nominal $\varnothing$	f8
Balance quality with shank	G 2.5 with HA
Helix angle	45 degrees
Corner chamfer angle	45 degrees
Coating	ZOX
Tool material	Solid carbide
Standard	Manufacturer's standard
Type	W
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	HPC
Colour ring	yellow
Type of product	End / face mill

## User data

	Suitability	$V_c$	ISO code
Aluminium	suitable only under restricted conditions	250 m/min	N
Aluminium (short chipping)	suitable	240 m/min	N
Alu > 10% Si	suitable	120 m/min	N
CuZn	suitable	120 m/min	N
wet maximum	suitable		
wet minimum	suitable only under restricted conditions		

dry	suitable only under restricted conditions
Air	suitable only under restricted conditions
<b>Services</b>	
Shank grinding Type HB	129100 HB