

## Garant

### GARANT Master Alu solid carbide milling cutter with more chip separators TPC, DLC, Ø h6 DC: 20 mm



#### Order data

Order number	203115 20
GTIN	4062406249755
Item class	11X

#### Description

##### Version:

**Specially designed for** TPC high-performance milling. **Optimised bending strength** due to the use of ultra-fine grain substrates. **1xD** chip separator for controlled chip breaking.

**Balanced** for very high process reliability and protecting the machine at high speeds.

##### Application:

Especially for milling **aluminium and non-ferrous metals**.

##### Note:

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

$ae_{max} = 0.1 \times D$  for TPC machining.

##### Successor product for No. 202283, 202284.

Tolerance nominal Ø: h6

No. of teeth Z: 5

Helix angle: 38 degrees

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: 5

Flute length  $L_c$ : 102 mm

Overhang length  $L_1$  incl. recess: 120 mm

Recess Ø  $D_1$ : 19 mm

Overall length L: 175 mm

Shank Ø  $D_s$ : 20 mm

#### Technical description

Direction of infeed	horizontal and oblique
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Balance quality with shank	G 2.5 with HB
Cutting edge $\varnothing D_c$	20 mm
Shank $\varnothing D_s$	20 mm
Overall length L	175 mm
Shank form	HB
No. of teeth Z	5
Shank	DIN 6535 HB to h6
Tolerance nominal $\varnothing$	h6
Average chip thickness $h_{max}$ for TPC milling in short-chipping aluminium	0.12 mm
Helix angle	38 degrees
Flute length $L_c$	102 mm
Recess $\varnothing D_1$	19 mm
Overhang length $L_1$ incl. recess	120 mm
Corner rounding $r_v$	0.2 mm
Series	GARANT Master Alu
Coating	DLC
Tool material	Solid carbide
Standard	Manufacturer's standard
Type	W
Spacing of the cutters	unequal spacing
Cutting width $a_e$ for milling operation	$0.1 \times D$
Through-coolant	no
Machining strategy	TPC
Colour ring	yellow
Type of product	End mill