

Garant
GARANT Master Alu solid carbide milling cutter with more chip separators
TPC, DLC, Ø h6 DC: 12mm

Order data

Order number	203114 12
GTIN	4062406249663
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.

$ae_{max} = 0.12 \times D$ for TPC machining.

Successor product for No. 202281, 202282.

Technical description

Helix angle	38 degrees
Balance quality with shank	G 2.5 with HB
Overall length L	110 mm
Flute length L_c	49 mm
Cutting edge $\varnothing D_c$	12 mm
Direction of infeed	horizontal and oblique
Average chip thickness h_{max} for TPC milling in short-chipping aluminium	0.078 mm
No. of teeth Z	4

Shank $\varnothing D_s$	12 mm
Overhang length L_1 incl. recess	60 mm
Shank	DIN 6535 HB to h6
Tolerance nominal \varnothing	h6
Recess $\varnothing D_1$	11 mm
Shank form	HB
Corner rounding r_v	0.1 mm
Series	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	$0.12 \times D$
Through-coolant	no
Machining strategy	TPC
Colour ring	yellow
Type of product	End / face mill

User data

	Suitability	V_c	ISO code
Aluminium	Suitable	500 m/min	N
Aluminium (short chipping)	Suitable	450 m/min	N
Alu > 10% Si	suitable	400 m/min	N
PMMA acrylic	Suitable	180 m/min	N
PE-HD	Suitable	140 m/min	N
PA 66	Suitable	180 m/min	N
PEEK	suitable	130 m/min	N

PF 31	Suitable	110 m/min	N
PVDF GF20	Suitable	160 m/min	N
POM GF25	Suitable	140 m/min	N
PA 66 GF30	Suitable	120 m/min	N
PEEK GF30	Suitable	140 m/min	N
PTFE CF25	Suitable	260 m/min	N
Honeycomb sandwich	suitable only under restricted conditions	260 m/min	N
Cu	Suitable	140 m/min	N
CuZn	Suitable	120 m/min	N
wet maximum	suitable		
wet minimum	suitable only under restricted conditions		
dry	suitable		
Air	suitable		