Garant

GARANT Diabolo solid carbide micro slot drill, TiAlN, ⌀ DC × L1: 1,6X8mm

Order data

Order number	201631 1,6X8
GTIN	4045197933041
Item class	11X

Description

Version:
GARANT Diabolo:
Special geometry, coating and carbide **for hard machining in the high-performance field.** Suitable even for **machining electrolytic copper.** Double-relief ground 2 chamfers hollow ground for high-precision hard machining.
Recess angle α = 16°.
Tolerances:
· **Neck ⌀: D_1 = 0 / -0.01 mm.**
Note:
At greater tool overhang lengths, use a reduced value for a_p!
Values for:
slots milled from solid: $a_p = 0.05 \times D \times a_p$ korr
side milling: $a_p = 0.1 \times D \times a_p$ korr
To calculate the feed rate vf please use the actual speed of the machine (the maximum possible speed)! e.g: vf = 18000 [rpm]× fz [mm/Z]× z

Technical description

Overhang length L_1 incl. recess	8 mm
Tolerance nominal ⌀	0 / –0,005
Flute length L_c	2.4 mm
Direction of infeed	horizontal, oblique and vertical
Correction factor $a_{p\,corr}$	1
Cutting speed v_c in steel < 65 HRC	52 m/min

Overall length L	45 mm
Feed f_z for side milling in steel < 65 HRC	0.03 mm
Feed f_z for slot milling in steel < 65 HRC	0.025 mm
Helix angle	30 degrees
Shank	DIN 6535 HA to h5
Cutting edge Ø D_C	1.6 mm
Shank Ø D_s	4 mm
Recess Ø D_1	1.51 mm
No. of teeth Z	2
Corner chamfer angle	90 degrees
Series	Diabolo
Coating	TiAlN
Tool material	Solid carbide
Standard	Manufacturer's standard
Type	H
Cutting width a_e for milling operation	Full slot cutting depth 1×D
Cutting width a_e for milling operation	0.1×D for side milling
Through-coolant	no
Colour ring	red
Type of product	End / face mill

User data

	Suitability	V_c	ISO code
Steel < 750 N/mm²	suitable only under restricted conditions	200 m/min	P
Steel < 900 N/mm²	suitable only under restricted conditions	200 m/min	P
Steel < 1100 N/mm²	suitable	190 m/min	P
Steel < 1400 N/mm²	suitable	170 m/min	P

Steel < 50 HRC	suitable	120 m/min	H
Steel < 55 HRC	suitable	100 m/min	H
Steel < 60 HRC	suitable	72 m/min	H
Steel < 65 HRC	suitable	55 m/min	H
Steel < 67 HRC	suitable	50 m/min	H
Steel < 70 HRC	suitable	45 m/min	H
INOX < 900 N/mm²	suitable	90 m/min	M
INOX > 900 N/mm²	suitable	80 m/min	M
CuZn	suitable only under restricted conditions	140 m/min	N
wet maximum	suitable only under restricted conditions		
wet minimum	suitable only under restricted conditions		
dry	suitable		
Air	suitable		