

Garant
GARANT Diabolo solid carbide micro slot drill, TiAlN, Ø DC×L1: 0,4X3mm

Order data

Order number	201632 0,4X3
GTIN	4062406386344
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 $\alpha = 16^\circ$.

Extra sturdy shank for achieving longer tool life.

Tolerances:

· **Neck Ø: $D_1 = 0 / -0.01$ mm.**

Note:

At greater tool overhang lengths, use a reduced value for a_p !

Values for:

slots milled from solid: $a_p = 0.05 \times D \times a_{p, \text{korr}}$

side milling: $a_p = 0.1 \times D \times a_{p, \text{korr}}$

To calculate the feed rate vf please use the actual speed of the machine (the maximum possible speed)! e.g: $vf = 18000 \text{ [rpm]} \times fz \text{ [mm/Z]} \times z$

Technical description

Shank	DIN 6535 HA to h5
Overhang length L_1 incl. recess	3 mm
Overall length L	54 mm
Feed f_z for slot milling in steel < 65 HRC	0.01 mm
Flute length L_c	0.6 mm

Cutting edge $\varnothing D_c$	0.4 mm
Cutting speed v_c in steel < 65 HRC	45 m/min
Recess $\varnothing D_1$	0.38 mm
Feed f_z for side milling in steel < 65 HRC	0.014 mm
Correction factor $a_{p,corr}$	0.8
No. of teeth Z	2
Shank $\varnothing D_s$	6 mm
Direction of infeed	horizontal, oblique and vertical
Helix angle	25 degrees
Corner chamfer angle	90 degrees
Tolerance nominal \varnothing	0 / -0,005
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 1xD
Cutting width a_e for milling operation	0.1xD 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/mm ²	suitable only under restricted conditions	200 m/min	P
Steel < 900 N/mm ²	suitable only under restricted conditions	200 m/min	P
Steel < 1100 N/mm ²	suitable	190 m/min	P

Steel < 1400 N/mm ²	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/mm ²	suitable	90 m/min	M
INOX > 900 N/mm ²	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		