

FRAISE-HÉMISPHERIQUE Z2 · BALL-NOSE-ENDMILL Z2 · HALBRUND-FRÄSER Z2



21412A-4

Version 21.06.2026

SWISS MADE

E2

E2 HIGH PRECISION
TOOL MATERIAL

$\lambda=35^{\circ}\text{-}38^{\circ}$
 $\gamma=10^{\circ}$

CUTTING ANGLES $\lambda=35^{\circ}\text{-}38^{\circ}$
 $\gamma=10^{\circ}$



HEMISPHERICAL U-
GROOVE TOOL



DUAL DIRECTION
HELICAL DRILL BIT

l_1
2.2xD

2.2xD DEPTH FOR
TOOLS



STANDARD TOOL WEAR
INDICATOR

MATERIAL COMPATIBILITY

●●● Excellent (3/3) ●●○ Good (2/3) ●○● Possible (1/3) ○○○ Not recommended

MATERIAL	SPECIFICATION	GRP	21412A-4
Alloyed and non-alloyed steels Non-alloyed steels	Rm < 450 N/mm ²	1a	●●●
	Rm 450–700 N/mm ²	1b	●●●
	Rm 700–900 N/mm ²	1c	●●●
	Rm > 1200 N/mm ²	1d	●●●
Stainless steels Stainless steels	Rm < 650 N/mm ²	2a	●●●
	Rm 650–950 N/mm ²	2b	●●●
	Rm > 950 N/mm ²	2c	●●●
Hardened steels Hardened steels	44–56 HRC	3a	●●○
	57–67 HRC	3b	●●○
Exotic materials Special alloys	< 32 HRC	4a	●●○
	> 32 HRC	4b	●●○
Graphite Industrial graphite		5	●●○
Cast iron Grey / nodular cast iron	< 32 HRC	6a	●●○
	> 32 HRC	6b	●●○
Titanium Titanium alloys	Rm < 600 N/mm ²	7a	●●●
	600 < Rm N/mm ²	7b	●●●
Nickel alloys Inconel, Hastelloy	Rm < 1000 N/mm ²	8a	●●○
	Rm > 1000 N/mm ²	8b	●●○
Copper, brass, bronze Copper-based	Rm < 850 N/mm ²	9a	●●○
	Rm > 850 N/mm ²	9b	●●○
Aluminum Aluminum alloys	Si < 0.5%	10a	●●○
	0.5% < Si < 5%	10b	●○●
	Si > 5%	10c	●○●
Synthetic materials Engineering plastics	Thermoplastic	11a	●○●
	Thermoset	11b	●○●
Composite materials Reinforced composites	Glass fiber / GFK	12a	●●○
	Carbon fiber / KFK	12b	●●○
Precious metals Gold, platinum, silver	Gold	13a	●●○
	Platinum	13b	●●○

TECHNICAL DRAWING



DIMENSIONS

NOMINAL DIMENSIONS	
D (0 / -0.01)	4 mm
d (h5)	4 mm
L	50 mm
l1	11 mm
l3	–
d3	–
R	2 mm
e	–
Z	2
Chamfer K	–
w° collision	–



E-SHOP / EZI CUT
eskenazi.ch/eshop/21412A-4

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