

FRAISE-D'ÉBAUCHE-MD-E2+-EZI-ALPHA+L3-POUR-MATÉRIAUX-DIFFICILES · ROUGHING-ENDMILL-SC-E2+-EZI-ALPHA+L3-FOR-DIFFICULT-MATERIALS · SCHAFT-SCHRUPPFRÄSER-HM-E2+-EZI-ALPHA+L3-FÜR-HARTE-WERKSTOFFE



SWISS MADE

22133A-12

Version 21.06.2026

E2 E2 HIGH PRECISION TOOL MATERIAL	$\lambda = 50^\circ$ $\gamma = -12^\circ$ CUTTING ANGLES 750° $7-12^\circ$	$0.005-0.03$ 45° 45° CHAMFER TOLERANCE 0.005-0.03	 DUAL DIRECTION HELICAL DRILL BIT	$1.5 \times D$ 1.5XD DEPTH PRECISION TOOL	L3 THREE-POINT CONTACT TOOL	 STANDARD TOOL WEAR INDICATOR	 ADJUSTABLE ANGLE ICON
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MATERIAL COMPATIBILITY

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

MATERIAL	SPECIFICATION	GRP	22133A-12
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)	12 mm
d (h5)	12 mm
L	83 mm
l1	18 mm
l3	37 mm
d3	-
R	-
e	-
Z	4
Chamfer K	0.1
w° collision	-



E-SHOP / EZI CUT
eskenazi.ch/eshop/22133A-12