

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-5-6

Version 21.06.2026

E2 HIGH PRECISION TOOL MATERIAL

CUTTING ANGLES
 $\lambda = 50^\circ$
 $\gamma = -12^\circ$

45° CHAMFER TOLERANCE 0.005-0.03

DUAL DIRECTION HELICAL DRILL BIT

1.5xD DEPTH PRECISION TOOL

THREE-POINT CONTACT TOOL

STANDARD TOOL WEAR INDICATOR

ADJUSTABLE ANGLE ICON

MATERIAL COMPATIBILITY

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

| MATERIAL | SPECIFICATION | GRP | 22133A-5-6 |
|--|------------------------------|-----|------------|
| Alloyed and non-alloyed steels <small>Non-alloyed steels</small> | 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 <small>Stainless steels</small> | Rm < 650 N/mm ² | 2a | ○○○ |
| | Rm 650–950 N/mm ² | 2b | ●○○ |
| | Rm > 950 N/mm ² | 2c | ●●○ |
| Hardened steels <small>Hardened steels</small> | 44–56 HRC | 3a | ●●● |
| | 57–67 HRC | 3b | ●●○ |
| Exotic materials <small>Special alloys</small> | < 32 HRC | 4a | ●●● |
| | > 32 HRC | 4b | ●●● |
| Graphite <small>Industrial graphite</small> | | 5 | ○○○ |
| Cast iron <small>Grey / nodular cast iron</small> | < 32 HRC | 6a | ●○○ |
| | > 32 HRC | 6b | ●○○ |
| Titanium <small>Titanium alloys</small> | Rm < 600 N/mm ² | 7a | ●○○ |
| | 600 < Rm N/mm ² | 7b | ●○○ |
| Nickel alloys <small>Inconel, Hastelloy</small> | Rm < 1000 N/mm ² | 8a | ●●● |
| | Rm > 1000 N/mm ² | 8b | ●●● |
| Copper, brass, bronze <small>Copper-based</small> | Rm < 850 N/mm ² | 9a | ○○○ |
| | Rm > 850 N/mm ² | 9b | ○○○ |
| Aluminum <small>Aluminum alloys</small> | Si < 0.5% | 10a | ○○○ |
| | 0.5% < Si < 5% | 10b | ○○○ |
| | Si > 5% | 10c | ○○○ |
| Synthetic materials <small>Engineering plastics</small> | Thermoplastic | 11a | ○○○ |
| | Thermoset | 11b | ○○○ |
| Composite materials <small>Reinforced composites</small> | Glass fiber / GFK | 12a | ○○○ |
| | Carbon fiber / KFK | 12b | ○○○ |
| Precious metals <small>Gold, platinum, silver</small> | Gold | 13a | ○○○ |
| | Platinum | 13b | ○○○ |

TECHNICAL DRAWING



DIMENSIONS

| NOMINAL DIMENSIONS | |
|--------------------|-------|
| D (0 / -0.01) | 5 mm |
| d (h5) | 6 mm |
| L | 57 mm |
| l1 | 7 mm |
| l3 | 15 mm |
| d3 | – |
| R | – |
| e | – |
| Z | 4 |
| Chamfer K | 0.1 |
| w° collision | 1.8° |



E-SHOP / EZI CUT
eskenazi.ch/eshop/22133A-5-6