

FRAISE-D'ÉBAUCHE-MD-E2+-EZI-ALPHA-POUR-ACIERS · ROUGHING-ENDMILL-SC-E2+-EZI-ALPHA-FOR-STEEL · SCHAFT-SCHRUPPFRÄSER-HM-E2+-EZI-ALPHA-FÜR-STAHL



SWISS MADE

21138A-12 Version 07.05.2026

12
Ø D (MM)

83
L (MM)

4
Z

MATERIAL COMPATIBILITY

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

| MATERIAL | SPECIFICATION | GRP | 21138A-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 |
| l | 18 mm |
| l3 | – |
| d3 | – |
| R | – |
| e | – |
| Z | 4 |
| Chamfer K | 0.1 |
| w° collision | – |



E-SHOP / EZI CUT
eskenazi.ch/eshop/21138A-12

© 2026 Eskenazi SA — Carouge, Genève
All rights reserved