

# FRAISE-PROFIL-ÉBAUCHE-MD-E25UF-+-EZI-ALPHA,- VERSION-COURTE · ROUGHIN-ENDMILL-SC-E2-+-EZI- ALPHA,-SHORT-VERSION · SCHAFT-SCHRUPPFÄSER- HM-E25UF-+-EZI-ALPHA,-KURTZE-VERSION



SWISS MADE

21520A-2 Version 07.05.2026

|   |   |  |   |   |                                    |
|---|---|--|---|---|------------------------------------|
| <b>E2</b><br>E2 HIGH PRECISION<br>TOOL MATERIAL | $\lambda = 30^\circ$<br>$\gamma = 3^\circ$<br>CUTTING ANGLES $\approx 30^\circ$ / $3^\circ$ | $45^\circ$<br>45° PRECISION ANGLE<br>MEASUREMENT | <br>DUAL DIRECTION<br>HELICAL DRILL BIT | $1.5 \times D$<br>1.5XD DEPTH<br>PRECISION TOOL | <br>SHORT LENGTH TOOL<br>WEAR BARS |
|---|---|--|---|---|------------------------------------|

## MATERIAL COMPATIBILITY

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

| MATERIAL   | SPECIFICATION                | GRP | 21520A-2 |
|--|------------------------------|-----|----------|
| <b>Alloyed and non-alloyed steels</b><br><small>Non-alloyed steels</small> | Rm < 450 N/mm <sup>2</sup>   | 1a  | ●●○      |
|  | Rm 450–700 N/mm <sup>2</sup> | 1b  | ●●○      |
|  | Rm 700–900 N/mm <sup>2</sup> | 1c  | ●●○      |
|  | Rm > 1200 N/mm <sup>2</sup>  | 1d  | ●○○      |
| <b>Stainless steels</b><br><small>Stainless steels</small>                 | Rm < 650 N/mm <sup>2</sup>   | 2a  | ●●○      |
|  | Rm 650–950 N/mm <sup>2</sup> | 2b  | ●●○      |
|  | Rm > 950 N/mm <sup>2</sup>   | 2c  | ●●○      |
| <b>Hardened steels</b><br><small>Hardened steels</small>                   | 44–56 HRC                    | 3a  | ○○○      |
|  | 57–67 HRC                    | 3b  | ○○○      |
| <b>Exotic materials</b><br><small>Special alloys</small>                   | < 32 HRC                     | 4a  | ●○○      |
|  | > 32 HRC                     | 4b  | ●○○      |
| <b>Graphite</b><br><small>Industrial graphite</small>                      |                              | 5   | ○○○      |
| <b>Cast iron</b><br><small>Grey / nodular cast iron</small>                | < 32 HRC                     | 6a  | ●●●      |
|  | > 32 HRC                     | 6b  | ●●●      |
| <b>Titanium</b><br><small>Titanium alloys</small>                          | Rm < 600 N/mm <sup>2</sup>   | 7a  | ●●○      |
|  | 600 < Rm N/mm <sup>2</sup>   | 7b  | ●○○      |
| <b>Nickel alloys</b><br><small>Inconel, Hastelloy</small>                  | Rm < 1000 N/mm <sup>2</sup>  | 8a  | ●○○      |
|  | Rm > 1000 N/mm <sup>2</sup>  | 8b  | ●○○      |
| <b>Copper, brass, bronze</b><br><small>Copper-based</small>                | Rm < 850 N/mm <sup>2</sup>   | 9a  | ●●○      |
|  | Rm > 850 N/mm <sup>2</sup>   | 9b  | ●●○      |
| <b>Aluminum</b><br><small>Aluminum alloys</small>                          | Si < 0.5%                    | 10a | ○○○      |
|  | 0.5% < Si < 5%               | 10b | ○○○      |
|  | Si > 5%                      | 10c | ○○○      |
| <b>Synthetic materials</b><br><small>Engineering plastics</small>          | Thermoplastic                | 11a | ○○○      |
|  | Thermoset                    | 11b | ○○○      |
| <b>Composite materials</b><br><small>Reinforced composites</small>         | Glass fiber / GFK            | 12a | ○○○      |
|  | Carbon fiber / KFK           | 12b | ○○○      |
| <b>Precious metals</b><br><small>Gold, platinum, silver</small>            | Gold                         | 13a | ●●○      |
|  | Platinum                     | 13b | ●○○      |

## TECHNICAL DRAWING



## DIMENSIONS

| NOMINAL DIMENSIONS |       |
|--------------------|-------|
| D (0 / -0.01)      | 2 mm  |
| d (h5)             | 3 mm  |
| L                  | 38 mm |
| l                  | 3 mm  |
| l3                 | –     |
| d3                 | –     |
| R                  | –     |
| e                  | –     |
| Z                  | 3     |
| Chamfer K          | 0.15  |
| w° collision       | 5.8°  |



E-SHOP / EZI CUT  
[eskenazi.ch/eshop/21520A-2](https://eskenazi.ch/eshop/21520A-2)