

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



21093A-3.0

Version 07.05.2026

SWISS MADE

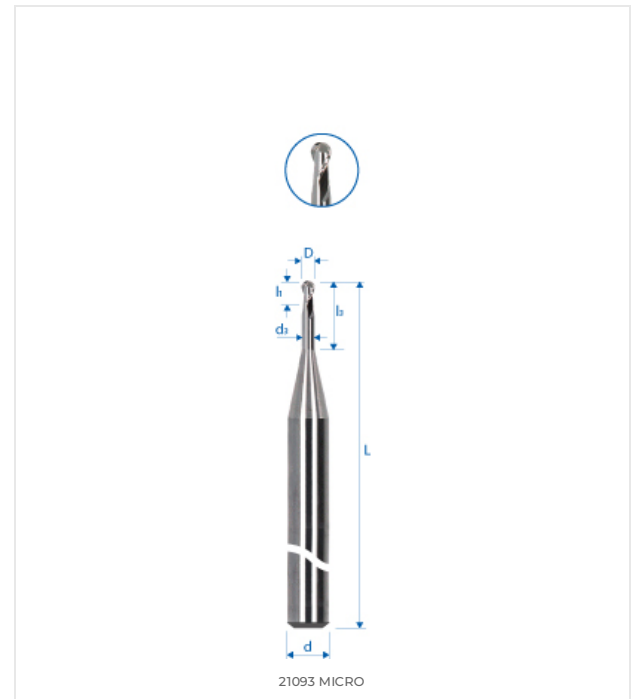
|   |   |                                    |   |  |  |                                     |
|---|---|------------------------------------|---|--|--|-------------------------------------|
| <p><b>E25 UF</b><br/>CARBIDE TOOL MATERIAL E25 UF</p> | <p><math>\lambda=30^\circ</math><br/><math>\gamma=10^\circ</math><br/>CUTTING ANGLES ?<br/>30° ?10°</p> | <p>V-GROOVE CHAMFER TOOL SHAPE</p> | <p>DUAL DIRECTION HELICAL DRILL BIT</p> | <p><math>l_1</math><br/>1.5xD<br/>1.5XD DEPTH PRECISION TOOL</p> | <p><math>l_3</math><br/>8xD<br/>8XD LENGTH L3 CUTTING TOOL</p> | <p>STANDARD TOOL WEAR INDICATOR</p> |
|---|---|------------------------------------|---|--|--|-------------------------------------|

## MATERIAL COMPATIBILITY

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

| MATERIAL   | SPECIFICATION                | GRP | 21093A-3.0 |
|--|------------------------------|-----|------------|
| <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)      | 3 mm   |
| d (h5)             | 3 mm   |
| L                  | 38 mm  |
| l1                 | 4.5 mm |
| l3                 | 15 mm  |
| d3                 | –      |
| R                  | 1.5 mm |
| e                  | –      |
| Z                  | 2      |
| Chamfer K          | –      |
| w° collision       | –      |



E-SHOP / EZI CUT  
[eskenazi.ch/eshop/21093A-3.0](https://eskenazi.ch/eshop/21093A-3.0)