# FRAISE **Z4** MD E25UF + EZI-ALPHA · ENDMILL **Z4** SC E25UF + EZI-ALPHA · FRÄSER **Z4** HM E25UF + EZI-ALPHA

**21112A-12** Version 04.11.2026

SWISS MADE

E2 — SUBMICRON GRAIN GRADE HIGH-SPEED MACHINING OF ABRASIVE MATERIALS

λ=35°-38° Y=10° — VARIABLE HELIX ANGLES 35° - 38° AND CUTTING ANGLE 10°

angle vif — SHARP EDGE

SIDE AND CENTER CUT

l1 2.2xD — CUTTING EDGE LENGTH 2.2XD

FITTING LENGTH STANDARD

IRREGULAR TOOTHING

λ2 λ1 — VARIABLE HELIX ANGLES

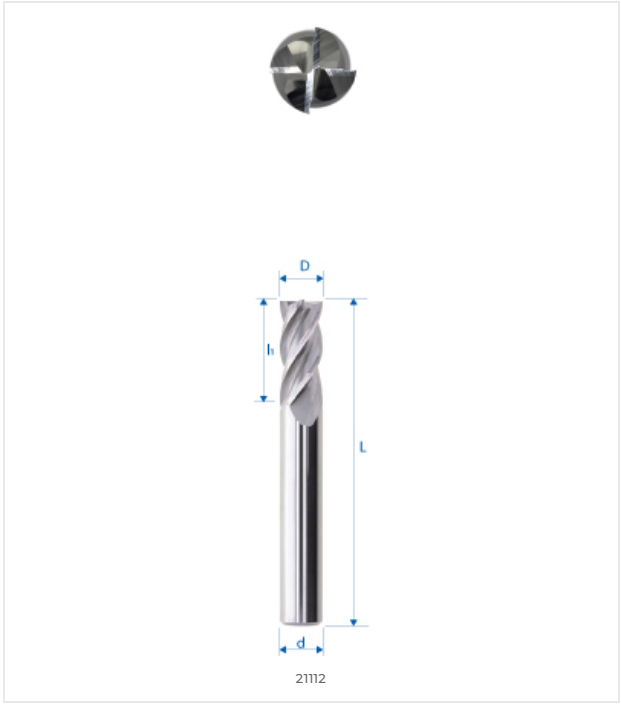
## MATERIAL COMPATIBILITY

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

Product material compatibility

| CATEGORY | MATERIAL | SPECIFICATION | GRP | 21112A-12 |
|---|---|---|---|---|
| | **Alloyed and non-alloyed steels** Non-alloyed steels | Rm < 450 N/mm² | 1a | ●●● 3/3 |
| | | Rm 450–700 N/mm² | 1b | ●●● 3/3 |
| | | Rm 700–900 N/mm² | 1c | ●●● 3/3 |
| | | Rm > 1200 N/mm² | 1d | ●●● 3/3 |
| | **Stainless steels** Stainless steels | Rm < 650 N/mm² | 2a | ●●● 3/3 |
| | | Rm 650–950 N/mm² | 2b | ●●● 3/3 |
| | | Rm > 950 N/mm² | 2c | ●●● 3/3 |
| | **Hardened steels** Hardened steels | 44–56 HRC | 3a | ●○○ 1/3 |
| | | 57–67 HRC | 3b | ○○○ 0/3 |
| | **Exotic materials** Special alloys | < 32 HRC | 4a | ●●○ 2/3 |
| | | > 32 HRC | 4b | ●●○ 2/3 |
| | **Graphite** Industrial graphite | | 5 | ●●○ 2/3 |
| | **Cast iron** Grey / nodular cast iron | < 32 HRC | 6a | ●●● 3/3 |
| | | > 32 HRC | 6b | ●●● 3/3 |
| | **Titanium** Titanium alloys | Rm < 600 N/mm² | 7a | ●●● 3/3 |
| | | 600 < Rm N/mm² | 7b | ●●● 3/3 |
| | **Nickel alloys** Inconel, Hastelloy | Rm < 1000 N/mm² | 8a | ●●○ 2/3 |
| | | Rm > 1000 N/mm² | 8b | ●●○ 2/3 |
| | **Copper, brass, bronze** Copper-based | Rm < 850 N/mm² | 9a | ●○○ 1/3 |
| | | Rm > 850 N/mm² | 9b | ●○○ 1/3 |
| | **Aluminum** Aluminum alloys | Si < 0.5% | 10a | ●○○ 1/3 |
| | | 0.5% < Si < 5% | 10b | ●○○ 1/3 |
| | | Si > 5% | 10c | ●○○ 1/3 |
| | **Synthetic materials** Engineering plastics | Thermoplastic | 11a | ○○○ 0/3 |
| | | Thermoset | 11b | ○○○ 0/3 |
| | **Composite materials** Reinforced composites | Glass fiber / GFK | 12a | ●○○ 1/3 |
| | | Carbon fiber / KFK | 12b | ●○○ 1/3 |
| | **Precious metals** Gold, platinum, silver | Gold | 13a | ●○○ 1/3 |
| | | Platinum | 13b | ●●○ 2/3 |

## TECHNICAL DRAWING




21112

## DIMENSIONS

| NOMINAL DIMENSIONS | |
|---|---|
| D (h10) | 12 mm |
| d (h6) | 12 mm |
| L | 83 mm |
| l1 | 26 mm |
| l3 | – |
| d3 | – |
| R | – |
| e | – |
| Z | 4 |
| Chamfer K | - |
| w° collision angle | - |

E-SHOP / EZI CUT
eskenazi.ch/eshop/21112A-12

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