

# MICRO-FRAISE · Z3-FINISHING-MICRO-END-MILL-FOR-WATCHMAKING-COMPONENT · Z3-FINISH-MIKROFRÄSER-FÜR-UHRENKOMPONENTE



SWISS MADE

21161T-1 Version 21.06.2026

<p>E25 UF</p> <p>CARBIDE TOOL MATERIAL E25 UF</p>	<p><math>\lambda=32^{\circ}-38^{\circ}</math> <math>\gamma=10^{\circ}</math></p> <p>ADJUSTABLE CUTTING ANGLES 32°-38°</p>	<p>angle vif</p> <p>ACUTE ANGLE PRECISION TOOL</p>	<p>DUAL DIRECTION HELICAL DRILL BIT</p>	<p>1.5xD</p> <p>1.5XD DEPTH PRECISION TOOL</p>	<p>ADJUSTABLE ANGLE ICON</p>	<p>VARIABLE HELIX DRILL BIT</p>
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## MATERIAL COMPATIBILITY

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

MATERIAL	SPECIFICATION	GRP	21161T-1
<b>Alloyed and non-alloyed steels</b> Non-alloyed steels	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> Stainless steels	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> Hardened steels	44–56 HRC	3a	●●●
	57–67 HRC	3b	●●○
<b>Exotic materials</b> Special alloys	< 32 HRC	4a	●●●
	> 32 HRC	4b	●●●
<b>Graphite</b> Industrial graphite		5	●●○
<b>Cast iron</b> Grey / nodular cast iron	< 32 HRC	6a	●●○
	> 32 HRC	6b	●●○
<b>Titanium</b> Titanium alloys	Rm < 600 N/mm <sup>2</sup>	7a	●●●
	600 < Rm N/mm <sup>2</sup>	7b	●●●
<b>Nickel alloys</b> Inconel, Hastelloy	Rm < 1000 N/mm <sup>2</sup>	8a	●●●
	Rm > 1000 N/mm <sup>2</sup>	8b	●●●
<b>Copper, brass, bronze</b> Copper-based	Rm < 850 N/mm <sup>2</sup>	9a	●●○
	Rm > 850 N/mm <sup>2</sup>	9b	●●○
<b>Aluminum</b> Aluminum alloys	Si < 0.5%	10a	●●○
	0.5% < Si < 5%	10b	●●○
	Si > 5%	10c	●●○
<b>Synthetic materials</b> Engineering plastics	Thermoplastic	11a	○○○
	Thermoset	11b	○○○
<b>Composite materials</b> Reinforced composites	Glass fiber / GFK	12a	●●○
	Carbon fiber / KFK	12b	●●○
<b>Precious metals</b> Gold, platinum, silver	Gold	13a	●●○
	Platinum	13b	●●○

## TECHNICAL DRAWING



## DIMENSIONS

NOMINAL DIMENSIONS	
D (0 / -0.01)	1 mm
d (h5)	3 mm
L	38 mm
l1	1.5 mm
l3	–
d3	–
R	–
e	–
Z	3
Chamfer K	–
w° collision	10°



**E-SHOP / EZI CUT**  
eskenazi.ch/eshop/21161T-1