

# ENGRAVING MILL with internal coolant

**Increased durability and perfect surface  
finish thanks to thru coolant**



**REF 119-3H :  
flat tip**



**REF 119-3RH :  
radius on tip**

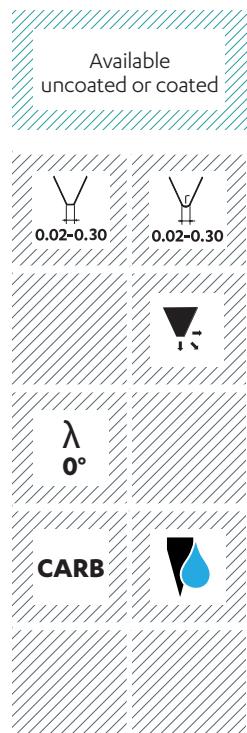
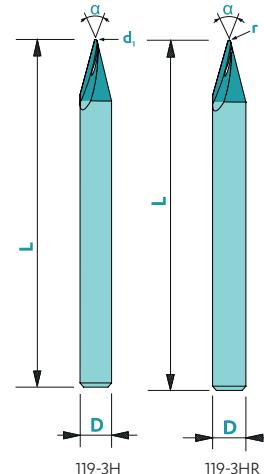


**119-3H**  
**119-3RH**

# Engraving mill with internal coolant - $\frac{3}{4}$



Material	n [rpm]	Ap	Uncoated	Coated	Rec. Coating*
Steel < 700 N/mm <sup>2</sup>	25 - 40'000	0.05 - 0.40	□	■	Tisi (BQ)
Steel > 700 N/mm <sup>2</sup>	20 - 40'000	0.05 - 0.30	-	■	Tisi (BQ)
Stainless steel	20 - 30'000	0.05 - 0.30	-	□	Tisi (BQ)
Cast iron	25 - 40'000	0.05 - 0.40	□	■	Tisi (BQ)
Copper	20 - 40'000	0.05 - 0.40	□	■	Solo (DA)
Brass - Bronze	25 - 40'000	0.05 - 0.40	■	■	Solo (DA)
Aluminium	25 - 40'000	0.05 - 0.50	□	■	Solo (DA)
Gold - Silver	20 - 40'000	0.05 - 0.40	■	□	Solo (DA)
Platinum - Palladium	-	-	-	-	-
Superalloys	-	-	□	■	-
Titanium	25 - 40'000	0.05 - 0.40	□	■	RICO (ZB)
			not adapted □	adapted □	highly adapted ■



## REF 119-3H - flat tip

Article number: 119-3Ha##d#.##

Example: End mill ref. 119-3H with 25° angle and tip diameter 0.05 mm: 119-3Ha25d0.05

$\alpha^*$	$d_1^{**}$	D	L
15-45°	0.02-0.09	3	33
15-45°	0.10-0.30	3	33
50-140°	0.02-0.09	3	33
50-140°	0.10-0.30	3	33

\*Available angles: every 5° between 15° and 45°; every 10° between 50° and 140°

\*\*Available radius: every 0.01 mm between 0.02 and 0.09 mm; every 0.05 mm

between 0.10 and 0.30 mm

Other dimensions (angle, radius, shank) upon request

## REF 119-3RH - radius on tip

Article number : 119-3RHa##r#.##

Example: End mill ref. 119-3RH with 25° angle and radius 0.05 mm: 119-3RHa25r0.05

$\alpha^*$	$r^{**}$	D	L
15-45°	0.02-0.09	3	33
15-45°	0.10-0.30	3	33
50-140°	0.02-0.09	3	33
50-140°	0.10-0.30	3	33

\*Available angles: every 5° between 15° and 45°; every 10° between 50° and 140°

\*\*Available radius: every 0.01 mm between 0.02 and 0.09 mm; every 0.05 mm

between 0.10 and 0.30 mm

Other dimensions (angle, radius, shank) upon request

If  $\alpha < 30^\circ$ , a double cone applies

\* Prices for coatings: contact us!

To order a coated tool, add the 2-letter coating code to the article number

