



PRECISION TOOLS

**ONE**OPERATION

# MICRO-SNAP

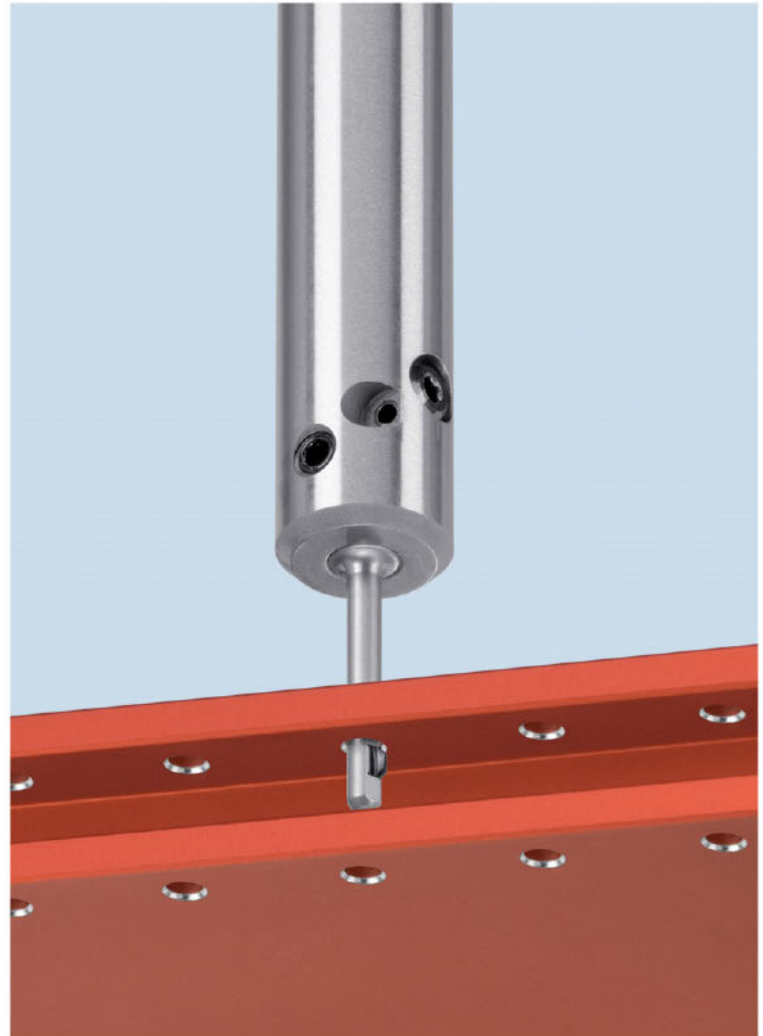
## Instruction Book

Carbide tool for all purpose deburring and chamfering of through holes 2mm-4mm, front and back, in a single pass.

### Table of Contents

Tool Description	pg. 2
Blade Change <i>Removing Blade</i>	pg. 3
Blade Change <i>Installing New Blade</i>	pg. 4-5
Programming	pg. 6-7

*All Heule tool systems are protected by international patents.*



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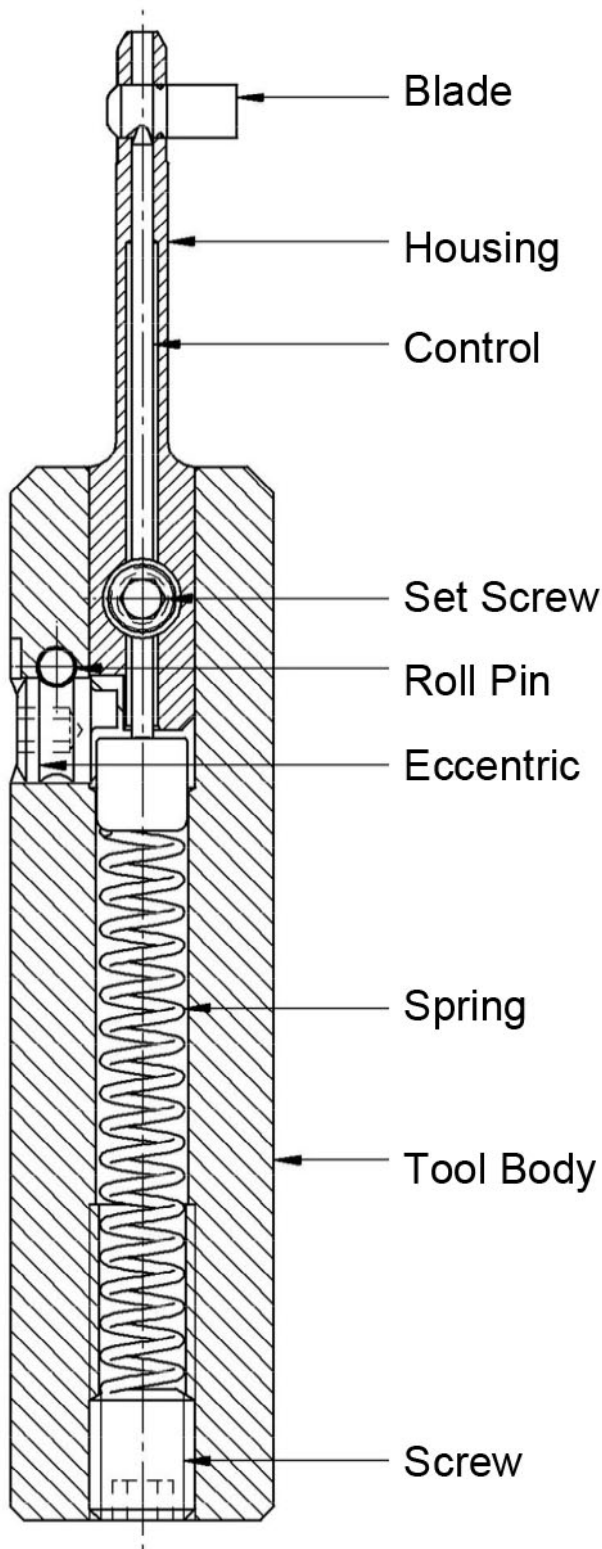
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MICRO-SNAP-IB 2012

# Tool Description



## What does the MICRO-SNAP tool do?

The MICRO-SNAP tool is for all purpose deburring and chamfering of through small holes 2mm-5mm (.079"-.197"), front and back, in a single pass.

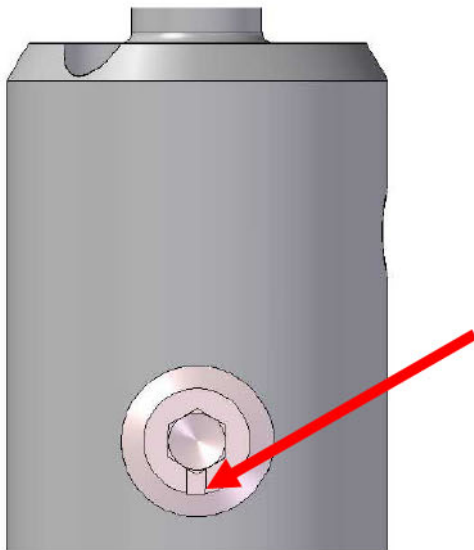
## How does it work?

As the rotating tool is fed into the hole, the front cutting edge deburrs the top of the hole by cutting a 45° chamfer. As the tool feeds into the part, the blade is forced into the body and slides in the blade window.

When the blade is in the hole, only the ground sliding surface touches the hole protecting it from damage while the tool is fed through the part. There is no need to stop or reverse the spindle.

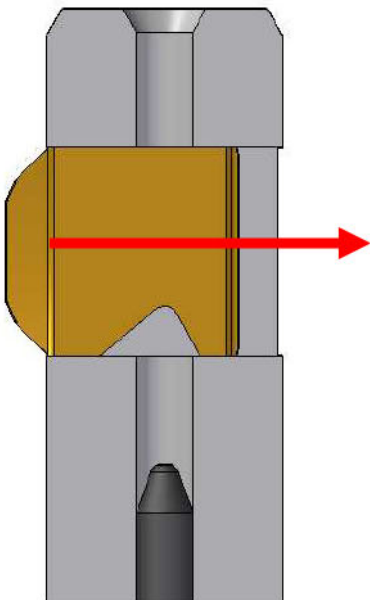
When the blade reaches the back of the part the coiled spring acts with the control bold to push it back out into cutting position. The back edge is deburred and chamfered as the tool is withdrawn. When the blade is again in the hole, the tool can be rapid fed out and on the next hole.

# Blade Change — Removing the Blade



## Step 1

Turn eccentric screw 180° until the notch points away from the blade housing. (backwards or downwards)



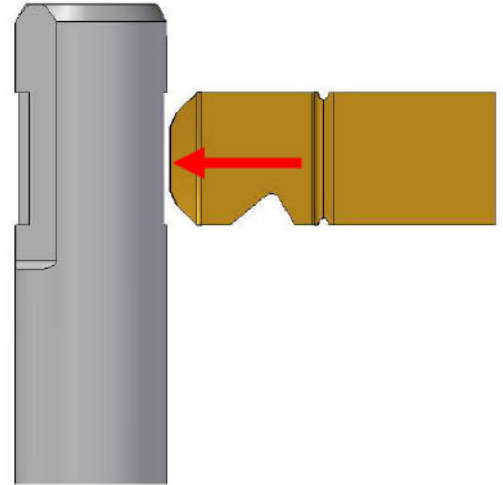
## Step 2

The leading pin is pulled in when the eccentric screw is turned, releasing the blade. Push the blade out of the tool through the back side of the blade housing (without the chip clearance flat).

# Blade Change — Installing New Blade

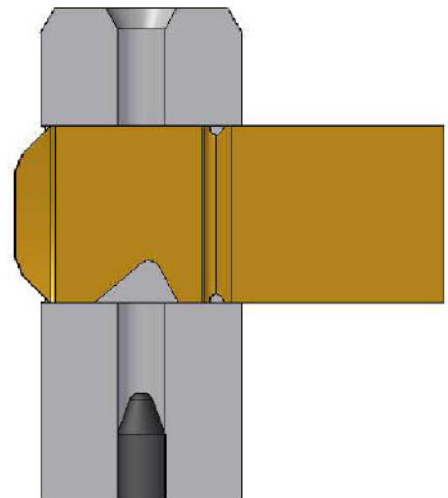
## Step 1

Insert the new blade with the assembly aid with the cutting side first into the blade window from the back side of the blade housing (without the chip clearance flat) by pushing it in with your finger.



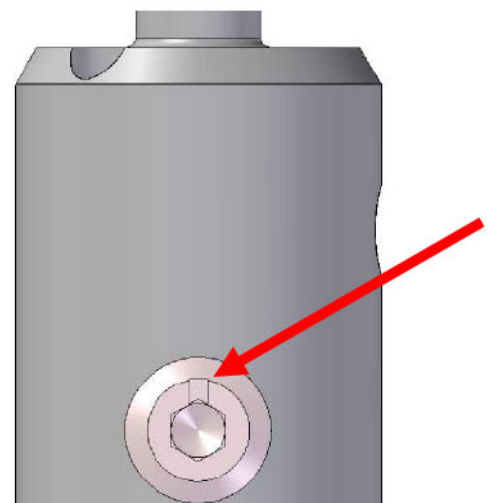
## Step 2

Make sure the blade is pushed through far enough so the pin groove in the blade is above the leading pin. You can check this by ensuring that the cutting part of the blade is completely out of the blade window on the front side with the chip clearance flat.



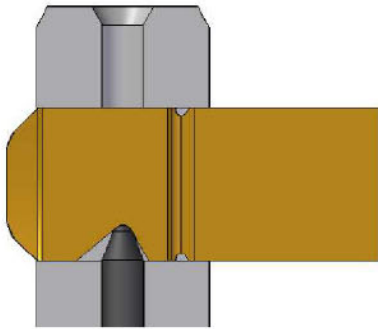
## Step 2

Turn the eccentric screw 180° until the notch points toward the blade housing.





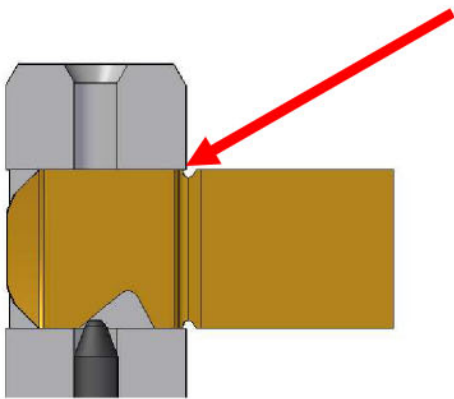
## Blade Change — Installing New Blade (Continued)



### Step 4

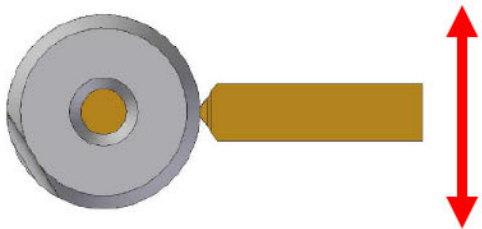
Once the eccentric screw is turned back, the leading pin moves into the pin groove of the blade, holding it in place.

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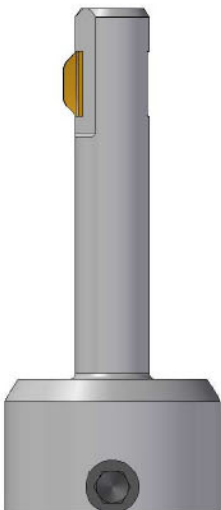
### Step 5

Pull the blade using the assembly back approximately 0.4mm so that the break line is at the edge of the blade window.



Remove the assembly aid by moving it from side to side with your fingers until it snaps off and the blade returns to its proper position.

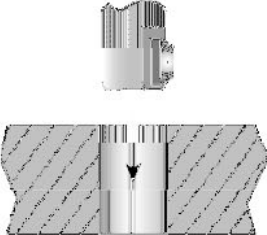
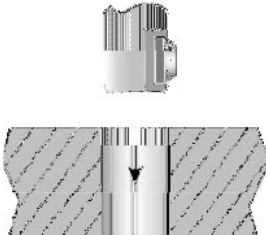

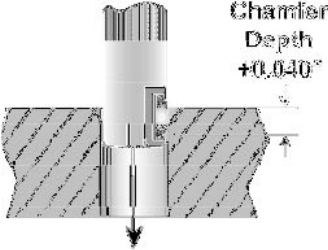

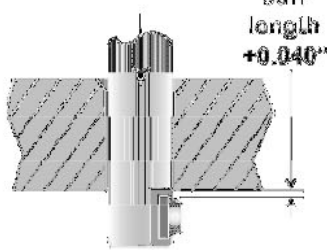
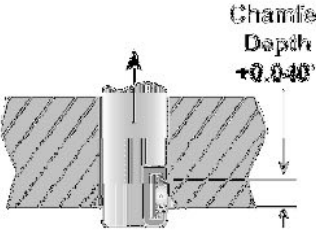
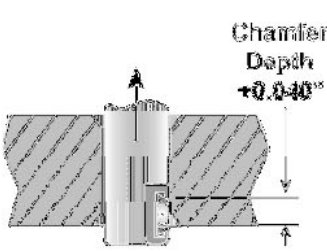


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### Step 6

The blade is now installed and the tool is ready for use.

# Programming

For Front & Back Chamfer		Back Chamfer Only
	<p><b>Step 1:</b>  <b>N01 M03 Sxxx</b>            Set the RPM According to the suggested values.</p>	
	<p><b>Step 2:</b> (Move into position)  <b>N02 M02 G00 Sxxx</b>            Move the tool with rapid feed into position with the front.</p>	
	<p><b>Step 3:</b> (Cut front chamfer)  <b>N03 M03 G01 Zxx Scs Fct</b>            Machine the part with cutting feed (cf) and speed (cs). Feed into the part the chamfer depth + 1.040" to ensure the tool is finished cutting.</p>	
	<p><b>Step 4:</b> (Rapid through part)  <b>N04 M03 G00 Zxx Scs Fct</b>            Move the tool through the part with rapid feed until the blade is 0.040" beyond burr. The blade will not damage the through hole.</p>	
	<p><b>Step 5:</b> (Cut back chamfer)  <b>N05 M03 G01 Zxx Scs Fct</b>            Machine the part with cutting feed (cf) and speed (cs). Feed into the part the chamfer depth + 0.040" to ensure the tool is finished cutting.</p>	
	<p><b>Step 6:</b> (Remove from part)  <b>N06 M03 G00 Zxx Scs Fct</b>            Remove the tool from the part with a rapid feed and proceed to the next hole. The blade will not damage the through hole.</p>	

## Programming *(continued)*

Material	IPR (Std Geo.)	IPR (DEFA Geo.)	SFM
Aluminum	0.006-0.012	0.001-0.003	210-400
Brass	0.006-0.014	0.001-0.003	210-400
Low Carbon Steels	0.004-0.008	0.001-0.003	150-210
Med Carbon Steels	0.004-0.009	0.001-0.002	130-180
Free Machining Alloys	0.004-0.006	0.001-0.002	100-160
Stainless Steel	0.002-0.005	0.001-0.002	90-140
Gray Cast Iron	0.004-0.008	0.001-0.003	150-220
Nodular Cast Iron	0.003-0.007	0.001-0.002	150-220
Short Clipping Iron	0.003-0.007	0.001-0.002	100-150
Titanium	0.001-0.003	0.001-0.002	20-50

### **IMPORTANT NOTE**

**RECOMMENDED MAXIMUM SPEED IS 6,000 RPM.**

Please contact Heule Tool Corporation Engineering Department for further assistance with your application.



**WARNING: Grinding may produce hazardous dust. To avoid adverse effects, use adequate ventilation and read MSDS. Cutting tools may break during use. To avoid injury, use proper safety precautions and protective equipment.**



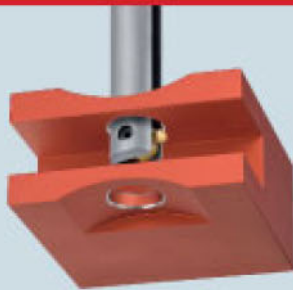
# Over 50 Years of Manufacturing Cutting Tools

HEULE manufactures cutting tools of the highest quality and precision consistent with Swiss craftsmanship for use in the machine tools of some of the world's largest manufactureres; and the smallest machine shops.



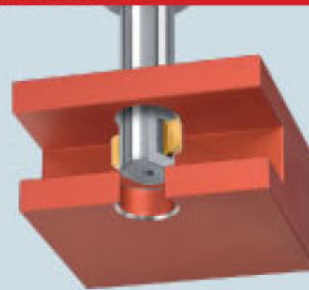
## DEBURRING

COFA  
SNAP



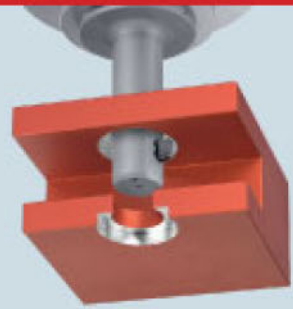
## CHAMFERING

SNAP  
GH-S  
DEFA



## COUNTERSINKING

BSF  
SOLO  
GH-Z/E  
GH-K



## DRILLING

VEX-P  
VEX-S



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