NOGA MT
MACHINE TOOLS

ULTIMATE SERIES
MACHINE TOOLS

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ULTIMATE SERIES

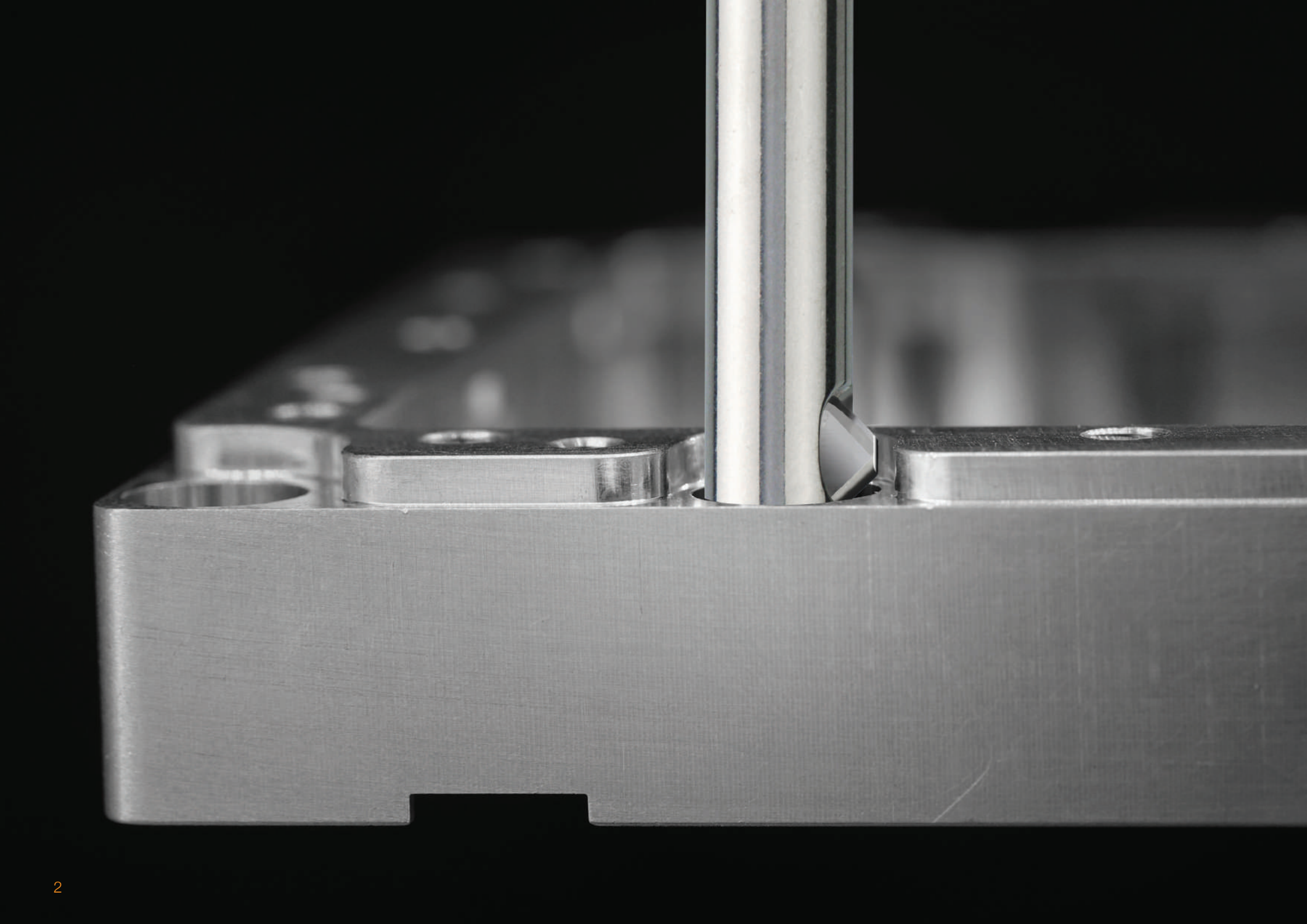
Machine Industry & Global Partners

For more than 40 years NOGA has been recognized worldwide for it's state-of-the-art Hand Deburring Tools, designed to be used extensively in industrial applications.

In recent years there has been a demand for dedicated machine deburring tools external and internal back holes for the metalworking and machining industry.

Today we are proud to introduce our new line of NOGA MT – Machine Tools.

NOGA MT Ultimate series products line designed for front and back Deburring, back Spotfacing and back Chamfering in a single pass through a hole.



ULTIMATE ADVANTAGES

- Innovative design with precision manufacturing.
- Providing reliability, efficiency and cost-effective solutions.
- Eliminate time consuming and costly manual processes.
- Significantly reduces the risk of mechanical failure or human error.
- Smart & Simple tool mechanism systems.
- Strong and durable tools.
- Easy to use.
- Quick setup.
- Tools can work on variety of machines.
- The tools could work vertically and horizontally.
- The tools blade designed to protect the hole bore and to unarm the internal surface.
- The tools blade made from hardened HSS or CARBIDE and have high abrasion resistance.
- Custom made tools for your specific applications.
- Patent Pending.

THE ULTIMATE SERIES
3 PRODUCT FAMILIES

UBURR

Deburring the front and back of a drilled through hole.

UBurr deburring tools providing a quick, effective, reliable and consistent deburring way of front and back side bore edges of a drilled hole in one single pass.

Efficient and convenient tools for long-term work and competitive prices.

ø3 mm up to ø25 mm

UCHAMF

Back Chamfering of a drilled through hole.

A sophisticated mechanism that allows a high level of accuracy to be achieved. The opening of the blade is done by opening and closing the coolant liquid from the machine.

Tools with a high level of accuracy and keeping competitive prices.

ø8 mm up to ø20 mm

USPOT

Back Spotfacing of a drilled through hole.

A sophisticated mechanism that allows a high level of accuracy to be achieved. The opening of the blade is done by opening and closing the coolant liquid from the machine.

Tools with a high level of accuracy and keeping competitive prices.

ø8 mm up to ø20 mm

* Custom made tools available on request

NOGANT

UBURR

THE MACHINE DEBURRING TOOL

UBurr deburring tools provide you with an innovating way to remove your burrs.

UBurr deburring tools providing a quick, effective, reliable and consistent deburring way of front and back side bore edges of a drilled hole in one single pass.

UBurr deburring tools radially removes the burrs off the bore edges, without requiring the workpiece to be turned or the spindle to be stopped.

This solution is faster, easier, and more economical for your hole deburring problems for small production and mass production as well.

UBurr deburring tool is a great choice for batch runs or in a production environment when a reliable and stable performance is required.

A simple and efficient mechanism for inserting and removing the blade.

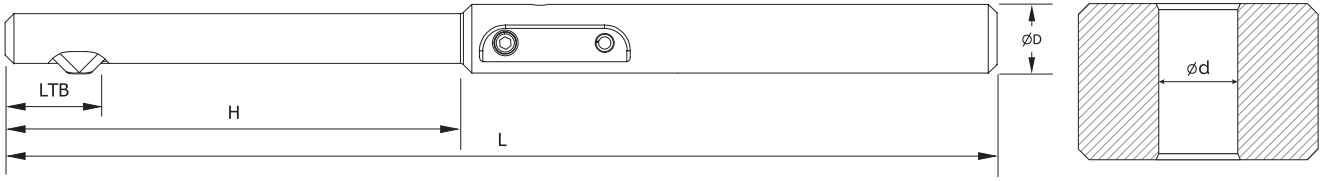
The tool blade designed to easily deburr unwanted material from the front and back side of the holes in seconds.

The unique geometry prevents the blade from damaging the surface inside the hole.

The UBurr standard tool series range from Ø3 mm up to Ø25 mm.

Custom made tools can be made for your specific applications.

UBURR
NMT-UB

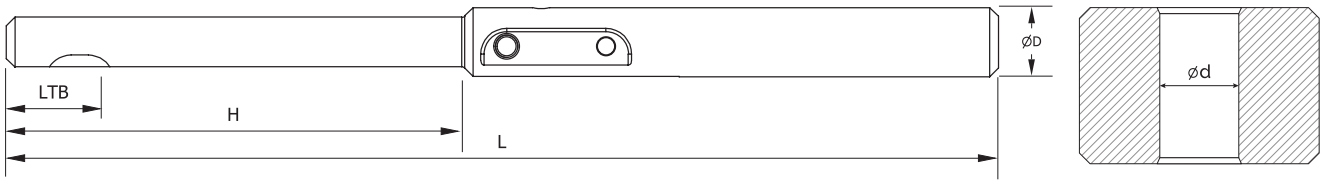


ONE PASS SOLUTION FOR HOLE-DEBURRING - **COMPLETE SETS**

Complete Set Item No.	Complete Set Description Tools & Blades	Tool Item No.		Blade Item No.	Hole Diameter Ø d	Shank Diameter Ø D	LTB *	H	L
UB3000	NMT-UB-d030-H29-D08-L85 + Blade	**UB1030**	+	**UB2030**	3.0	8	10.0	29	85
UB3001	NMT-UB-d035-H29-D08-L85 + Blade	**UB1035**	+	**UB2030**	3.5	8	10.0	29	85
UB3002	NMT-UB-d040-H29-D08-L85 + Blade	**UB1040**	+	**UB2030**	4.0	8	10.0	29	85
UB3003	NMT-UB-d045-H29-D08-L85 + Blade	**UB1045**	+	**UB2030**	4.5	8	10.0	29	85
UB3004	NMT-UB-d050-H53-D08-L115 + Blade	**UB1050**	+	**UB2060**	5.0	8	12.0	53	115
UB3005	NMT-UB-d055-H53-D08-L115 + Blade	**UB1055**	+	**UB2060**	5.5	8	12.0	53	115
UB3006	NMT-UB-d060-H53-D08-L115 + Blade	**UB1060**	+	**UB2060**	6.0	8	12.0	53	115
UB3007	NMT-UB-d065-H53-D08-L115 + Blade	**UB1065**	+	**UB2060**	6.5	8	12.0	53	115
UB3008	NMT-UB-d070-H53-D08-L115 + Blade	**UB1070**	+	**UB2060**	7.0	8	12.0	53	115
UB3009	NMT-UB-d075-H53-D08-L115 + Blade	**UB1075**	+	**UB2060**	7.5	8	12.0	53	115
UB3010	NMT-UB-d080-H53-D10-L115 + Blade	**UB1080**	+	**UB2060**	8.0	10	12.0	53	115
UB3011	NMT-UB-d085-H53-D10-L115 + Blade	**UB1085**	+	**UB2060**	8.5	10	12.0	53	115
UB3012	NMT-UB-d090-H53-D10-L115 + Blade	**UB1090**	+	**UB2060**	9.0	10	12.0	53	115
UB3013	NMT-UB-d095-H53-D10-L115 + Blade	**UB1095**	+	**UB2060**	9.5	10	12.0	53	115
UB3014	NMT-UB-d100-H80-D10-L125 + Blade	**UB1100**	+	**UB2060**	10.0	10	12.0	80	125
UB3015	NMT-UB-d105-H80-D10-L125 + Blade	**UB1105**	+	**UB2060**	10.5	10	12.0	80	125
UB3016	NMT-UB-d110-H80-D10-L125 + Blade	**UB1110**	+	**UB2060**	11.0	10	12.0	80	125
UB3017	NMT-UB-d115-H80-D12-L125 + Blade	**UB1115**	+	**UB2060**	11.5	12	12.0	80	125
UB3018	NMT-UB-d120-H80-D12-L125 + Blade	**UB1120**	+	**UB2060**	12.0	12	12.0	80	125
UB3019	NMT-UB-d125-H80-D12-L125 + Blade	**UB1125**	+	**UB2060**	12.5	12	12.0	80	125

All measurements are in mm unless mentioned otherwise | * Length to bottom

UBURR
NMT-UB

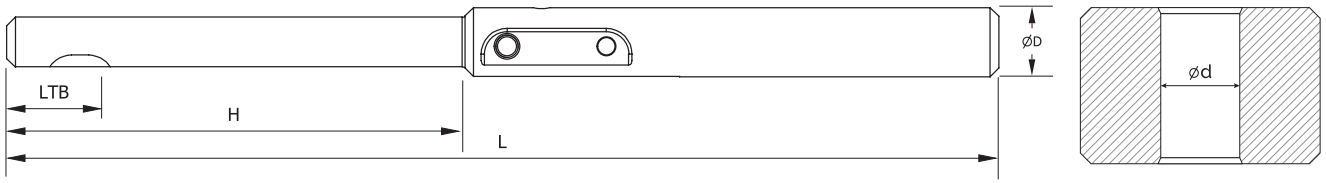


ONE PASS SOLUTION FOR HOLE-DEBURRING - TOOLHOLDERS

Tool Item No.	Tool Description	Hole Diameter Ø d	Shank Diameter Ø D	LTB *	H	L	** Blade Item No.	Blade Description
UB1030	NMT-UB-d030-H29-D08-L85	3.0	8.0	10.0	29.0	85	**UB2030**	NMT-UB-B 030-045 HSS
UB1035	NMT-UB-d035-H29-D08-L85	3.5	8.0	10.0	29.0	85	**UB2030**	NMT-UB-B 030-045 HSS
UB1040	NMT-UB-d040-H29-D08-L85	4.0	8.0	10.0	29.0	85	**UB2030**	NMT-UB-B 030-045 HSS
UB1045	NMT-UB-d045-H29-D08-L85	4.5	8.0	10.0	29.0	85	**UB2030**	NMT-UB-B 030-045 HSS
UB1050	NMT-UB-d050-H53-D08-L115	5.0	8.0	12.0	53.0	115	**UB2060**	NMT-UB-B 050-250 HSS
UB1055	NMT-UB-d055-H53-D08-L115	5.5	8.0	12.0	53.0	115	**UB2060**	NMT-UB-B 050-250 HSS
UB1060	NMT-UB-d060-H53-D08-L115	6.0	8.0	12.0	53.0	115	**UB2060**	NMT-UB-B 050-250 HSS
UB1065	NMT-UB-d065-H53-D08-L115	6.5	8.0	12.0	53.0	115	**UB2060**	NMT-UB-B 050-250 HSS
UB1070	NMT-UB-d070-H53-D08-L115	7.0	8.0	12.0	53.0	115	**UB2060**	NMT-UB-B 050-250 HSS
UB1075	NMT-UB-d075-H53-D08-L115	7.5	8.0	12.0	53.0	115	**UB2060**	NMT-UB-B 050-250 HSS
UB1080	NMT-UB-d080-H53-D10-L115	8.0	10.0	12.0	53.0	115	**UB2060**	NMT-UB-B 050-250 HSS
UB1085	NMT-UB-d085-H53-D10-L115	8.5	10.0	12.0	53.0	115	**UB2060**	NMT-UB-B 050-250 HSS
UB1090	NMT-UB-d090-H53-D10-L115	9.0	10.0	12.0	53.0	115	**UB2060**	NMT-UB-B 050-250 HSS
UB1095	NMT-UB-d095-H53-D10-L115	9.5	10.0	12.0	53.0	115	**UB2060**	NMT-UB-B 050-250 HSS
UB1100	NMT-UB-d100-H80-D10-L125	10.0	10.0	12.0	80.0	125	**UB2060**	NMT-UB-B 050-250 HSS
UB1105	NMT-UB-d105-H80-D10-L125	10.5	10.0	12.0	80.0	125	**UB2060**	NMT-UB-B 050-250 HSS
UB1110	NMT-UB-d110-H80-D10-L125	11.0	10.0	12.0	80.0	125	**UB2060**	NMT-UB-B 050-250 HSS
UB1115	NMT-UB-d115-H80-D12-L125	11.5	12.0	12.0	80.0	125	**UB2060**	NMT-UB-B 050-250 HSS
UB1120	NMT-UB-d120-H80-D12-L125	12.0	12.0	12.0	80.0	125	**UB2060**	NMT-UB-B 050-250 HSS
UB1125	NMT-UB-d125-H80-D12-L125	12.5	12.0	12.0	80.0	125	**UB2060**	NMT-UB-B 050-250 HSS

All measurements are in mm unless mentioned otherwise | * Length to bottom ** Blades sold separately

UBURR
NMT-UB

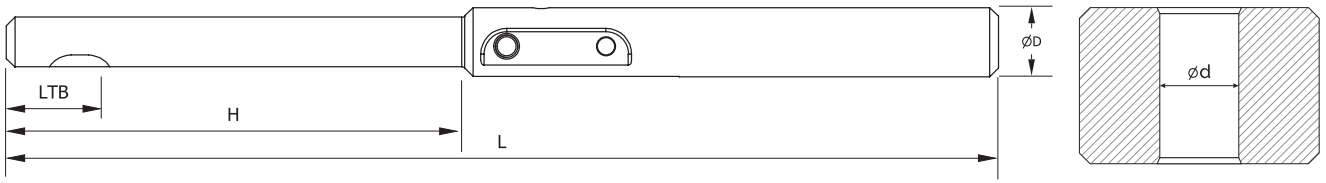


ONE PASS SOLUTION FOR HOLE-DEBURRING - **TOOLHOLDERS**

Tool Item No.	Tool Description	Hole Diameter Ø d	Shank Diameter Ø D	LTB *	H	L	** Blade Item No.	Blade Description
UB1130	NMT-UB-d130-H80-D12-L125	13.0	12.0	12.0	80.0	125	**UB2060**	NMT-UB-B 060-250 HSS
UB1135	NMT-UB-d135-H80-D12-L125	13.5	12.0	12.0	80.0	125	**UB2060**	NMT-UB-B 060-250 HSS
UB1140	NMT-UB-d140-H80-D12-L125	14.0	12.0	12.0	80.0	125	**UB2060**	NMT-UB-B 060-250 HSS
UB1145	NMT-UB-d145-H80-D12-L125	14.5	12.0	12.0	80.0	125	**UB2060**	NMT-UB-B 060-250 HSS
UB1150	NMT-UB-d150-H80-D12-L125	15.0	12.0	12.0	80.0	125	**UB2060**	NMT-UB-B 060-250 HSS
UB1155	NMT-UB-d155-H80-D12-L125	15.5	12.0	12.0	80.0	125	**UB2060**	NMT-UB-B 060-250 HSS
UB1160	NMT-UB-d160-H80-D16-L125	16.0	16.0	12.0	80.0	125	**UB2060**	NMT-UB-B 060-250 HSS
UB1165	NMT-UB-d165-H80-D16-L125	16.5	16.0	12.0	80.0	125	**UB2060**	NMT-UB-B 060-250 HSS
UB1170	NMT-UB-d170-H80-D16-L125	17.0	16.0	12.0	80.0	125	**UB2060**	NMT-UB-B 060-250 HSS
UB1175	NMT-UB-d175-H80-D16-L125	17.5	16.0	12.0	80.0	125	**UB2060**	NMT-UB-B 060-250 HSS
UB1180	NMT-UB-d180-H80-D16-L125	18.0	16.0	12.0	80.0	125	**UB2060**	NMT-UB-B 060-250 HSS
UB1185	NMT-UB-d185-H80-D16-L125	18.5	16.0	12.0	80.0	125	**UB2060**	NMT-UB-B 060-250 HSS
UB1190	NMT-UB-d190-H80-D16-L125	19.0	16.0	12.0	80.0	125	**UB2060**	NMT-UB-B 060-250 HSS
UB1195	NMT-UB-d195-H80-D20-L125	19.5	20.0	12.0	80.0	125	**UB2060**	NMT-UB-B 060-250 HSS
UB1200	NMT-UB-d200-H80-D20-L125	20.0	20.0	12.0	80.0	125	**UB2060**	NMT-UB-B 060-250 HSS
UB1205	NMT-UB-d205-H80-D20-L125	20.5	20.0	12.0	80.0	125	**UB2060**	NMT-UB-B 060-250 HSS
UB1210	NMT-UB-d210-H80-D20-L125	21.0	20.0	12.0	80.0	125	**UB2060**	NMT-UB-B 060-250 HSS
UB1215	NMT-UB-d215-H80-D20-L125	21.5	20.0	12.0	80.0	125	**UB2060**	NMT-UB-B 060-250 HSS
UB1220	NMT-UB-d220-H80-D20-L125	22.0	20.0	12.0	80.0	125	**UB2060**	NMT-UB-B 060-250 HSS
UB1225	NMT-UB-d225-H80-D20-L125	22.5	20.0	12.0	80.0	125	**UB2060**	NMT-UB-B 060-250 HSS

All measurements are in mm unless mentioned otherwise | * Length to bottom ** Blades sold separately

UBURR
NMT-UB



ONE PASS SOLUTION FOR HOLE-DEBURRING - TOOLHOLDERS

Tool Item No.	Tool Description	Hole Diameter Ø d	Shank Diameter Ø D	LTB *	H	L	** Blade Item No.	Blade Description
UB1230	NMT-UB-d230-H80-D20-L125	23.0	20.0	12.0	80	125	**UB2060**	NMT-UB-B 060-250 HSS
UB1235	NMT-UB-d235-H80-D20-L125	23.5	20.0	12.0	80	125	**UB2060**	NMT-UB-B 060-250 HSS
UB1240	NMT-UB-d240-H80-D20-L125	24.0	20.0	12.0	80	125	**UB2060**	NMT-UB-B 060-250 HSS
UB1245	NMT-UB-d245-H80-D20-L125	24.5	20.0	12.0	80	125	**UB2060**	NMT-UB-B 060-250 HSS
UB1250	NMT-UB-d250-H80-D20-L125	25.0	20.0	12.0	80	125	**UB2060**	NMT-UB-B 060-250 HSS

TOOL DESIGNATION

NMT NOGA Machine Tools	**UB** - UBURR	**d**-Hole Diameter	**H**-Neck Down Length	**D**-Shank Diameter	**L**-Total Length

BLADE/INSERT DESIGNATION			I/Angle		Blade Material&Coating
NMT NOGA Machine Tools	UB - **B** Blade/Insert	Blade/Insert Tool Dia			HSS/HSS C(Coated)* * Upon Request

ONE PASS SOLUTION FOR HOLE-DEBURRING - BLADES

Blade Item No.	Blade Description
UB2030	NMT-UB-B 030-045 HSS
UB2060	NMT-UB-B 050-250 HSS

All measurements are in mm unless mentioned otherwise | * Length to bottom | ** Blades sold separately

FRONT SIDE
NOGA

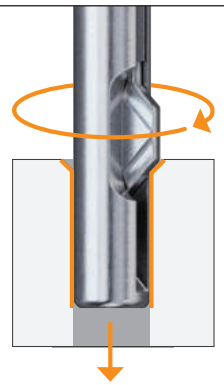
BACK SIDE

UBURR: THE TOOL PATH

ONE PASS SOLUTION TO HOLE-DEBURRING

1

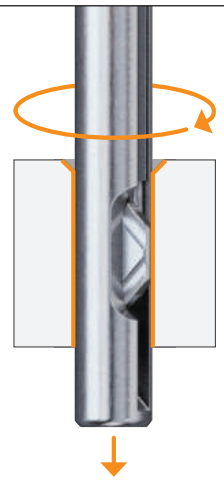
UBURR tools remove the burr from the front hole surface by a unique flexible blade.



2

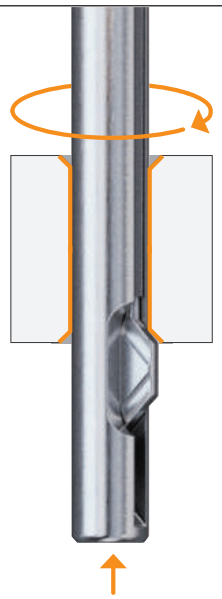
The **UBURR** blade enters into the tool pocket automatically as the pressure is increasing on the blade.

The unique geometry prevents the blade from damaging the surface inside the hole.



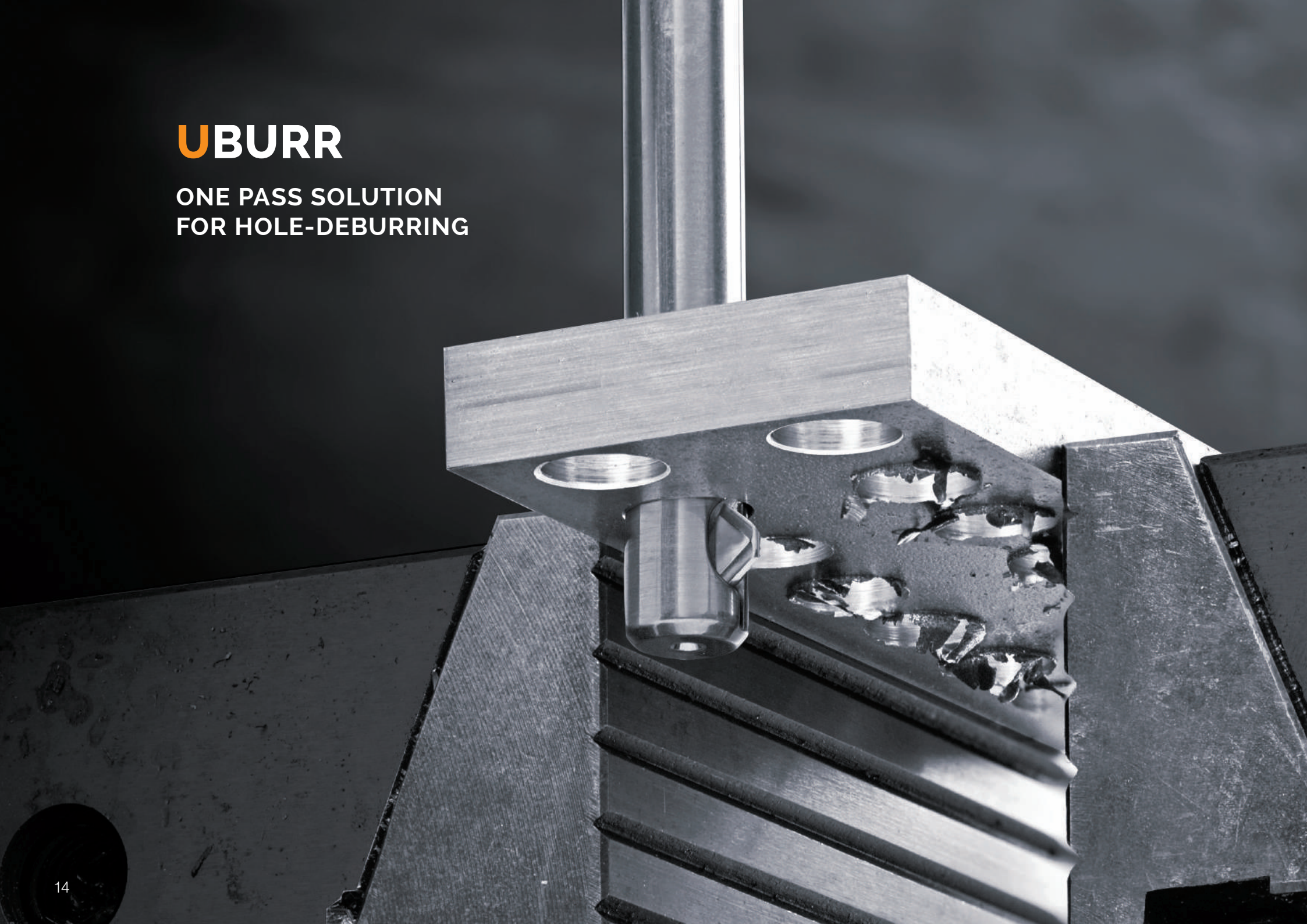
3

The **UBURR** tools remove the burr from the back hole surface with the same spindle direction by going up.



UBURR

ONE PASS SOLUTION FOR HOLE-DEBURRING

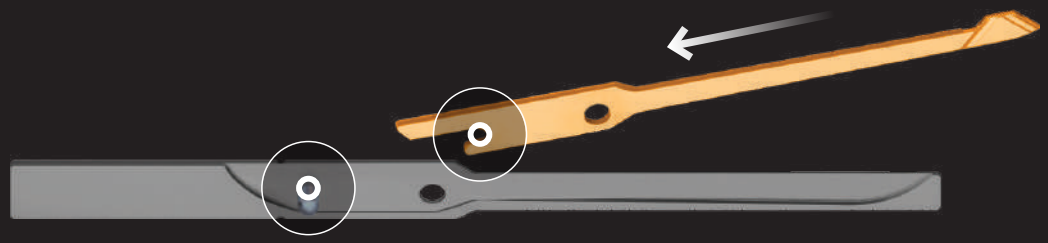


CUTTING CONDITIONS
UBURR

		HSS		HSS + COATING	TiN
		Vc=m/min	Fz=mm/tooth	Vc=m/min	Fz=mm/tooth
P	Steel	25.0-45.0	0.05-0.1	45.0-65.0	0.05-0.1
M	Stainless Steel	15.0-30.0	0.05-0.08	30.0-55.0	0.05-0.08
K	Cast Iron	20.0-35.0	0.05-0.1	35.0-55.0	0.05-0.1
N	Aluminum	40.0-60.0	0.05-0.12	50.0-75.0	0.05-0.12
S	Titanium / Inconel	10.0-15.0	0.05-0.08	15.0-20.0	0.05-0.08
H	Hard Material	15.0-30.0	0.05-0.08	20.0-35.0	0.05-0.08

BLADE INSERTION
UBURR

1

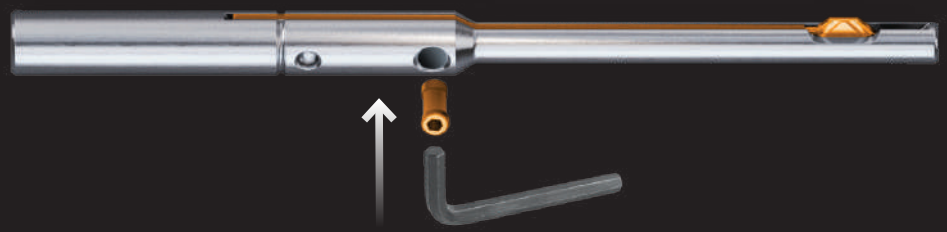


Insert the blade into the holder slot until the blade stops at the holder pin.

2

Push the blade into the tool pocket.

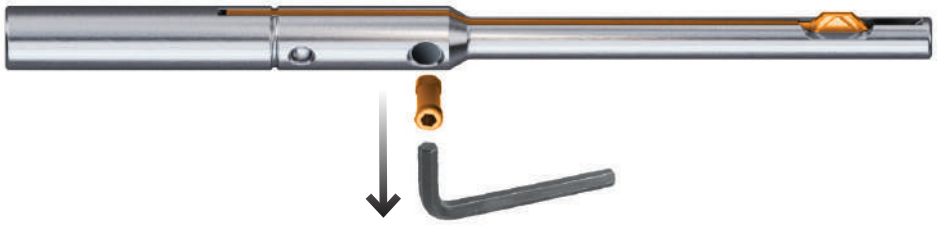
3



Lock the screw clockwise.

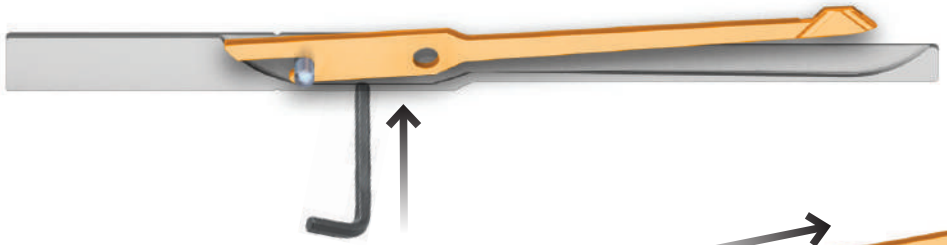
BLADE REMOVAL
UBURR

1



Remove the blade: Unlock the screw using a 0.05 inch Allen key, with a counterclockwise turn of the locking screw.

2



Push the blade by hexagon key through the technical hole.

3

Pull up the blade from the holder.

UCHAMF

BACK CHAMFERING OF A DRILLED THROUGH HOLE

COMING SOON

UCHAMF

THE MACHINE BACK CHAMFERING TOOL

UChamf tools allow back chamfering with an efficient and consistent way.

UChamf tools allow back chamfering through holes in one operation without turning the workpiece.

UChamf tools are focused on the reliability of the solutions.

This solution is faster, easier, and more economical for your back chamfering problems for small as well as mass production.

The UChamf tool is especially designed for automatic operation.

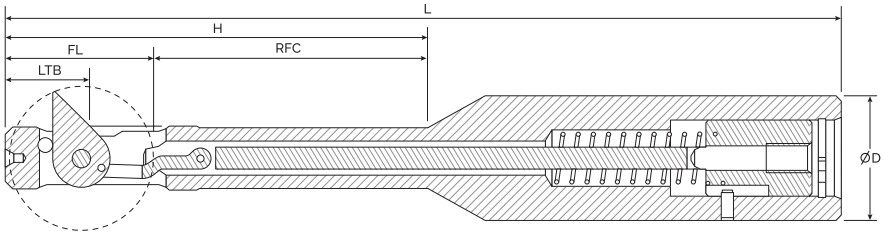
The opening and closing of the blade are controlled by activating the internal coolant of the machine.

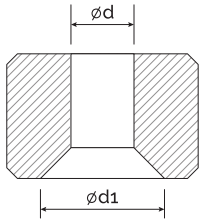
The tool blade designed to protect the hole bore and to unarm the internal surface.

The UChamf standard tool series range from Ø8 mm up to Ø20 mm. The tool is available in different chamfer angles and sizes.

Custom made tools can be made for your specific applications.

UCHAMF
NMT-UC





ONE PASS SOLUTION FOR THROUGH-HOLE - **BACK CHAMFERING**

Tool Item No.	Tool Description	Bore Ø d	Bore Ø d1 Range	LTB *	RFC **	FL ***	H	Ø D	L	Blade Item No.	Blade 45º
UC1080	NMT-UC-d080-H40-D16-L114	8.0	8.1-18.5	11.0	40.0	19.0	59.0	16.0	114.0	**UC2080**	NMT-UC-B-080 l18.5 /45 HSS
UC1085	NMT-UC-d085-H40-D16-L114	8.5	8.6-19.0	11.0	40.0	19.0	59.0	16.0	114.0	**UC2085**	NMT-UC-B-085 l19.0 /45 HSS
UC1090	NMT-UC-d090-H40-D16-L114	9.0	9.1-20.0	11.0	40.0	19.0	59.0	16.0	114.0	**UC2090**	NMT-UC-B-090 l20.0 /45 HSS
UC1095	NMT-UC-d095-H40-D16-L114	9.5	9.6-20.5	11.0	40.0	19.0	59.0	16.0	114.0	**UC2095**	NMT-UC-B-095 l20.5 /45 HSS
UC1100	NMT-UC-d100-H50-D16-L125	10.0	10.1-23.0	12.5	50.0	22.5	72.5	16.0	125.0	**UC2100**	NMT-UC-B-100 l23.0 /45 HSS
UC1105	NMT-UC-d105-H50-D16-L125	10.5	10.6-23.5	12.5	50.0	22.5	72.5	16.0	125.0	**UC2105**	NMT-UC-B-105 l23.5 /45 HSS
UC1110	NMT-UC-d110-H50-D16-L125	11.0	11.1-25.0	12.5	50.0	22.5	72.5	16.0	125.0	**UC2110**	NMT-UC-B-110 l25.0 /45 HSS
UC1115	NMT-UC-d115-H50-D16-L125	11.5	11.5-25.5	12.5	50.0	22.5	72.5	16.0	125.0	**UC2115**	NMT-UC-B-115 l25.5 /45 HSS
UC1120	NMT-UC-d120-H50-D16-L125	12.0	12.1-27.5	13.8	50.0	25.5	75.5	16.0	125.0	**UC2120**	NMT-UC-B-120 l27.5 /45 HSS
UC1125	NMT-UC-d125-H50-D16-L125	12.5	12.6-28.0	13.8	50.0	25.5	75.5	16.0	125.0	**UC2125**	NMT-UC-B-125 l28.0 /45 HSS
UC1130	NMT-UC-d130-H50-D16-L125	13.0	13.1-30.0	13.8	50.0	25.5	75.5	16.0	125.0	**UC2130**	NMT-UC-B-130 l30.0 /45 HSS
UC1135	NMT-UC-d135-H50-D16-L125	13.5	13.6-30.5	13.8	50.0	25.5	75.5	16.0	125.0	**UC2135**	NMT-UC-B-135 l30.5 /45 HSS
UC1140	NMT-UC-d140-H50-D16-L125	14.0	14.1-32.0	15.0	50.0	29.0	79.0	16.0	125.0	**UC2140**	NMT-UC-B-140 l32.0 /45 HSS

All measurements are in mm unless mentioned otherwise | * Length to bottom | ** Relief for cutting | *** Folding Length

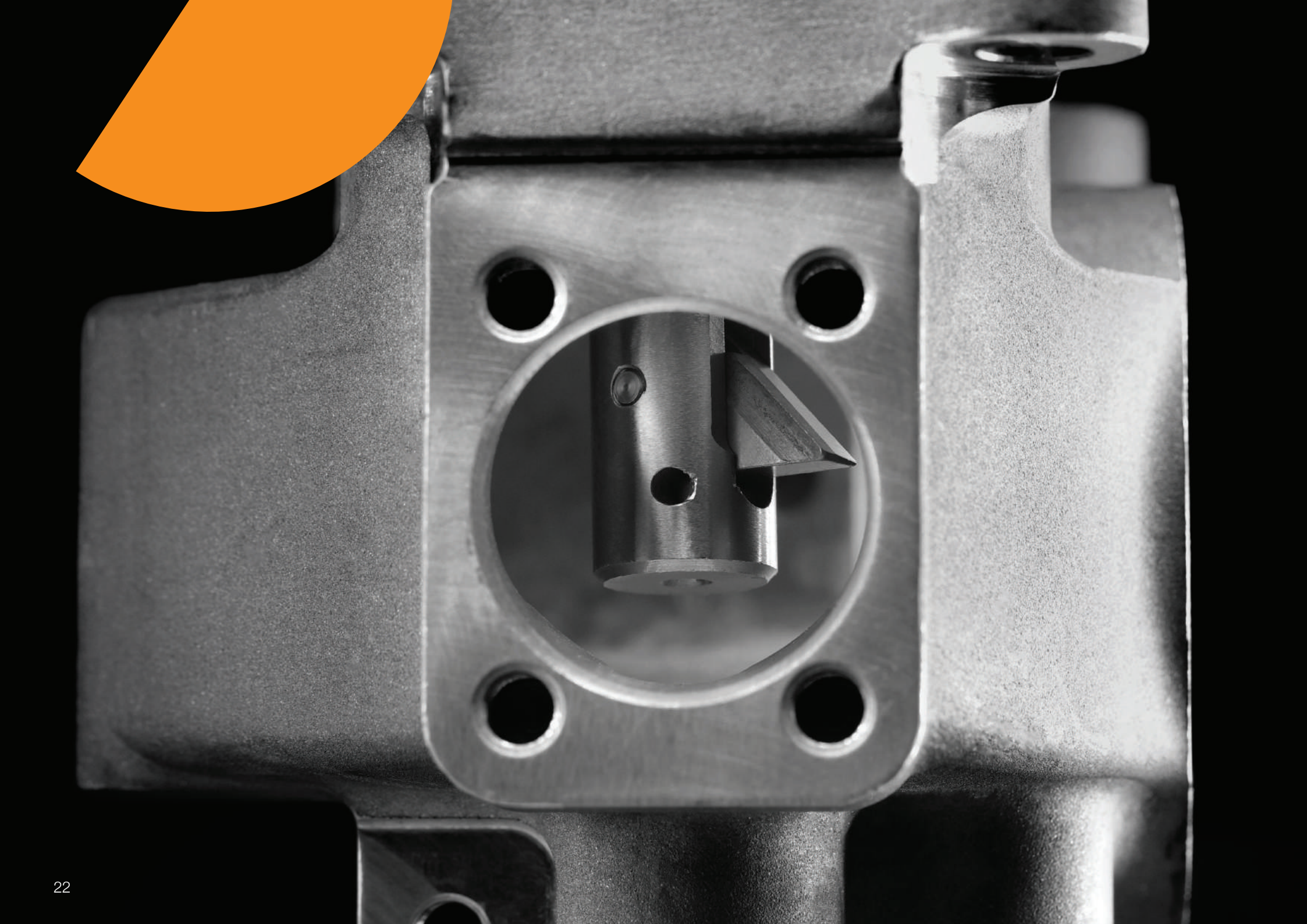
TOOL DESIGNATION

NMT NOGA Machine Tools	**UC** - UHAMF		

BLADE/INSERT DESIGNATION		I/Angle	Blade Material & Coating
NMT NOGA Machine Tools	UC - **B**	Cutting Length/Angle	HSS / HSS C(coated)* or CR / CRC* (CA (Carbide/CAC) Carbide Coated)* * Upon Request

Tool Item No.	Tool Description	Bore Ø d	Bore Ø d1 Range	LTB *	RFC **	FL ***	H	Ø D	L	Blade Item No.	Blade 45º
UC1145	NMT-UC-d145-H50-D16-L125	14.5	14.6-32.5	15.0	50.0	29.0	79.0	16.0	125.0	**UC2145**	NMT-UC-B-145 l32.5 /45 HSS
UC1150	NMT-UC-d150-H70-D16-L150	15.0	15.1-34.5	15.0	70.0	29.0	99.0	16.0	150.0	**UC2150**	NMT-UC-B-150 l34.5 /45 HSS
UC1155	NMT-UC-d155-H70-D16-L150	15.5	15.6-35.0	15.0	70.0	29.0	99.0	16.0	150.0	**UC2155**	NMT-UC-B-155 l35.0 /45 HSS
UC1160	NMT-UC-d160-H70-D16-L160	16.0	16.1-37.0	18.4	70.0	34.0	104.0	16.0	160.0	**UC2160**	NMT-UC-B-160 l37.0 /45 HSS
UC1165	NMT-UC-d165-H70-D20-L160	16.5	16.6-37.5	18.4	70.0	34.0	104.0	16.0	160.0	**UC2165**	NMT-UC-B-165 l37.5 /45 HSS
UC1170	NMT-UC-d170-H70-D20-L160	17.0	17.1-39.0	18.4	70.0	34.0	104.0	20.0	160.0	**UC2170**	NMT-UC-B-170 l39.0 /45 HSS
UC1175	NMT-UC-d175-H70-D20-L160	17.5	17.6-39.5	18.4	70.0	34.0	104.0	20.0	160.0	**UC2175**	NMT-UC-B-175 l39.5 /45 HSS
UC1180	NMT-UC-d180-H70-D20-L160	18.0	18.1-41.0	20.4	70.0	37.5	107.5	20.0	160.0	**UC2180**	NMT-UC-B-180 l41.0 /45 HSS
UC1185	NMT-UC-d185-H70-D20-L160	18.5	18.6-41.5	20.4	70.0	37.5	107.5	20.0	160.0	**UC2185**	NMT-UC-B-185 l41.5 /45 HSS
UC1190	NMT-UC-d195-H70-D20-L160	19.0	19.1-43.5	20.4	70.0	37.5	107.5	20.0	160.0	**UC2190**	NMT-UC-B-190 l43.5 /45 HSS
UC1195	NMT-UC-d195-H70-D20-L160	19.5	19.4-44.0	20.4	70.0	37.5	107.5	20.0	160.0	**UC2195**	NMT-UC-B-195 l44.0 /45 HSS
UC1200	NMT-UC-d200-H70-D20-L168	20.0	20.1-46.0	20.4	70.0	38.0	108.0	20.0	170.0	**UC2200**	NMT-UC-B-200 l46.0 /45 HSS

All measurements are in mm unless mentioned otherwise | * Length to bottom | ** Relief for cutting | *** Folding Length



CUTTING CONDITIONS
UCHAMF

		HSS		HSS + COATING	TiN	CARBIDE + COATING TiAlN	
		Vc=m/min	Fz=mm/tooth	Vc=m/min	Fz=mm/tooth	Vc=m/min	Fz=mm/tooth
P	Steel	25.0-45.0	0.05-0.1	45.0-65.0	0.05-0.1	60.0-110.0	0.05-0.1
M	Stainless Steel	15.0-30.0	0.05-0.08	30.0-55.0	0.05-0.08	50.0-90.0	0.05-0.08
K	Cast Iron	20.0-35.0	0.05-0.1	35.0-55.0	0.05-0.1	60.0-120.0	0.05-0.1
N	Aluminum	40.0-60.0	0.05-0.12	50.0-75.0	0.05-0.12	80.0-130.0	0.05-0.12
S	Titanium / Inconel	10.0-15.0	0.05-0.08	15.0-20.0	0.05-0.08	15.0-35.0	0.05-0.08
H	Hard Material	15.0-30.0	0.05-0.08	20.0-35.0	0.05-0.08	50.0-70.0	0.05-0.08

USPOT

BACK SPOTFACING OF A DRILLED THROUGH HOLE

COMING SOON

USPOT

THE MACHINE BACK SPOTFACING TOOL

USpot tools allow back spotfacing with an efficient and consistent way.

USpot tools allow back spotfacing through holes in one operation without turning the workpiece.

The USpot tool is especially designed for automatic operation.

The USpot tool works without an anti-rotation device, change of turning direction or any machine adaptations.

USpot tools are focused on the reliability of the solutions.

This solution is faster, easier, and more economical for your back spotfacing problems for small as well as mass production.

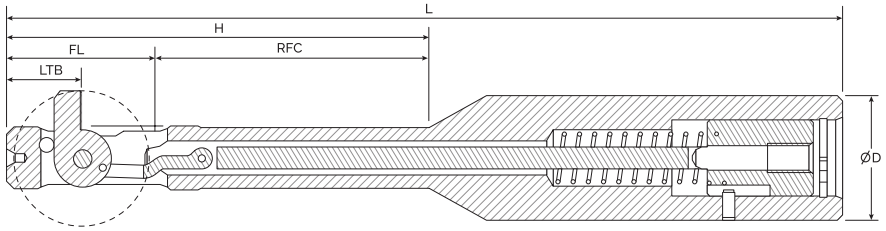
The opening and closing of the blade are controlled by activating the internal coolant of the machine.

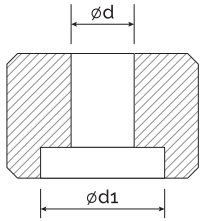
The tool blade designed to protect the hole bore and to unarm the internal surface.

The USpot tool standard series range from Ø8 mm up to Ø20 mm. The tool is available with a different bore diameter.

Custom made tools can be made for your specific applications.

USPOT
NMT-US





ONE PASS SOLUTION FOR THROUGH-HOLE - **BACK SPOTFACING**

Tool Item No.	Tool Description	Bore Ø d	Bore Ø d1 Range	LTB *	RFC **	FL ***	H	Ø D	L
US1080	NMT-US-d080-H40-D16-L114	8.0	11.5-20.0	10.0	40.0	19.0	59.0	16.0	114.0
US1085	NMT-US-d085-H40-D16-L114	8.5	12.0-21.3	10.0	40.0	19.0	59.0	16.0	114.0
US1090	NMT-US-d090-H40-D16-L114	9.0	13.5-22.5	10.0	40.0	19.0	59.0	16.0	114.0
US1095	NMT-US-d095-H40-D16-L114	9.5	14.0-23.8	10.0	40.0	19.0	59.0	16.0	114.0
US1100	NMT-US-d100-H50-D16-L125	10.0	14.5-25.0	11.0	50.0	22.5	72.5	16.0	125.0
US1105	NMT-US-d105-H50-D16-L125	10.5	15.5-26.3	11.0	50.0	22.5	72.5	16.0	125.0
US1110	NMT-US-d110-H50-D16-L125	11.0	16.0-27.5	11.0	50.0	22.5	72.5	16.0	125.0
US1115	NMT-US-d115-H50-D16-L125	11.5	16.5-28.8	11.0	50.0	22.5	72.5	16.0	125.0
US1120	NMT-US-d120-H50-D16-L125	12.0	18.0-30.0	12.0	50.0	25.5	75.5	16.0	125.0
US1125	NMT-US-d125-H50-D16-L125	12.5	18.5-31.3	12.0	50.0	25.5	75.5	16.0	125.0
US1130	NMT-US-d130-H50-D16-L125	13.0	19.0-32.5	12.0	50.0	25.5	75.5	16.0	125.0
US1135	NMT-US-d135-H50-D16-L125	13.5	19.5-33.8	12.0	50.0	25.5	75.5	16.0	125.0
US1140	NMT-US-d140-H50-D16-L125	14.0	20.0-35.0	13.0	50.0	29.0	79.0	16.0	125.0

Blade Item No.	Blade item STANDARD Minimum size	Blade Item No.	Blade item STANDARD Maximum size
US2080	NMT-US-B-080 l11.5 HSS	**US3080**	NMT-US-B-080 l20.0 HSS
US2085	NMT-US-B-085 l12.0 HSS	**US3085**	NMT-US-B-085 l21.3 HSS
US2090	NMT-US-B-090 l13.5 HSS	**US3090**	NMT-US-B-090 l22.5 HSS
US2095	NMT-US-B-095 l14.0 HSS	**US3095**	NMT-US-B-095 l23.8 HSS
US2100	NMT-US-B-100 l14.5 HSS	**US3100**	NMT-US-B-100 l25.0 HSS
US2105	NMT-US-B-105 l15.5 HSS	**US3105**	NMT-US-B-105 l26.3 HSS
US2110	NMT-US-B-110 l16.0 HSS	**US3110**	NMT-US-B-110 l27.5 HSS
US2115	NMT-US-B-115 l16.5 HSS	**US3115**	NMT-US-B-115 l28.8 HSS
US2120	NMT-US-B-120 l18.0 HSS	**US3120**	NMT-US-B-120 l30.0 HSS
US2125	NMT-US-B-125 l18.5 HSS	**US3125**	NMT-US-B-125 l31.3 HSS
US2130	NMT-US-B-130 l19.0 HSS	**US3130**	NMT-US-B-130 l32.5 HSS
US2135	NMT-US-B-135 l19.5 HSS	**US3135**	NMT-US-B-135 l33.8 HSS
US2140	NMT-US-B-140 l20.0 HSS	**US3140**	NMT-US-B-140 l35.0 HSS

All measurements are in mm unless mentioned otherwise | * Length to bottom | ** Relief for cutting | *** Folding Length

TOOL DESIGNATION

NMT NOGA Machine Tools	**US** - USPOT		

BLADE/INSERT DESIGNATION		I/Angle	Blade Material & Coating
NMT NOGA Machine Tools	US - **B**	Cutting Length	HSS / HSS C(coated)* or CR / CRC* (CA (Carbide/CAC) Carbide Coated)* * Upon Request

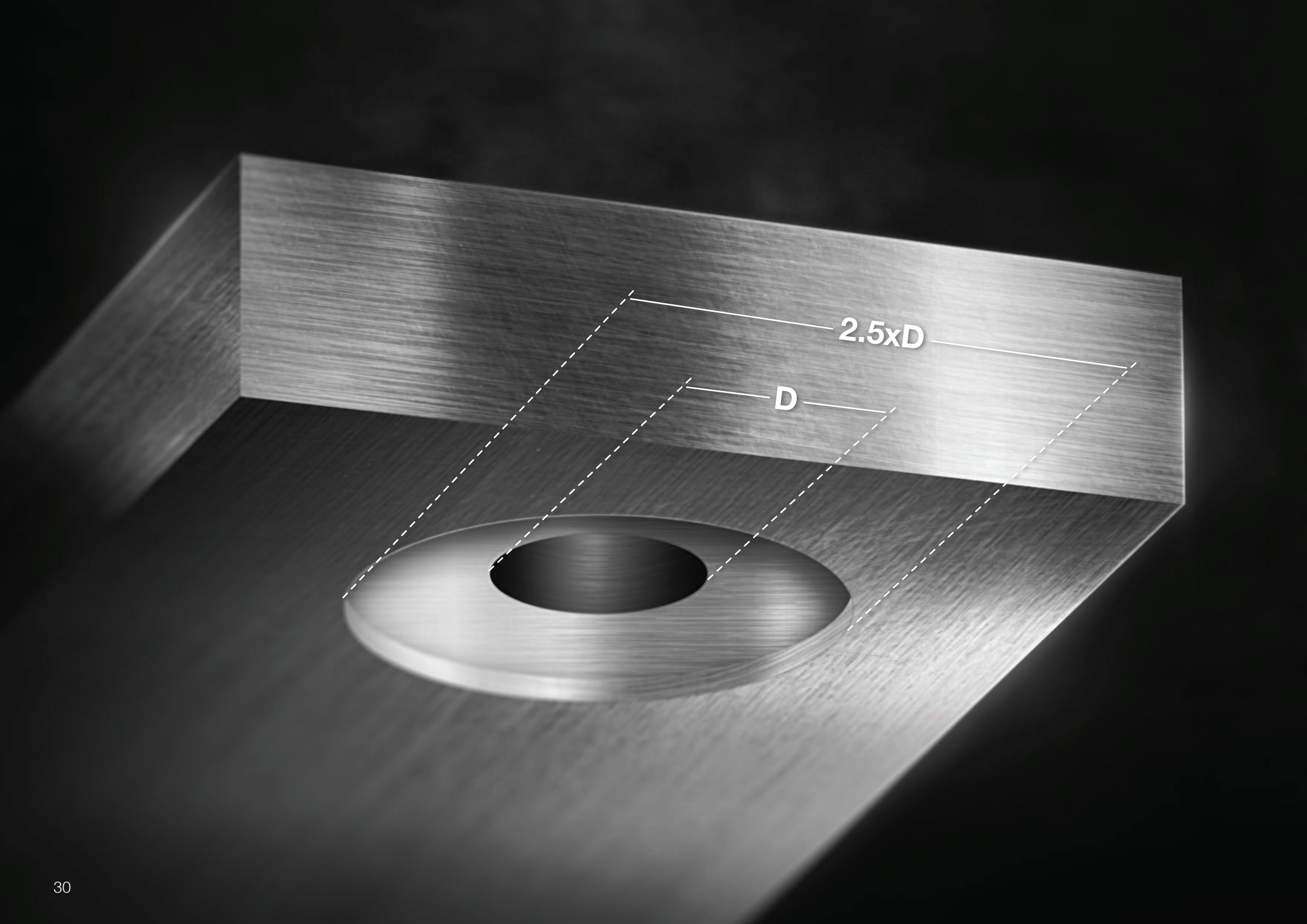
Tool Item No.	Tool Description	Bore Ø d	Bore Ø d1 Range	LTB *	RFC **	FL ***	H	Ø D	L
US1145	NMT-US-d145-H50-D16-L125	14.5	20.5-36.3	13.0	50.0	29.0	79.0	16.0	125.0
US1150	NMT-US-d150-H70-D16-L150	15.0	22.0-37.5	13.0	70.0	29.0	99.0	16.0	150.0
US1155	NMT-US-d155-H70-D16-L150	15.5	22.5-38.8	13.0	70.0	29.0	99.0	16.0	150.0
US1160	NMT-US-d160-H70-D16-L160	16.0	23.0-40.0	15.0	70.0	34.0	104.0	16.0	160.0
US1165	NMT-US-d165-H70-D20-L160	16.5	23.5-41.3	15.0	70.0	34.0	104.0	20.0	160.0
US1170	NMT-US-d170-H70-D20-L160	17.0	24.0-42.5	15.0	70.0	34.0	104.0	20.0	160.0
US1175	NMT-US-d175-H70-D20-L160	17.5	24.5-43.8	15.0	70.0	34.0	104.0	20.0	160.0
US1180	NMT-US-d180-H70-D20-L160	18.0	26.5-45.0	17.0	70.0	37.5	107.5	20.0	160.0
US1185	NMT-US-d185-H70-D20-L160	18.5	27.0-46.3	17.0	70.0	37.5	107.5	20.0	160.0
US1190	NMT-US-d190-H70-D20-L160	19.0	27.5-47.5	17.0	70.0	37.5	107.5	20.0	160.0
US1195	NMT-US-d195-H70-D20-L160	19.5	28.0-48.8	17.0	70.0	37.5	107.5	20.0	160.0
US1200	NMT-US-d200-H70-D20-L168	20.0	28.5-50.0	17.0	70.0	38.0	108.0	20.0	170.0

Blade Item No.	Blade item STANDARD Minimum size	Blade Item No.	Blade item STANDARD Maximum size
US2145	NMT-US-B-145 l20.5 HSS	**US3145**	NMT-US-B-145 l36.3 HSS
US2150	NMT-US-B-150 l22.0 HSS	**US3150**	NMT-US-B-150 l37.5 HSS
US2155	NMT-US-B-155 l22.5 HSS	**US3155**	NMT-US-B-155 l38.8 HSS
US2160	NMT-US-B-160 l23.0 HSS	**US3160**	NMT-US-B-160 l40.0 HSS
US2165	NMT-US-B-165 l23.5 HSS	**US3165**	NMT-US-B-165 l41.3 HSS
US2170	NMT-US-B-170 l24.0 HSS	**US3170**	NMT-US-B-170 l42.5 HSS
US2175	NMT-US-B-175 l24.5 HSS	**US3175**	NMT-US-B-175 l43.8 HSS
US2180	NMT-US-B-180 l26.5 HSS	**US3180**	NMT-US-B-180 l45.0 HSS
US2185	NMT-US-B-185 l27.0 HSS	**US3185**	NMT-US-B-185 l46.3 HSS
US2190	NMT-US-B-190 l27.5 HSS	**US3190**	NMT-US-B-190 l47.5 HSS
US2195	NMT-US-B-195 l28.0 HSS	**US3195**	NMT-US-B-195 l48.8 HSS
US2200	NMT-US-B-200 l28.5 HSS	**US3200**	NMT-US-B-200 l50.0 HSS

All measurements are in mm unless mentioned otherwise | * Length to bottom | ** Relief for cutting | *** Folding Length

CUTTING CONDITIONS
USPOT

		HSS		HSS + COATING	TiN	CARBIDE + COATING TiAlN	
		Vc=m/min	Fz=mm/tooth	Vc=m/min	Fz=mm/tooth	Vc=m/min	Fz=mm/tooth
P	Steel	25.0-45.0	0.05-0.1	45.0-65.0	0.05-0.1	60.0-110.0	0.05-0.1
M	Stainless Steel	15.0-30.0	0.05-0.08	30.0-55.0	0.05-0.08	50.0-90.0	0.05-0.08
K	Cast Iron	20.0-35.0	0.05-0.1	35.0-55.0	0.05-0.1	60.0-120.0	0.05-0.1
N	Aluminum	40.0-60.0	0.05-0.12	50.0-75.0	0.05-0.12	80.0-130.0	0.05-0.12
S	Titanium / Inconel	10.0-15.0	0.05-0.08	15.0-20.0	0.05-0.08	15.0-35.0	0.05-0.08
H	Hard Material	15.0-30.0	0.05-0.08	20.0-35.0	0.05-0.08	50.0-70.0	0.05-0.08


2.5xD
D

USPOT & UCHAMF: THE TOOL PATH

ONE PASS SOLUTION FOR THROUGH-HOLE: BACK SPOTFACING/CHAMFERING

USPOT

UCHAMF

USPOT & UCHAMF are specifically designed for CNC machines with **coolant through** the spindle. The insert expands by spring force and is retracted by coolant pressure of a minimum **6 bar** (90 PSI).

- Tool holder with internal cooling
- Minimum coolant pressure 6 bar (90 PSI)
- Coolant must be filtered (filter dimension ≤ 25 µm)
- For chip evacuation make sure that there is enough space from the workpiece material
- **Available Dia. 8mm-20mm in the range of every 0.5mm and length of Max 2.5 x D USPOT, 2.3 x D UCHAMF**
- **USPOT Tool Selection for Counterbores according to DIN 974-1 socket head cap screws**

USPOT & UCHAMF: STEPS

STEP 1: Position A

Internal coolant **ON**
(wait 2-5 sec to build up the coolant pressure);
Blade in the pocket.

STEP 2: Position A to B

Internal coolant **ON**;
Blade in the pocket;
Rapid feed.

STEP 3: Position B

Internal coolant **OFF**
(Wait 2-3 sec).

STEP 4: Position B to C

Internal coolant **OFF**;
Rapid feed.

STEP 5: Position C to D

Internal coolant **OFF**;
External coolant **ON**;
Spindle speed **ON**;
Working feed rate to 0.2-0.3 mm **into raw material.**

STEP 6: Position D

Internal coolant **ON**;
External coolant **ON**;
Spindle speed **ON**.

STEP 7: Position D to E

Internal coolant **ON**;
External coolant **ON**;
Spindle speed **ON**;
Working feed rate to the required dimensions of the spot/chamfer.

STEP 8: Position E

Internal coolant **OFF**;
External coolant **OFF**;
Spindle speed **ON**.

STEP 9: Position E to C

Internal coolant **OFF**;
External coolant **OFF**;
Spindle speed **ON**;
Working feed rate.

STEP 10: Position C to B

Internal coolant **OFF**;
External coolant **OFF**;
Spindle speed **OFF**;
Rapid feed.

STEP 11: Position B

Internal coolant **ON**;
External coolant **OFF**;
Spindle speed **OFF**.

STEP 12: Position B to A

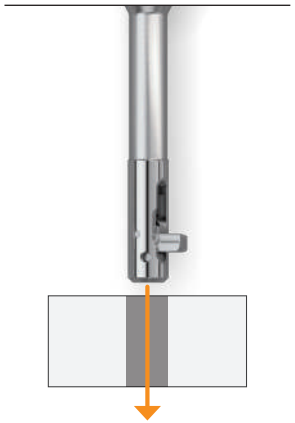
Internal coolant **ON**;
External coolant **OFF**;
Spindle speed **OFF**;
Rapid feed.

STEP 13: Position B

Internal coolant **OFF**;
External coolant **OFF**;
Spindle speed **OFF**.

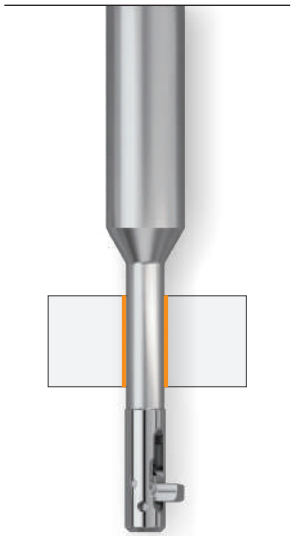
A POSITION

Tool is above to workpiece hole.



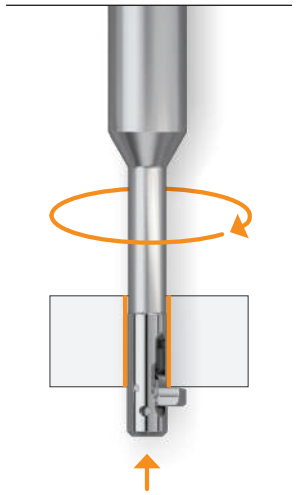
B POSITION

Tool is under the workpiece hole (FL + workpiece thickness + 2 mm).



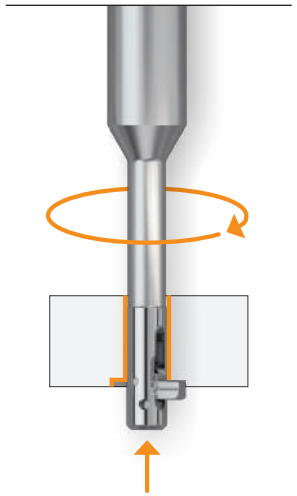
C POSITION

Tool is 1 mm under the workpiece hole.



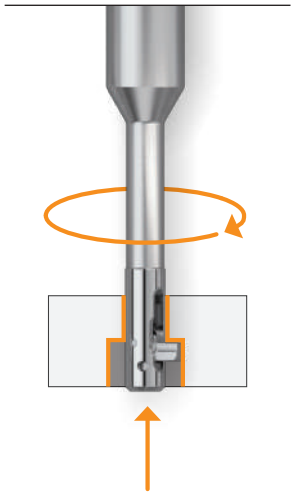
D POSITION

Tool is 0.2 mm into the workpiece.



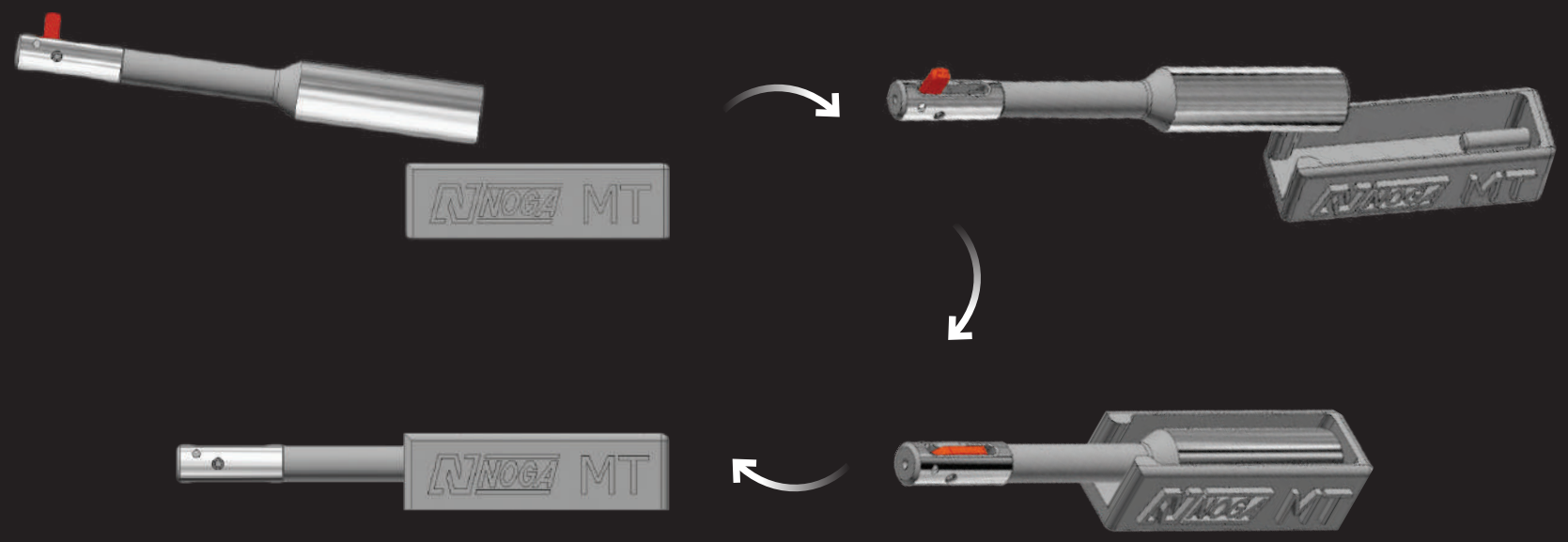
E POSITION

Tool is in the required dimensions of the spot/chamfer.

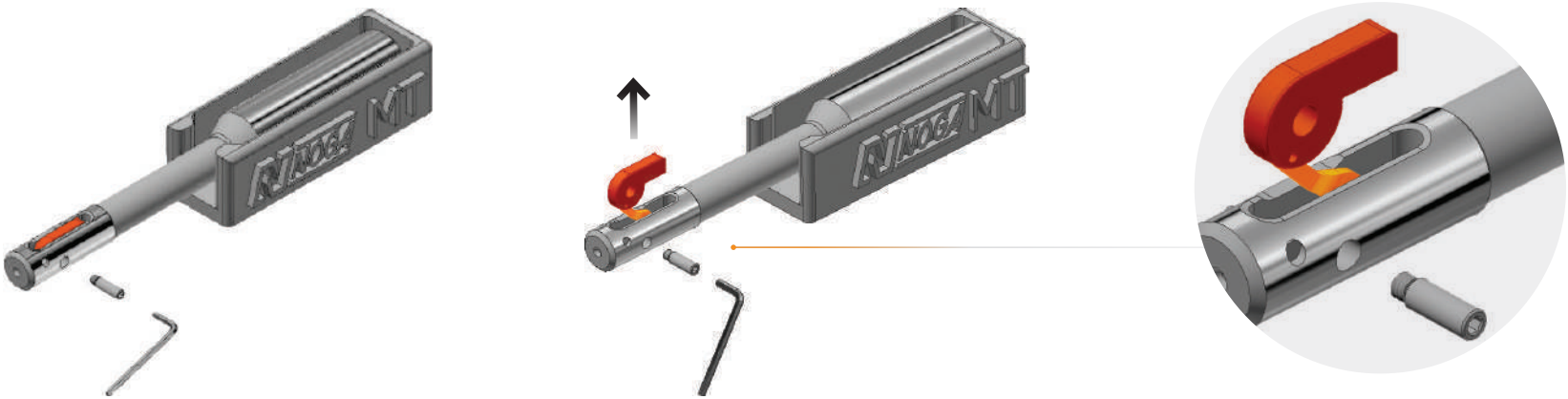


BLADE REPLACEMENT
USPOT & UCHAMF

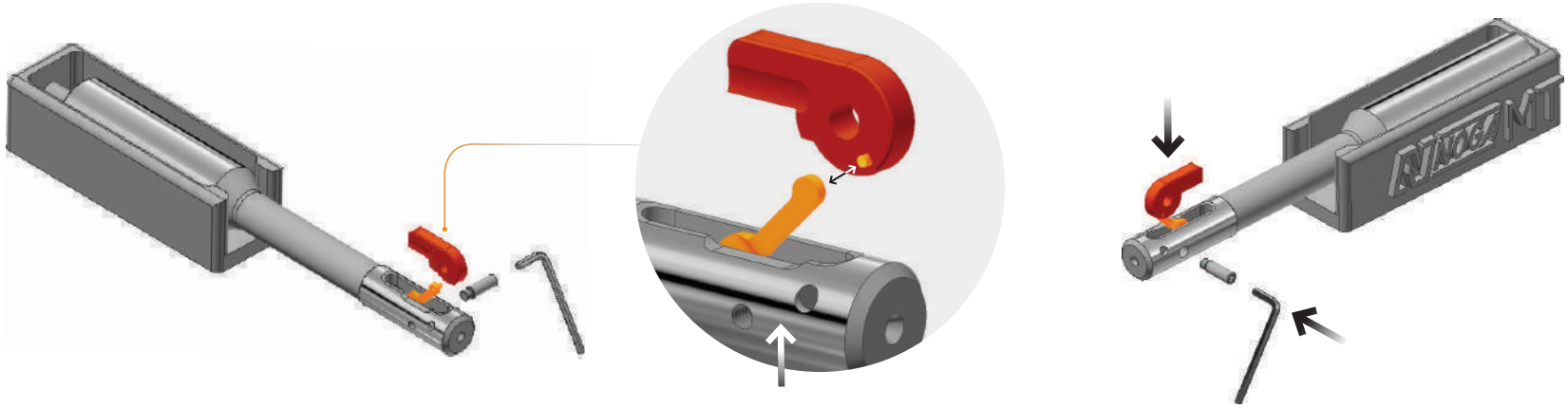
1 Locate the tool into the assembly device, push the tool inside the assembly device pin until the blade is covered in the pocket.



2 Unlock the locking screw and push the blade out of the tool pocket.



3 Remove the blade and replace with a new one.



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