



ULTIMATE SERIES
MACHINE TOOLS





ULTIMATE SERIES

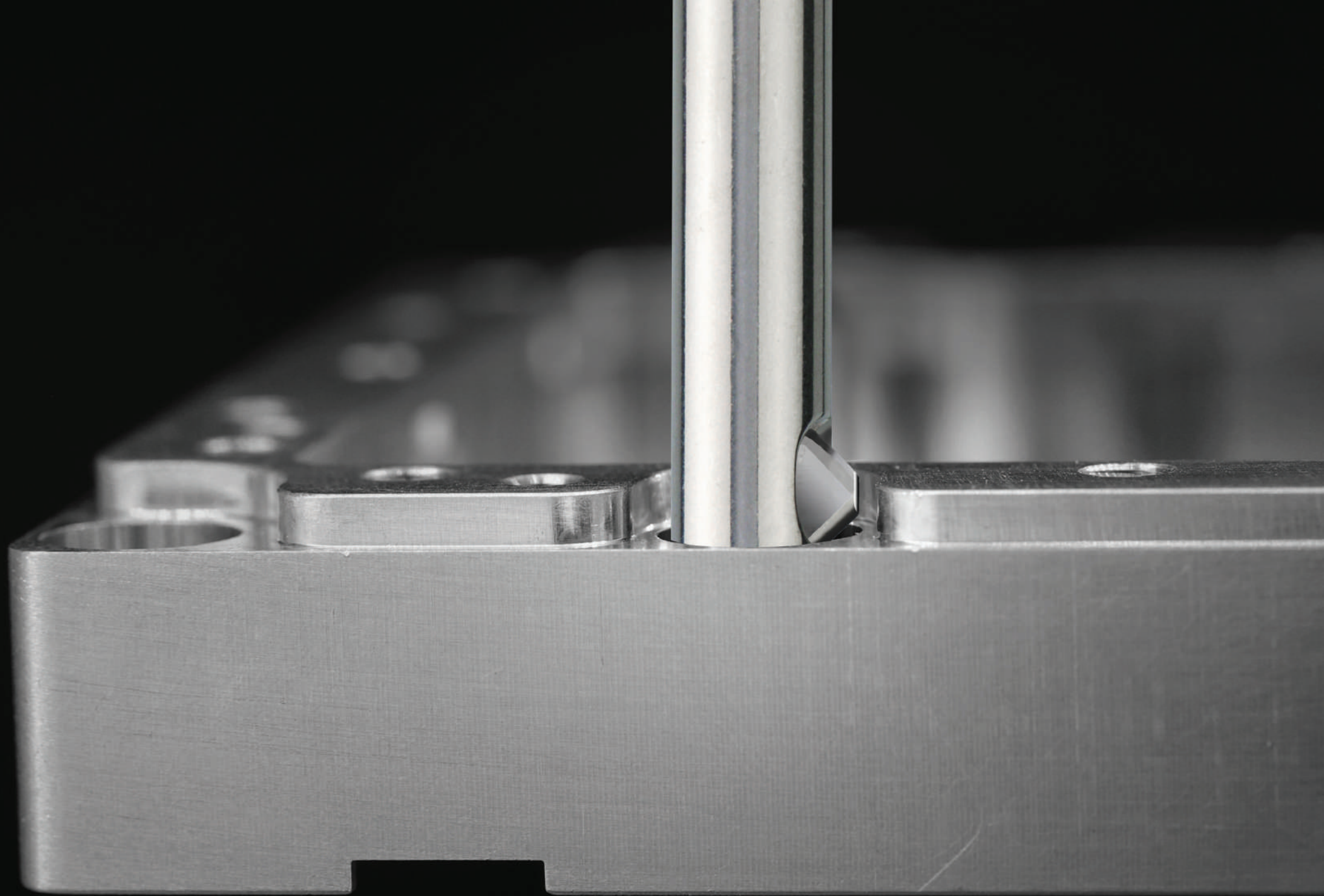
Machine Industry & Global Partners

For more than 40 years NOGA has been recognized worldwide for its 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



**COMING
SOON**

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



**COMING
SOON**

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



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.

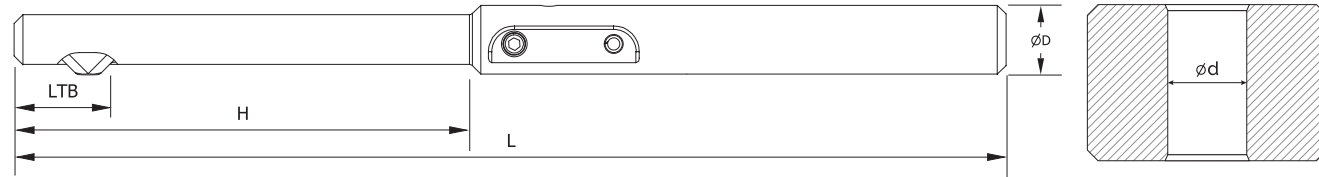
The UBurr standard tool series range from Ø3 mm up to Ø25 mm.

Custom made tools can be made for your specific applications.



UBURR

NMT-UB



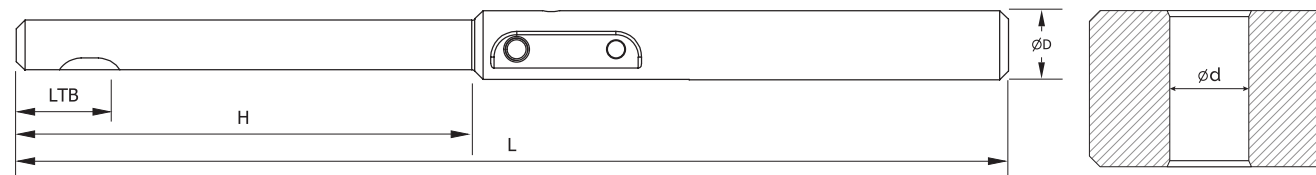
ONE PASS SOLUTION FOR HOLE-DEBURRING - COMPLETE SETS

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



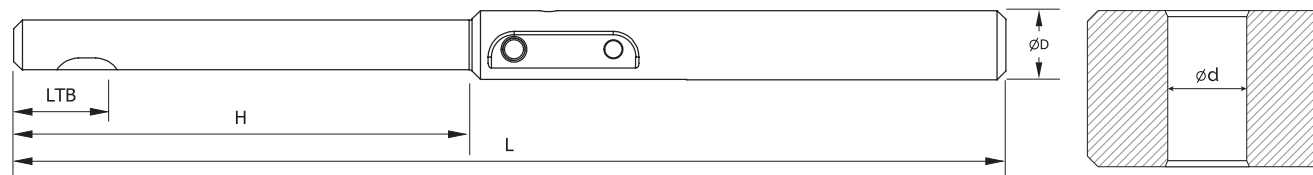
ONE PASS SOLUTION FOR HOLE-DEBURRING - TOOLHOLDERS

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

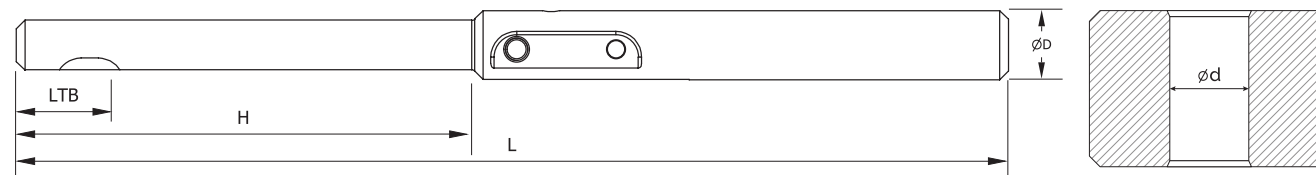
All measurements are in mm unless mentioned otherwise

* Length to bottom

** Blades sold separately

UBURR

NMT-UB



ONE PASS SOLUTION FOR HOLE-DEBURRING - TOOLHOLDERS

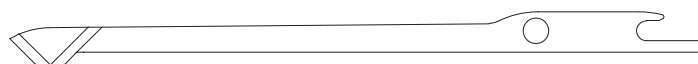
Tool Item No.	Tool Description	Hole Diameter Ø d	Shank Diameter Ø D	LTB *	H	L	** Blade Item No.	Blade Description
UB1230	NMT-UB-d230-H80-D20-L125	23.0	20.0	12.0	80	125	UB2060	NMT-UB-B 060-250 HSS
UB1235	NMT-UB-d235-H80-D20-L125	23.5	20.0	12.0	80	125	UB2060	NMT-UB-B 060-250 HSS
UB1240	NMT-UB-d240-H80-D20-L125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



FRONT
SIDE

NOGA

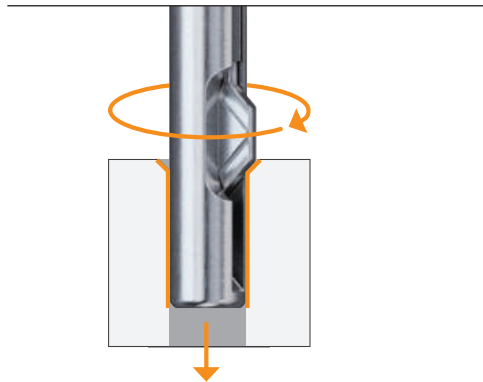
BACK
SIDE

UBURR: THE TOOL PATH

ONE PASS SOLUTION TO HOLE-DEBURRING

1

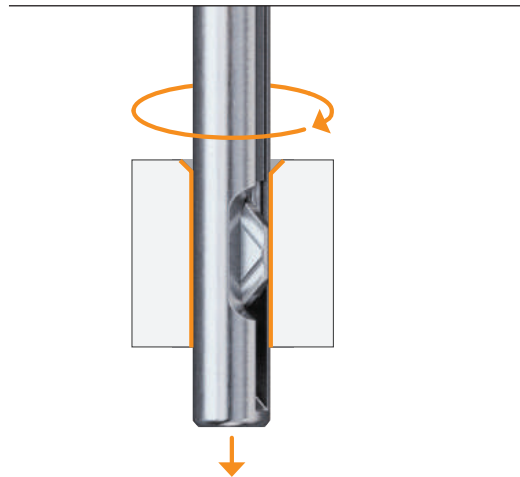
UBURR tools remove the burr from the front hole surface by a unique flexible blade.



2

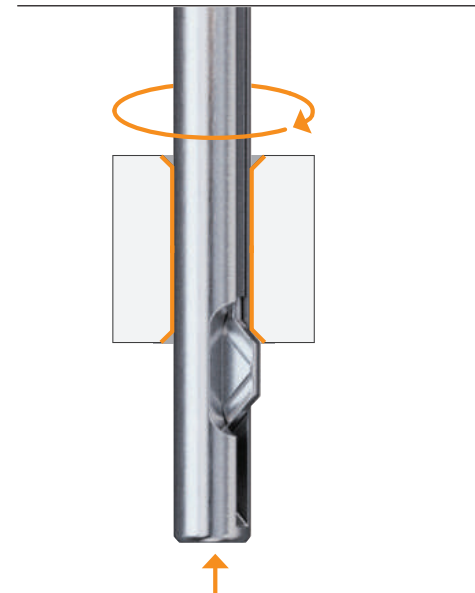
The **UBURR** blade enters into the tool pocket automatically as the pressure is increasing on the blade.

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



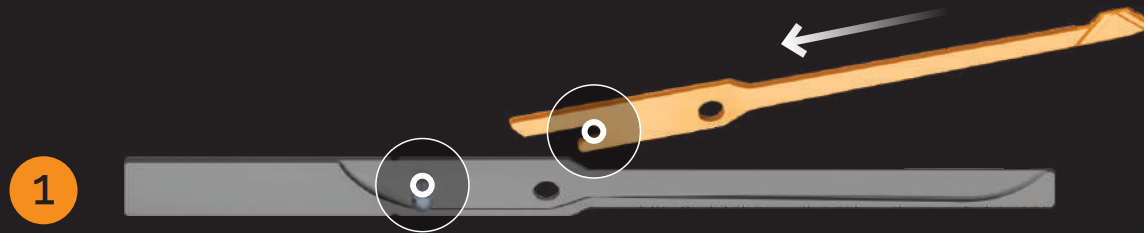
CUTTING CONDITIONS

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

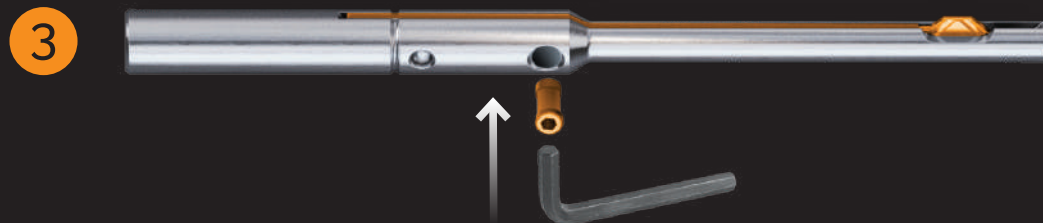
UBURR



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



Push the blade into the tool pocket.

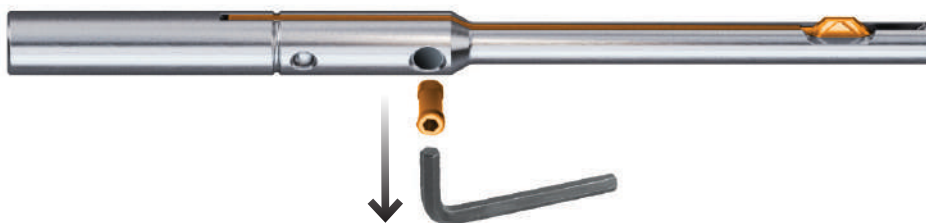


Lock the screw clockwise.

BLADE REMOVAL

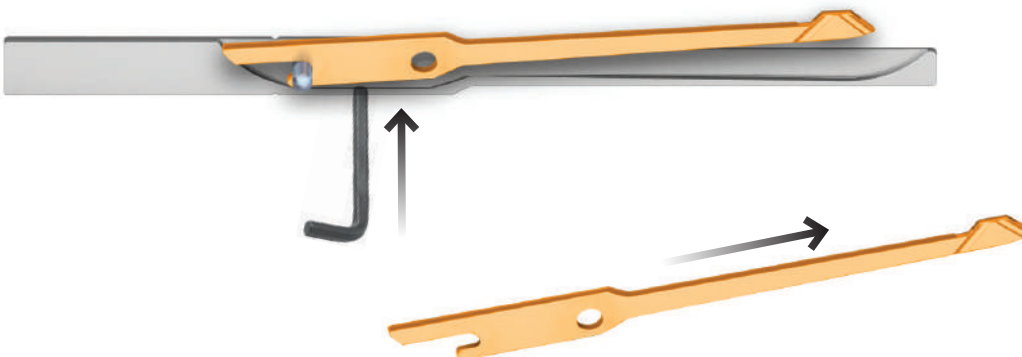
UBURR

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.

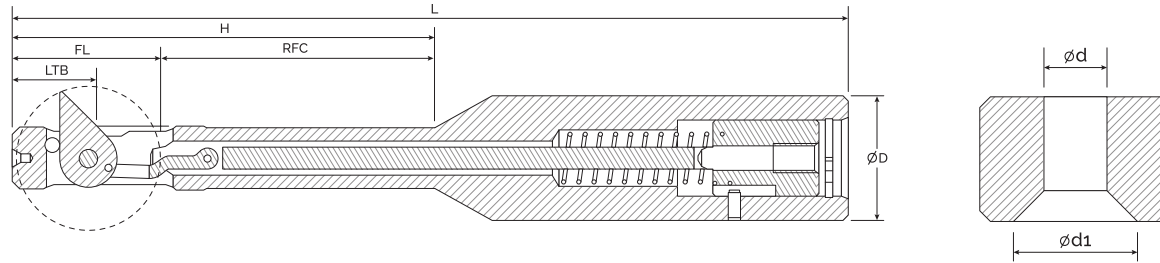
The UChamf standard tool series range from Ø8 mm up to Ø20 mm. The tool is available in different chamfer angles and sizes.

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 45°
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 I18.5 /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 I19.0 /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 I20.0 /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 I20.5 /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 I23.0 /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 I23.5 /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 I25.0 /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 I25.5 /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 I27.5 /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 I28.0 /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 I30.0 /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 I30.5 /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 I32.0 /45 HSS

All measurements are in mm unless mentioned otherwise

* Length to bottom

** Relief for cutting

*** Folding Length

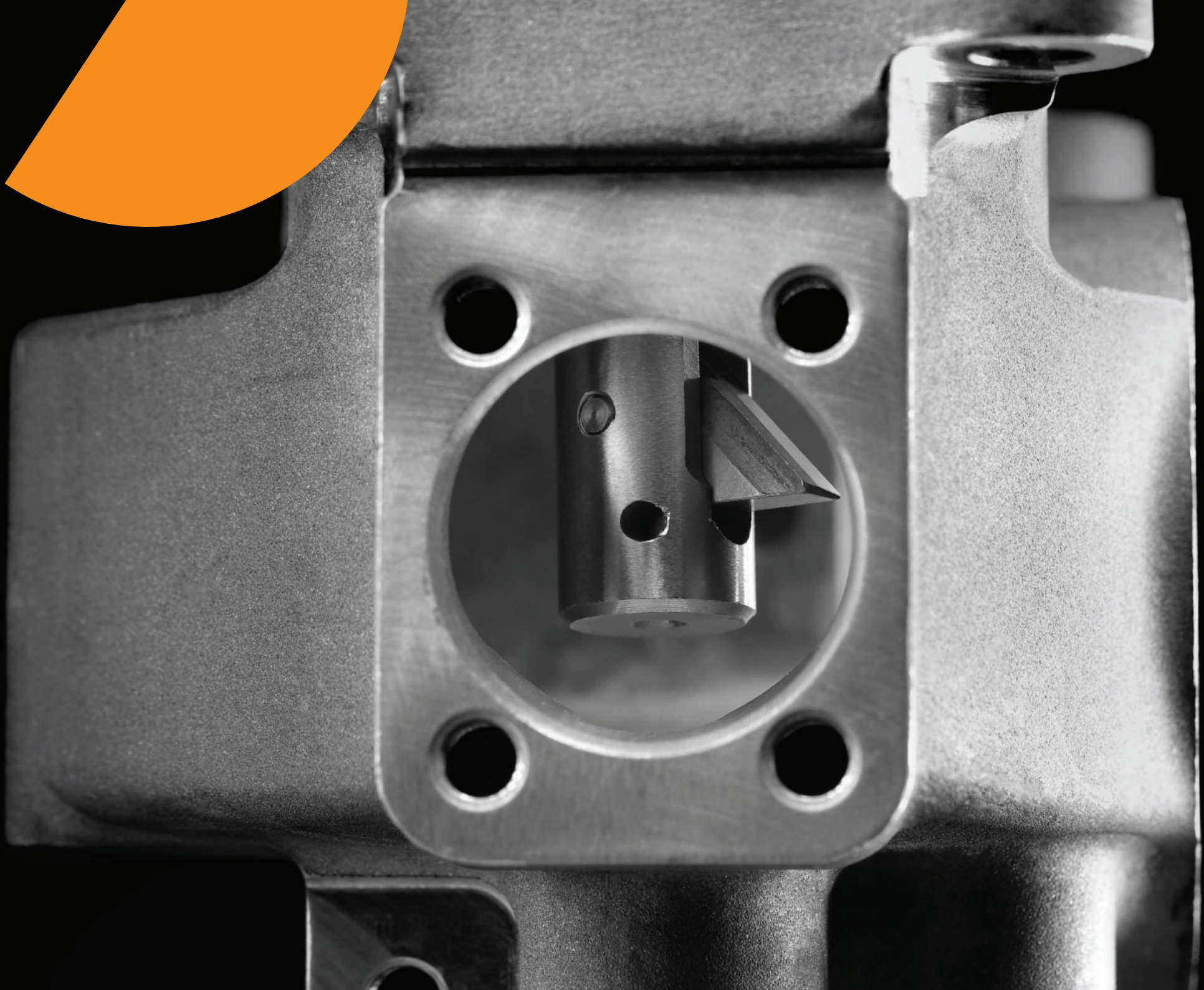
TOOL DESIGNATION

NMT NOGA Machine Tools	UC - UHAMF		
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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 45°
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 I32.5 /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 I34.5 /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 I35.0 /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 I37.0 /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 I37.5 /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 I39.0 /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 I39.5 /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 I41.0 /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 I41.5 /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 I43.5 /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 I44.0 /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 I46.0 /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.

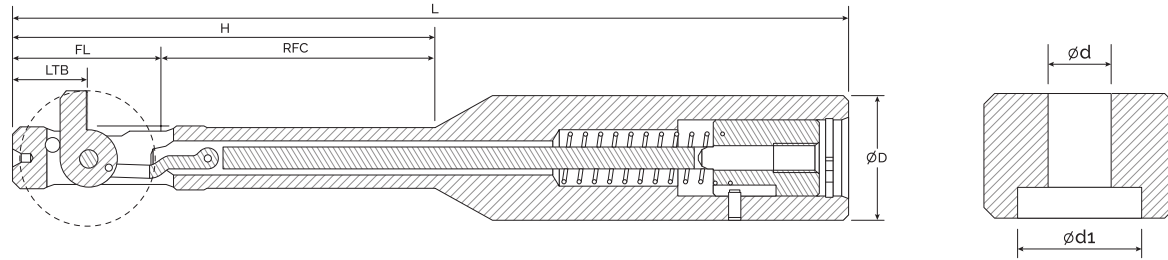
The USpot tool standard series range from Ø8 mm up to Ø20 mm. The tool is available with a different bore diameter.

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	Blade Item No.	Blade item STANDARD Minimum size	Blade Item No.	Blade item STANDARD Maximum size
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	US2080	NMT-US-B-080 I11.5 HSS	US3080	NMT-US-B-080 I20.0 HSS
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	US2085	NMT-US-B-085 I12.0 HSS	US3085	NMT-US-B-085 I21.3 HSS
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	US2090	NMT-US-B-090 I13.5 HSS	US3090	NMT-US-B-090 I22.5 HSS
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	US2095	NMT-US-B-095 I14.0 HSS	US3095	NMT-US-B-095 I23.8 HSS
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	US2100	NMT-US-B-100 I14.5 HSS	US3100	NMT-US-B-100 I25.0 HSS
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	US2105	NMT-US-B-105 I15.5 HSS	US3105	NMT-US-B-105 I26.3 HSS
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	US2110	NMT-US-B-110 I16.0 HSS	US3110	NMT-US-B-110 I27.5 HSS
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	US2115	NMT-US-B-115 I16.5 HSS	US3115	NMT-US-B-115 I28.8 HSS
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	US2120	NMT-US-B-120 I18.0 HSS	US3120	NMT-US-B-120 I30.0 HSS
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	US2125	NMT-US-B-125 I18.5 HSS	US3125	NMT-US-B-125 I31.3 HSS
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	US2130	NMT-US-B-130 I19.0 HSS	US3130	NMT-US-B-130 I32.5 HSS
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	US2135	NMT-US-B-135 I19.5 HSS	US3135	NMT-US-B-135 I33.8 HSS
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	US2140	NMT-US-B-140 I20.0 HSS	US3140	NMT-US-B-140 I35.0 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		
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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	Blade Item No.	Blade item STANDARD Minimum size	Blade Item No.	Blade item STANDARD Maximum size
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	US2145	NMT-US-B-145 I20.5 HSS	US3145	NMT-US-B-145 I36.3 HSS
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	US2150	NMT-US-B-150 I22.0 HSS	US3150	NMT-US-B-150 I37.5 HSS
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	US2155	NMT-US-B-155 I22.5 HSS	US3155	NMT-US-B-155 I38.8 HSS
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	US2160	NMT-US-B-160 I23.0 HSS	US3160	NMT-US-B-160 I40.0 HSS
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	US2165	NMT-US-B-165 I23.5 HSS	US3165	NMT-US-B-165 I41.3 HSS
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	US2170	NMT-US-B-170 I24.0 HSS	US3170	NMT-US-B-170 I42.5 HSS
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	US2175	NMT-US-B-175 I24.5 HSS	US3175	NMT-US-B-175 I43.8 HSS
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	US2180	NMT-US-B-180 I26.5 HSS	US3180	NMT-US-B-180 I45.0 HSS
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	US2185	NMT-US-B-185 I27.0 HSS	US3185	NMT-US-B-185 I46.3 HSS
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	US2190	NMT-US-B-190 I27.5 HSS	US3190	NMT-US-B-190 I47.5 HSS
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	US2195	NMT-US-B-195 I28.0 HSS	US3195	NMT-US-B-195 I48.8 HSS
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	US2200	NMT-US-B-200 I28.5 HSS	US3200	NMT-US-B-200 I50.0 HSS

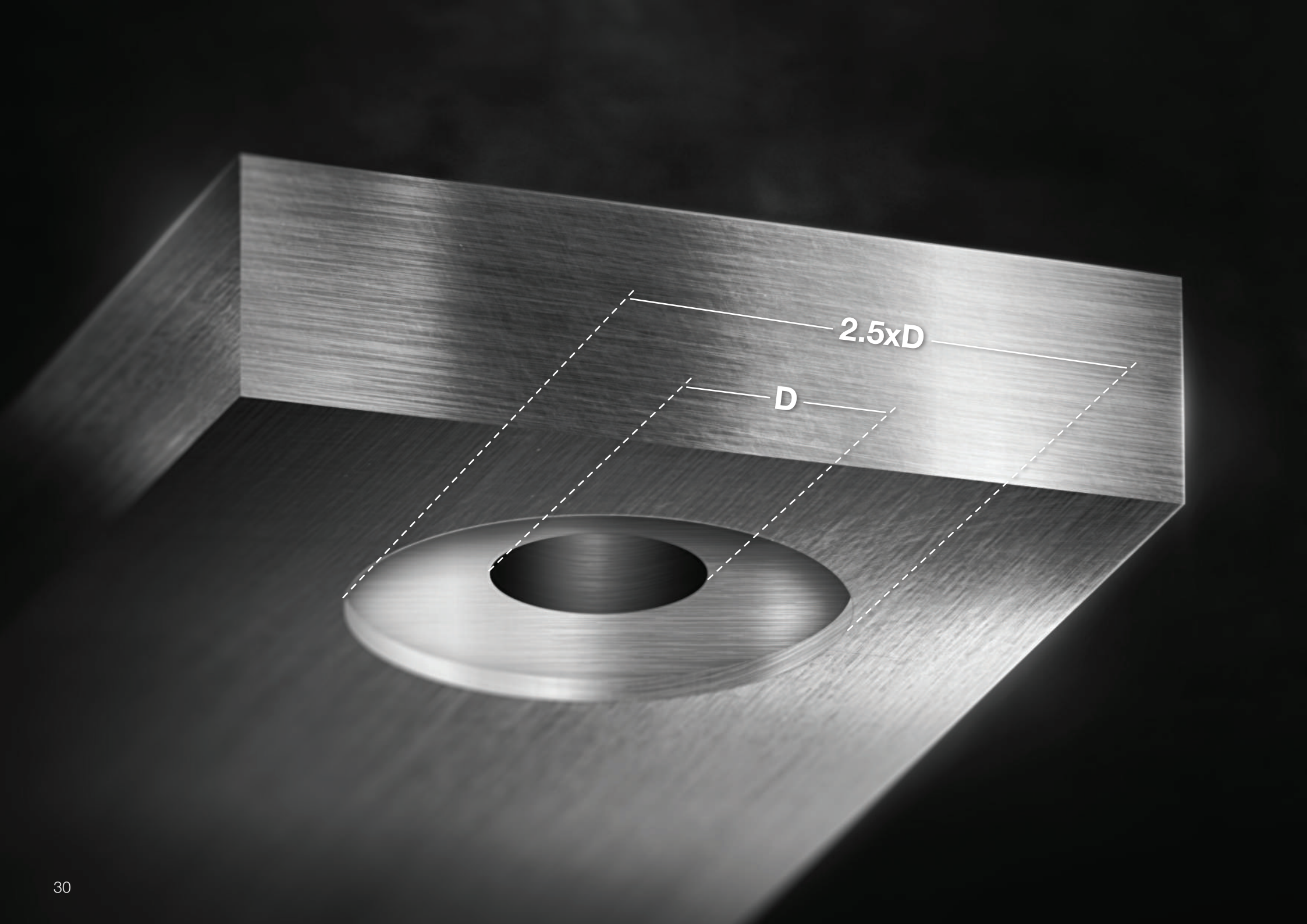
All measurements are in mm unless mentioned otherwise | * Length to bottom | ** Relief for cutting | *** Folding Length



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



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 $\leq 25 \mu\text{m}$)

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**

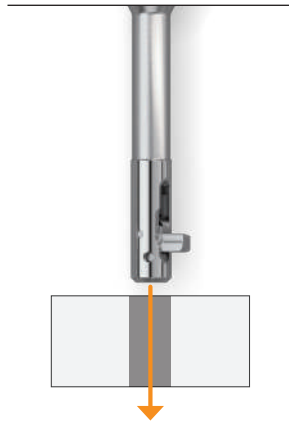
Internal coolant **ON**;
External coolant **OFF**;
Spindle speed **OFF**;
Rapid feed.

STEP 13: Position **B**

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

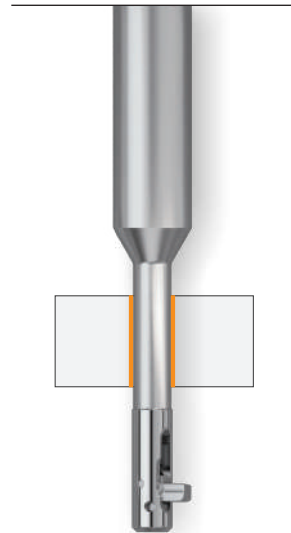
A POSITION

Tool is above to workpiece hole.



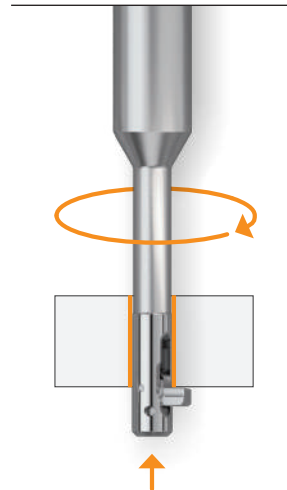
B POSITION

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



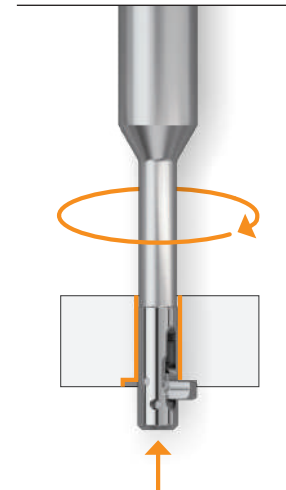
C POSITION

Tool is 1 mm under the workpiece hole.



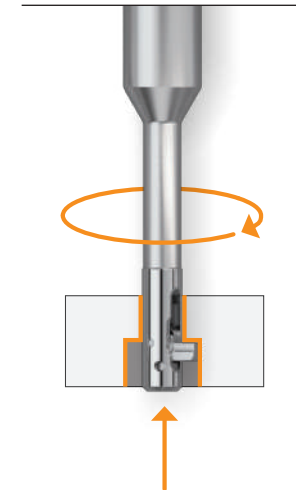
D POSITION

Tool is 0.2 mm into the workpiece.



E POSITION

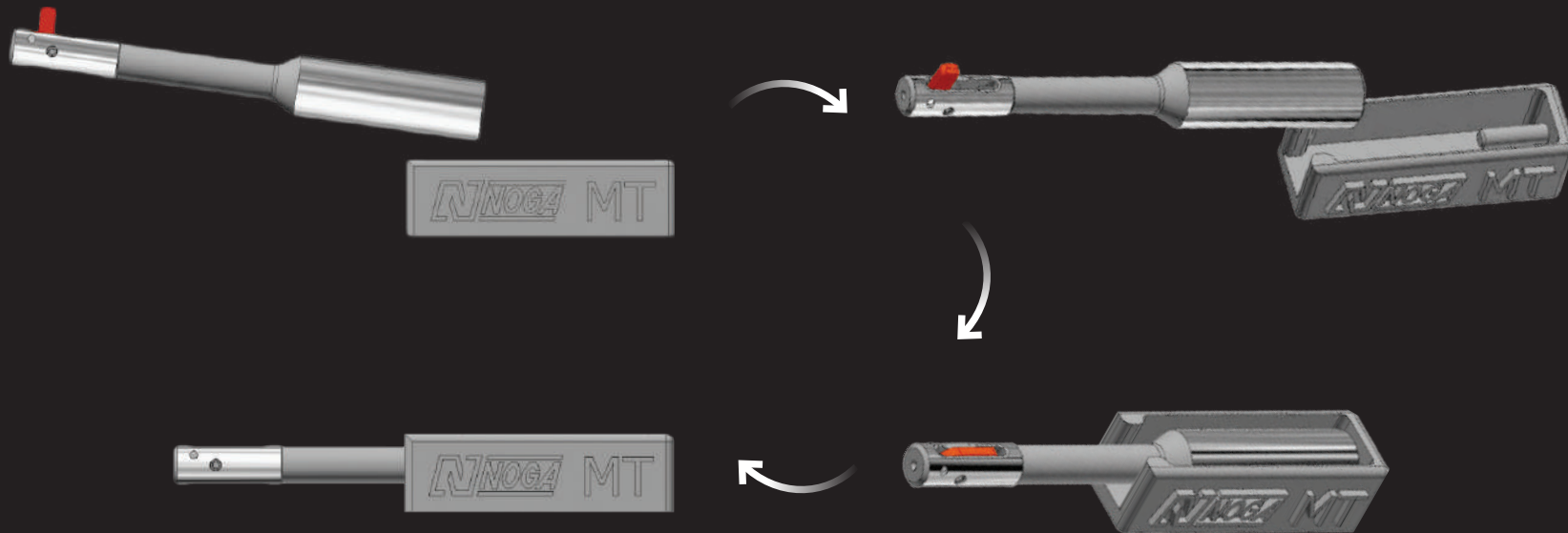
Tool is in the required dimensions of the spot/chamfer.



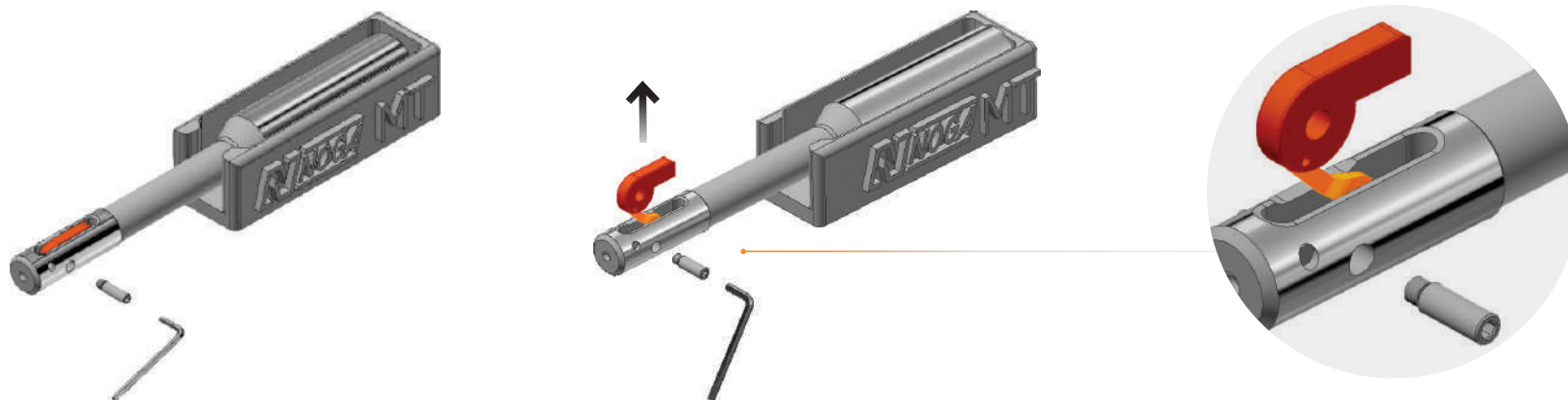
BLADE REPLACEMENT

USPOT & UCHAMF

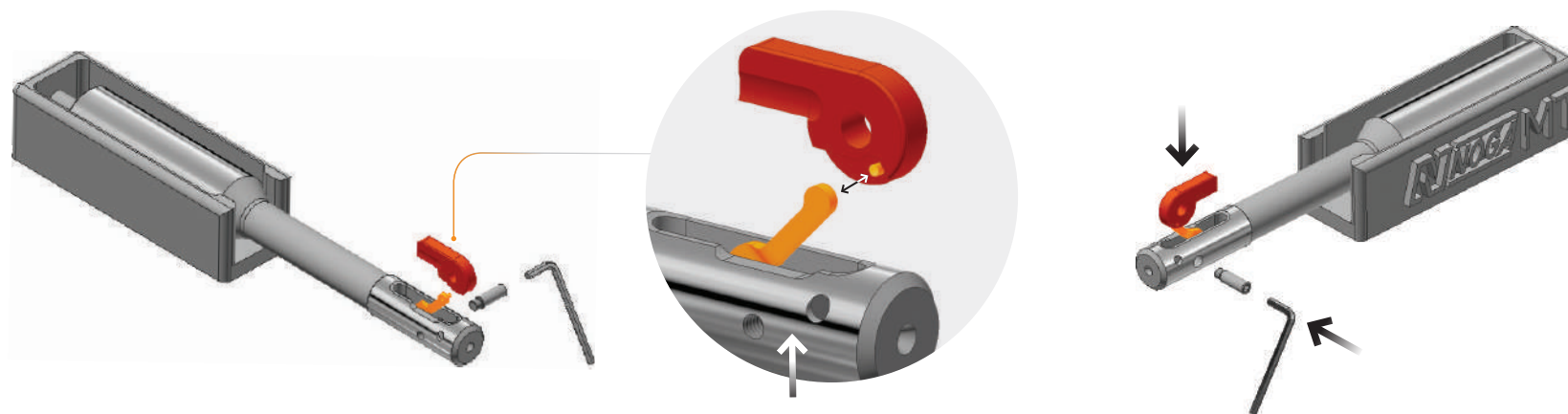
- 1 Locate the tool into the assembly device, push the tool inside the assembly device pin until the blade is covered in the pocket.



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



- 3** Remove the blade and replace with a new one.



All NOGA products meet the strict requirements of ISO 9001 and ISO 14001.

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