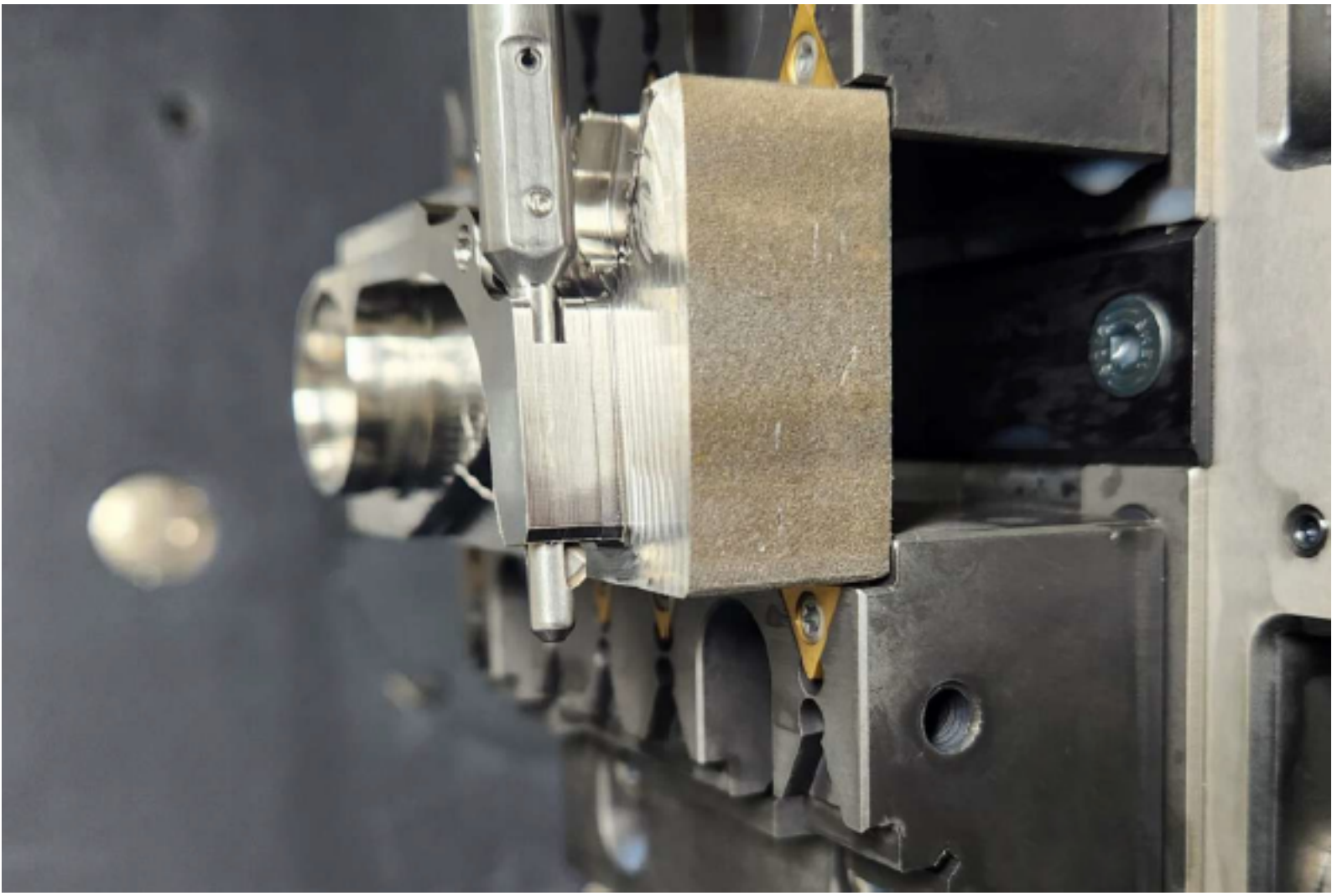
NOGA MT
MACHINE TOOLS

ULTIMATE UBURR! TOOLS

A MARK OF EXCELLENCE



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NOGA MT
MACHINE TOOLS

ULTIMATE
UBURR! TOOLS

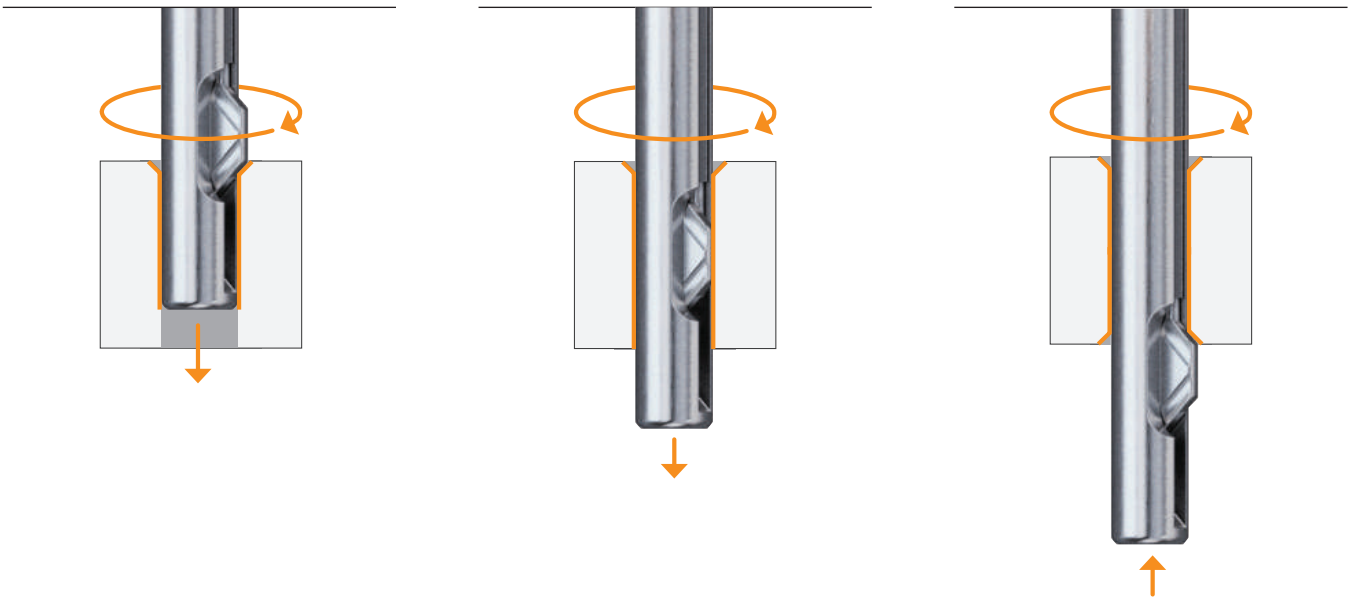
UBURR SETS NEW STANDARDS

Enter NOGA MT **UBURR** – a family of deburring tools designed to streamline the automatic deburring process, comprising two essential components.

1. **Precision cutting blade with unique geometry with different chip-formers and sizes.**
2. **MT DURASHIELD state-of-the-art tool-holder as never seen before in the industry for the metal cutting tools.**

HOW DOES THE UBURR WORK?

1. Upon insertion, the replaceable cutting blade eliminating the burr on the front side of the hole.
2. As the cutting tool encounters increased feed pressure, surpassing the preset spring tension, the blade automatically retracts while passing through the pilot-hole. The unique geometry of the blade ensures no scratches occurs on the inner surface of the pilot-hole threaded or drilled.
3. Upon exiting the pilot-hole, spring tension once again triggers the blade to extend, effectively removing the burr on the back side of the hole during the return stroke.



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UBURR MAIN BENEFITS

OPERATIONAL EXCELLENCE

AUTOMATED EFFICIENCY:
- Achieve seamless production with single-pass automatic deburring of both front and rear hole edges, eliminating the need for manual intervention.

PRECISION PERFORMANCE:
- Consistently deliver high-quality deburring results at any production volume.

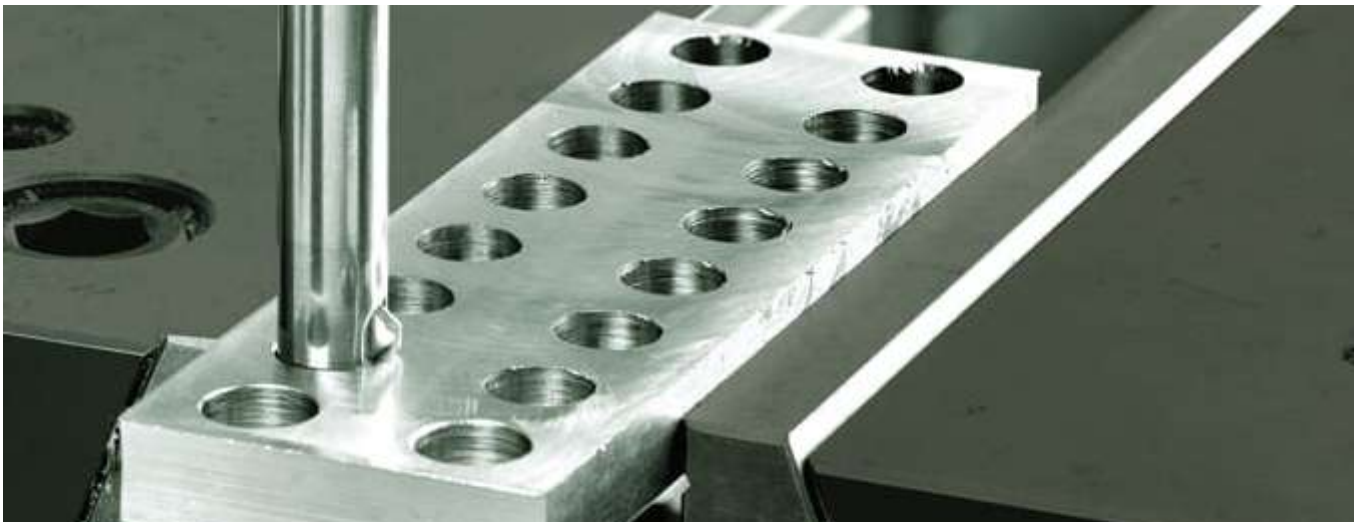
PREMIUM CONSTRUCTION:
- Manufactured from Precipitation Hardened AISI 17-4 PH for outstanding durability and dependable performance.

VERSATILE APPLICATION

UNIVERSAL COMPATIBILITY:
- Operates effectively with both CNC machines and electric hand drills.

ADAPTIVE DESIGN:
- A single holder supports multiple pilot diameters, reducing the need for extensive tool inventory.

COMPREHENSIVE MATERIAL AND GEOMETRICAL SUPPORT:
- The blades are available in HSS or Solid Carbide, with TiAlN PVD coated or uncoated blades and 3 types of chip formers, for efficient processing of various materials.



SMART DESIGN FEATURES

PLUG-AND-PLAY CONVENIENCE:
- No blade adjustments required, saving time and ensuring consistent, repeatable results.

PROTECTIVE GEOMETRY:
- Specialized blade design prevents scratches on drilled or threaded surfaces.

SIMPLIFIED MAINTENANCE:
- Quick and intuitive blade replacement minimizes downtime.

EFFICIENT INVENTORY MANAGEMENT:
- Only three blade types needed for all hole diameters.

CUSTOMIZABLE SOLUTIONS:
- Tailored configurations available to meet specific production needs.

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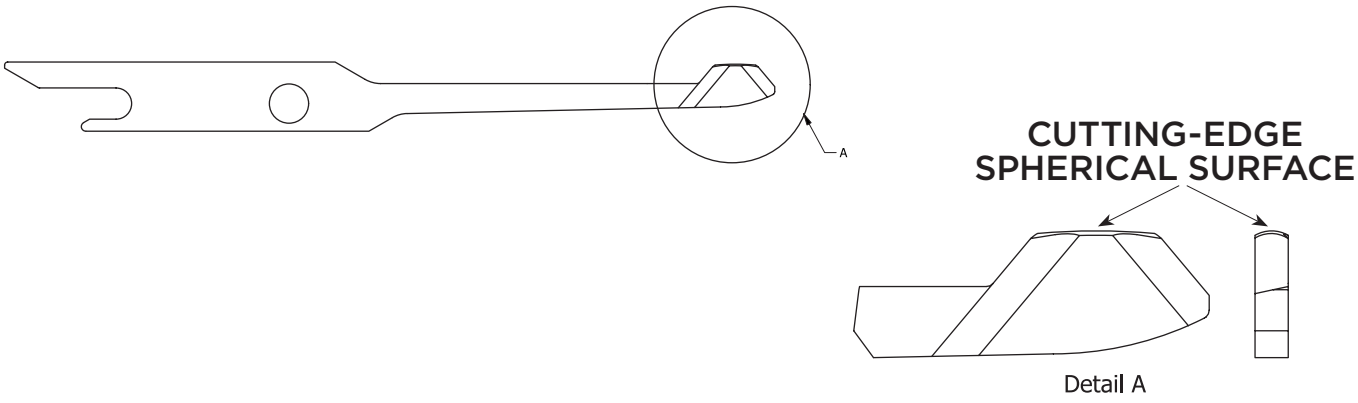
BLADE FEATURES:

Our high-precision blades, made of High-Speed Steel (HSS) and Solid-Carbide, offer toughness and durability, enabling them to withstand high impact loads and shock during machining processes. This enhances tool reliability and minimizes the risk of tool breakage or chipping, while also exhibiting excellent resistance to wear and abrasion. They can withstand prolonged use without significant deterioration in cutting performance, extending tool life and reducing the frequency of tool replacements.

The blade's unique geometry is engineered to prevent damage to the inner surfaces of the hole while entering it, maintaining the integrity of the workpiece with every pass, and featuring a unique spherical surface.

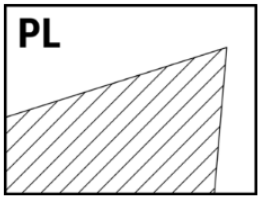
UBURR BLADE CUTTING-EDGE GEOMETRY



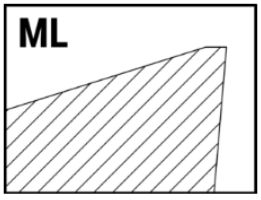
UBURR blades are available in Type 2.5, 3 and Type 5 sizes, with each type offering PL, ML or HL chip-formers, coated with TiAlN or uncoated.

AVAILABLE CHIP-FORMERS

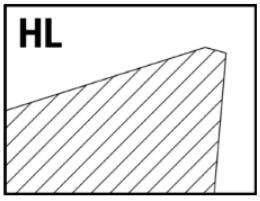
PL
POSITIVE CUTTING LAND
Suitable for all-round purpose and ISO, P, M, K, N, S. as well as composite materials



ML
MODERATE CUTTING LAND
Suitable for ISO, P, M, K, S, H. materials



HL
NEGATIVE CUTTING LAND
Suitable for ISO, P, M, K, S, H. materials



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BLADE FEATURES:

Each blade (except size 2.5) comes with an rMQR rectangular engraved laser code for technical information, including machining guidelines and cutting parameters.

Download the QRBOT app to scan the Rectangular Micro QR Code (rMQR) and access the UBURR machining guidelines.

QRbot

UBURR BLADES CODING SYSTEM SPECIFICATIONS AND IDENTIFICATION:

UB – **TSB** – **3** – **ML** – **NCT**

AVAILABLE PVD COATING TYPES
NCT - NOGA MT Type T Grade and TiAlN coating
POL – No coating and polished chip-former

CHIP-FORMERS
PL - Positive Land, suitable for ISO P,M,K,N,S and composite materials
ML - Moderate Land-for light roughing, suitable for ISO P,M,K,S,H materials
HL(1) - High Land for hardened material, suitable for ISO H.

BLADE SIZES:
2.5 - for pilot hole (.098") Ø2.5≤d≤Ø3.0 (.118")
3 - for pilot hole (.118") Ø3.0≤d≤Ø5.0 (.197")
5 - for pilot hole d≥Ø5.0 (.197")

BLADE TYPE
TSB - HSS Blade
SCB - Solid Carbide Blade

UBURR MT Family

(1) Available only as special

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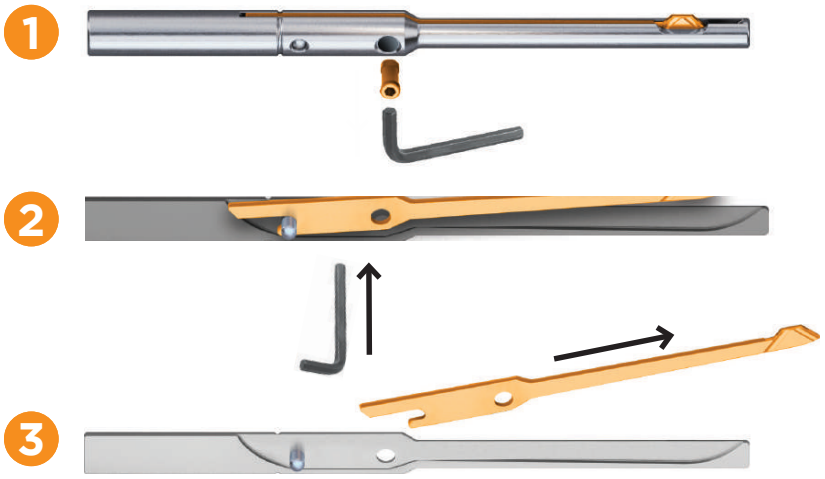
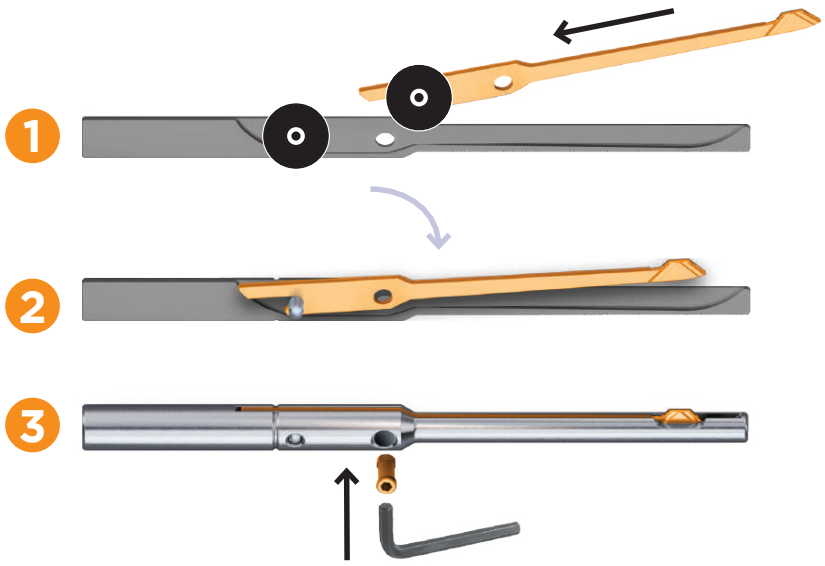
BLADE REMOVAL

1. Unlock the screw with a counterclockwise turn of the locking screw.
2. Push the blade by hexagon key through.
3. Pull up the blade from the holder.



BLADE INSERTION

1. Insert the blade into the holder slot.
2. Push the blade into the tool pocket.
3. Lock the screw clockwise.



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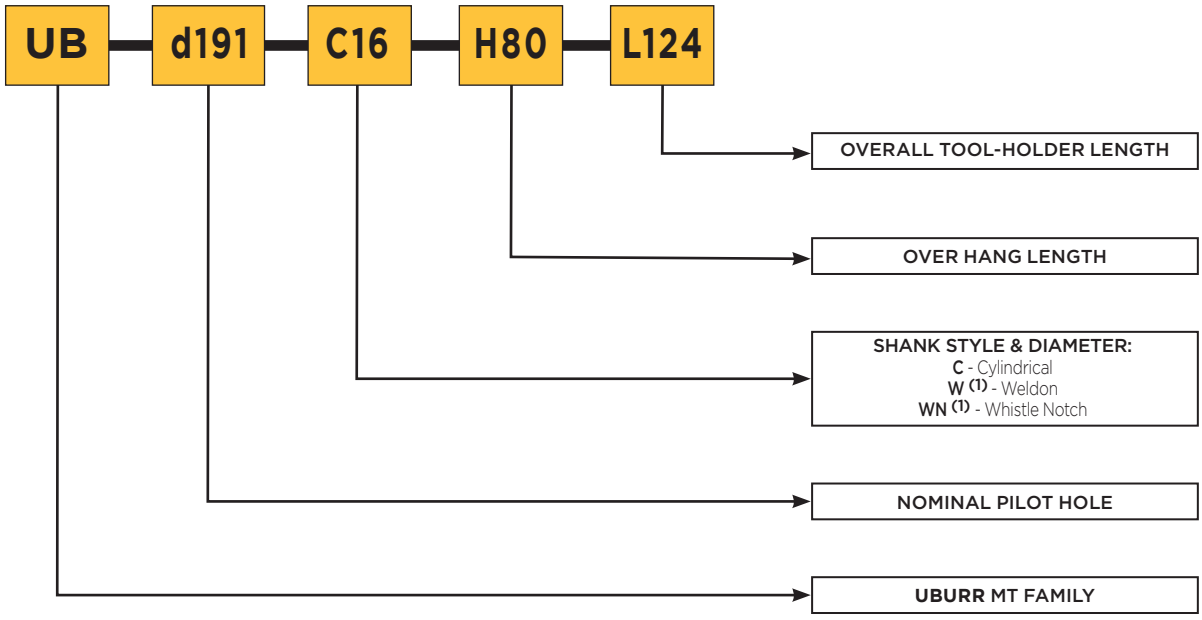
UBURR BLADES SPECIFICATIONS TABLE

SIZE 2.5 (1) BLADE for pilot hole Ø2.5 <d < Ø3.0		
SKU BLADE	DESIGNATION	DESCRIPTION
UB2020(1)	UB-TSB-2.5-PL	HSS Blade size 2.5 without coating and type P chip-former
SIZE 3 BLADE for pilot hole Ø3.0 < d < Ø5.		
SKU BLADE	DESIGNATION	DESCRIPTION
UB2030	UB-TSB-3-PL	HSS blade size 3 without coating and type P chip-former
UB2032	UB-TSB-3-PL-NCT	HSS blade size 3 with TiAlN coating and type P chip-former
UB2034	UB-TSB-3-ML-NCT	HSS blade size 3 with TiAlN coating and type M chip-former
UB2036	UB-SCB-3-PL-NCT	Carbide blade size 3 with TiAlN coating and type P chip-former
UB2038	UB-SCB-3-ML-NCT	Carbide blade size 3 with TiAlN coating and type M chip-former
SIZE 5 BLADE for pilot hole d ≥ Ø5.0		
SKU BLADE	DESIGNATION	DESCRIPTION
UB2060	UB-TSB-5-PL	HSS blade size 5 without coating and type P chip-former
UB2062	UB-TSB-5-PL-NCT	HSS blade size 5 with TiAlN coating and type P chip-former
UB2063	UB-TSB-5-ML-NCT	HSS blade size 5 with TiAlN coating and type M chip-former
UB2067	UB-SCB-5-PL-NCT	Carbide blade size 5 with TiAlN coating and type P chip-former
UB2069	UB-SCB-5-ML-NCT	Carbide blade size 5 with TiAlN coating and type M chip-former

(1) The **UB2020** blade is designed only for back deburring

UBURR TOOL-HOLDERS CODING SYSTEM SPECIFICATIONS AND IDENTIFICATION:



(1) Available only as special

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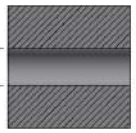

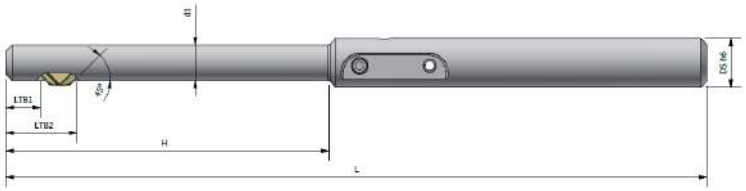

UBURR TOOL-HOLDERS (mm)

Ød min. PILOT HOLE RANGE	SKU TOOL-HOLDER	DESCRIPTION TOOL-HOLDER	+	SKU BLADE	=	DESCRIPTION SET	SKU SET	ØDS h6	LTB1(2)	LTB2(2)	H	L
2.50-3.00	UB1025	UB-d025-C08-H29-L69	+	UB2020(1)	=	UBS-d025-C08-H29-L69	UB2500	8	N/A	7	29	69
3.00-3.50	UB1030	UB-d030-C08-H29-L85	+	UB2030	=	UBS-d030-C08-H29-L85	UB3000	8	4	10	29	85
3.50-4.00	UB1035	UB-d035-C08-H29-L85	+	UB2030	=	UBS-d035-C08-H29-L85	UB3001	8	4	10	29	85
4.00-4.50	UB1040	UB-d040-C08-H29-L85	+	UB2030	=	UBS-d040-C08-H29-L85	UB3002	8	4	10	29	85
4.50-5.00	UB1045	UB-d045-C08-H29-L85	+	UB2030	=	UBS-d045-C08-H29-L85	UB3003	8	4	10	29	85
5.00-5.50	UB1050	UB-d050-C08-H53-L115	+	UB2060	=	UBS-d050-C08-H53-L115	UB3004	8	4	12	53	115
5.50-6.00	UB1055	UB-d055-C08-H53-L115	+	UB2060	=	UBS-d055-C08-H53-L115	UB3005	8	4	12	53	115
6.00-6.50	UB1060	UB-d060-C08-H53-L115	+	UB2060	=	UBS-d060-C08-H53-L115	UB3006	8	4	12	53	115
6.50-7.00	UB1065	UB-d065-C08-H53-L115	+	UB2060	=	UBS-d065-C08-H53-L115	UB3007	8	4	12	53	115
7.00-7.50	UB1070	UB-d070-C08-H53-L115	+	UB2060	=	UBS-d070-C08-H53-L115	UB3008	8	4	12	53	115
7.50-8.00	UB1075	UB-d075-C08-H53-L115	+	UB2060	=	UBS-d075-C08-H53-L115	UB3009	8	4	12	53	115
8.00-8.50	UB1080	UB-d080-C10-H53-L115	+	UB2060	=	UBS-d080-C10-H53-L115	UB3010	10	4	12	53	115
8.50-9.00	UB1085	UB-d085-C10-H53-L115	+	UB2060	=	UBS-d085-C10-H53-L115	UB3011	10	4	12	53	115
9.00-9.50	UB1090	UB-d090-C10-H53-L115	+	UB2060	=	UBS-d090-C10-H53-L115	UB3012	10	4	12	53	115
9.50-10.00	UB1095	UB-d095-C10-H53-L115	+	UB2060	=	UBS-d095-C10-H53-L115	UB3013	10	4	12	53	115
10.00-10.50	UB1100	UB-d100-C10-H80-L125	+	UB2060	=	UBS-d100-C10-H80-L125	UB3014	10	4	12	80	125
10.50-11.00	UB1105	UB-d105-C10-H80-L125	+	UB2060	=	UBS-d105-C10-H80-L125	UB3015	10	4	12	80	125
11.00-11.50	UB1110	UB-d110-C10-H80-L125	+	UB2060	=	UBS-d110-C10-H80-L125	UB3016	10	4	12	80	125
11.50-12.00	UB1115	UB-d115-C12-H80-L125	+	UB2060	=	UBS-d115-C12-H80-L125	UB3017	12	4	12	80	125
12.00-12.50	UB1120	UB-d120-C12-H80-L125	+	UB2060	=	UBS-d120-C12-H80-L125	UB3018	12	4	12	80	125
12.50-13.00	UB1125	UB-d125-C12-H80-L125	+	UB2060	=	UBS-d125-C12-H80-L125	UB3019	12	4	12	80	125
13.00-13.50	UB1130	UB-d130-C12-H80-L125	+	UB2060	=	UBS-d130-C12-H80-L125	UB3020	12	4	12	80	125
13.50-14.00	UB1135	UB-d135-C12-H80-L125	+	UB2060	=	UBS-d135-C12-H80-L125	UB3021	12	4	12	80	125
14.00-14.50	UB1140	UB-d140-C12-H80-L125	+	UB2060	=	UBS-d140-C12-H80-L125	UB3022	12	4	12	80	125
14.50-15.00	UB1145	UB-d145-C12-H80-L125	+	UB2060	=	UBS-d145-C12-H80-L125	UB3023	12	4	12	80	125
15.00-15.50	UB1150	UB-d150-C12-H80-L125	+	UB2060	=	UBS-d150-C12-H80-L125	UB3024	12	4	12	80	125
15.50-16.00	UB1155	UB-d155-C12-H80-L125	+	UB2060	=	UBS-d155-C12-H80-L125	UB3025	12	4	12	80	125
16.00-16.50	UB1160	UB-d160-C16-H80-L125	+	UB2060	=	UBS-d160-C16-H80-L125	UB3026	16	4	12	80	125
16.50-17.00	UB1165	UB-d165-C16-H80-L125	+	UB2060	=	UBS-d165-C16-H80-L125	UB3027	16	4	12	80	125
17.00-17.50	UB1170	UB-d170-C16-H80-L125	+	UB2060	=	UBS-d170-C16-H80-L125	UB3028	16	4	12	80	125
17.50-18.00	UB1175	UB-d175-C16-H80-L125	+	UB2060	=	UBS-d175-C16-H80-L125	UB3029	16	4	12	80	125
18.00-18.50	UB1180	UB-d180-C16-H80-L125	+	UB2060	=	UBS-d180-C16-H80-L125	UB3030	16	4	12	80	125
18.50-19.00	UB1185	UB-d185-C16-H80-L125	+	UB2060	=	UBS-d185-C16-H80-L125	UB3031	16	4	12	80	125
19.00-19.50	UB1190	UB-d190-C16-H80-L125	+	UB2060	=	UBS-d190-C16-H80-L125	UB3032	16	4	12	80	125
19.50-20.00	UB1195	UB-d195-C20-H80-L125	+	UB2060	=	UBS-d195-C20-H80-L125	UB3033	20	4	12	80	125
20.00-20.50	UB1200	UB-d200-C20-H80-L125	+	UB2060	=	UBS-d200-C20-H80-L125	UB3034	20	4	12	80	125
20.50-21.00	UB1205	UB-d205-C20-H80-L125	+	UB2060	=	UBS-d205-C20-H80-L125	UB3035	20	4	12	80	125
21.00-21.50	UB1210	UB-d210-C20-H80-L125	+	UB2060	=	UBS-d210-C20-H80-L125	UB3036	20	4	12	80	125

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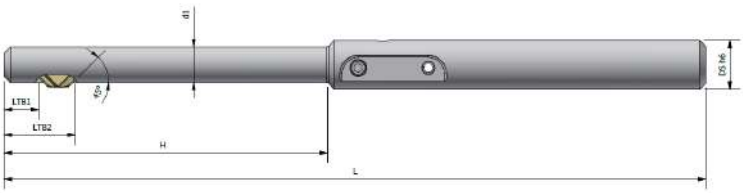

UBURR TOOL-HOLDERS (mm)

Ød min. PILOT HOLE RANGE	SKU TOOL-HOLDER	DESCRIPTION TOOL-HOLDER	+	SKU BLADE	=	DESCRIPTION SET	SKU SET	ØDS h6	LTB1(2)	LTB2(2)	H	L
21.50-22.00	UB1215	UB-d215-C20-H80-L125	+	UB2060	=	UBS-d215-C20-H80-L125	UB3037	20	4	12	80	125
22.00-22.50	UB1220	UB-d220-C20-H80-L125	+	UB2060	=	UBS-d220-C20-H80-L125	UB3038	20	4	12	80	125
22.50-23.00	UB1225	UB-d225-C20-H80-L125	+	UB2060	=	UBS-d225-C20-H80-L125	UB3039	20	4	12	80	125
23.00-23.50	UB1230	UB-d230-C20-H80-L125	+	UB2060	=	UBS-d230-C20-H80-L125	UB3040	20	4	12	80	125
23.50-24.00	UB1235	UB-d235-C20-H80-L125	+	UB2060	=	UBS-d235-C20-H80-L125	UB3041	20	4	12	80	125
24.00-24.50	UB1240	UB-d240-C20-H80-L125	+	UB2060	=	UBS-d240-C20-H80-L125	UB3042	20	4	12	80	125
24.50-25.00	UB1245	UB-d245-C20-H80-L125	+	UB2060	=	UBS-d245-C20-H80-L125	UB3043	20	4	12	80	125
25.00-25.50	UB1250	UB-d250-C20-H80-L125	+	UB2060	=	UBS-d250-C20-H80-L125	UB3044	20	4	12	80	125

(1) The **UB2020** blade is designed only for back deburring.

(2) LTB (Length to Blade)

UX Tool-holder Spare Parts:

Hex L-Key - SP0105 0.050" 1 + 1 /16 /1 + 9/16

Blade Clamping Screw - UB0021 M2.5 X 0.35

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CUTTING RECOMMENDATIONS

ISO	MATERIAL		CONDITION	As is AISI/SAE/ASTM	DIN W.-Nr.
P	Non-Alloy Steel and Cast Steel Free Cutting Steel	<0.25%C	Annealed	1020	1.0044
		≥0.25%C	Annealed	1035	1.0501
		<0.55%C	Quenched and tempered	1045	1.1201
		≥0.55%C	Annealed	1055	1.0535
			Quenched and tempered	1060	1.1221
	Low Alloy and Cast Steel (less than 5% of Alloying Elements)		Annealed	G92600	1.5028
			Quenched and Tempered	4130	1.7218
				4142	1.2332
				5045	1.7006
	High-Alloy Steel, Cast Steel and Tool Steel		Annealed	H13	1.2344
			Quenched and Tempered	M33	1.3249
	Stainless Steel, Cast Steel		Ferritic / Martensitic	420	1.4021
			Martensitic		
M	Stainless Steel, Cast Steel		Austenitic, Duplex	304L	1.4306
K	Grey Cast Iron (GG)		Ferritic / Pearlitic	Class 25	0.6015
			Pearlitic / Martensitic	Grade H20	0.36037
	Nodular Cast Iron (GGG)		Ferritic	60-40-18	0.7043
			Pearlitic	F33500	0.7050
	Malleable Cast Iron		Ferritic	A47	0.8135
			Pearlitic	A220 Class	0.8155
N	Aluminum - Wrought Alloys		Not Hardenable	5005	3.3315
			Hardenable	7075	3.4365
	Aluminum - Cast Alloys	<12%Si	Not Hardenable	518	3.3292
			Hardenable	515	3.3241
		>12%Si	High Temperature	390	
	Copper Alloys	≥ 1% Pb	Free Cutting	C36000	2.0375
			Brass	C22000	2.0230
			Electrolytic Copper	C63000	2.0966
	Non Metallic		Duroplastics, Fiber Plastics	Bakelite	
			Hard Rubber	Ebonite	
S	High Temperature Alloys	Fe based	Annealed	330	1.4864
			Hardened	S590	1.4977
		Ni or Co based	Annealed	Inconoly 825	2.4858
			Hardened	Inconel 718	2.4668
			Cast	Nimocast K24	2.4674
	Titanium Alloys		Pure	Titanium G.1	3.7024
			Alpha+Beta Alloys, Hardened	Titanium G.5	3.7165
H	Hardened steel		Hardened	HARDOX 500	
			Hardened	HARDOX EXTREME	
	Chilled Cast Iron		Cast	A532 IIIA 25% Cr	0.9650
	Cast Iron		Hardened	A532 IIID 20% CrMo	0.9645
C	Carbon Fiber Re-inforced Plastics (CFRP)		Cured	–	
	Glass Fiber Re-inforced Plastics (GFRP)				

	HSS BLADE	CARBIDE BLADE	HSS or CARBIDE	HSS or CARBIDE		
	Vc cutting speed(1)	Vc cutting speed(1)	Vc cutting speed (1)	fr cutting speed (1)		
ISO	UNCOATED m/min. sfm	COATED m/min. sfm	COATED m/min. sfm	COATED/ UNCOATED m/min. ipr	RECOMMENDED CHIP-FORMER	COOLANT
P	25-45 80-150	45-65 100-165	60-120 200-390	0.08 - 0.20/ 0.003 - 0.008	PL	AIR / WET
	20-45 80-150	35-65 115-165	50-120 165-395	0.08 - 0.20/ 0.003 - 0.008		
	20-40 65-130	35-55 115-180	50-100 165-330		ML	
	15-35 50-115	30-50 100-165	45-90 150-295	0.08 - 0.15/ 0.003 - 0.006		
M	15-30 50-100	30-55 100-180	50-100 165-330	0.08 - 0.15/ 0.003 - 0.006	PL	WET
K	20-35 65-115	35-55 115-180	60-120 200-395	0.08 - 0.25/ 0.003 - 0.012	PL	AIR / WET
	30-70 100-230	40-90 130-295	50-100 165-330	0.08 - 0.20/ 0.005 - 0.008		
N	50-70 165-230	75-120 245-395	100-160 330-525	0.10 - 0.30/ 0.004 - 0.012	PL	WET
	30-60 100-200	45-100 150-330	90-130 295-425			
	60-100 195-330	90-150 295-490	180-305 600-1000			
S	10-15 33-50	15-35 50-115	40-80 130-260	0.10 - 0.20/ 0.005 - 0.008	PL	WET
	NOT RECOMMENDED	10-15 33-50	25-40 80-130			
	10-15 33-50	15-20 50-65	30-60 100-165			
H	NOT RECOMMENDED	10-20 10-20 30-65	30-50 100-165	0.04 - 0.06/ 0.0015 - 0.0024	HL	AIR
		10-15 30-50	30-40 100-130		ML	
		15-20 50-65	45-50 145-165			
		10-20 30-65	30-50 100-165			
C	NOT RECOMMENDED		90-140 295 - 460	0.05 - 0.25 / 0.002 - 0.010	PL Recommended with special diamond coating or DLC	AIR/ WET
			90-350 295 - 1150			

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