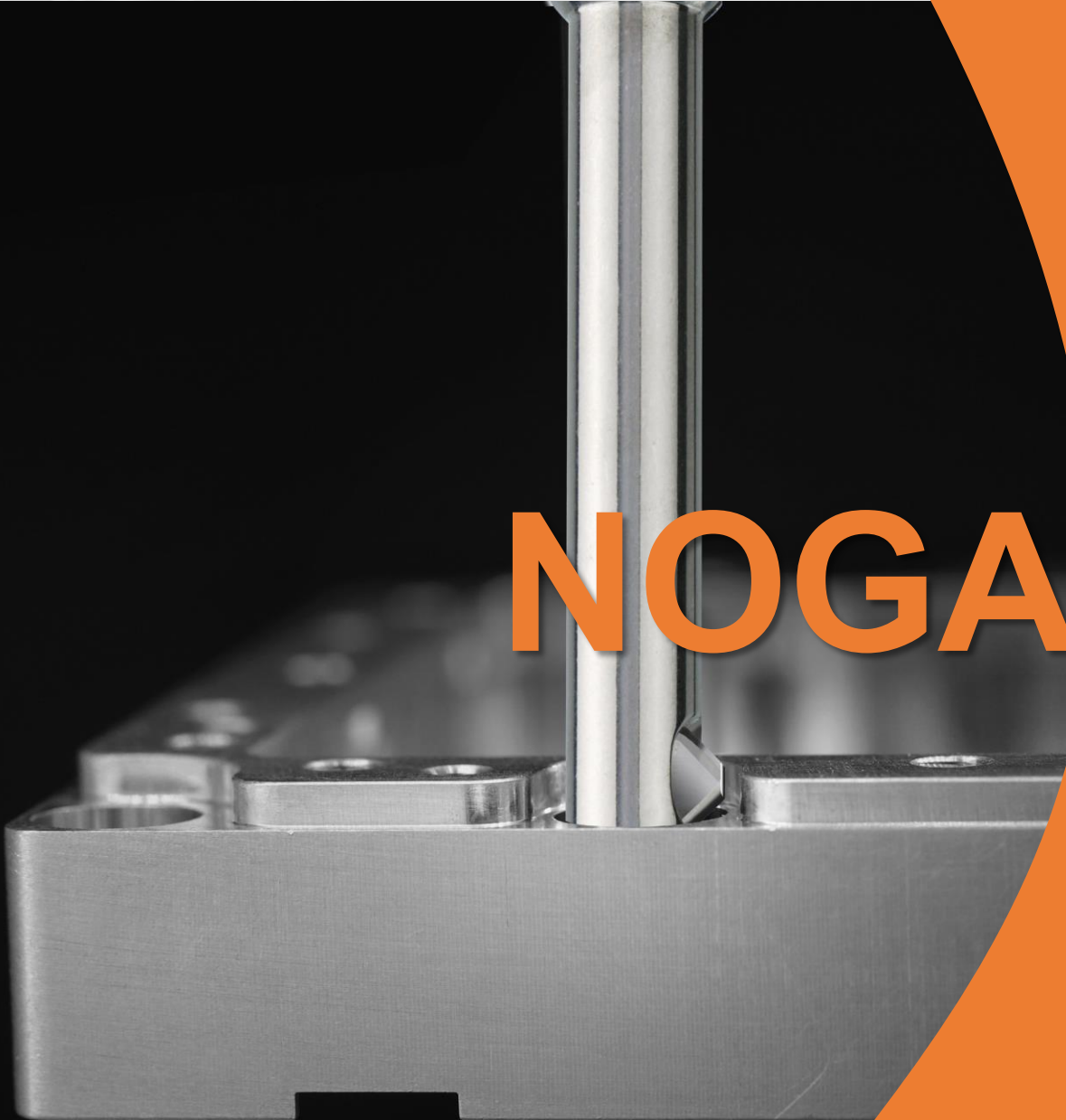




NOGA MT

VAN CUTSEM tools
Quality tools for metalworking

MT Ultimate Families

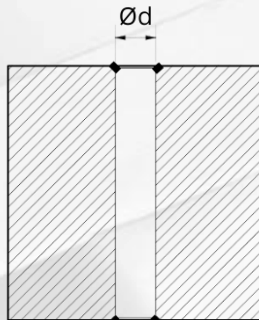
UBACK

Tool Holders Support Pilot Hole Diameters
Ød Ranging from Ø8.0-25.0mm (0.315-0.984")

UBURR



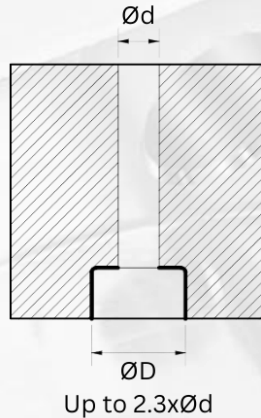
Front and Back Deburring
Ød Range of Ø2.5-25mm (0.098-0.984")



USPOT Inserts



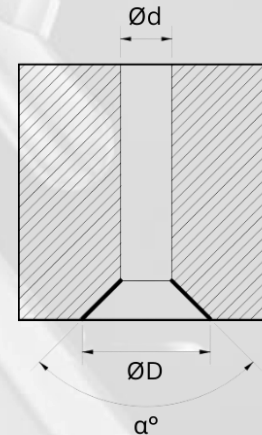
**Through-hole Back
Counterbore Or Spotfacing**
ØD ranging from Ø8.5-57.5mm (0.335-2.264")
Semi-Standard / Tailor-made Inserts



UCHAMF Inserts



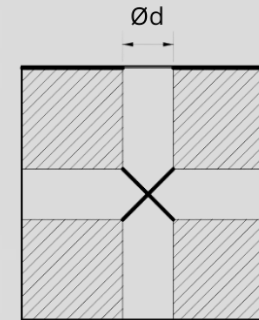
**Through-hole Back
Countersink or Chamfering**
ØD range from 8.5-46.0mm (0.335-1.811")
Available with Standard 82° and 90° Countersink Inserts
and Tailor-made Inserts



UFIBER

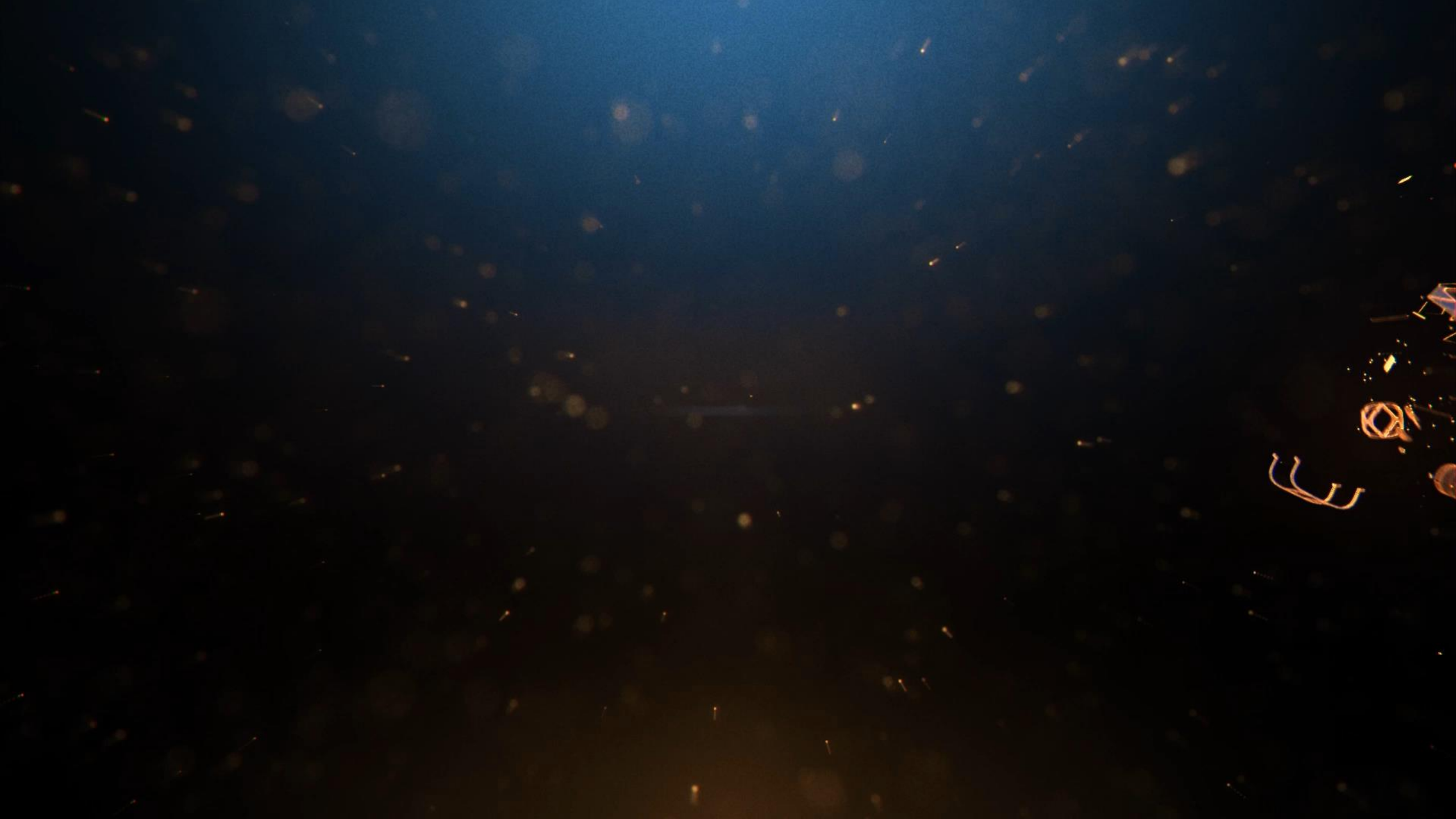


Ceramic Fiber Brushes
For Inner-holes, Cross-holes Ød Range of:
Ø1-20mm (0.0394-0.787")
Surface ØD Range of Ø6-100mm (0.236-3.937")
Available in 10 Grit Levels from #150 to #6000



Game-Changer for Automated Surface Finish





UFIBER

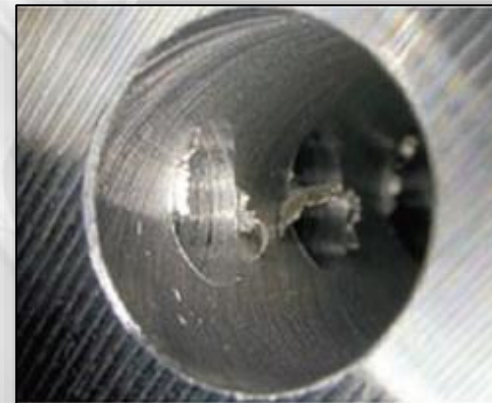
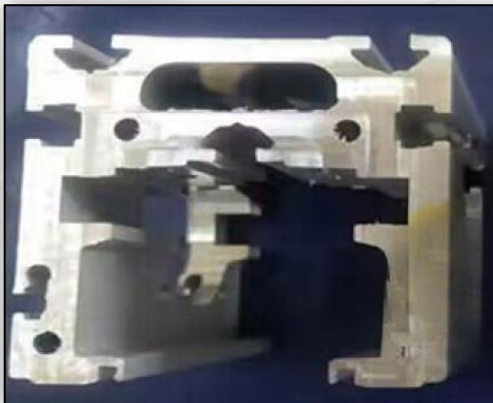
Revolutionaire keramische borstels

Toepassingen:

- ✓ **Ontbramen** – verwijdt bramen van een breed scala aan materialen, waaronder aluminiumlegeringen, koper en staal.
- ✓ **Polijsten** – zorgt voor een gepolijste afwerking van gaten, kruisgaten en oppervlakken, en garandeert gladheid en precisie.
- ✓ **Verwijderen van snijsporen** – elimineert snijmarkeringen op oppervlakken, waardoor de totale afwerking en uitstraling van het materiaal wordt verbeterd.

Gebruiksgebieden:

- ✓ **Kruisgatbewerking** – ontbramen en polijsten van kruisgaten en binnengaten.
- ✓ **Microgat en binnengroeven** – ontbramen en polijsten van micro-binnengaten, mini-gaten, smalle oppervlakken en groefbodems.
- ✓ **Oppervlakte-afwerking** – ontbramen, polijsten en verwijderen van snijsporen van oppervlakken en uiteinden.

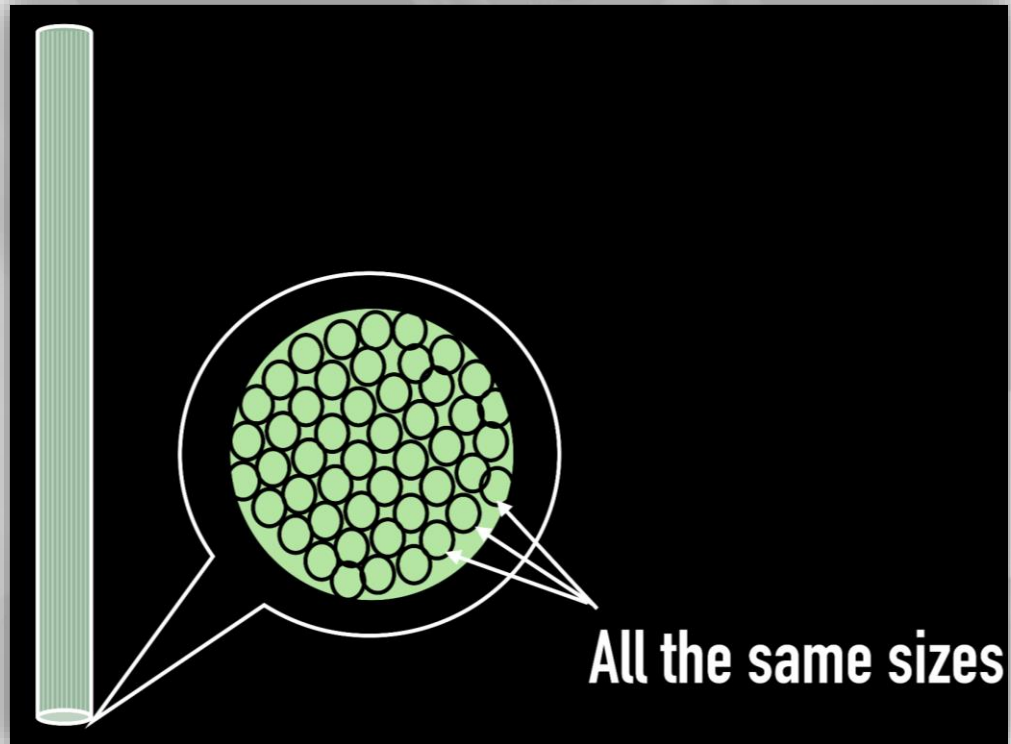


Wat zijn UFIBER borstels?

UFIBER borstels zijn geavanceerde keramische slijpgereedschappen, speciaal ontwikkeld met lange aluminiumoxidevezels (Al_2O_3). Welke zeer slijtvast zijn in vergelijking met andere ontbraam borstels.

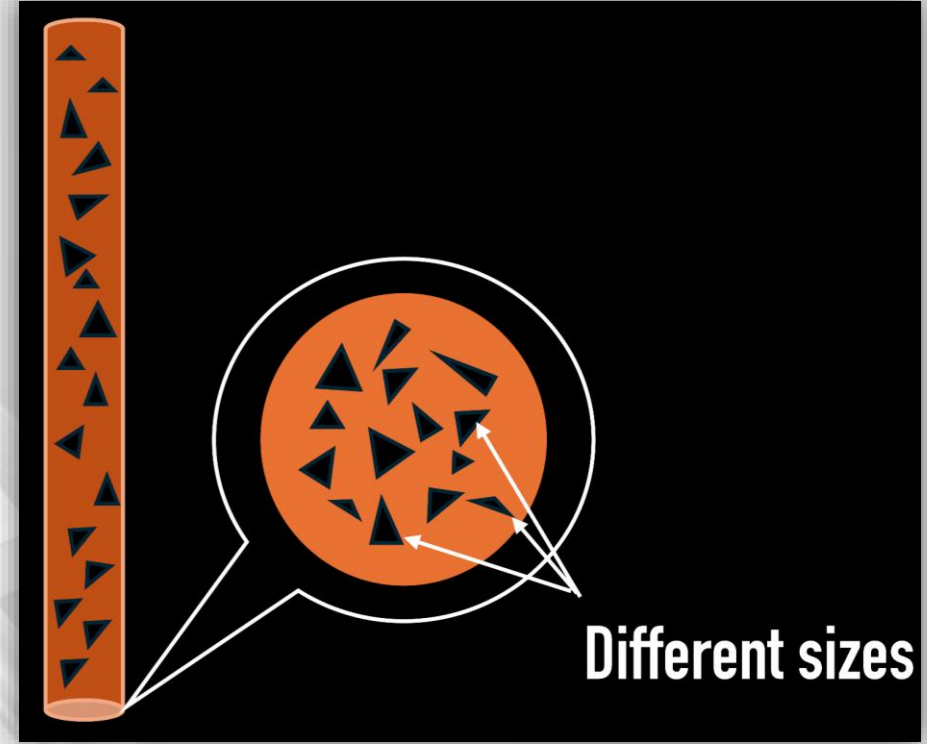


KERAMISCHE FIBERS



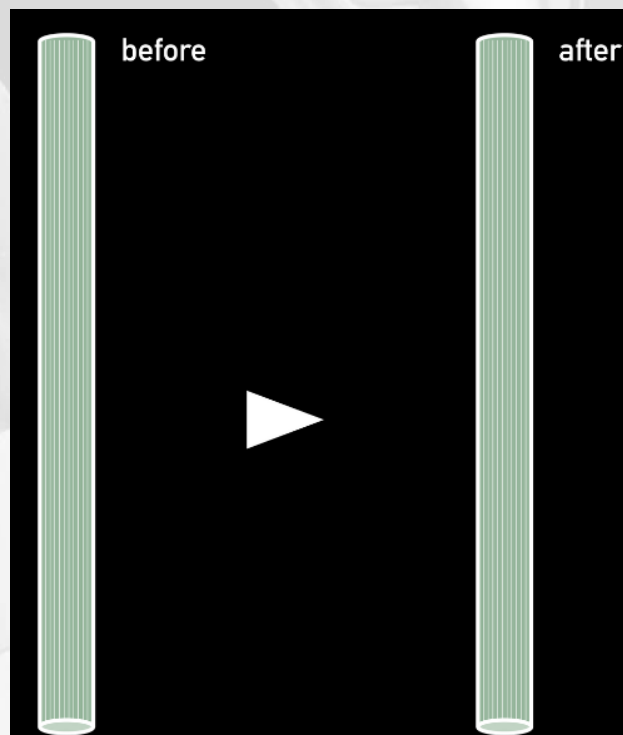
De keramische vezelborstel heeft een uniforme korrelgrootte, waardoor een veel gladdere oppervlakte-afwerking mogelijk is in vergelijking met borstels met andere slijpkorrels.

TRADITIONELE TOEPASSINGEN



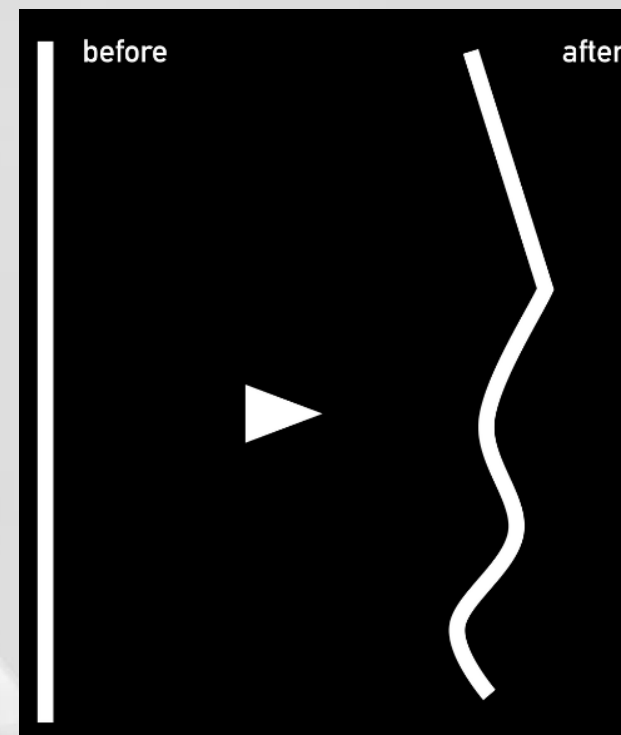
Voorbeelden zijn elastische slijpstiften en nylon borstels met diamant-abrasief.

KERAMISCHE FIBERS



Sterker: dankzij de continue structuur van de vezels behoudt de borstel zijn rechte vorm en waaiert hij niet uit zoals een tandenborstel.

TRADITIONELE BRUSH



Voorbeelden zijn staalborstels en nylon borstels met diamant-abrasief.

UFIBER VS COMPETITIE

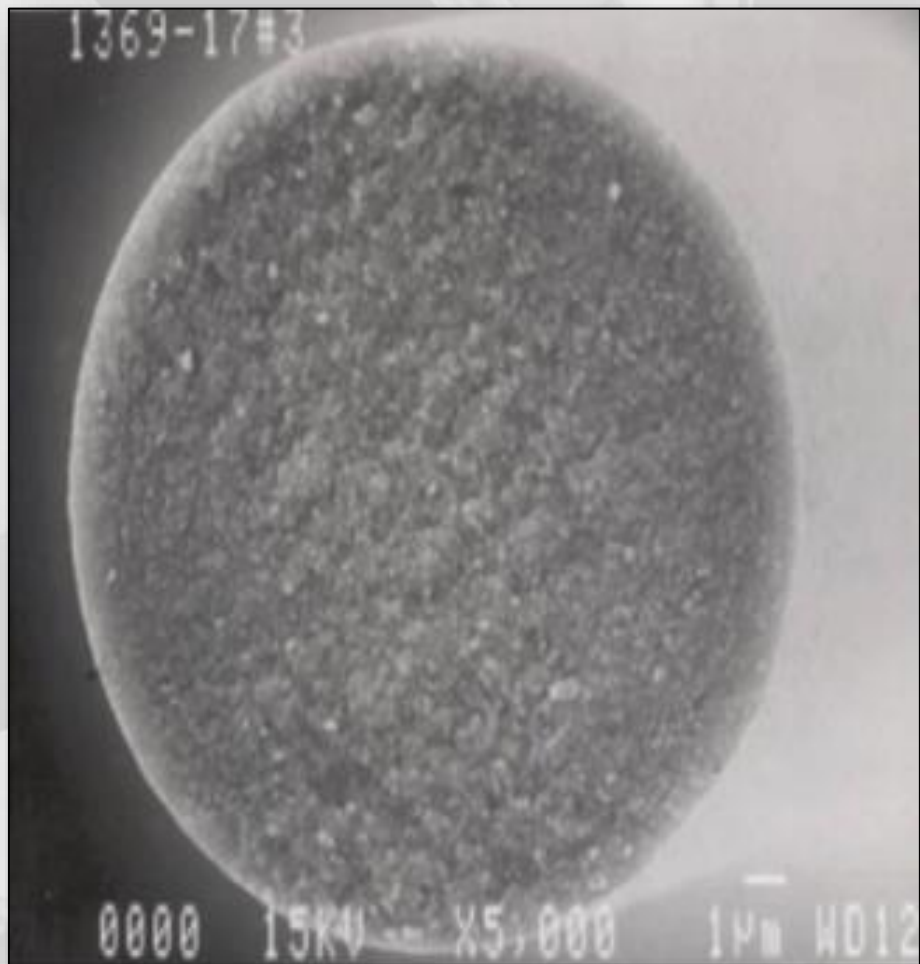
UFIBER vs SiC (Silicon Carbide) BORSTEL



UFIBER VS COMPETITIE

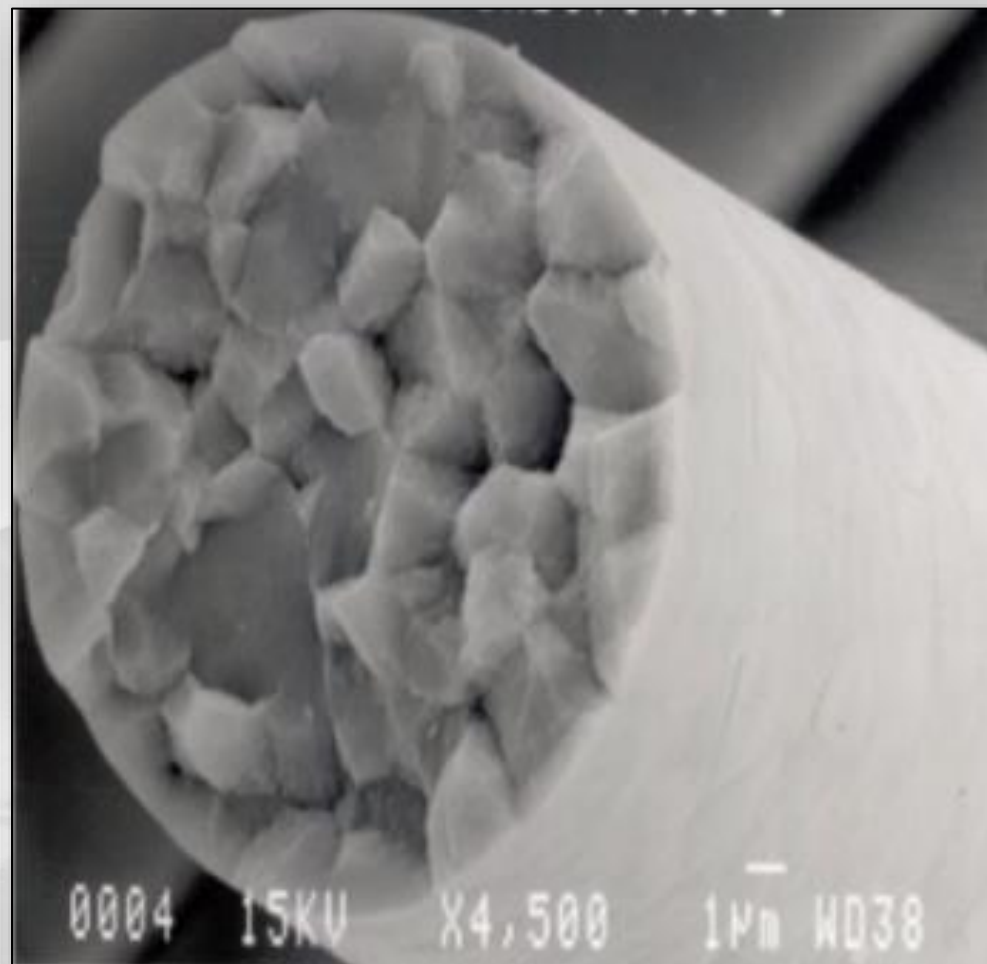
NANO Basis filament

Glad en consistent



Conventioneel micron-basis filament

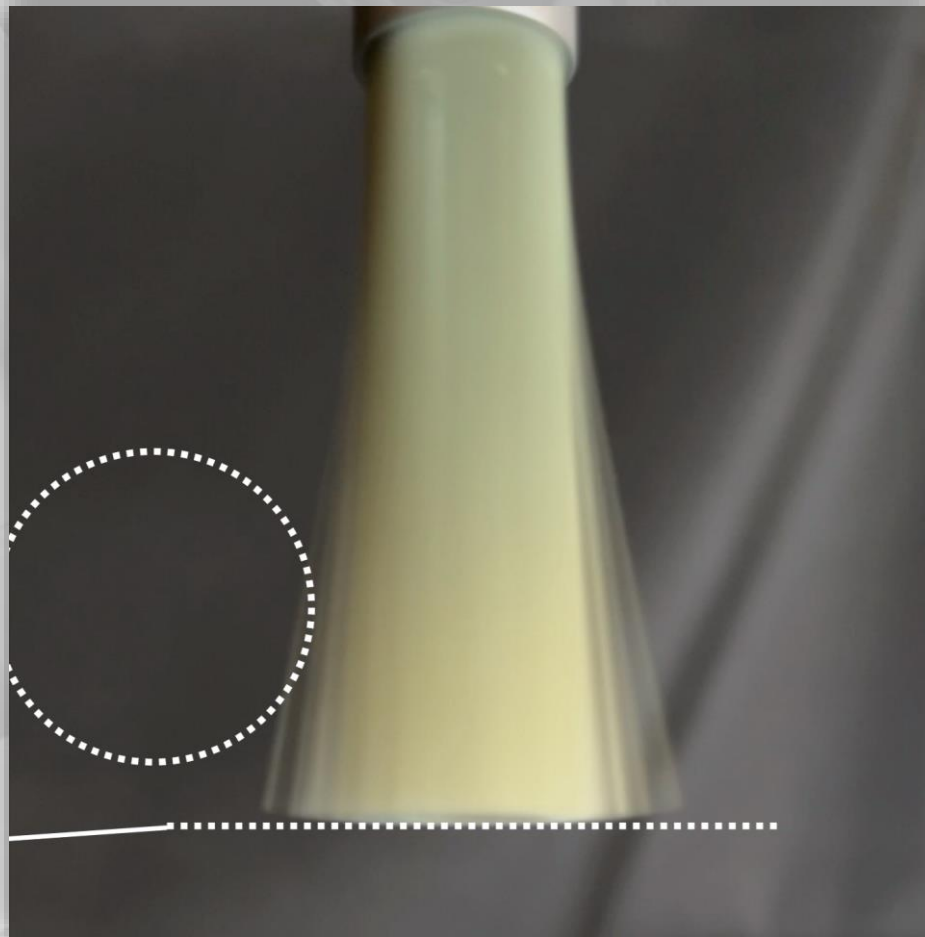
Onregelmatige en grotere korrelstructuren



UFIBER VS COMPETITIE

NANO Basis filament

Glad en consistent



Conventioneel micron-basis filament

Onregelmatige en grotere korrelstructuren



UFIBER-GRITS

SELECTEER DE JUISTE GRIT SOORT BIJ HET TE BEWERKEN MATERIAAL



UFIBER INDUSTRIES

AUTOMOTIVE/ AEROSPACE / MEDICAL / GENERAL INDUSTRY



- ✓ **Precisie-engineering** – ontwikkeld met geavanceerde nanotechnologie voor superieure controle over de oppervlakte-afwerking.
- ✓ **Duurzaamheid** – uitzonderlijke slijtvastheid, waardoor langdurige prestaties gegarandeerd zijn, zelfs onder veeleisende omstandigheden.
- ✓ **Veelzijdigheid** – ideaal voor diverse taken, waaronder polijsten, ontbramen en afwerken van meerdere soorten materialen.
- ✓ **CNC-automatiseringsklaar** – perfect voor integratie in geautomatiseerde CNC-systemen, waardoor de productiviteit in industriële omgevingen wordt verhoogd.

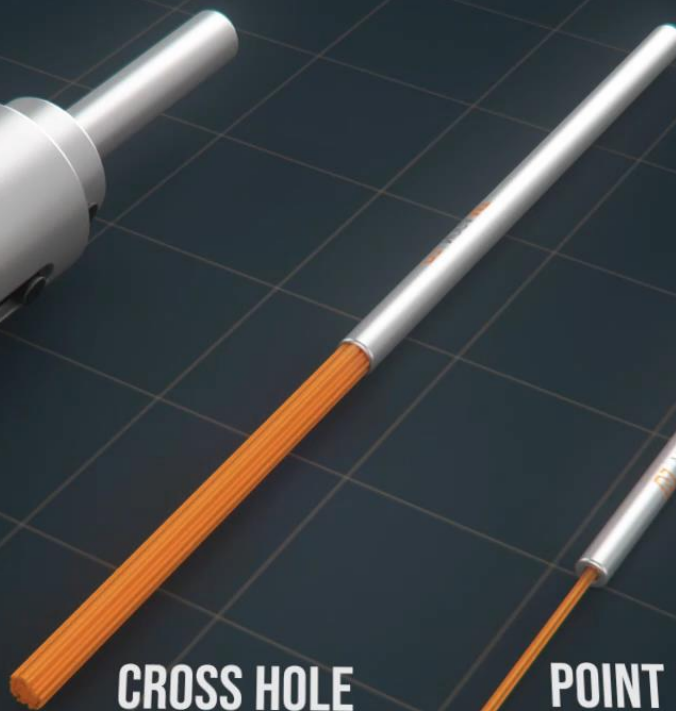


NOGA **MT**
MACHINE TOOLS

UFIBER APPLICATIONS TYPES



SURFACE TYPE



CROSS HOLE



POINT BRUSH



END BRUSH

UFIBER

Verwijderen van bramen, polijsten van oppervlakken, verwijderen van gereedschapssporen, oppervlaktevoorbereiding



POINT TYPE
VOOR BINNENGAT-ONTBRAMEN,
POLIJSTEN, VERWIJDEREN VAN
GEREEDSCHAPSSPOREN, ROEST

- Pilotgaten van Ø1–3 mm
- Maximale snelheid: **12.000 RPM**



END TYPE
ONTWORPEN VOOR GEBRUIK MET
HANDGEREEDSCHAP (ROTARY TOOLS),

- Ideaal voor precieze afwerkingstaken, vooral in krappe of verzonken gebieden
- 5 mm vlak oppervlak of 90° afgeschuinde punt
- Maximale snelheid: **12.000 RPM**



CROSS-HOLE TYPE
VOOR BINNENDIAMETER-POLIJSTEN EN KRUISGAT-
BRAAMVERWIJDERING

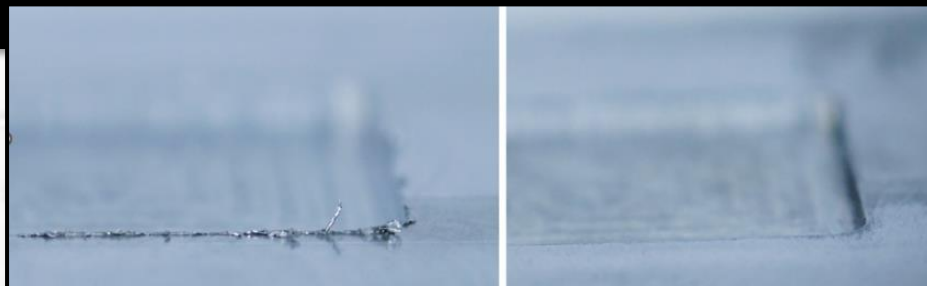
- Pilotgaten van Ø3–20 mm
- Maximale snelheid: **20.000 RPM**



CUP TYPE
VOOR UNIFORME AFWERKING VAN VLAKKE
OPPERVLAKKEN

- Beschikbaar in Ø6–100 mm
- Maximale snelheid: **12.000 RPM**

UFIBER SURFACE BRUSH



UFIBER

SURFACE BRUSH - HOW TO USE

Belangrijkste kenmerken:

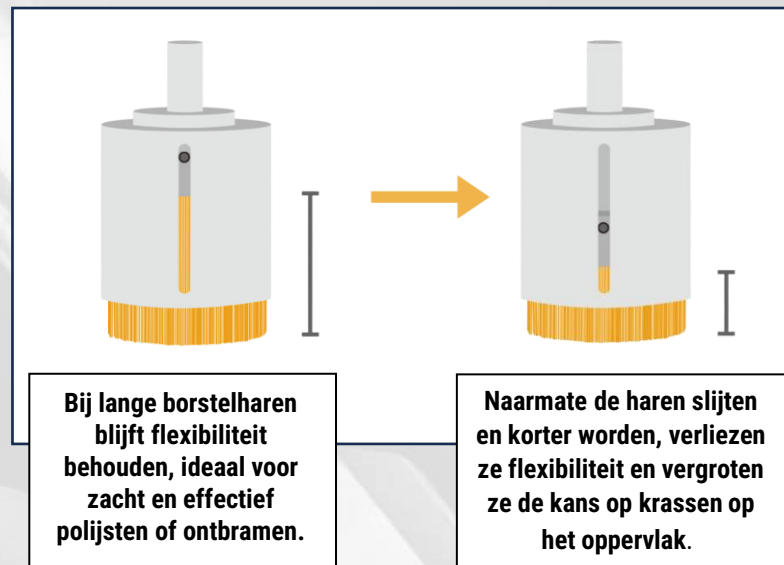
- Ontworpen voor oppervlaktepolijsten en ontbramen.
- Ideaal voor uniforme afwerking van vlakke oppervlakken.
- Borstels passen in een huls met de gereedschapsschacht, ideaal voor geautomatiseerd ontbramen in CNC-machines, robots en bewerkingscentra.
- Gemaakt van keramische vezel, verwijdt bramen met de snijkanten van de vezels.



UFIBER

SURFACE BRUSH - HOW TO USE

BRUSH PROJECTION ADJUSTMENT

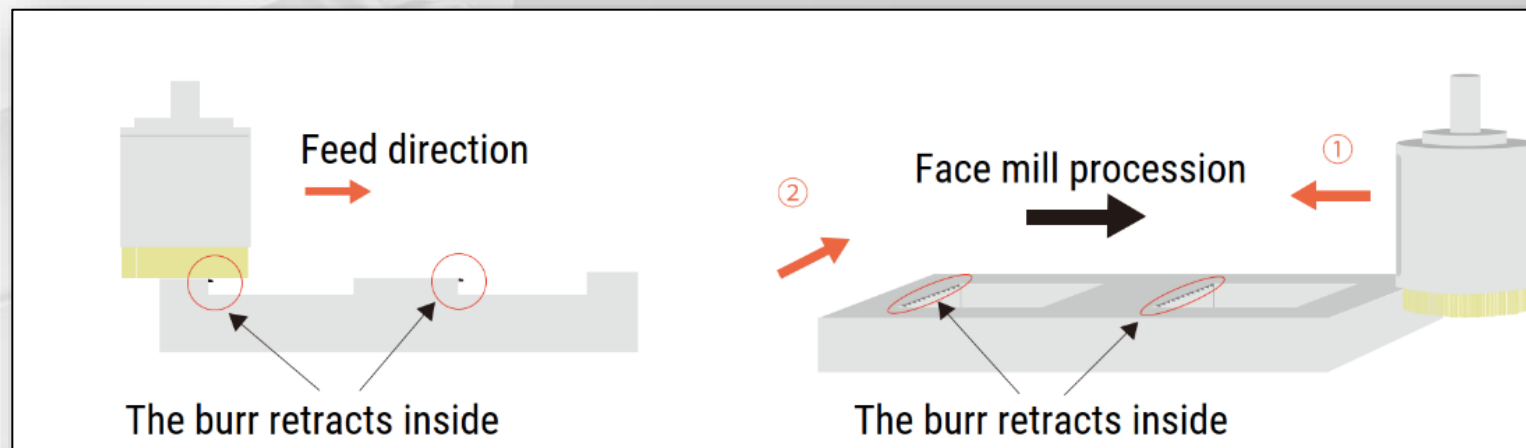


Effectieve braamverwijdering bij precisiebewerking

Stap 1: Na precisiebewerking ontstaan doorgaans bramen aan de zijkant van de sleuf.

Stap 2: Bij verdere bewerking in één richting kunnen deze bramen verschuiven en zich ophopen in de sleuf.

Stap 3: Om de bramen te verwijderen, plaats de vezelborstels gericht naar de bramen (richting ① of ②) en verwijder ze door de borstelrichting om te keren.

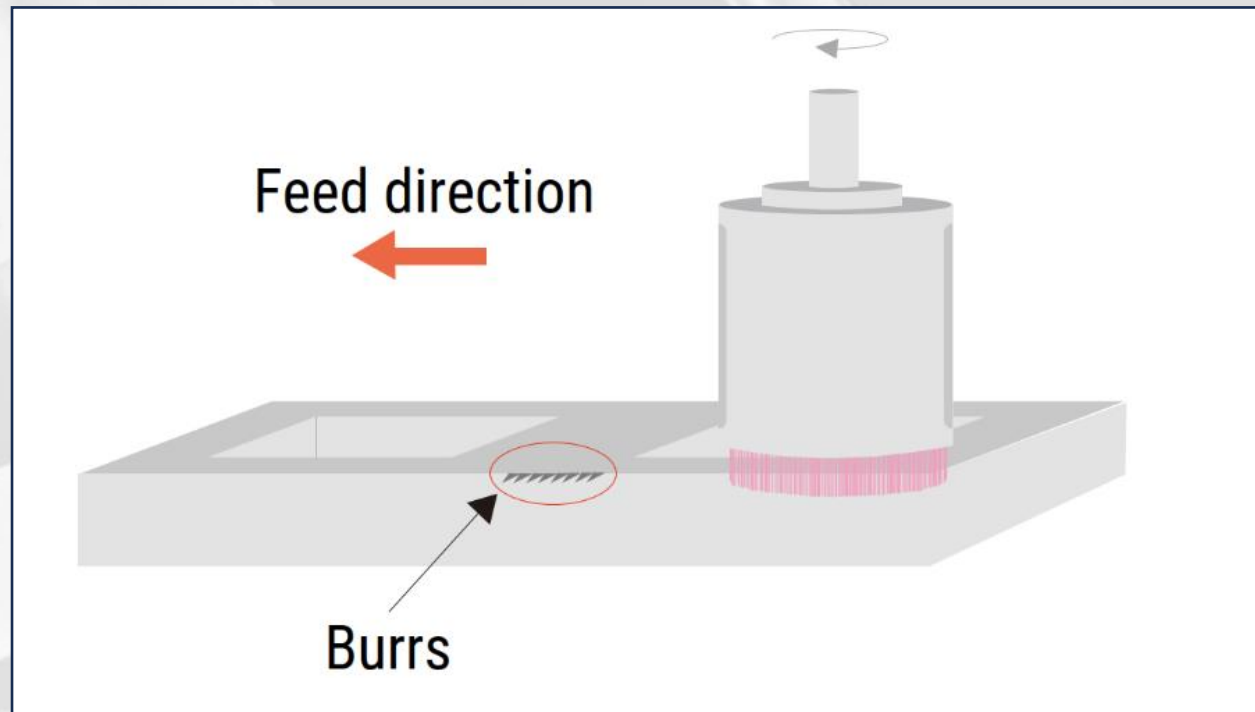


UFIBER

SURFACE BRUSH - HOW TO USE

Voedingsrichting voor het verwijderen van zijbramen

Gebruik een vezelborstel met de opwaartse snijmethode, waarbij de borstel de bramen van onderaf omhoog duwt.



UFIBER

SURFACE BRUSH - HOW TO USE

Veelzijdige oppervlakteborstel voor efficiënte kruisgat-braamverwijdering

De oppervlakteborstel kan ook functioneren als kruisgatborstel: door centrifugale kracht tijdens rotatie zet de borstel uit en verwijdt efficiënt fijne bramen van de binnenoppervlakken van cilinders.

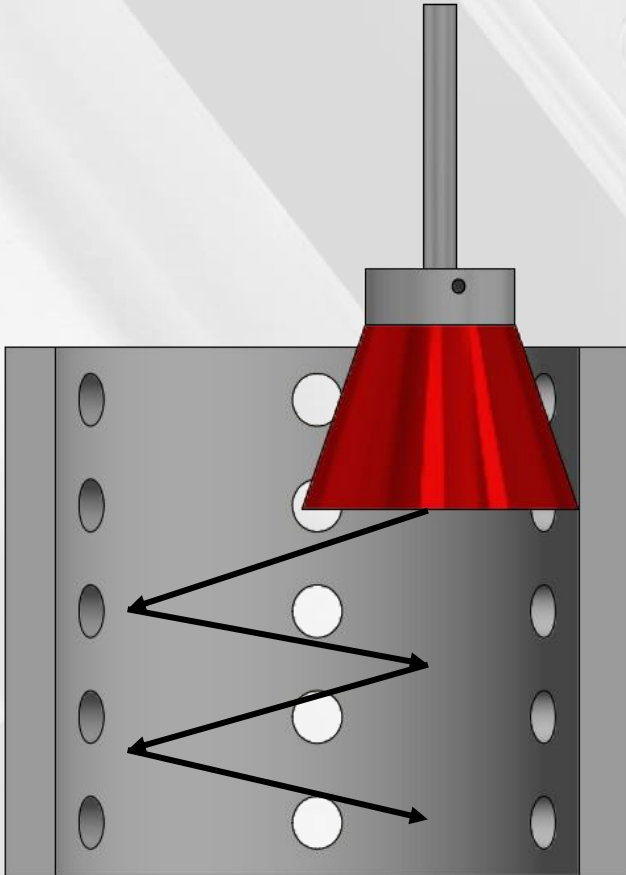
UF1625 / UF-FB-**W**-D025-L75
at 5000rpm



UF1725 / UF-FB-**R**-D025-L75
at 5000rpm



ONTBRAMEN MET HELIXINTERPOLATIE EN EEN VLAKBORSTEL



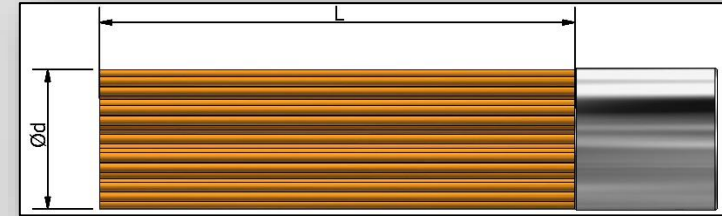
De Surface-Brush kan ook functioneren als kruisgatborstel, gebruikmakend van centrifugale kracht tijdens rotatie om fijne bramen efficiënt te verwijderen uit de binnenoppervlakken van cilinders.



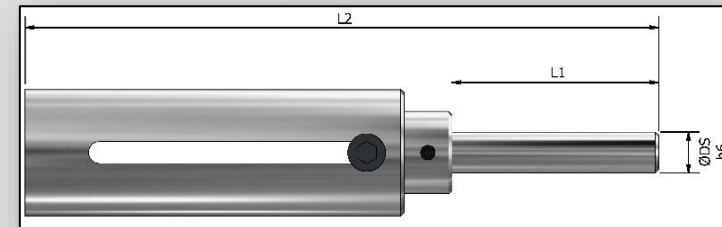
UFIBER

SURFACE BRUSH – SPEEDS RECOMMENDATIONS

Description	Ød		Spindle Speed		Depth Of Cut (DOC)			Feed	Brush Projection
			min.	max.	Polishing	Deburring	Max.		
	mm	inch	min ⁻¹		mm / Inch			mm/min. / Inch/min.	mm / Inch
UF-FB-...-D006-L30	6	0.236	9000	12000	0.2 .008"	0.5 .02"	1.2 .05"	2000 79"	10 .394"
UF-FB-...-D015-L50	15	0.591	5700	7200					
UF-FB-...-D025-L75	25	0.984	5000	6000					
UF-FB-...-D040-L75	40	1.575	2700	3600					
UF-FB-...-D060-L75	60	2.362	1800	2400					
UF-FB-...-D100-L75	100	3.937	1000	1400					



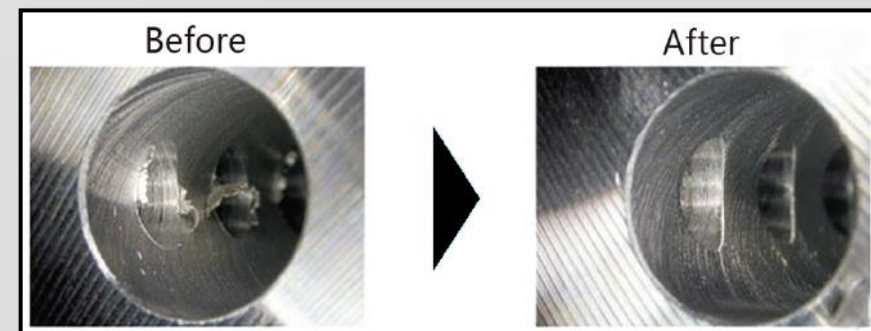
SUITABLE FOR	SKU#	DESCRIPTION	ØDS mm / Inch	L1 mm / Inch	L2 mm / Inch	Clamping Screw MxPxLength (mm)	LN Key S (mm)
Ø6 / .236"	UF5506	UF-FS-006-C06-L70	Ø6 / .236"	30 / 1.181"	70 / 2.756"	M3x0.5x4	2.5
Ø15 / .590"	UF5515	UF-FS-015-C06-L90	Ø6 / .236"	30 / 1.181"	90 / 3.543"	M3x0.5x6	2.5
Ø25 / .984"	UF5525	UF-FS-025-C10-L140	Ø10 / .394"	30 / 1.181"	140 / 5.512"	M4x0.7x10	3.0
Ø40 / 1.575"	UF5540	UF-FS-040-C12-L140	Ø12 / .472"	30 / 1.181"	140 / 5.512"	M6x1.0x10	4
Ø60 / 2.362"	UF5560	UF-FS-060-C12-L145	Ø12 / .472"	40 / 1.575"	145 / 5.708"	M6x1.0x10	4
Ø100 / 3.937"	UF5500	UF-FS-100-C16-L155	Ø16 / .630"	40 / 1.575"	155 / 6.102"	M8x1.25x16	5



UFIBER

CROSS-HOLES - HOW TO USE

GEBRUIK VAN DE BORSTEL MET DE MACHINE-SPIL:

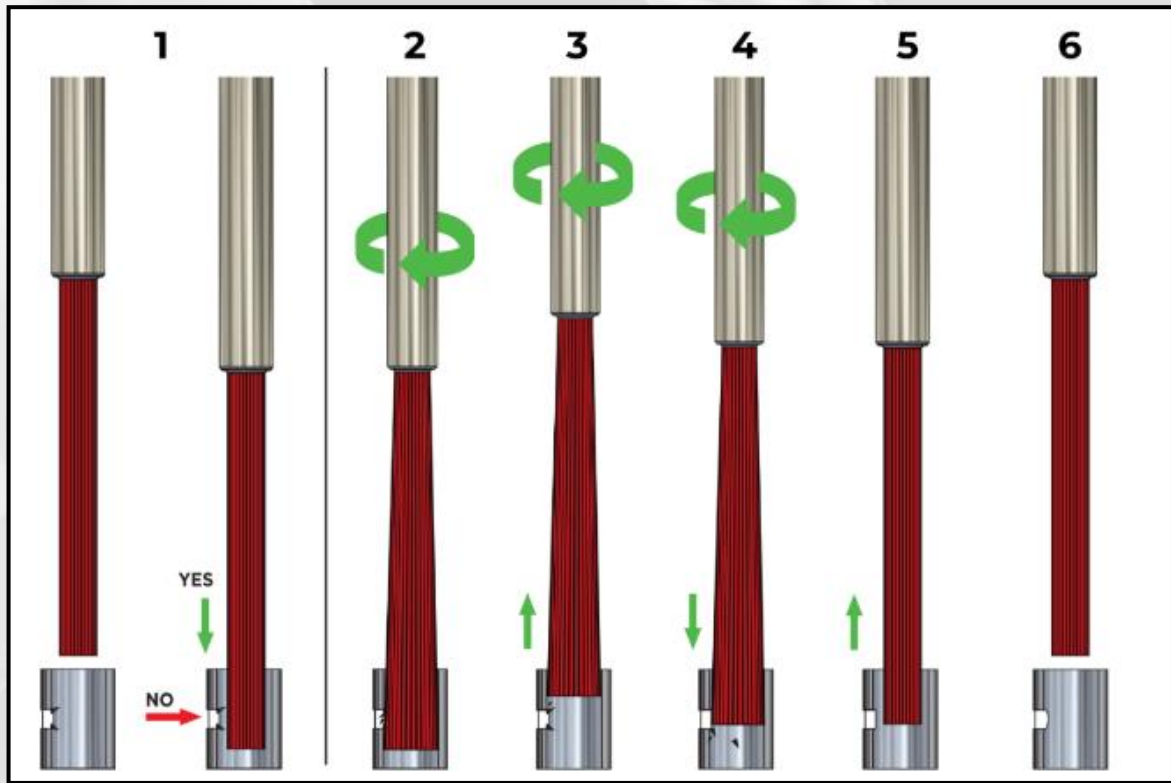


- De borstel zet uit door centrifugale kracht tijdens rotatie en verwijdert effectief fijne bramen van het binnenoppervlak van de cilinder.
- Helpt bij het voorkomen en verwijderen van zwartoxide in de cilinder.
- Verwijdert snijresten en voorkomt dat bramen zich aan oppervlakken hechten.
- Gemaakt van keramische vezel, verwijdert bramen met de snijkanten van de vezels.
- Geschikt voor het verwijderen van binnenoppervlak-bramen in staal, aluminium, roestvrij staal, composieten en harsmaterialen.
- Kan worden gemonteerd op bewerkingscentra, robots of andere verwerkingsapparatuur.
- Verwijdert efficiënt snij-, polijst- en verwerkingsresten.

UFIBER

CROSS-HOLES - HOW TO USE

GEBRUIK VAN DE BORSTEL MET DE MACHINE-SPIL:



Hoe UFIBER kruisgatborstels te gebruiken

- 1. Borstel invoeren zonder rotatie** - Zorg dat de borstel stilstaat bij het invoeren in de cilinder om beschadiging of verspreiding van de haren te voorkomen, wat schade kan veroorzaken.
- 2. Roteer het gereedschap door het kruisgat** - Bereik consistente randkwaliteit door zowel met de klok mee als tegen de klok in te draaien.
- 3. Borstel terugtrekken tijdens bewerking** - Terugtrekken voorkomt dat bramen platgedrukt worden tegen het binnenoppervlak van de cilinder.
- 4. Borstel vooruit duwen tijdens bewerking** - Vooruitduwen helpt resterende, opstaande bramen te verwijderen.
- 5. Stop de rotatie van de borstel**
- 6. Verwijder de borstel terwijl deze stilstaat** - Zorg dat de borstel volledig tot stilstand is gekomen voor verwijdering.

UFIBER

Snijgegevens

Hoe UFIBER kruisgatborstels te gebruiken

1. Boorgatdiameter:

Voorbeeld; Een kruisgatborstel die een gat van 5 mm binnengaat, gedraagt zich volledig anders dan wanneer deze een gat van 8 mm binnengaat. Het contactoppervlak, de wrijving en de snijbelasting veranderen allemaal – waardoor het vereiste toerental (RPM) dienovereenkomstig verandert.

2. Korrelgrootte:

Overstappen van korrel 600 naar korrel 1000 verandert de agressiviteit van de borstel volledig.

Hogere korrel → fijner, minder snijkracht → vereist hogere RPM

Lagere korrel → agressiever → vereist lagere RPM

3. Borsteltype en vezellengte

4. Toepassingsverschillen

Conclusie is keuze maken voor type borstel en dan aan de hand van toerental gaan testen wanneer het beste resultaat wordt behaald.

UFIBER

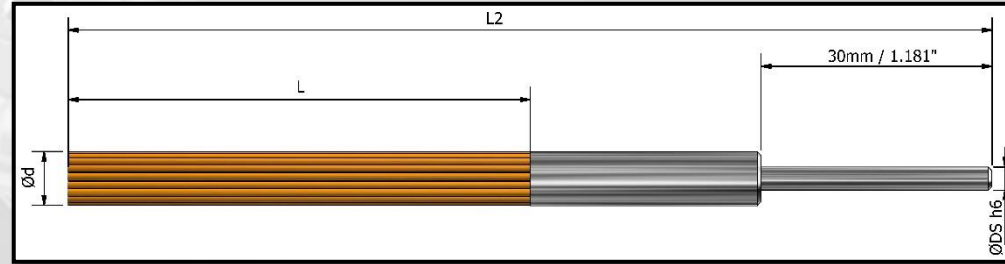
CROSS-HOLES - HOW TO USE

Inzicht in de relatie tussen RPM en borsteldiameter



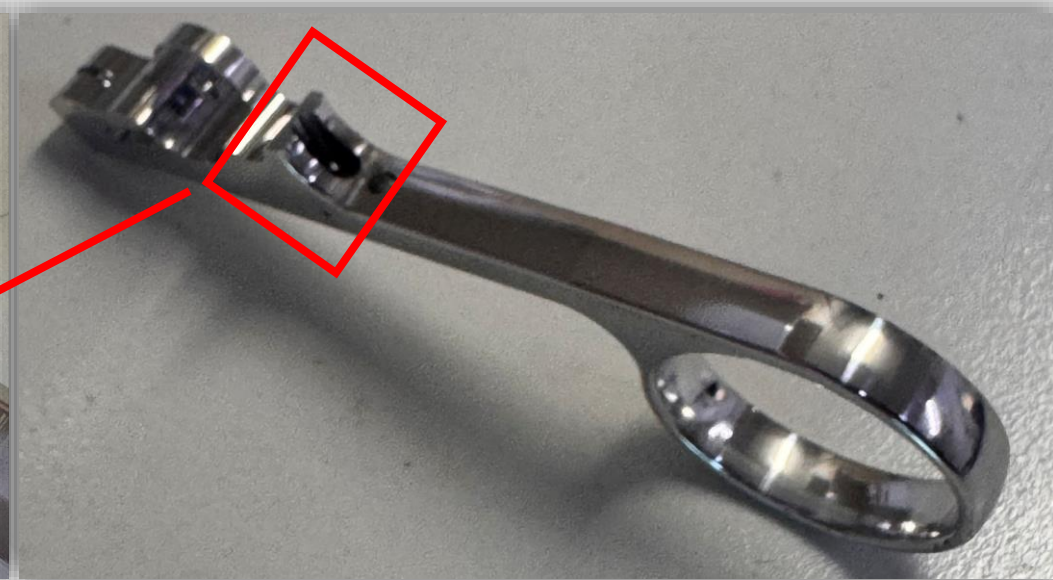
UFIBER

CROSS-HOLES – Aanbevolen RPM



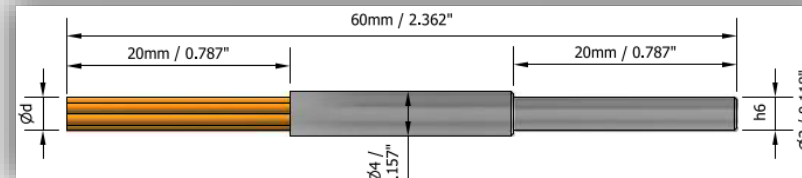
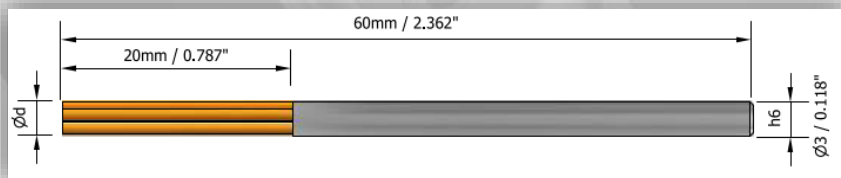
BRUSH	Ød	L	L2	Spindle Speed		Pilot-hole diameter	
		Bristle Length	Total Length	min.	max.	Grit #150-#1000	Grit #1200-#6000
	mm Inch	mm Inch	mm Inch	min ⁻¹		mm Inch	mm Inch
UF-CH-...-D015-L60	1.5 0.059"	50 1.97"	120 4.72"	-	20000	3.5-5 0.138"-0.197"	3.5-5 0.138"-0.197"
UF-CH-...-D030-L60	3 0.118"	60 2.36"	120 4.72"	-	14000	5-7 0.197"-0.276"	-
UF-CH-...-D030-L50	3 0.118"	50 1.97"	130 5.12"	-	14000	-	5-7 0.197"-0.276"
UF-CH-...-D050-L60	5 0.197"	60 2.36"	130 5.12"	-	14000	7-9 0.276"-0.354"	-
UF-CH-...-D050-L50	5 0.197"	50 1.97"	120 4.72"	-	14000	-	8-10 0.315"-0.394"
UF-CH-...-D070-L60	7 0.276"	60 2.36"	130 5.12"	-	14000	9-14 0.354"-0.551"	-
UF-CH-...-D070-L50	7 0.276"	50 1.97"	120 4.72"	-	14000	-	10-20 0.394"-0.787"

UFIBER POINT-BRUSH



UFIBER

POINT-BRUSH – SPEEDS RECOMMENDATIONS



Description	Ød	Spindle Speed	
		min.	max.
	mm / Inch	min ⁻¹	
UF-PB-...-D1-L20	1 .039"	-	12000
UF-PB-...-D1.5-L20	1.5 .079"	-	12000
UF-PB-...-D2-L20	2 .079"	-	12000

Description	Ød	Spindle Speed	
		min.	max.
	mm / Inch	min ⁻¹	
UF-PB-...-D2.5-L20	2.5 .098"	-	12000
UF-PB-...-D3-L20	3 .118"	-	12000

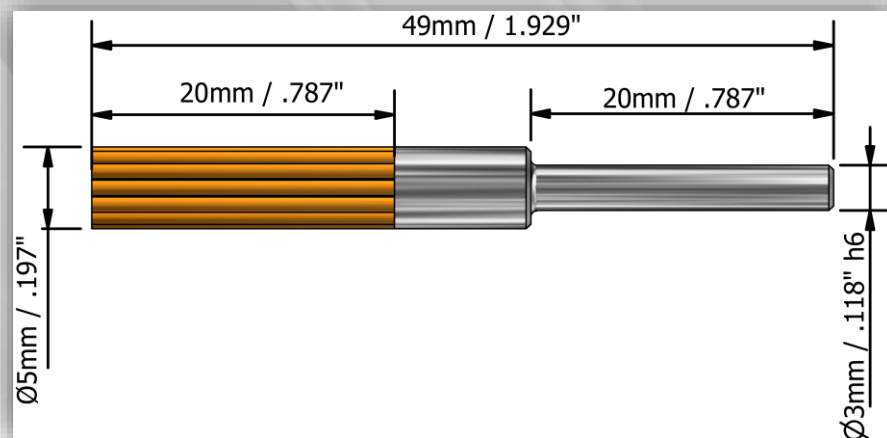
Belangrijkste kenmerken:

- Geschikt voor precisiewerk in kleine of complexe gebieden, ideaal voor het verwijderen van gereedschapssporen, polijsten en afwerken van onderdelen met kleine of smalle vormen.
- Geschikt voor gebruik in CNC-machines, robots of handgereedschap (rotary tools).

Veiligheidswaarschuwing puntborstels:

- De borstel wordt niet aanbevolen voor gebruik met pneumatisch aangedreven gereedschap wegens veiligheidsredenen.

END-BRUSH – SPEEDS RECOMMENDATIONS



Description	Ød	Spindle Speed	
		min.	max.
	mm / Inch	min ⁻¹	
UF-EB-...-D5-L20	5 .197"	-	12000

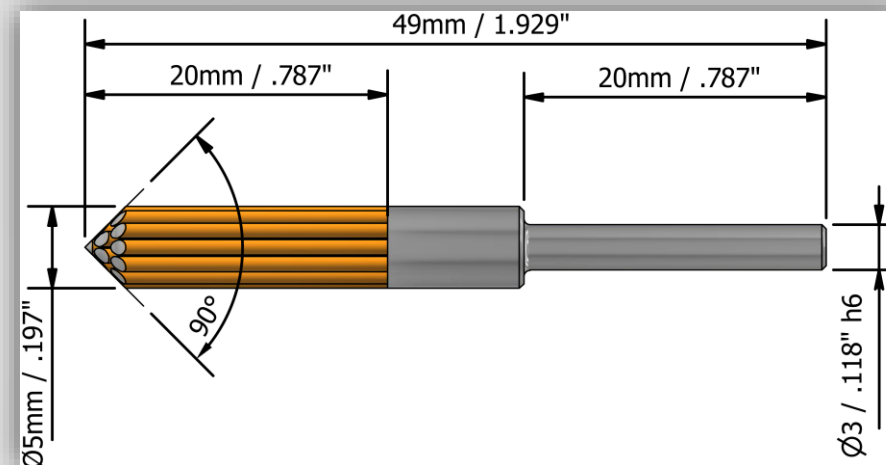
Belangrijkste kenmerken:

Duurzaamheid: de borstel heeft hoge buigsterkte en kan werken tot 12.000 RPM zonder risico op breuk van de vezels.

Puntafstelling: de borstelpunt kan onder een hoek worden gebracht met een diamantschijf op een draaibank of spil.

Veiligheidswaarschuwing puntborstels:

Niet aanbevolen voor gebruik met pneumatisch aangedreven gereedschap wegens veiligheidsredenen.

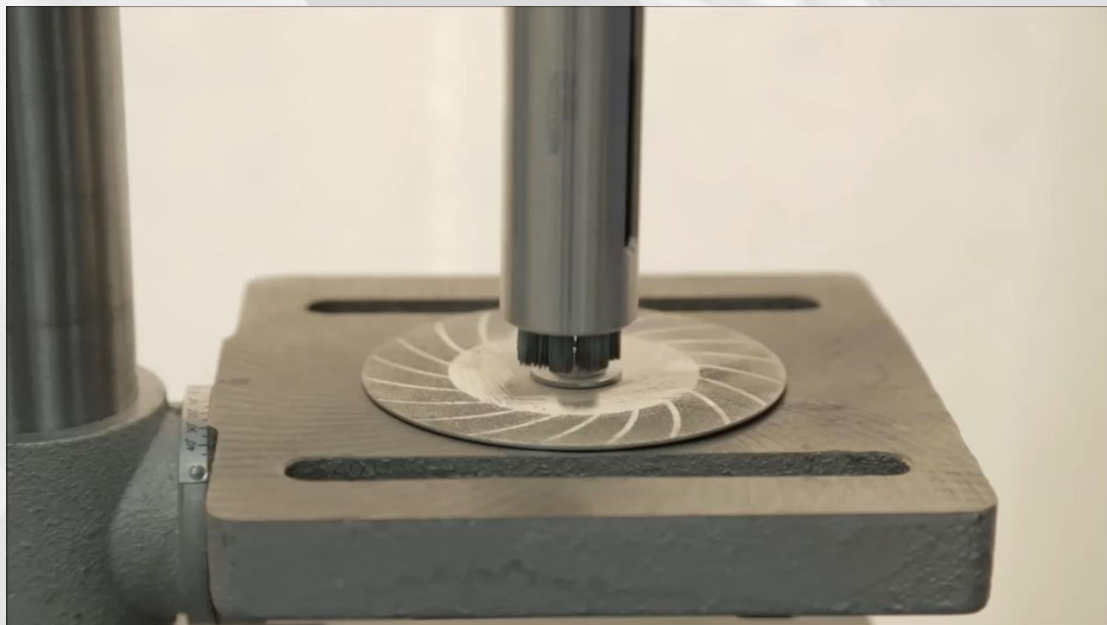


Description	Ød	Spindle Speed	
		min.	max.
	mm / Inch	min ⁻¹	
UF-EB45-...-D5-L20	5 .197"	-	12000



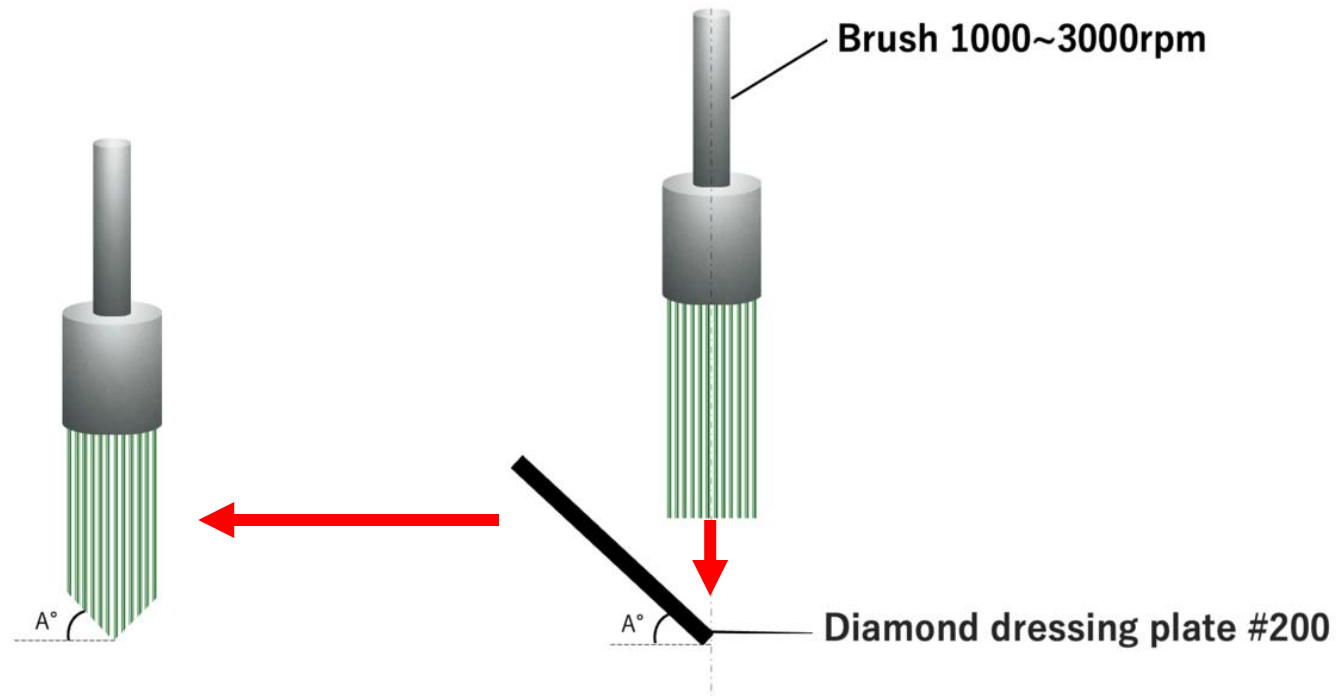
UFIBER

Onderhoud borstels



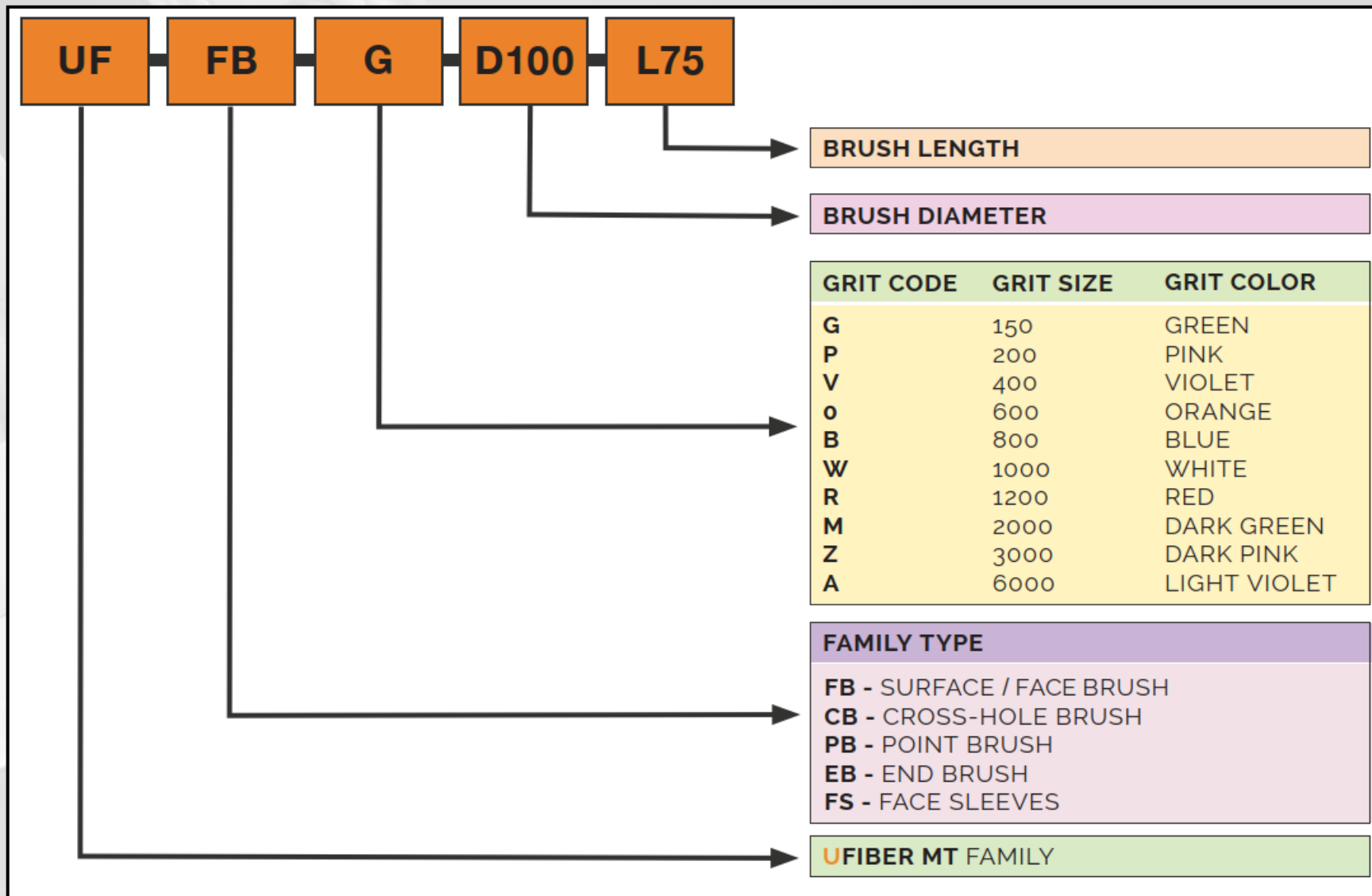
UFIBER

Onderhoud borstels



UFIBER-BRUSH CODING SYSTEM

SPECIFICATIONS AND IDENTIFICATION



UFIBER CASE STUDIES

VERWIJDEREN VAN BRAMEN IN AUTOMOTIVE PRODUCTEN MET SURFACE BRUSH



BEFORE

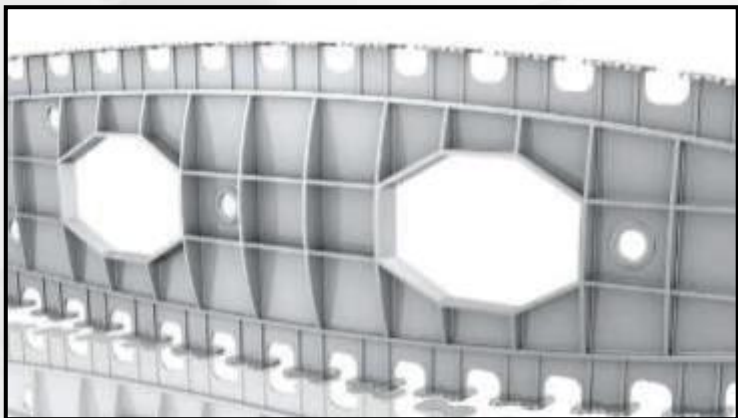


AFTER



- **Material:** ADC12 (A383.0) Aluminum - Silicon Alloys
- **Cutting Parameters:** S = 6000RPM, F = 1000mm/min. (34.9inch/min.), DOC = 0.5 mm (0.0196")
- **Surface Brush:** UF1625 / UF-FB-W-D025-L75 Ø5 / Grit#1000 (White)

VERWIJDEREN BRAMEN VOOR AEROSPACE PRODUCTEN MET SURFACE BRUSH



BEFORE



AFTER



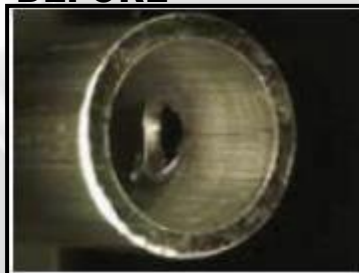
- **Material:** 7075 Aluminum Alloy
- **Cutting Parameters:** S = 6000RPM, F = 1000mm/min. (34.9inch/min.), DOC = 0.5 mm (0.0196")
- **Surface Brush:** UF1625 / UF-FB-W-D025-L75 / Ø5 Grit#1000 (White)

UFIBER CASE STUDIES

BRAMEN VERWIJDEREN IN PIJP MET CROSS-HOLE BRAMEN



BEFORE



AFTER



- **Material:** Aluminum
- **Cutting Parameters:** S = 11000RPM, F = 1100mm/min. (44.3inch/min.)
- **Cross-Hole Brush:** UF2650 / UF-CH-W-D050-L60 / Ø Grit#1000 (White)

UFIBER CASE STUDIES

CUTTER MARKS REMOVAL

- **Material:** A7075 Aluminum Alloys
- **Cutting Parameters:** S = 6000RPM, F = 2000mm/min. (79inch/min.), DOC = 0.5 mm (0.0196")
- **Surface Brush:** UF1625 / UF-FB-W-D025-L75 / Ø5 Grit#1000 (White)

- **Material:** Inconel 625
- **Cutting Parameters:** S = 6000RPM, F = 800mm/min. (32inch/min.), DOC = 0.5 mm (0.0196")
- **Surface Brush:** UF1325 / UF-FB-V-D025-L75 / Ø5 Grit#400 (Violet)

- **Material:** SCM440 / AISI Steel Alloy
- **Cutting Parameters:** S = 6000RPM, F = 1000mm/min. (39.5inch/min.), DOC = 0.5 mm (0.0196")
- **Surface Brush:** UF1325 / UF-FB-W-D025-L75 / Ø5 Grit#400 (Violet)

- **Material:** Titanium Ti-6Al-4V
- **Cutting Parameters:** S = 6000RPM, F = 1000mm/min. (39.5inch/min.), DOC = 0.5 mm (0.0196")
- **Surface Brush:** UF1325 / UF-FB-W-D025-L75 / Ø5 Grit#400 (Violet)

BEFORE



Ra = 0.197μm Rz = 0.837μm

AFTER



Ra = 0.068μm Rz = 0.284μm



Ra = 0.707μm Rz = 3.304μm



Ra = 0.068μm Rz = 0.284μm



Ra = 0.546μm Rz = 2.169μm



Ra = 0.097μm Rz = 0.441μm



Ra = 0.785μm Rz = 3.156μm



Ra = 0.265μm Rz = 0.982μm

Case Study-Electromechanical Components

Industrie: ELECTROMECHANICAL COMPONENTS

Doelstelling: Verwijderen van bramen en gladder oppervlak

Toepassingsdetails:

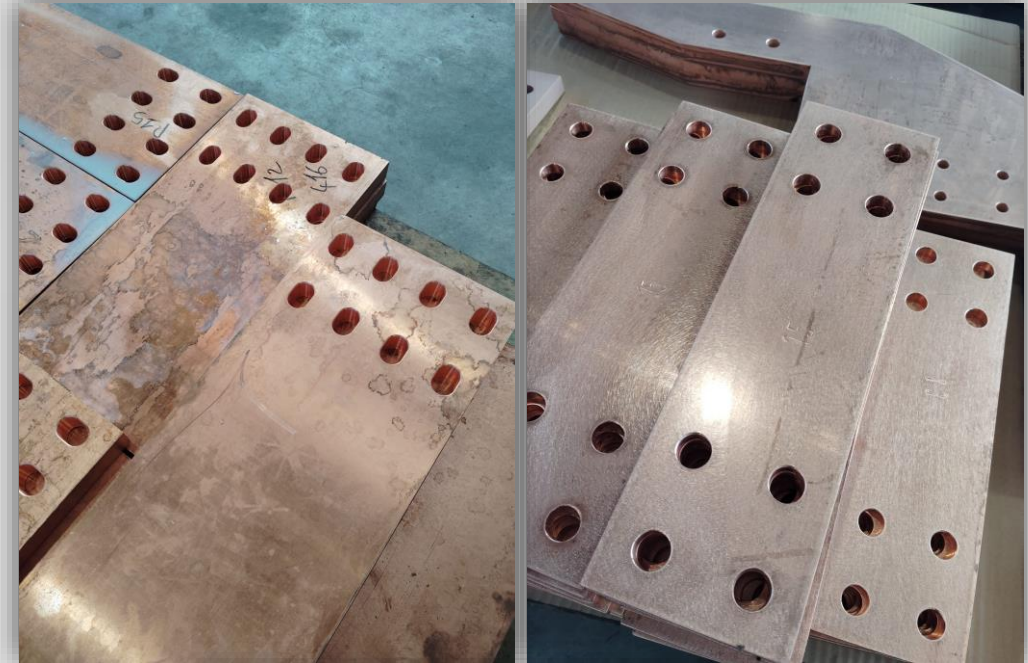
- Parts: 340 x 100mm plates and 640 x 200mm plates and Ø20mm round flange
- Material: Copper for the plates and Aisi 304 for the round flange
- Machine type: DAHLI TAIWAN DL-MCV1020BA
- Production Volume: NA

Tool:

- UF1425; UF-FB-O-D025-L75 / Ø25mm (0.984") Surface-brush, Grit#600 Orange
- UF1860; UF-FB-M-D060-L75 / Ø60mm (2.362") Surface-brush, Grit#2000 Light Green

Machine parameters:

Surface Brush		S Spindle Speed	F Table Feed		DOC Depth Of Cut		Coolant
Item#	Description	RPM	mm/min	inch/min.	mm	inch	
UF1425	UF-FB-O-D025-L75	2000	1500	59	0.1	0.004	External Air
UF1860	UF-FB-M-D060-L75	1800	1500	59	0.1	0.004	External Air



Case Study-Electromechanical Components

Tests carried out with a Mitutoyo roughness tester:
considering where: Ra1.6 for turning, Ra0.8 for grinding, Ra0.2 for lapping

After



Before



Case Study-Manifold block

Industrie: Aerospace

Doelstelling: Het elimineren van bramen die ontstaan tijdens kruisgatboren op een CNC-machine, waardoor handmatig ontbramen overbodig wordt.

Toepassingsdetails:

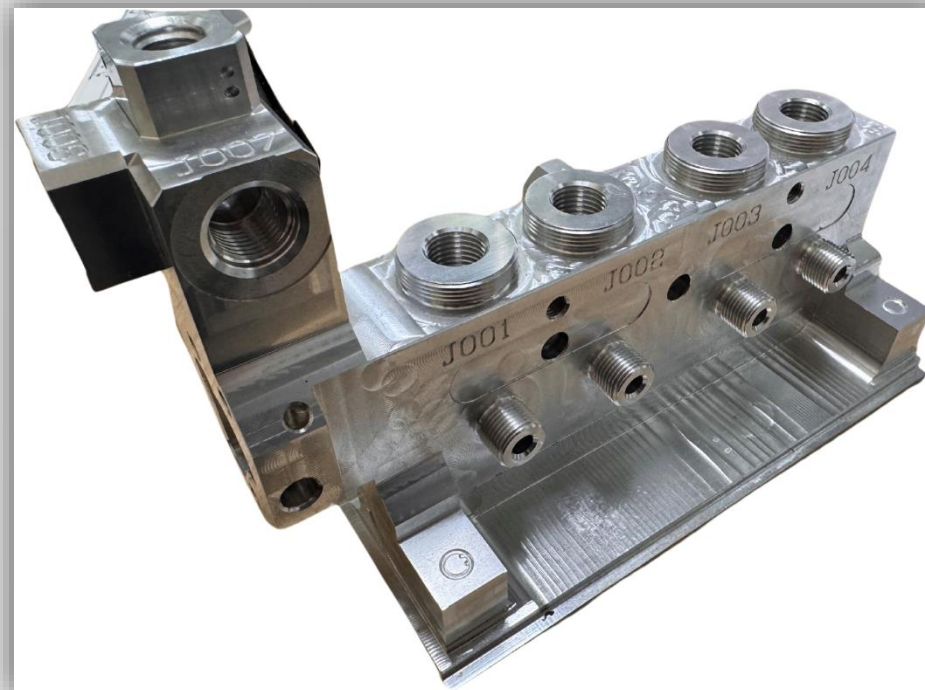
- Part: Manifold block
- Material: AISI 7075, Wr N. 3.4365.
- Pilot Holes: Ø19.1mm/ 0.752"
- Pilot Holes Length: 140mm / 5.512"
- Production Volume: NA

Tool:

- UF1715; UF-FB-R-D015-L50 / Ø15mm (0.590") Surface-brush, Grit#1200 Red
- Special tool-holder, ontworpen en gemaakt door de eindgebruiker zelf. Zie afbeelding.

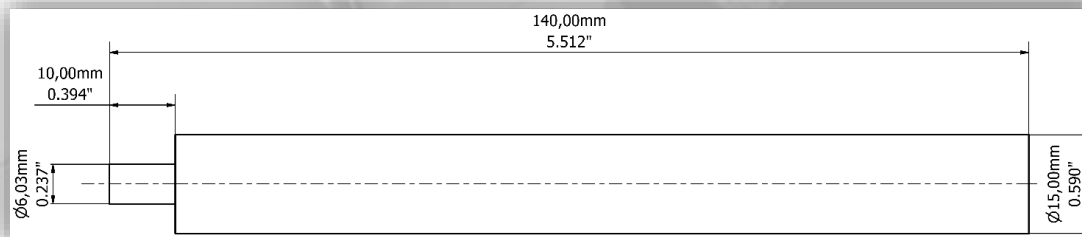
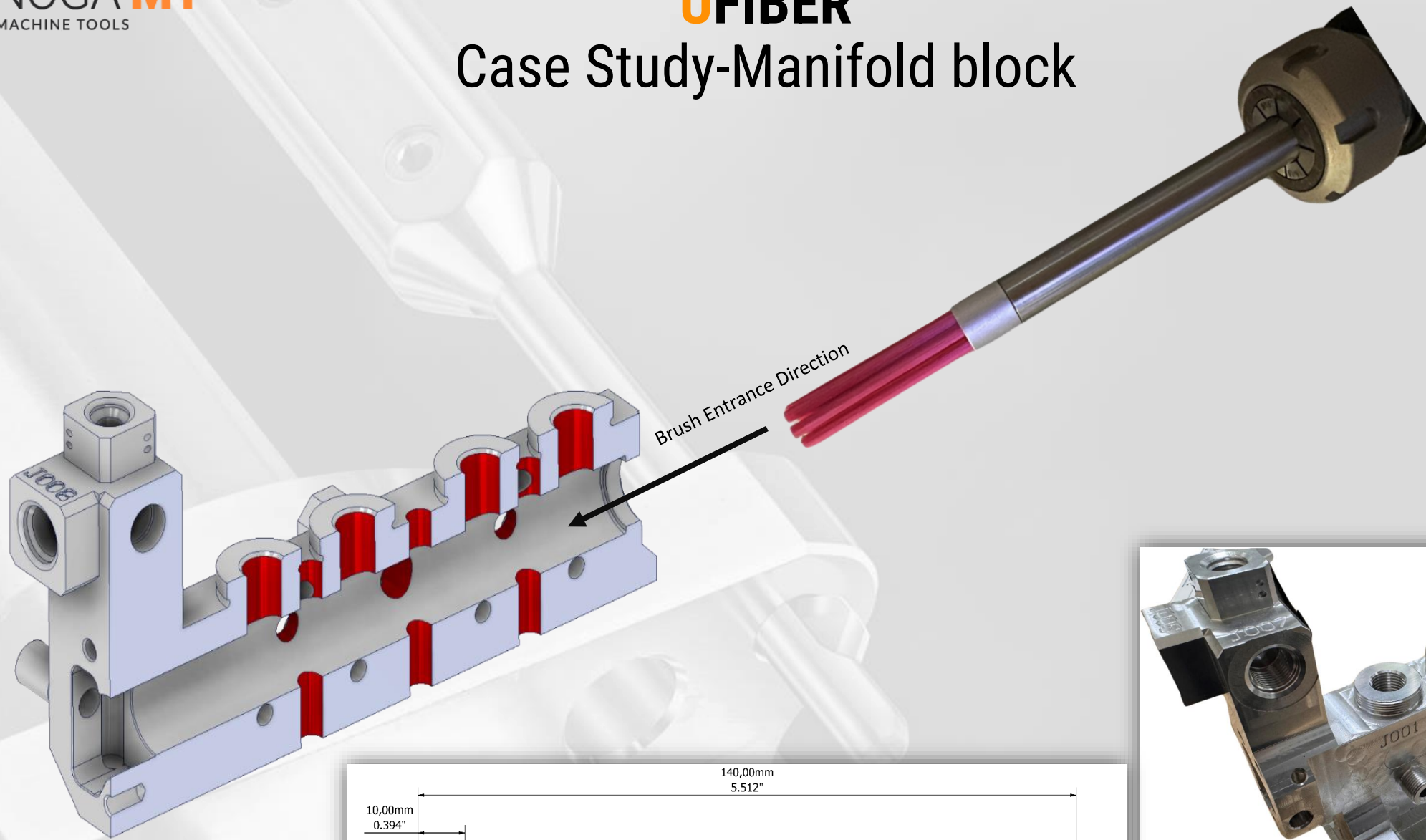
Machine parameters:

Ød		S	F		Coolant
Pilot-Hole		Spindle Speed	Table Feed		
mm	Inch	RPM	mm/min	inch/min.	
19.1	0.752	7000	500	20	External Emulsion



UFIBER

Case Study-Manifold block



UFIBER

Case Study-Manifold block

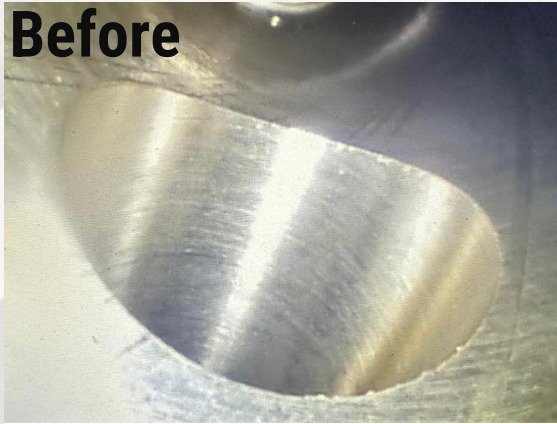
Before



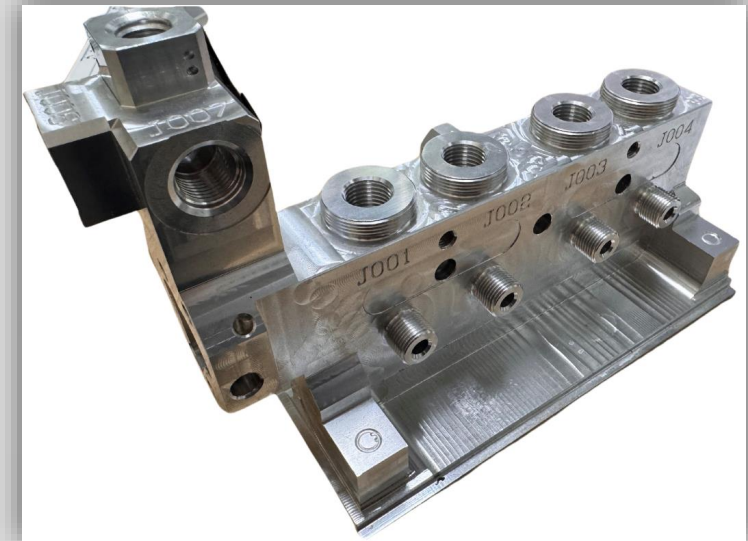
After



Before



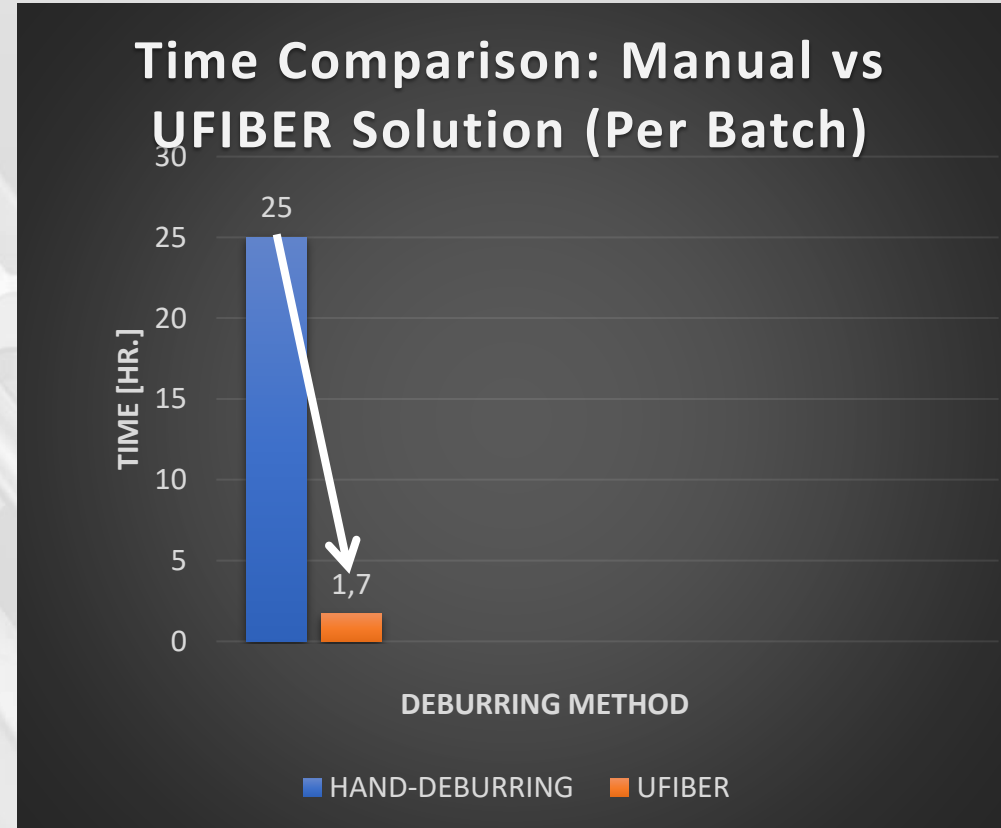
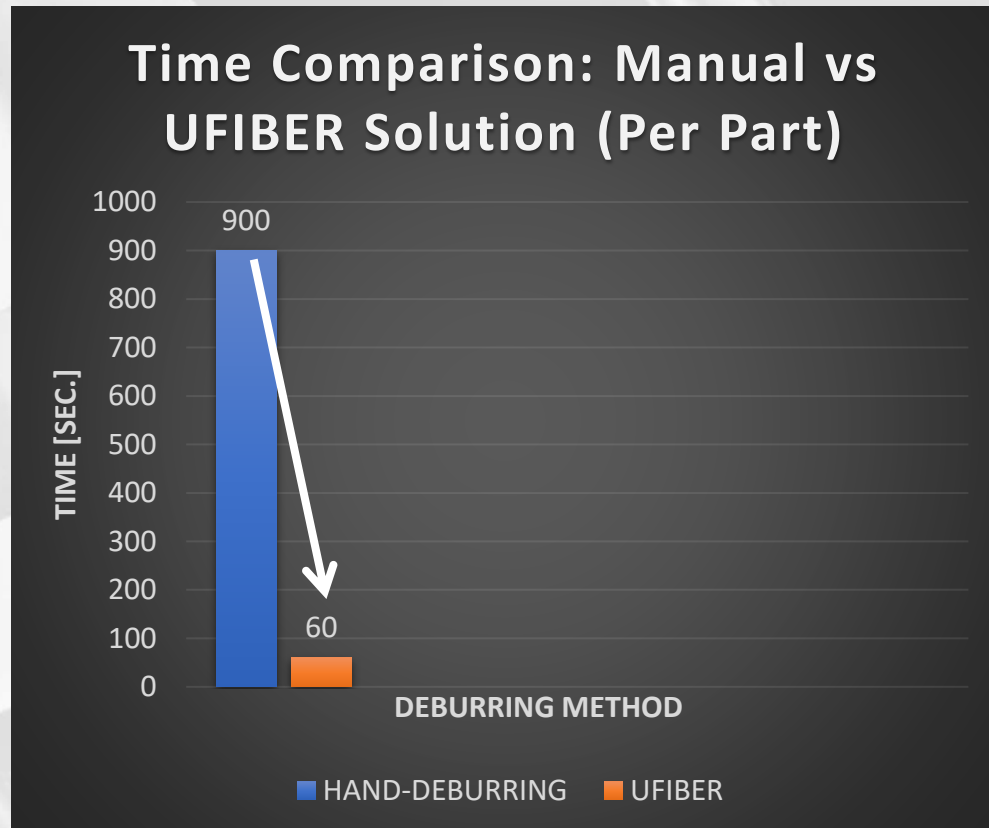
After



Case Study-Manifold block

Voor implementatie van de UFIBER-oplossing verwijderde de klant bramen handmatig, wat ongeveer 15 minuten (900 seconden) per onderdeel of 25 uur per batch kostte.

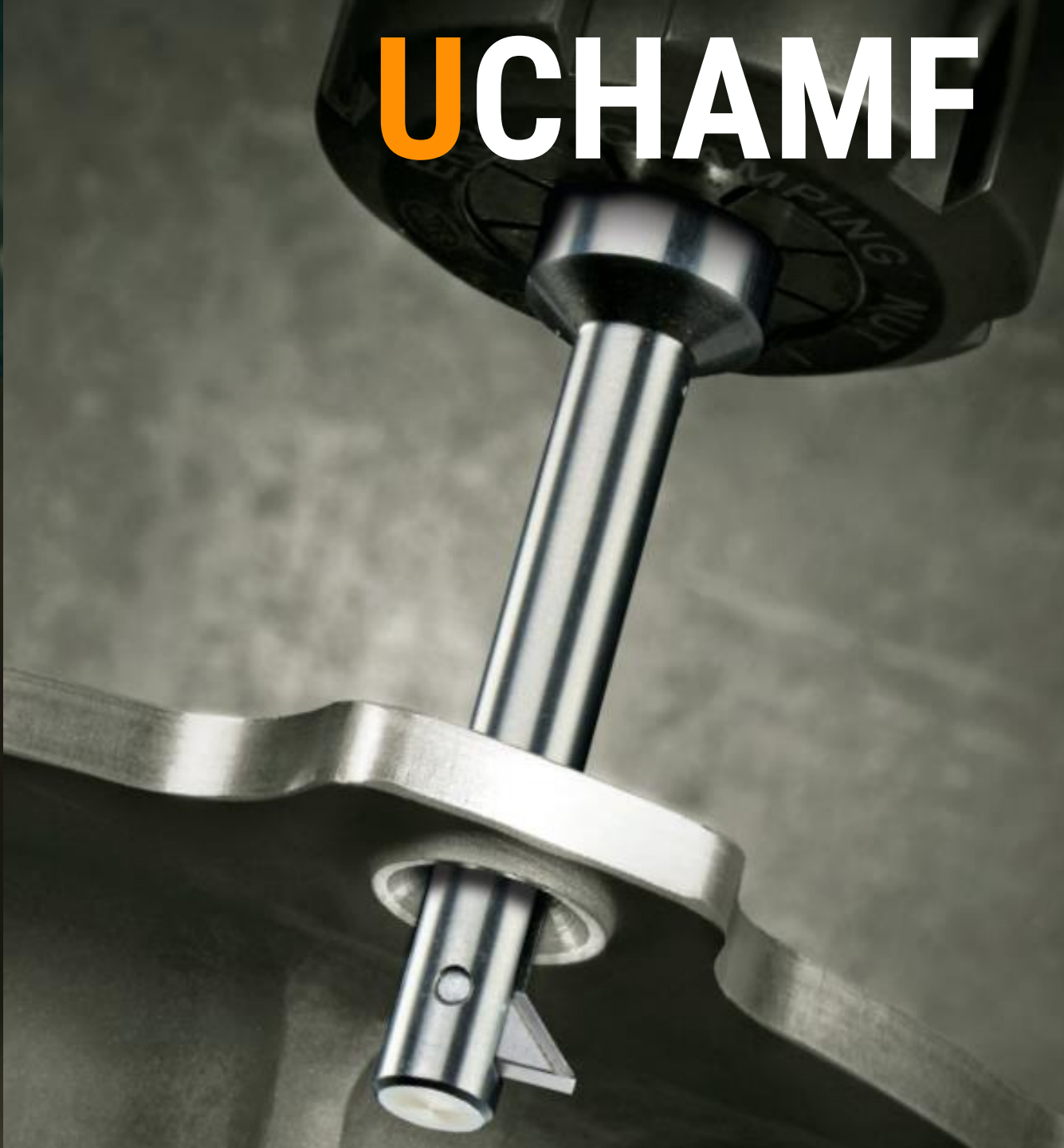
Met de UFIBER-oplossing werd de procestijd teruggebracht tot slechts 60 seconden per onderdeel of 1,7 uur per batch – een **tijdsbesparing van 93,33%** of een **15-voudige efficiëntieverbetering**.



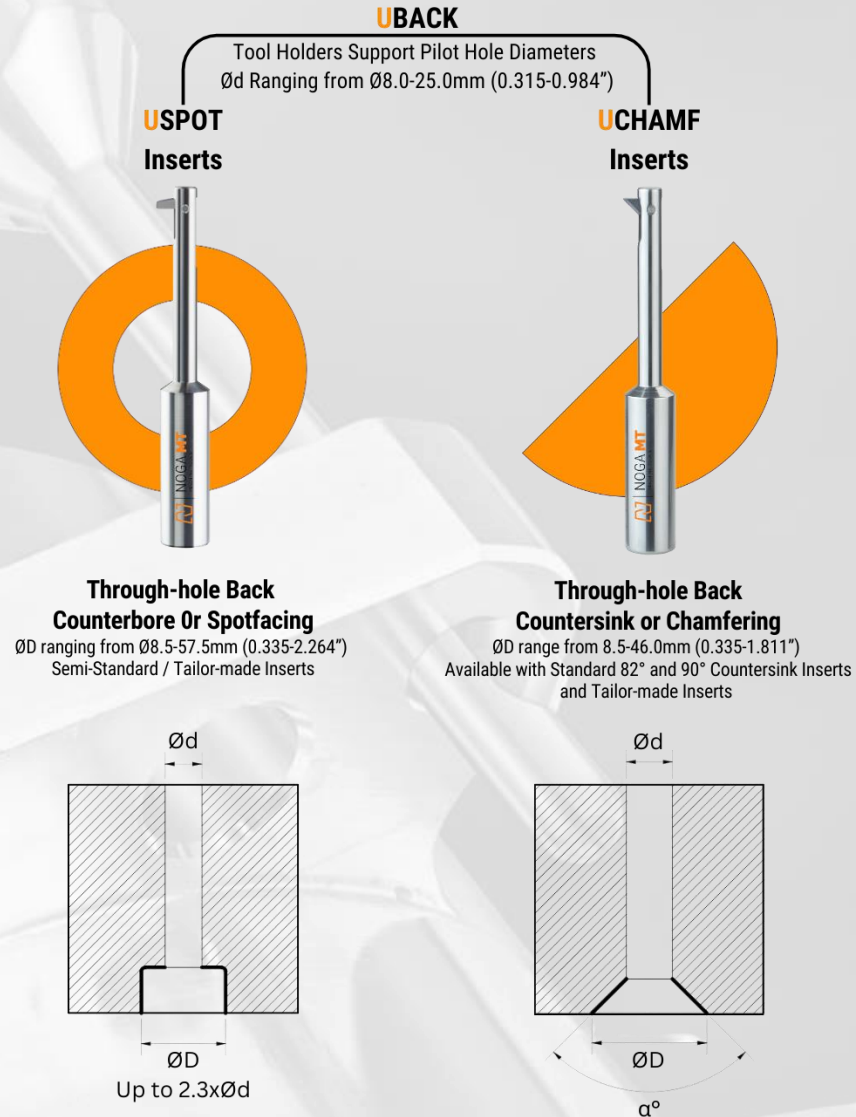
USPOT



UCHAMF



ONE PASS SOLUTION FOR BACK SPOTFACING, COUNTERBORING OR BACK CHAMFERING (COUNTERSUNK)



UCHAMF and USPOT

ONE PASS SOLUTION FOR BACK SPOTFACING OR BACK CHAMFERING (COUNTERSUNK)

Voordelen:

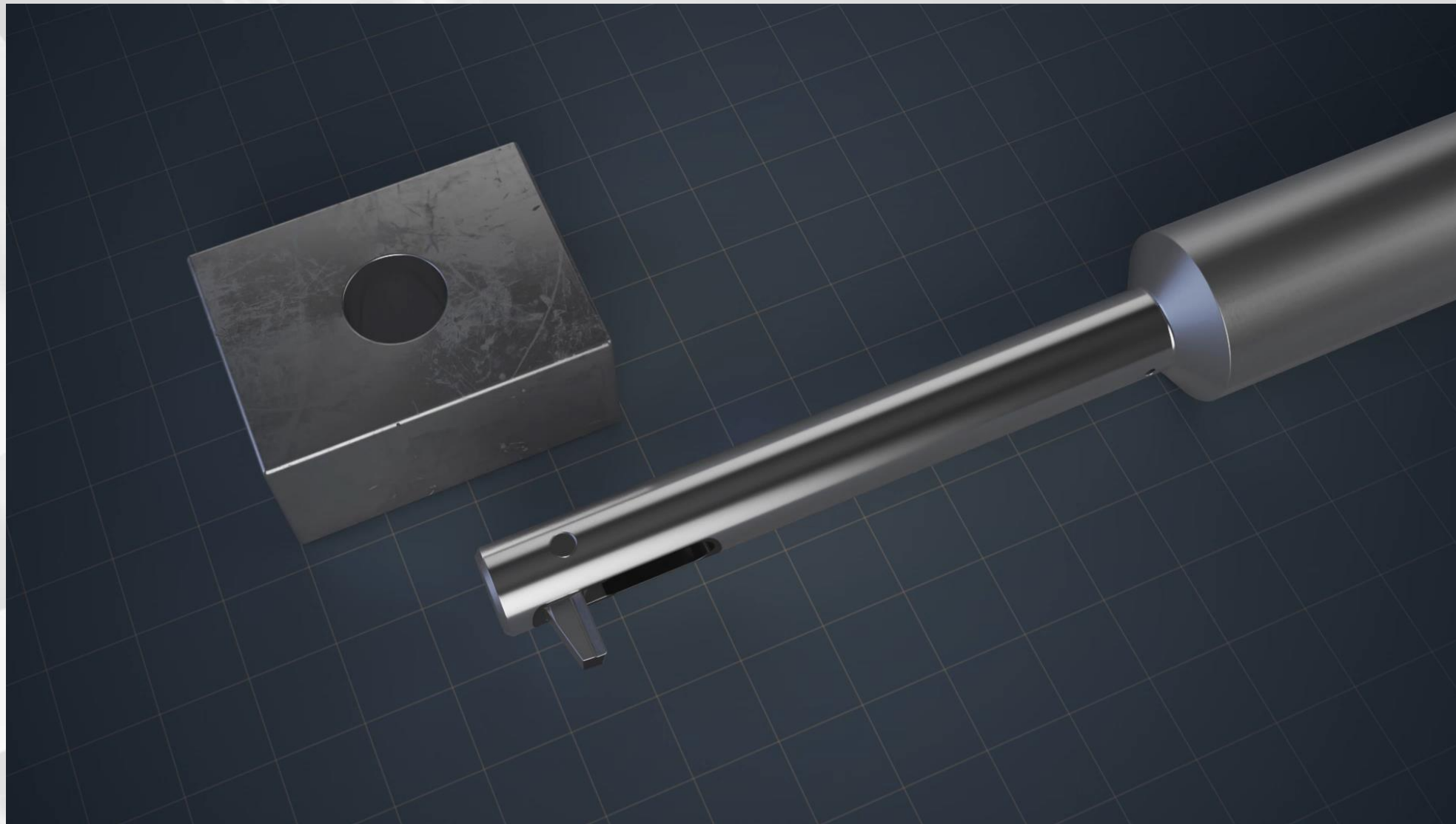
- ✓ **Efficiënte Éénstapsbewerking:** Voor afschuinen en verzinken van doorlopende gaten in één doorgang, zonder het werkstuk te draaien.
- ✓ **Oplossingen op maat:** UX-gereedschapshouders ondersteunen configuraties op maat met USPOT- en UCHAMF-inserts, met opties voor coatings, spaanbrekers, hoekstralen en meer.
- ✓ **Innovatieve hydraulische bediening:** UX-gereedschapshouders zorgen voor precieze en consistente werking en vereenvoudigen de vervanging van inserts.
- ✓ **Uitstekend spaandbeheer:** Voorkom onderbrekingen dankzij optimale spaanafvoer voor een soepele en efficiënte bewerking.
- ✓ **Kostenefficiënt voor elk volume:** Van kleinschalige projecten tot grootschalige productie, dit systeem biedt uitzonderlijke waarde.
- ✓ **Ontworpen voor automatisering:** Naadloze integratie in geautomatiseerde productiesystemen voor maximale efficiëntie.
- ✓ **Koelmiddelgestuurd mechanisme:** Werkt soepel met interne koeling, lucht of emulsie (minimaal 6 bar / 90 PSI), voor consistente resultaten.
- ✓ **Veelzijdige toepassingen:** UX-gereedschapshouders zijn compatibel met een breed scala aan USPOT- en UCHAMF-inserts en geschikt voor uiteenlopende bewerkingstaken.
- ✓ **Breed scala aan maten:** UX-gereedschapshouders zijn verkrijgbaar in diameters van Ø8 mm tot Ø25 mm met diverse afschuiningshoeken en verzinkdiameters.





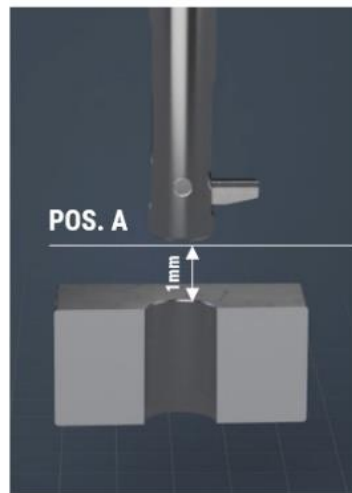
NOGA **MT**
MACHINE TOOLS

USPOT UCHAMF MACHINING OPERATION

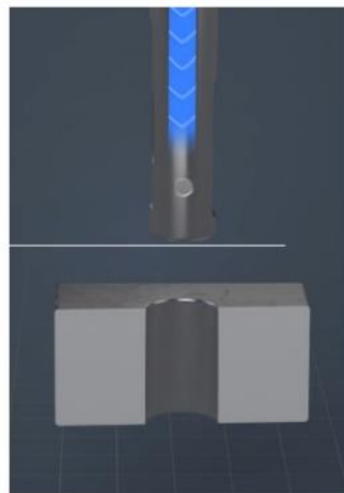


USPOT UCHAMF MACHINING OPERATION

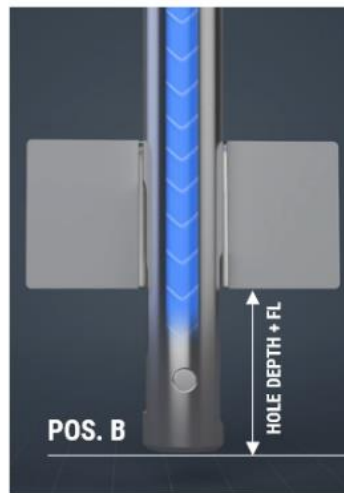
Step 1



Step 2



Step 3



Step 4



Step 5



Step 6



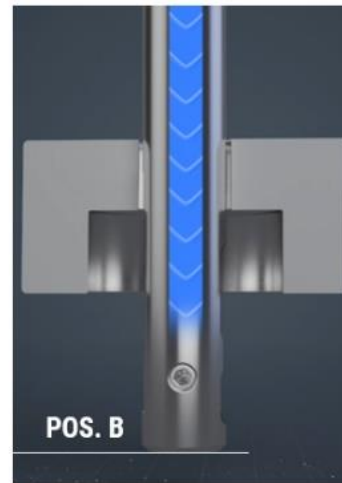
Step 7



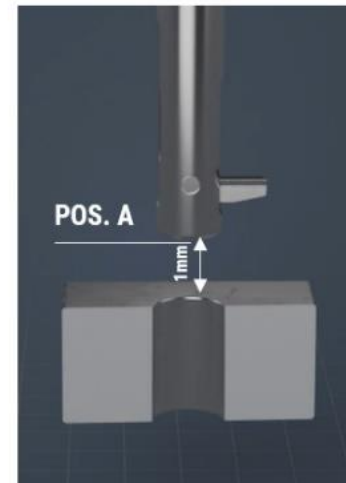
Step 8



Step 9

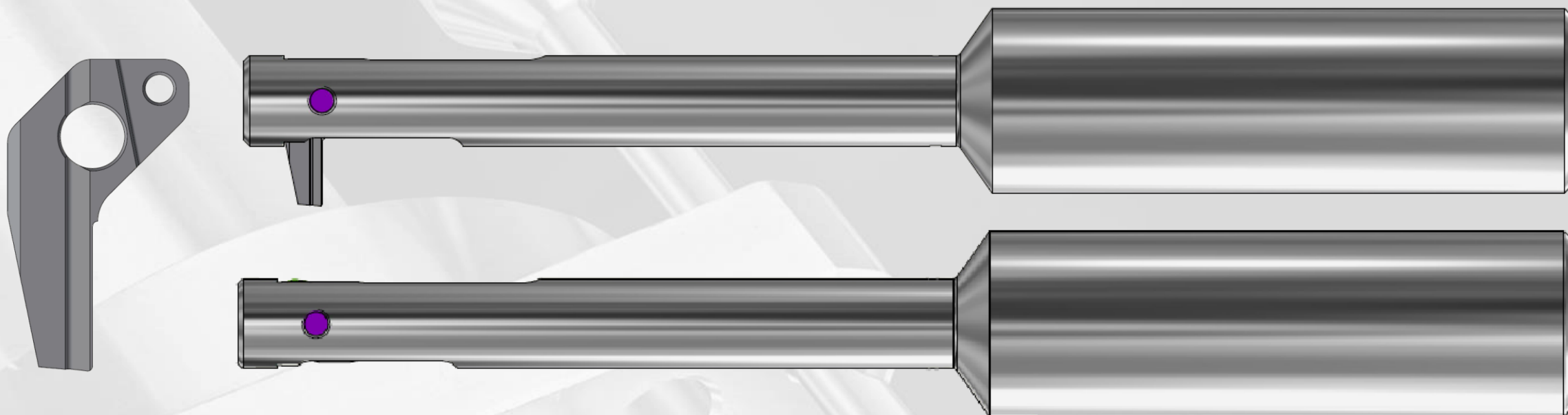


Step 10

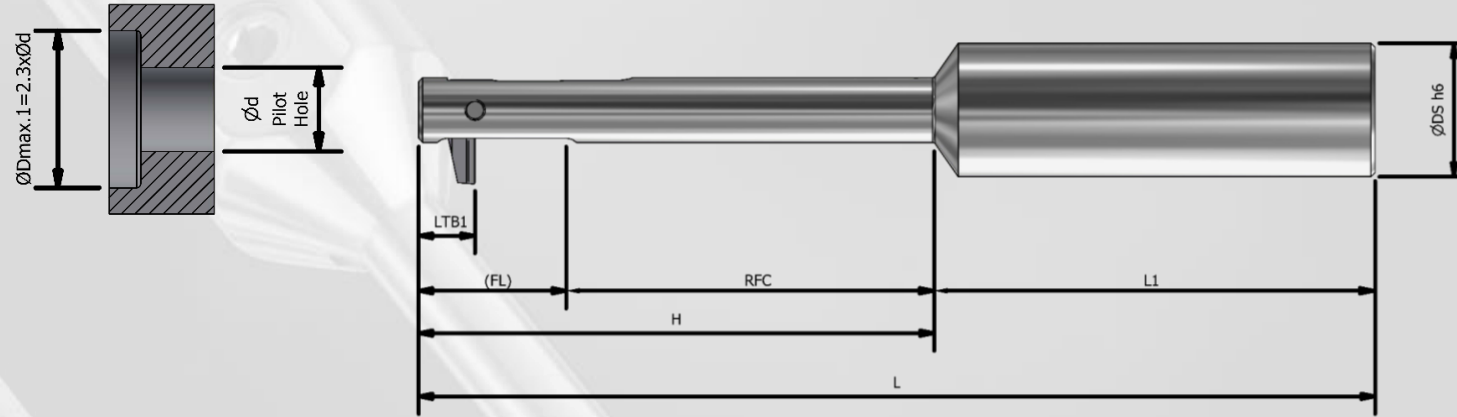


USPOT

ONE PASS SOLUTION FOR BACK SPOTFACING OR COUNTERBORE

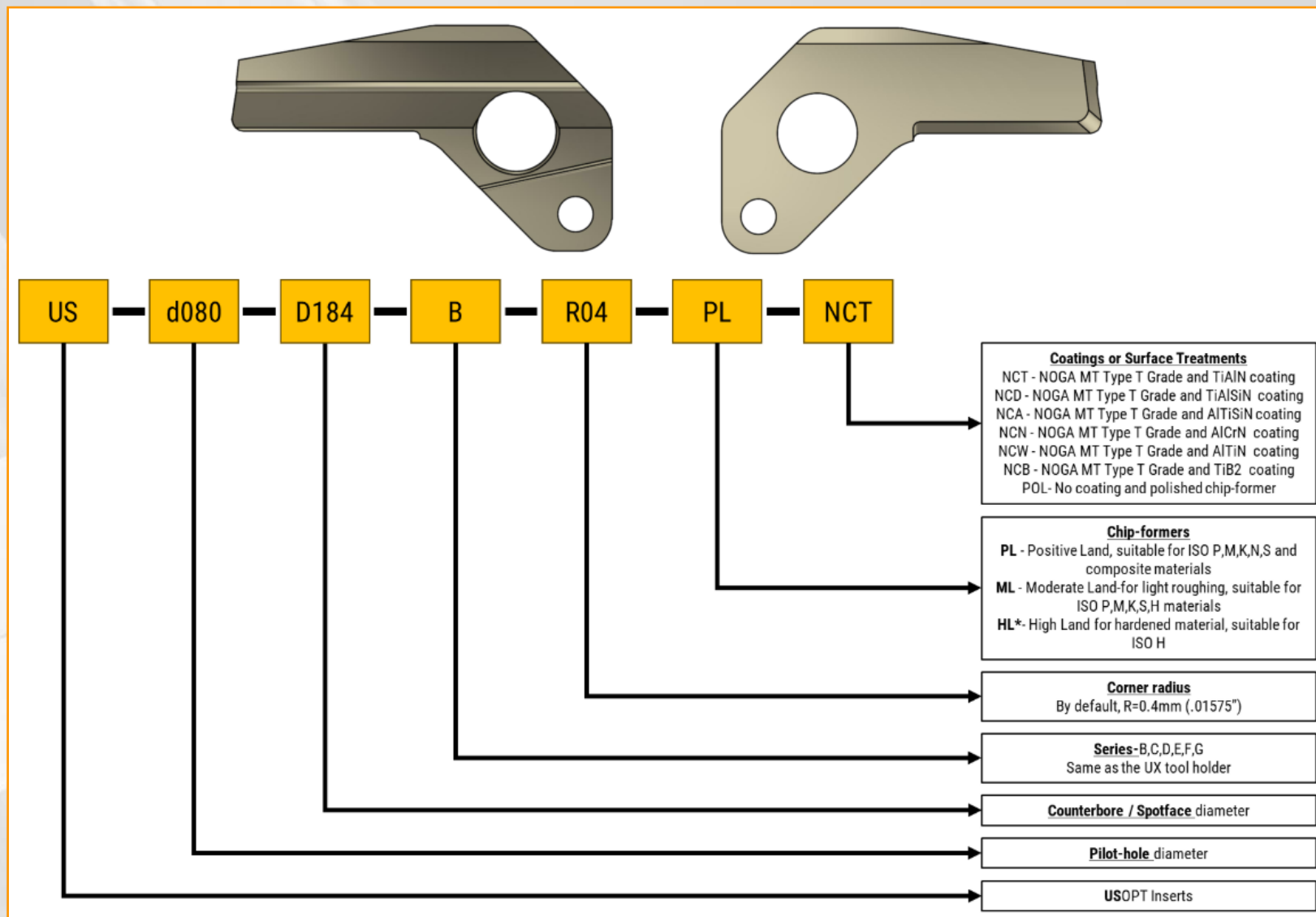


UBACK Standard Tool-Holders with USPOT Inserts (mm)



Ødmin. Pilot Hole	Tool- Holder SKU	Tool-Holder Description	ØDS h6	FL	RFC	H	L	L1	LTB1 ⁽¹⁾ USPOT	ØDmax ⁽²⁾	Insert Clamping Screw M*P*L (mm)	Series ⁽³⁾
8	UX2080	UX-d080-B-C16-H62-L115	16	17	43	62	115	53	6.8	18.5	UX0005/ M2.5x0.35x7B	B
9	UX2090	UX-d090-B-C16-H62-L115	16	17.8	43	62	115	53	6.8	21		B
10	UX2100	UX-d100-B-C16-H62-L115	16	18.8	43	62	115	53	6.8	23		B
11	UX3110	UX-d110-C-C16-H80-L133	16	27	52	80	133	53	11.4	26	UX0006/ M3x0.35x10C	C
12	UX3120	UX-d120-C-C16-H80-L133	16	27.3	52	80	133	53	11.4	28		C
13	UX3130	UX-d130-C-C16-H80-L133	16	28	52	80	133	53	11.4	30		C
14	UX4140	UX-d140-D-C20-H105-L158	20	32.5	72.5	105	158	53	13.5	32.5	UX0007/ M3x0.35x13D	D
15	UX4150	UX-d150-D-C20-H105-L158	20	32.5	72.5	105	158	53	13.5	34.5		D
16	UX4160	UX-d160-D-C20-H105-L158	20	32.5	72.5	105	158	53	13.5	37		D
17	UX5170	UX-d170-E-C20-H115-L170	20	38.5	76.5	115	170	55	16	39.5	UX0008/ M3x0.35x16E	E
18	UX5180	UX-d180-E-C20-H115-L170	20	38.5	76.5	115	170	55	16	41.5		E
19	UX5190	UX-d190-E-C20-H115-L170	20	38.5	76.5	115	170	55	16	44		E
20	UX6200	UX-d200-F-C25-H120-L175	25	43.5	76.5	120	175	55	17.8	46	UX0009/ M4x0.5x19F	F
21	UX6210	UX-d210-F-C25-H120-L175	25	43.5	76.5	120	175	55	17.8	48.5		F
22	UX6220	UX-d220-F-C25-H120-L175	25	43.5	76.5	120	175	55	17.8	50.5		F
23	UX7230	UX-d230-G-C25-H120-L175	25	48	72	120	175	55	20	53	UX0010/ M4x0.5x21G	G
24	UX7240	UX-d240-G-C25-H120-L175	25	48	72	120	175	55	20	55.5		G
25	UX7250	UX-d250-G-C25-H120-L175	25	48	72	120	175	55	20	57.5		G

USPOT INSERT CODING AND ORDERING

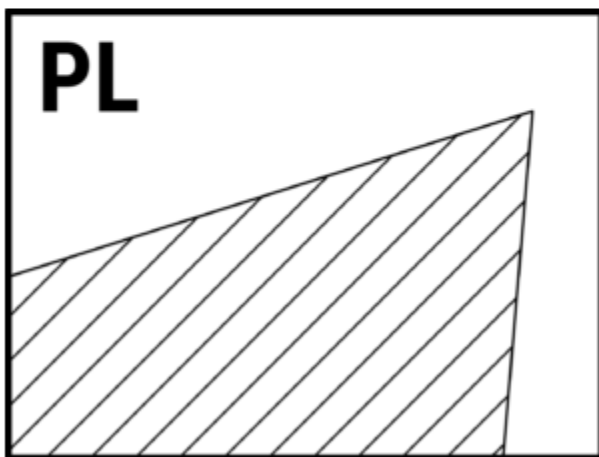


UBACK Chip-formers

PL

Positive cutting land

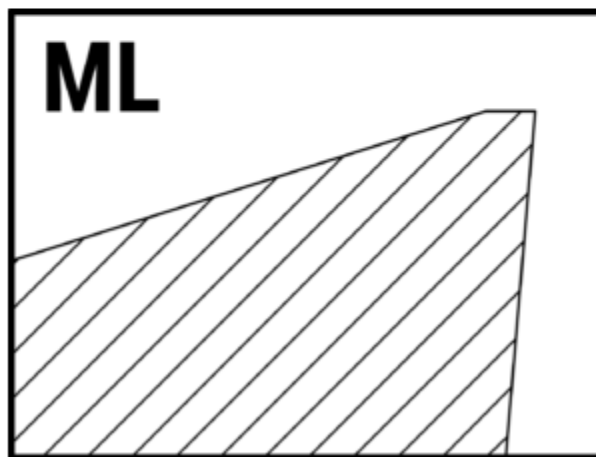
Suitable for all around purpose
and ISO P,M,K,N,S
as well as composite materials



ML

Moderate cutting land

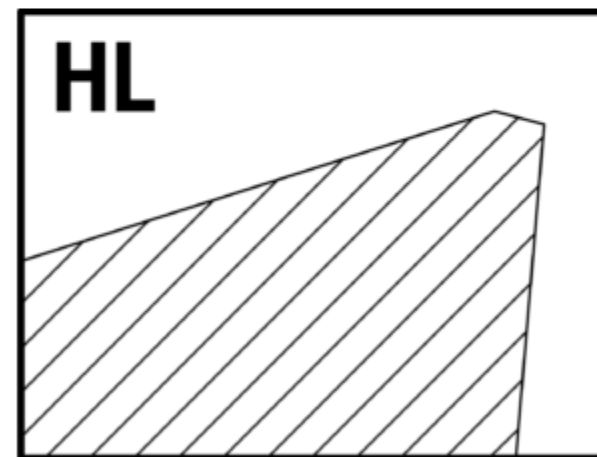
Suitable for and ISO P,M,K,S,H
Materials



HL

Negative cutting land

Suitable for and ISO P,M,K,S,H
Materials



Coatings or Surface Treatments

Coating	Key Features	Applications	Industries	Material Examples	ISO GROUP					
					P	M	K	N	S	H
TiAlN	Suitable for mid steels, cast iron, stainless steel, titanium alloys, Inconel, tool steel, and hardened steels. Offers excellent thermal stability, oxidation resistance, and wear resistance.	Ideal for high-speed cutting and general-purpose machining. Performs well in both wet and dry conditions.	Aerospace, Automotive, General Engineering	AISI 304, 42CrMo4, GG (Grey Cast Iron), Ti6Al4V	✓	✓	✓	X	✓	✓
TiAlSiN	Provides exceptional hardness and oxidation resistance, withstanding temperatures above 1,200°C. Suitable for high-strength steels, superalloys, hardened steels (over 45 Rc), and titanium alloys.	Best for high-performance machining in demanding environments. Excels in dry machining at high speeds.	Aerospace, Automotive, Die and Mold	Inconel 718, AISI 4140, Ti6Al4V	✓	✓	X	X	✓	X
AlTiSiN	Offers high hardness, thermal stability, and resistance to wear and oxidation. Suitable for stainless steel, hardened cast, superalloys, and steels over 45 Rc.	Designed for high-speed machining in extreme conditions. Performs exceptionally in dry machining.	Aerospace, Automotive, Precision Engineering	AISI 316, AISI H13, Hastelloy	X	✓	X	X	✓	✓
AlCrN	Provides excellent oxidation resistance (up to 1,100°C), toughness, and abrasion resistance. Suitable for carbon steels, cast iron, stainless steel, and aluminum.	Suitable for general machining in wet and dry environments. Excels in abrasive and high-wear applications.	Automotive, Aerospace, Die and Mold	AISI 304, AISI 1045, GG, AL6061	✓	✓	✓	✓	X	X
AlTiN	High hardness, wear resistance, and thermal stability up to 1,100°C. Designed for mid steels, cast iron, high-speed steels, tool steel, and hardened materials.	Ideal for heavy-duty machining and high-speed cutting. Performs well in dry and abrasive conditions.	Aerospace, Automotive, Heavy Engineering	AISI 4340, M2 HSS, GG (Grey Cast Iron)	✓	✓	✓	X	X	X
TiB2	Known for exceptional chemical stability, low friction, and high thermal conductivity. Best for machining non-ferrous materials such as aluminium, copper, brass, and magnesium alloys. Reduces friction and Built-Up Edge. (BUE)	Optimized for high-speed machining of non-ferrous metals. Prevents material adhesion and improves efficiency.	Aerospace, Automotive, Electronics	AL7075, 6061-T6, Copper, Magnesium Alloys (AZ31)	X	X	X	✓	✓	X
Polishing	Provides a smooth, refined surface finish by removing micro-defects, scratches, or burrs. Enhances aesthetics and surface quality. Reduces friction and BUE.	Suitable for machining aluminium with high speeds and high MRR (Metal Removal Rates)	Aerospace, Automotive	AL7075, 6061-T6, Copper, Magnesium Alloys (AZ31)	X	X	X	✓	X	X



UBACK Snijgegevens

ISO	MATERIAL		CONDITION	As is AISI/SAE/ASTM	DIN W.-Nr.	ISO	Vc cutting speed ⁽¹⁾ m/min. sfm	Series B fz ⁽¹⁾ cutting speed mm/t. lpt	Series C fz ⁽¹⁾ cutting speed mm/t. lpt	Series D fz ⁽¹⁾ cutting speed mm/t. lpt	Series E fz ⁽¹⁾ cutting speed mm/t. lpt	Series F fz ⁽¹⁾ cutting speed mm/t. lpt	Series G fz ⁽¹⁾ cutting speed mm/t. lpt	RECOMMENDED CHIP-FORMER	COOLANT							
P	Non-Alloy Steel and Cast Steel Free Cutting Steel	<0.25%C	Annealed	1020	1.0044	P	60 - 120 / 200 - 390	0.03 / 0.0012"	0.04 / 0.0016"	0.05 / 0.0020"	0.07 / 0.0028"	0.08 / 0.0031"	0.09 / 0.0035"		AIR / WET							
		≥0.25%C	Annealed	1035	1.0501																	
		<0.55%C	Quenched and tempered	1045	1.1201																	
		≥0.25%C	Annealed	1055	1.0535																	
			Quenched and tempered	1060	1.1221																	
	Low Alloy and Cast Steel (less than 5% of Alloying Elements)	Quenched and Tempered	Annealed	G92600	1.5028		50 - 120 / 165 - 390	0.03 / 0.0012"	0.04 / 0.0016"	0.05 / 0.0020"	0.07 / 0.0028"	0.08 / 0.0031"	0.09 / 0.0035"									
			4130	1.7218																		
			4142	1.2332	50 - 100 / 165 - 330		0.03 / 0.0012"	0.04 / 0.0016"	0.05 / 0.0020"	0.07 / 0.0028"	0.08 / 0.0031"	0.09 / 0.0035"										
	High-Alloy Steel, Cast Steel and Tool Steel	Annealed	H13	1.2344	40 - 90 / 150 - 295		0.02 / 0.0008"	0.03 / 0.0012"	0.04 / 0.0016"	0.05 / 0.0020"	0.06 / 0.0024"	0.08 / 0.0031"										
		Quenched and Tempered	M33	1.3249																		
Stainless Steel, Cast Steel	Ferritic / Martensitic	420	1.4021	40 - 90 / 150 - 295	0.02 / 0.0008"	0.03 / 0.0012"	0.04 / 0.0016"	0.05 / 0.0020"	0.06 / 0.0024"	0.08 / 0.0031"												
	Martensitic																					
M	Stainless Steel, Cast Steel	Austenitic, Duplex	304L	1.4306	M	50 - 100 / 165 - 330	0.03 / 0.0012"	0.04 / 0.0016"	0.05 / 0.0020"	0.07 / 0.0028"	0.08 / 0.0031"	0.09 / 0.0035"		WET								
K	Cast Iron (GG)	Ferritic / Pearlitic	Class 25	0.6015	K	60 - 120 / 200 - 395	0.03 / 0.0012"	0.04 / 0.0016"	0.05 / 0.0020"	0.07 / 0.0028"	0.08 / 0.0031"	0.09 / 0.0035"		AIR / WET								
	Pearlitic / Martensitic	Grade H20	36037																			
	Nodular Cast Iron (GGG)	Ferritic	60-40-18	0.7043		50 - 100 / 165 - 330	0.02 / 0.0008"	0.03 / 0.0012"	0.04 / 0.0016"	0.05 / 0.0020"	0.06 / 0.0024"	0.08 / 0.0031"										
		Pearlitic	F33500	0.705																		
	Malleable Cast Iron	Ferritic	A47	0.8135																		
N	Aluminum - Wrought Alloys	Not Hardenable	5005	3.3315	N	100 - 160 / 330 - 525	0.05 / 0.0020"	0.06 / 0.0024"	0.08 / 0.0031"	0.10 / 0.0039"	0.12 / 0.0047"	0.14 / 0.0055"		WET								
		Hardenable	7075	3.4365																		
	Aluminum - Cast Alloys	<12%Si	Not Hardenable	518		3.3292							90 - 130 / 295 - 425		0.05 / 0.0020"	0.06 / 0.0024"	0.08 / 0.0031"	0.10 / 0.0039"	0.12 / 0.0047"	0.14 / 0.0055"		
		>12%Si	Hardenable	515		3.3241																
	Copper Alloys	>12%Si	High Temperature	390		180 - 305 / 600 - 1000							0.05 / 0.0020"		0.06 / 0.0024"	0.08 / 0.0031"	0.10 / 0.0039"	0.12 / 0.0047"	0.14 / 0.0055"			
		≥ 1% Pb	Free Cutting	C36000																	2.0375	
		Brass	C22000	2.023																		
	Non Metallic	Electrolytic Copper	C63000	2.0966		180 - 305 / 600 - 1000							0.05 / 0.0020"		0.06 / 0.0024"	0.08 / 0.0031"	0.10 / 0.0039"	0.12 / 0.0047"	0.14 / 0.0055"			
		Duroplastics, Fiber Plastics	Bakelite																			
		Hard Rubber	Ebonite																			
S	High Temperature Alloys	Fe based	Annealed	330	1.4864	S	40 - 80 / 130 - 260	0.02 / 0.0008"	0.03 / 0.0012"	0.04 / 0.0016"	0.05 / 0.0020"	0.06 / 0.0024"	0.08 / 0.0031"		WET							
			Hardened	S590	1.4977																	
		Ni or Co based	Annealed	Inconel 825	2.4858		25 - 40 / 80 - 130									0.02 / 0.0008"	0.03 / 0.0012"	0.04 / 0.0016"	0.05 / 0.0020"	0.06 / 0.0024"	0.08 / 0.0031"	
			Hardened	Inconel 718	2.4668																	
			Cast	Nimocast K24	2.4674		30 - 60 / 100 - 180									0.02 / 0.0008"	0.03 / 0.0012"	0.04 / 0.0016"	0.05 / 0.0020"	0.06 / 0.0024"	0.08 / 0.0031"	
			Pure	Titanium G.1	3.7024																	
	Titanium Alloys	Alpha+Beta Alloys, Hardened	Titanium G.5	3.7165	30 - 60 / 100 - 180		0.02 / 0.0008"	0.03 / 0.0012"	0.04 / 0.0016"	0.05 / 0.0020"	0.06 / 0.0024"	0.08 / 0.0031"										
H	Hardened steel	Hardened	HARDOX 500		H	30 - 50 / 100 - 165	0.02 / 0.0008"	0.02 / 0.0008"	0.03 / 0.0012"	0.04 / 0.0016"	0.05 / 0.0020"	0.06 / 0.0024"		AIR								
		Hardened	HARDOX EXTREME			30 - 40 / 100 - 130																
	Chilled Cast Iron	Cast	A532 IIIA 25% Cr	0.965		45 - 50 / 145 - 165	0.02 / 0.0008"	0.02 / 0.0008"	0.03 / 0.0012"	0.04 / 0.0016"	0.05 / 0.0020"	0.06 / 0.0024"										
	Cast Iron	Hardened	A532 IID 20% CrMo	0.9645		30 - 50 / 100 - 165	0.02 / 0.0008"	0.02 / 0.0008"	0.03 / 0.0012"	0.04 / 0.0016"	0.05 / 0.0020"	0.06 / 0.0024"										

USPOT

INSERT CODING AND ORDERING FOR SEMI-STANDARD

USPOT – Bestellen van speciale inserts:

Hier is een voorbeeld van de codering van een speciale **USPOT**-insert voor de toepassing zoals rechts getoond:

1. $\varnothing d = 8.7\text{mm}$ (0.343")

2. $\varnothing D = 17.6\text{mm}$ (0.693")

3. $R = 0.2\text{mm}$ (0.032")

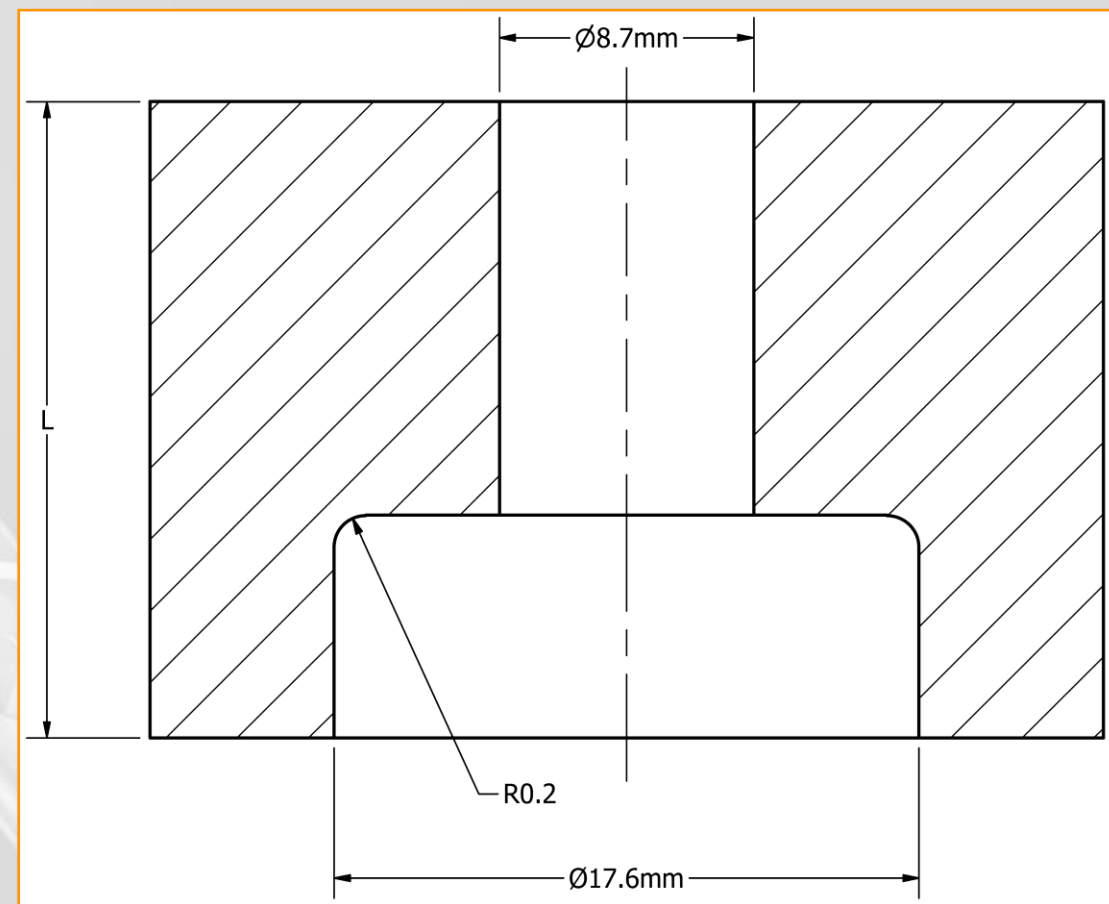
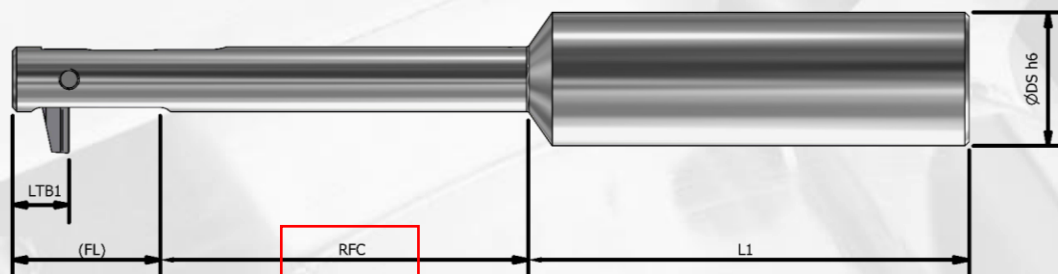
4. **Materiaal:** AISI 4340 / 34CrNiMo6 (1.6582) / SNCM439, tempered to 42 HRC

Aanbevolen gereedschapshouder: **UX2080 / UX-d080-B-C16-H62-L115**

Bijbehorende insert: **US-d087-D176-B-R02-ML-NCT**

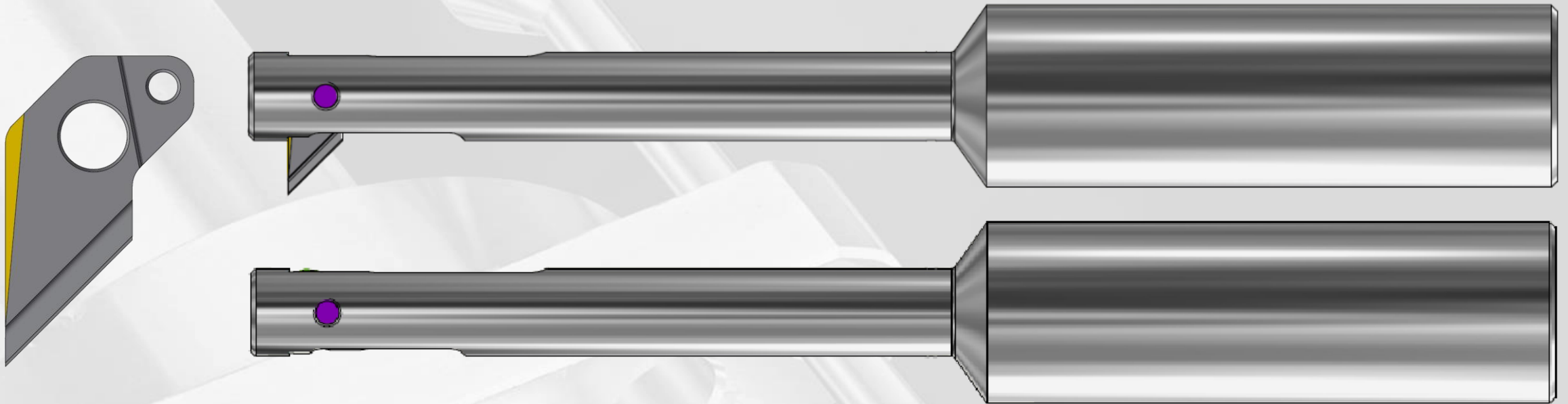
Belangrijke opmerking:

Zorg ervoor dat de lengte van het voorgeboorde gat (L) kleiner of gelijk is aan de RFC (Relief For Cutting), dus: $L \leq \text{RFC}$, zoals gespecificeerd in de tabel van de UBACK-gereedschapshouders hieronder.



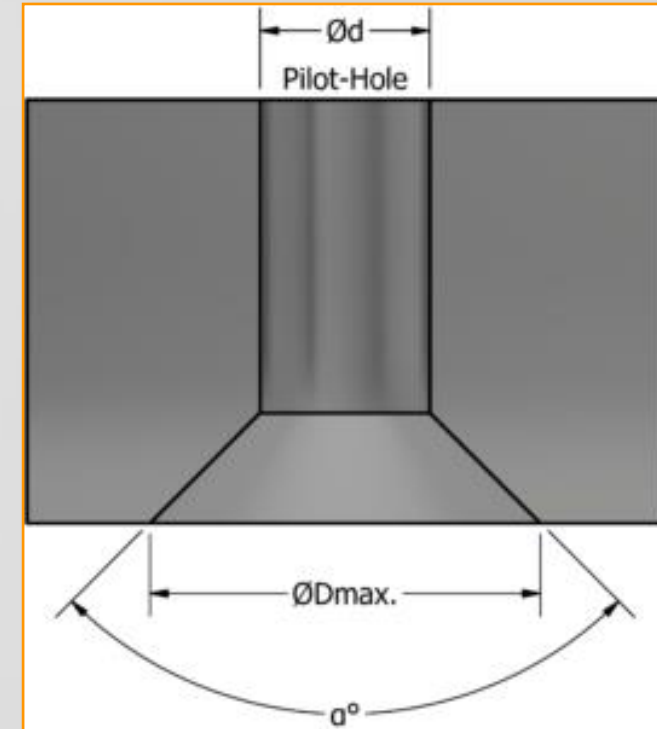
UCHAMF

ONE PASS SOLUTION FOR BACK CHAMFERING (COUNTERSUNK)

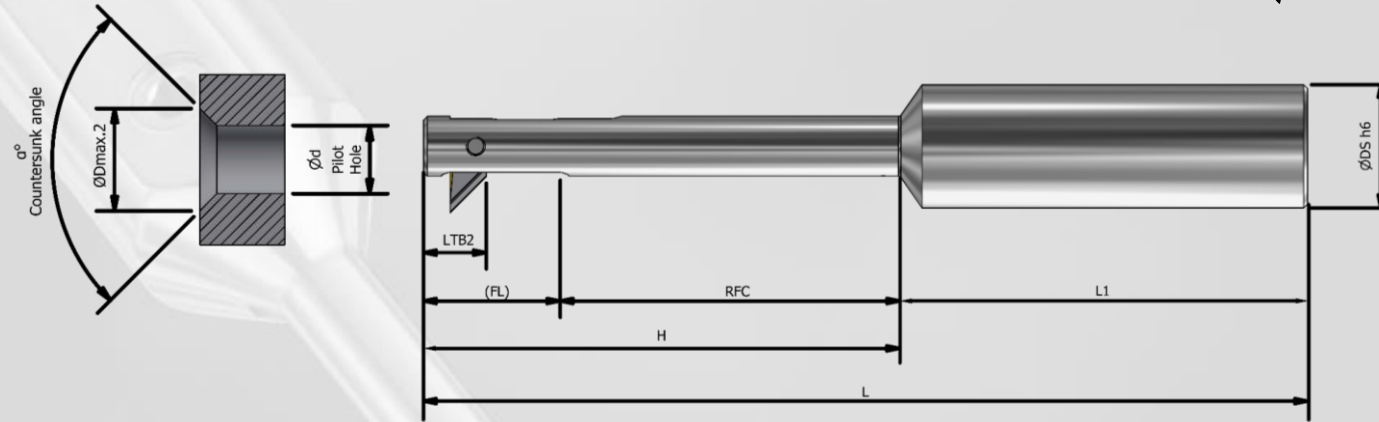


ONE PASS SOLUTION FOR BACK CHAMFERING (COUNTERSUNK)

Series	Ød Pilot-Hole Range mm /inch	ØD Countersink Range for 82° mm /inch	ØD Countersink Range for 90° mm /inch
B	8.0–10.0 /0.315–0.394"	8.5–20.0 /0.335–0.787"	8.5–19.0 /0.335–0.748"
C	11.0–13.0 /0.433–0.512"	11.5–28.0 /0.453–1.102"	11.5–26.0 /0.453–1.024"
D	14.0–16.0 /0.551–0.630"	14.5–34.0 /0.571–1.339"	14.5–31.0 /0.571–1.220"
E	17.0–19.0 /0.669–0.748"	17.5–40.0 /0.689–1.575"	17.5–37.0 /0.689–1.457"
F	20.0–22.0 /0.787–0.866"	20.5–43.0 /0.807–1.693"	20.5–40.0 /0.807–1.575"
G	23.0–25.0 /0.906–0.984"	23.5–46.0 /0.925–1.811"	23.5–43.0 /0.925–1.693"



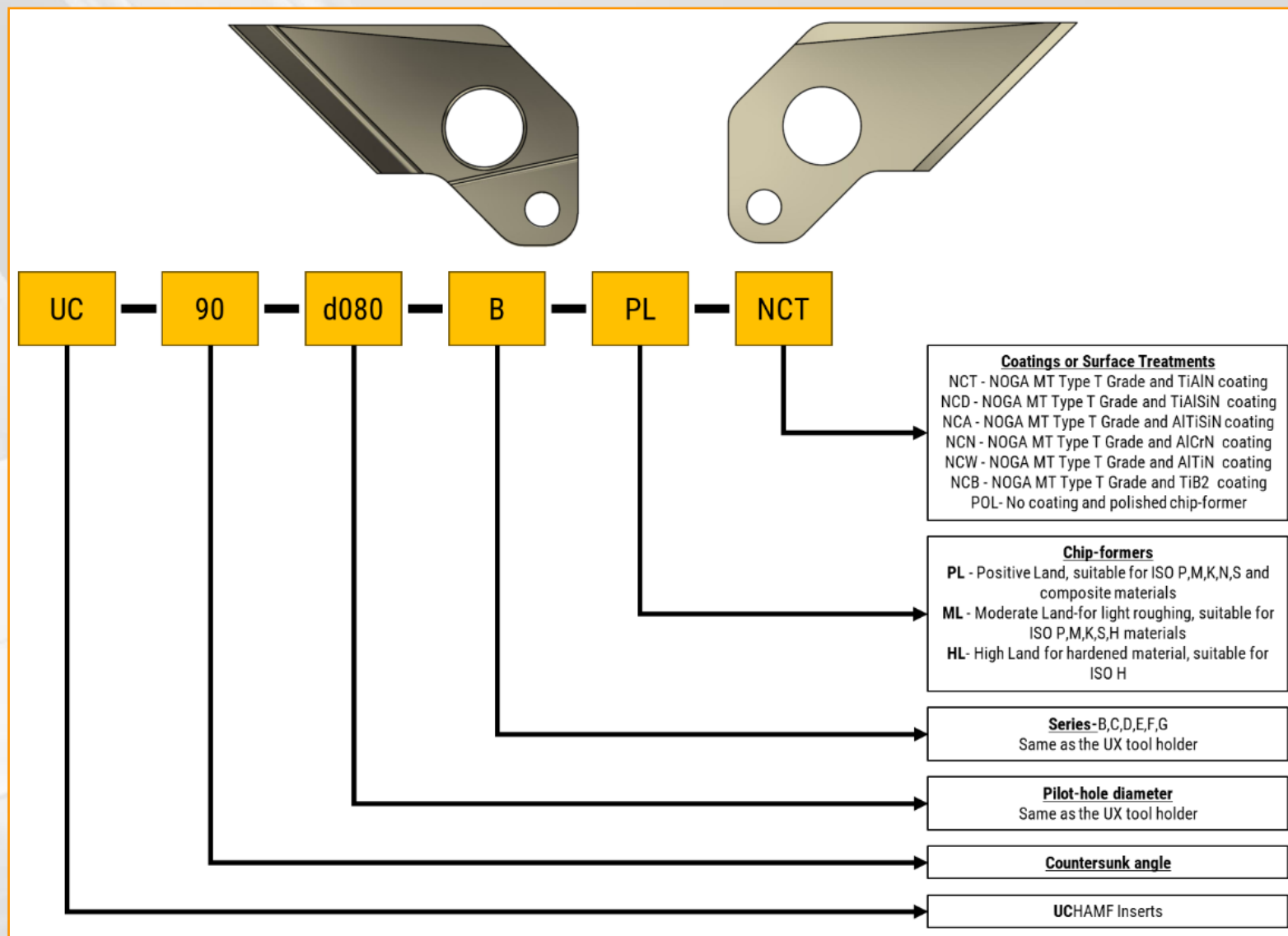
UBACK Standard Tool-Holders with UCHAMF Inserts (mm)



Ødmin. Pilot Hole	Tool- Holder SKU	Tool-Holder Description	ØDS h6	FL	RFC	H	L	L1	LTB2 ⁽¹⁾ UCHAMF	Insert Clamping Screw M*P*L (mm)	Series ⁽²⁾
8	UX2080	UX-d080-B-C16-H62-L115	16	17	43	62	115	53	8.25	UX0005/ M2.5x0.35x7B	B
9	UX2090	UX-d090-B-C16-H62-L115	16	17.8	43	62	115	53	8.25		B
10	UX2100	UX-d100-B-C16-H62-L115	16	18.8	43	62	115	53	8.25		B
11	UX3110	UX-d110-C-C16-H80-L133	16	27	52	80	133	53	13.6	UX0006/ M3x0.35x10C	C
12	UX3120	UX-d120-C-C16-H80-L133	16	27.3	52	80	133	53	13.6		C
13	UX3130	UX-d130-C-C16-H80-L133	16	28	52	80	133	53	13.6		C
14	UX4140	UX-d140-D-C20-H105-L158	20	32.5	72.5	105	158	53	15.3	UX0007/ M3x0.35x13D	D
15	UX4150	UX-d150-D-C20-H105-L158	20	32.5	72.5	105	158	53	15.3		D
16	UX4160	UX-d160-D-C20-H105-L158	20	32.5	72.5	105	158	53	15.3		D
17	UX5170	UX-d170-E-C20-H115-L170	20	38.5	76.5	115	170	55	18	UX0008/ M3x0.35x16E	E
18	UX5180	UX-d180-E-C20-H115-L170	20	38.5	76.5	115	170	55	18		E
19	UX5190	UX-d190-E-C20-H115-L170	20	38.5	76.5	115	170	55	18		E
20	UX6200	UX-d200-F-C25-H120-L175	25	43.5	76.5	120	175	55	20	UX0009/ M4x0.5x19F	F
21	UX6210	UX-d210-F-C25-H120-L175	25	43.5	76.5	120	175	55	20		F
22	UX6220	UX-d220-F-C25-H120-L175	25	43.5	76.5	120	175	55	20		F
23	UX7230	UX-d230-G-C25-H120-L175	25	48	72	120	175	55	22	UX0010/ M4x0.5x21G	G
24	UX7240	UX-d240-G-C25-H120-L175	25	48	72	120	175	55	22		G
25	UX7250	UX-d250-G-C25-H120-L175	25	48	72	120	175	55	22		G

UCHAMF

INSERT CODING AND ORDERING

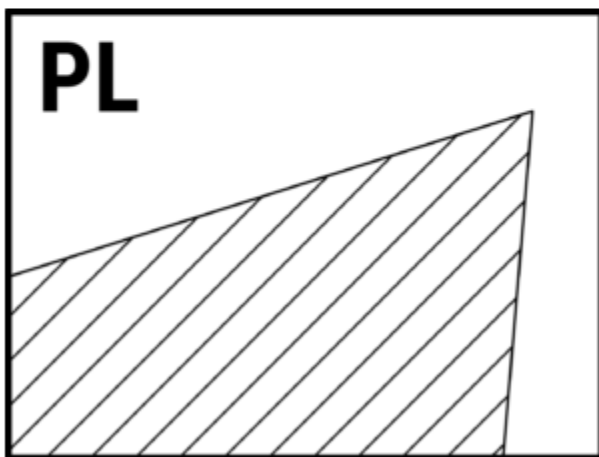


UBACK Chip-formers

PL

Positive cutting land

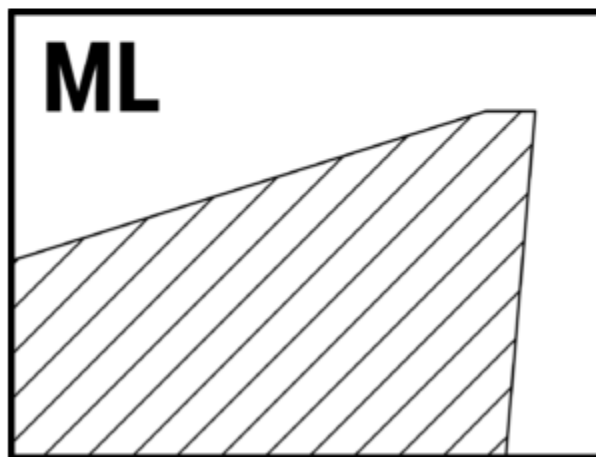
Suitable for all around purpose
and ISO P,M,K,N,S
as well as composite materials



ML

Moderate cutting land

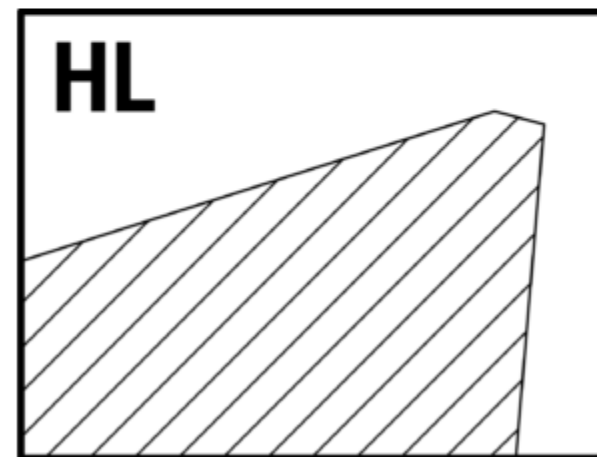
Suitable for and ISO P,M,K,S,H
Materials



HL

Negative cutting land

Suitable for and ISO P,M,K,S,H
Materials



Coatings or Surface Treatments

Coating	Key Features	Applications	Industries	Material Examples	ISO GROUP					
					P	M	K	N	S	H
TiAlN	Suitable for mid steels, cast iron, stainless steel, titanium alloys, Inconel, tool steel, and hardened steels. Offers excellent thermal stability, oxidation resistance, and wear resistance.	Ideal for high-speed cutting and general-purpose machining. Performs well in both wet and dry conditions.	Aerospace, Automotive, General Engineering	AISI 304, 42CrMo4, GG (Grey Cast Iron), Ti6Al4V	✓	✓	✓	X	✓	✓
TiAlSiN	Provides exceptional hardness and oxidation resistance, withstanding temperatures above 1,200°C. Suitable for high-strength steels, superalloys, hardened steels (over 45 Rc), and titanium alloys.	Best for high-performance machining in demanding environments. Excels in dry machining at high speeds.	Aerospace, Automotive, Die and Mold	Inconel 718, AISI 4140, Ti6Al4V	✓	✓	X	X	✓	X
AlTiSiN	Offers high hardness, thermal stability, and resistance to wear and oxidation. Suitable for stainless steel, hardened cast, superalloys, and steels over 45 Rc.	Designed for high-speed machining in extreme conditions. Performs exceptionally in dry machining.	Aerospace, Automotive, Precision Engineering	AISI 316, AISI H13, Hastelloy	X	✓	X	X	✓	✓
AlCrN	Provides excellent oxidation resistance (up to 1,100°C), toughness, and abrasion resistance. Suitable for carbon steels, cast iron, stainless steel, and aluminum.	Suitable for general machining in wet and dry environments. Excels in abrasive and high-wear applications.	Automotive, Aerospace, Die and Mold	AISI 304, AISI 1045, GG, AL6061	✓	✓	✓	✓	X	X
AlTiN	High hardness, wear resistance, and thermal stability up to 1,100°C. Designed for mid steels, cast iron, high-speed steels, tool steel, and hardened materials.	Ideal for heavy-duty machining and high-speed cutting. Performs well in dry and abrasive conditions.	Aerospace, Automotive, Heavy Engineering	AISI 4340, M2 HSS, GG (Grey Cast Iron)	✓	✓	✓	X	X	X
TiB2	Known for exceptional chemical stability, low friction, and high thermal conductivity. Best for machining non-ferrous materials such as aluminium, copper, brass, and magnesium alloys. Reduces friction and Built-Up Edge. (BUE)	Optimized for high-speed machining of non-ferrous metals. Prevents material adhesion and improves efficiency.	Aerospace, Automotive, Electronics	AL7075, 6061-T6, Copper, Magnesium Alloys (AZ31)	X	X	X	✓	✓	X
Polishing	Provides a smooth, refined surface finish by removing micro-defects, scratches, or burrs. Enhances aesthetics and surface quality. Reduces friction and BUE.	Suitable for machining aluminium with high speeds and high MRR (Metal Removal Rates)	Aerospace, Automotive	AL7075, 6061-T6, Copper, Magnesium Alloys (AZ31)	X	X	X	✓	X	X

UBACK

USPOT Insert Code Generator & Tool-Holder Helper

USPOT Insert Code Generator & Tool-Holder Helper

All inputs are required except Material Hardness (HRC) and Coating, which are optional.

Unit System:

Metric (mm) ▼

Pilot-hole Diameter: (min: 8 mm)

8

Counterbore Diameter: (min: pilot + 0.5 mm)

16

Corner Radius: (0.1–1.6 mm)

e.g. 0.4

ISO Material Group:

ISO P – Steel ▼

Material Hardness (HRC): (max: 65 HRC)

Coating (optional – default is NCT):

(Auto or Default: NCT) ▼

Clear

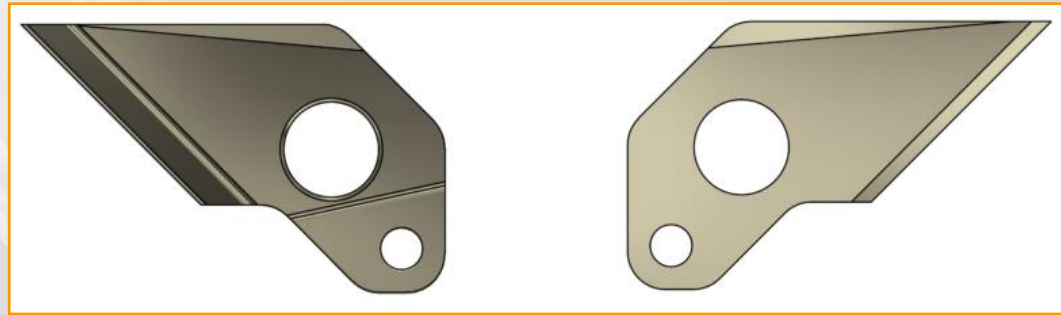
Generate

✓ Insert Code: US-d080-D160-B-R04-PL-NCT

🔧 Tool-Holder SKU: UX2080 Description: UX-d080-B-C16-H62-L115

UCHAMF

82° and 90° Standard Inserts (mm/inch):



Ødmin. Pilot Hole mm/inch	Countersunk angle $\alpha=82^\circ$			Countersunk angle $\alpha=90^\circ$			Series
	Insert SKU	Insert Description	ØDmax. mm/inch	Insert SKU	Insert Description	ØDmax. mm/inch	
8/0.315	UC2101	UC-82-d080-B-R04-PL-NCT	17/0.669	UC2201	UC-90-d080-B-R04-PL-NCT	18/0.709	B
9/0.354	UC2102	UC-82-d090-B-R04-PL-NCT	18/0.709	UC2202	UC-90-d090-B-R04-PL-NCT	19/0.748	
10/0.394	UC2103	UC-82-d100-B-R04-PL-NCT	19/0.748	UC2203	UC-90-d100-B-R04-PL-NCT	20/0.787	
11/0.433	UC3101	UC-82-d110-C-R04-PL-NCT	24/0.945	UC3201	UC-90-d110-C-R04-PL-NCT	26/1.024	C
12/0.472	UC3102	UC-82-d120-C-R04-PL-NCT	25/0.948	UC3202	UC-90-d120-C-R04-PL-NCT	27/1.063	
13/0.512	UC3103	UC-82-d130-C-R04-PL-NCT	26/1.024	UC3203	UC-90-d130-C-R04-PL-NCT	28/1.102	
14/0.551	UC4101	UC-82-d140-D-R04-PL-NCT	28/1.102	UC4201	UC-90-d140-D-R04-PL-NCT	31/1.220	D
15/0.591	UC4102	UC-82-d150-D-R04-PL-NCT	29/1.142	UC4202	UC-90-d150-D-R04-PL-NCT	32/1.260	
16/0.630	UC4103	UC-82-d160-D-R04-PL-NCT	31/1.220	UC4203	UC-90-d160-D-R04-PL-NCT	34/1.339	
17/0.669	UC5101	UC-82-d170-E-R04-PL-NCT	34/1.339	UC5201	UC-90-d170-E-R04-PL-NCT	37/1.457	E
18/0.709	UC5102	UC-82-d180-E-R04-PL-NCT	35/1.378	UC5202	UC-90-d180-E-R04-PL-NCT	38/1.496	
19/0.748	UC5103	UC-82-d190-E-R04-PL-NCT	37/1.457	UC5203	UC-90-d190-E-R04-PL-NCT	40/1.575	
20/0.787	UC6101	UC-82-d200-F-R04-PL-NCT	38/1.496	UC6201	UC-90-d200-F-R04-PL-NCT	41/1.614	F
21/0.827	UC6102	UC-82-d210-F-R04-PL-NCT	39/1.535	UC6202	UC-90-d210-F-R04-PL-NCT	42/1.654	
22/0.866	UC6103	UC-82-d220-F-R04-PL-NCT	40/1.575	UC6203	UC-90-d220-F-R04-PL-NCT	43/1.693	
23/0.906	UC7101	UC-82-d230-G-R04-PL-NCT	41/1.614	UC7201	UC-90-d230-G-R04-PL-NCT	44/1.732	G
24/0.945	UC7102	UC-82-d240-G-R04-PL-NCT	42/1.654	UC7202	UC-90-d240-G-R04-PL-NCT	45/1.772	
25/0.984	UC7103	UC-82-d250-G-R04-PL-NCT	43/1.693	UC7203	UC-90-d250-G-R04-PL-NCT	46/1.811	

UCHAMF

INSERT CODING AND ORDERING FOR SEMI-STANDARD

Hier is een voorbeeld van de codering van een speciale **UCHAMF**-insert voor de toepassing zoals rechts getoond:

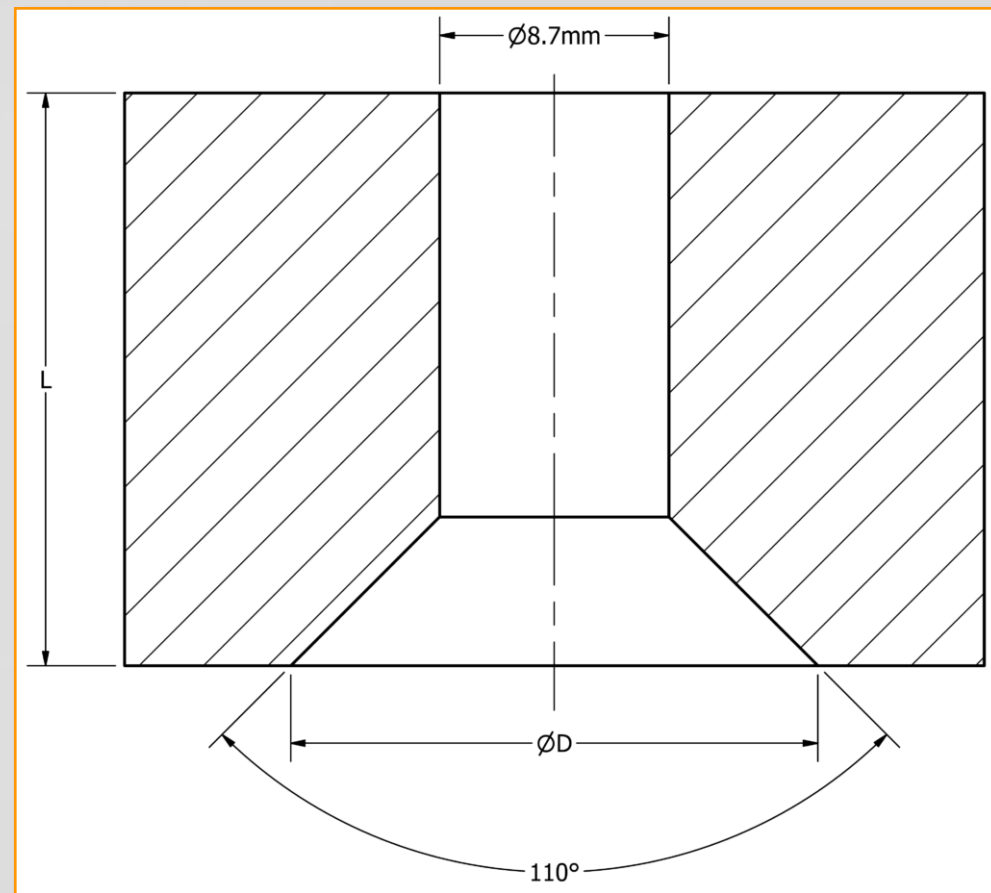
1. $\varnothing d = 8.7\text{mm}$ (0.343")
2. Countersink angle = 110°
3. Material: Aluminim AISI / EN AW / JIS – 7075

Aanbevolen gereedschapshouder: **UX2080 / UX-d080-B-C16-H62-L115** with $\varnothing d_{\min} = 8\text{mm}$ (0.315")

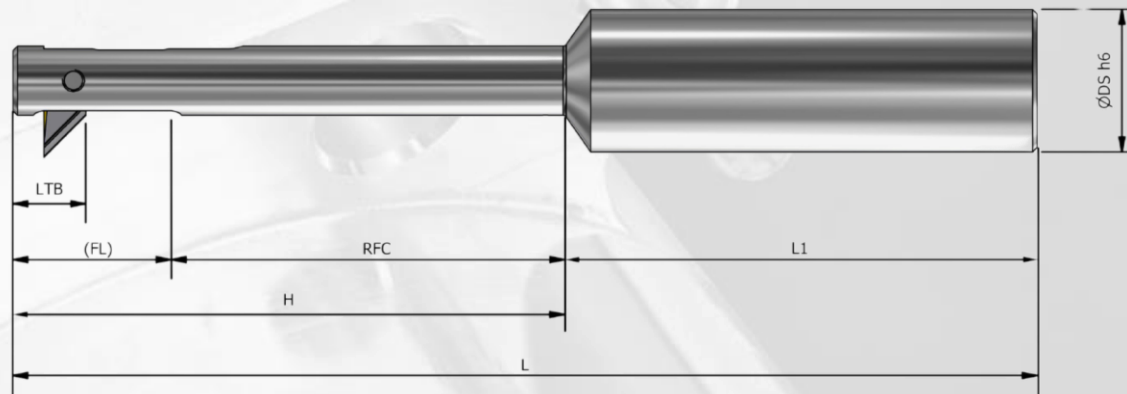
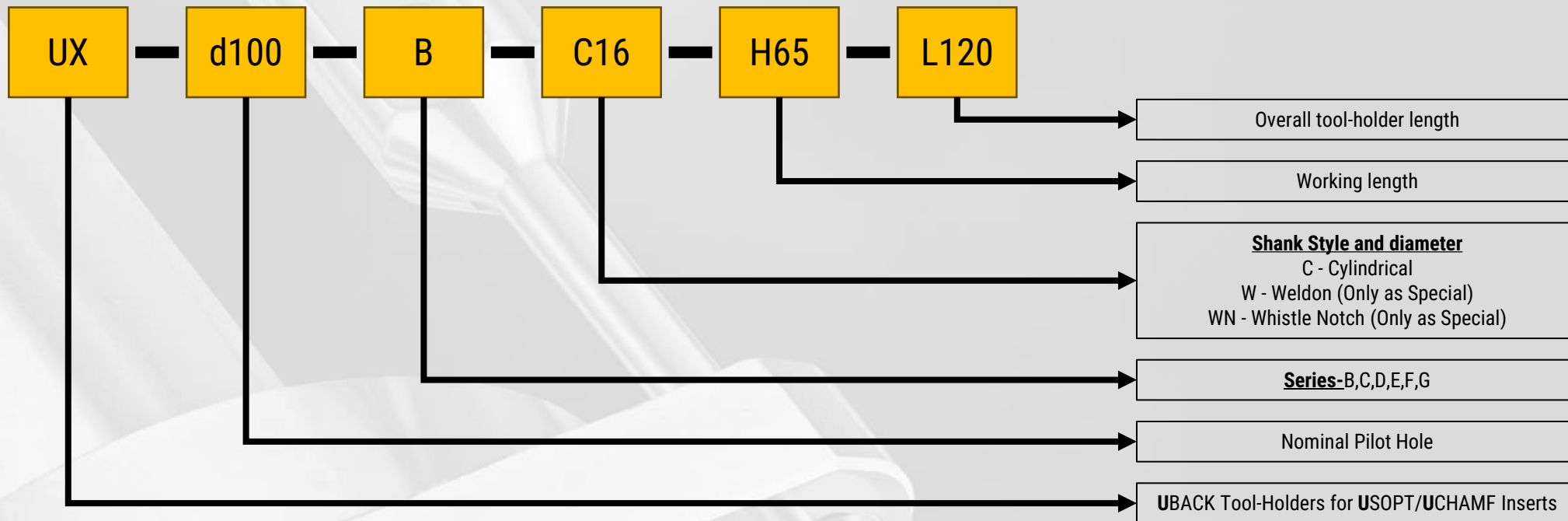
Bijbehorende insert: **UC-110-d080-B-PL-NCT**

Belangrijke opmerkingen:

1. Zorg ervoor dat de lengte van het voorgeboorde gat (L) kleiner of gelijk is aan de RFC: $L \leq \text{RFC}$, zoals gespecificeerd in de tabel van de UBACK-gereedschapshouders hieronder.
2. Zorg ervoor dat de verzinkingsdiameter $\varnothing D$ kleiner of gelijk is aan de maximaal toelaatbare diameter: $\varnothing D \leq \varnothing D_{\max}$, zoals gespecificeerd in de tabel van de UBACK-gereedschapshouders hieronder.



UBACK TOOL-HOLDERS CODING



USPOT / UCHAMF

EASY BLADE REPLACEMENT

NOGA'S USPOT AND UCHAMF INSERT REPLACEMENT



USPOT / UCHAMF

EASY BLADE REPLACEMENT

Step 1

Press the Insert Down and Hold



Step 2

While holding the insert down, insert the pin into the small hole at the base of the neck.



Step 3

Loosen the screw and remove it from the tool holder



Step 4

Push the connecting rod along with the wear insert



Step 5

Install a new insert, aligning its hole, and position it onto the rod's pin



Step 6

Tighten the screw back in place



Step 7

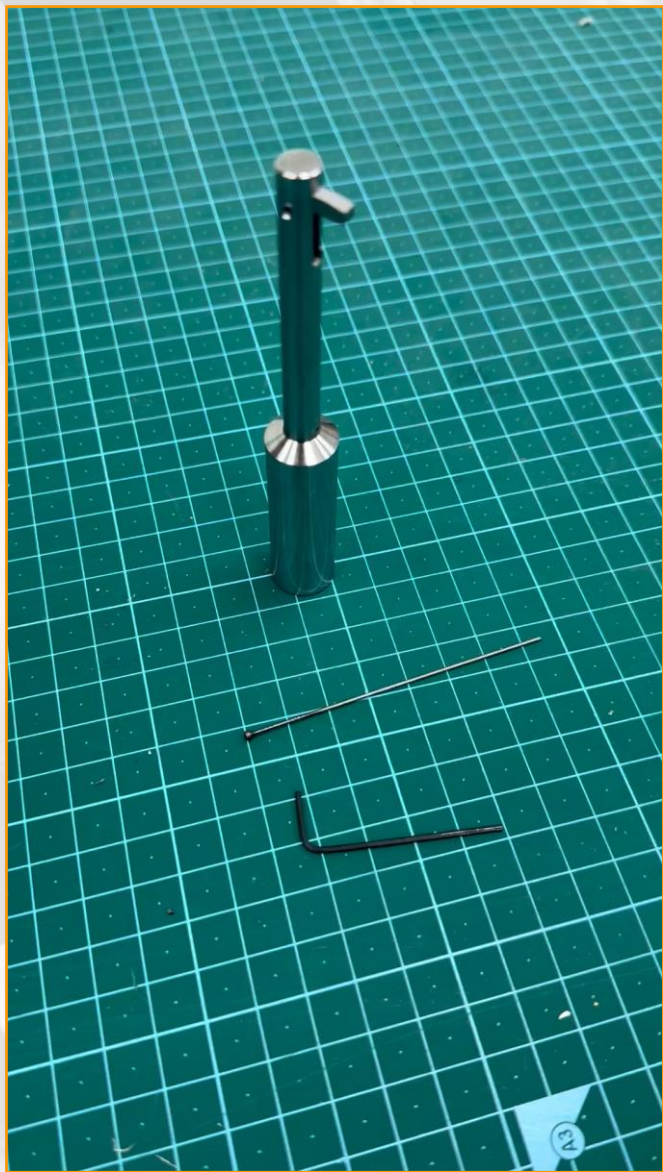
Pull the pin out to release the insert, allowing it to pop out





NOGA **MT**
MACHINE TOOLS

USPOT / UCHAMF EASY BLADE REPLACEMENT



VS



USPOT / UCHAMF

Powered by Air or Emulsion

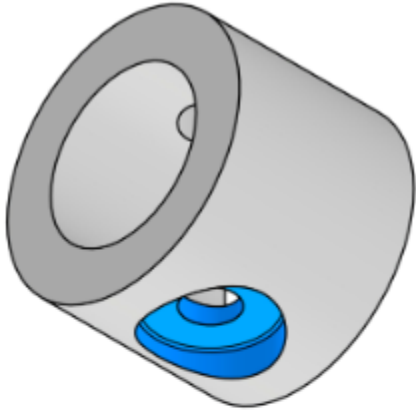


Configureren van **UBACK**-gereedschapshouders voor verschillende koelsystemen

UBACK-gereedschapshouders zijn compatibel met lucht, emulsie of MQL-koelsystemen. Bij gebruik van lucht als koelmiddel moet de achterkant van het gereedschap worden afgesloten met de meegeleverde **BR05006 – M5 x 6 mm stelschroef**.

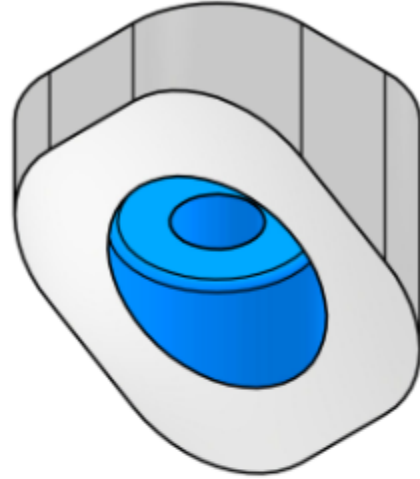


Counterbore Machining Guidelines for Specific Conditions



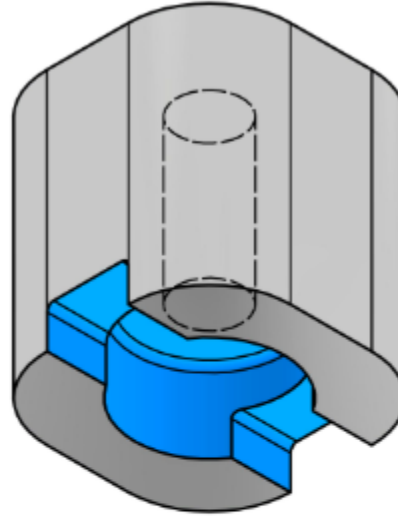
Counterbore on Cylindrical Bore

- Use with Internal Coolant



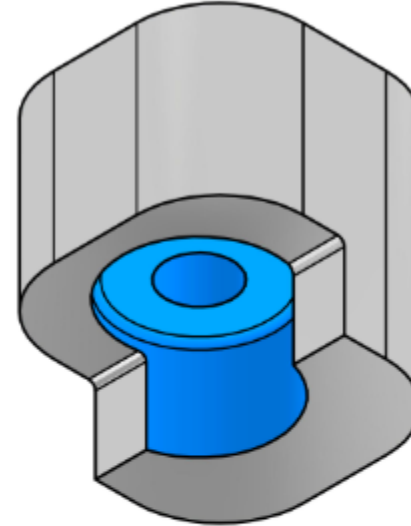
Counterbore on Sloped Surface

- Use external coolant only



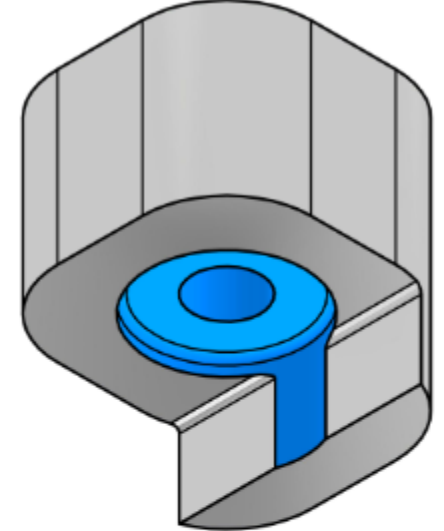
Counterbore on Slot

- Fully Interrupted Cut
- Use external coolant only
- Consider reduced stability and adjust cutting parameters by reducing them by 30%



Counterbore on Shoulder

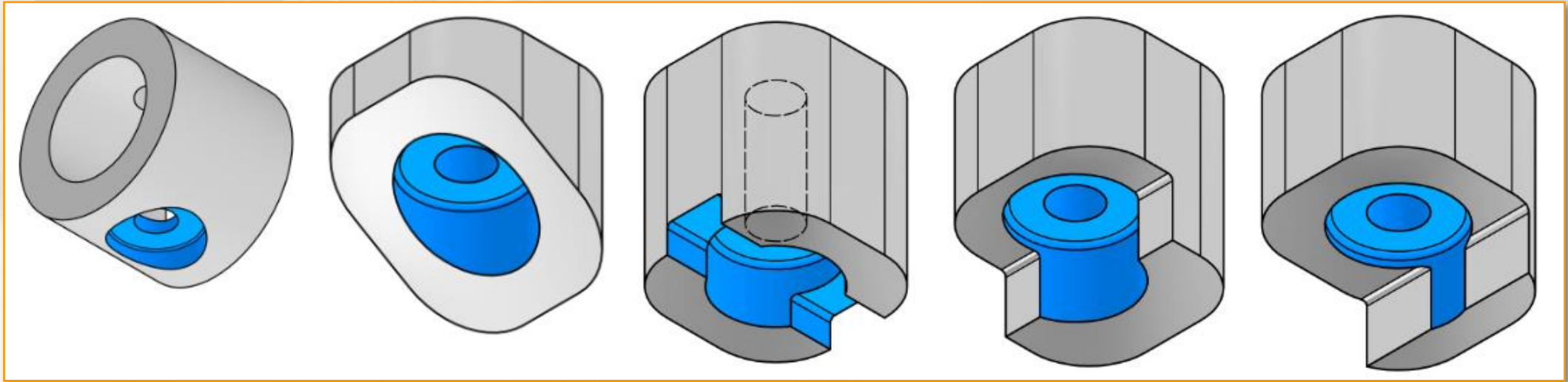
- Fully Interrupted Cut
- Use external coolant only
- Consider reduced stability and adjust cutting parameters by reducing them by 30%



Counterbore on Shoulder

- Fully Interrupted Cut
- Use external coolant only
- Consider reduced stability and adjust cutting parameters by reducing them by 30%

Counterbore Machining Guidelines for Specific Conditions



VS



UBACK Case Study

Industry: Automotive-structural supports

Goal: The customer was facing limitations in traditional counterboring and spot-facing tools:

- Inconsistent surface finish in Al-Si casting material.
- Tool wear leading to frequent replacements.
- Inefficient cycle times, reducing overall productivity.

Application details:

- Material: Aluminum casting, Alu Ac65. 12% Si
- Adaptation SK40 (DIN69871)
- Pilot Hole: Ø13mm / .512"
- Spotface: Ø25mm / .984" and **interrupted cut**

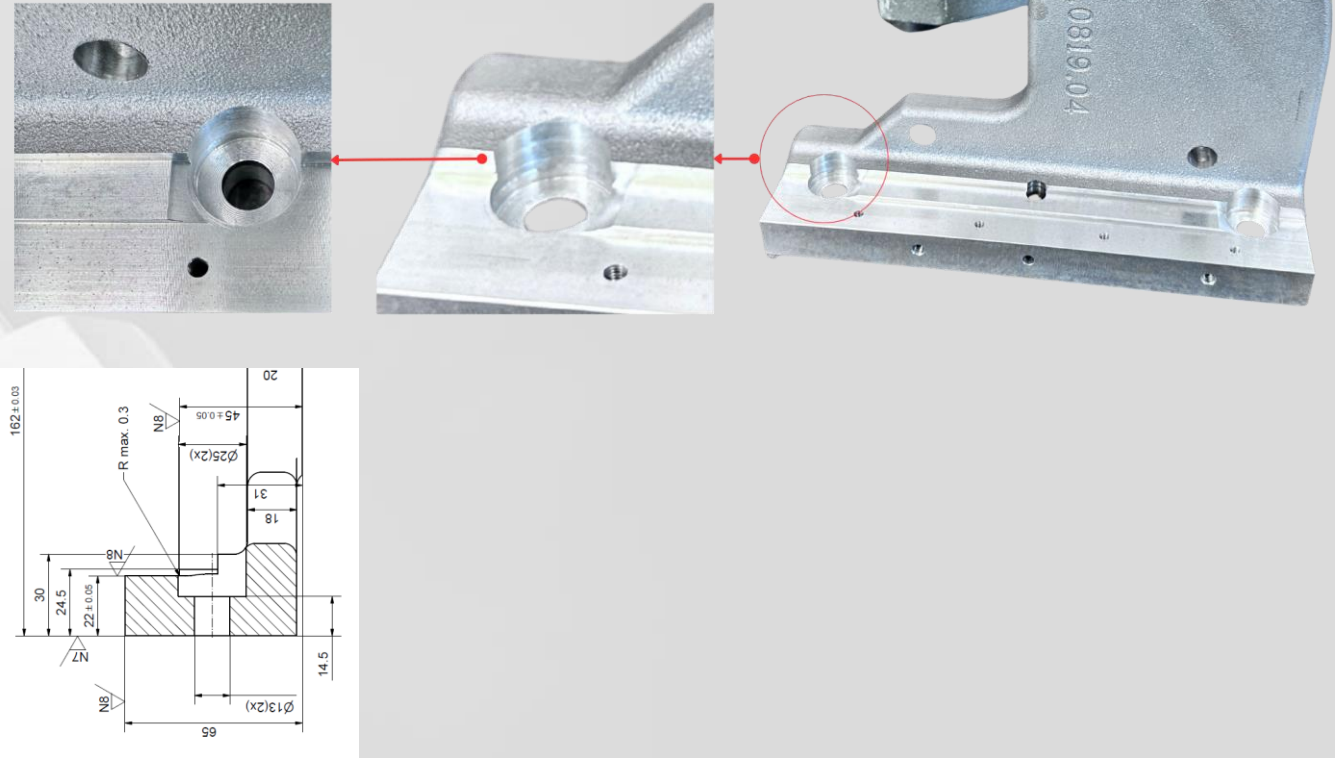
Tool: UX3130, UX-d130-C-C16-H80-L133

Insert: US3007, US-d130-D250-C-R04-PL-NCT

Machining parameters:

S	F		v _c		f _r		Coolant
Spindle Speed	Table Feed		Cutting Speed		Feed per tooth		
RPM	mm/min	inch/min.	m/min.	sfm	mm	inch	
2000	80	3.15	160	525	0.04	0.002	Emulsion

Results: USPOT delivered precise counterbores, smoother finishes, faster cycles, and longer tool life in aluminum casting. The customer reported higher process stability and efficiency, making USPOT their preferred solution.



UBACK

Competitive Analysis

FEATURE	UBACK BY NOGAMT	COMPETITOR X
TECHNOLOGY	Hydraulic mechanism for precise control	Mechanical and hydraulic mechanism
APPLICATIONS	Back spotfacing, counterboring, countersinking, including interrupted cuts applications	Back spotfacing, counterboring with limited interrupted cuts applications
MATERIAL SUITABILITY	Compatible with all materials; offers advanced coatings and chip-formers (e.g., hardened steel, composites)	Limited materials, fewer coating types, and chip-formers
AUTOMATION READINESS	Fully compatible with CNC and robotic systems	Limited CNC integration
INSERT RETRACTION	Precise hydraulic actuation	Controlled with hydraulic actuation
INSERT EXTENSION	Precise hydraulic actuation	Uses centrifugal force
COOLANT SYSTEM	Same tool-holder works with air, emulsion, or MQL	Requires a different tool-holder system
SPEED & EFFICIENCY	Delivers faster cycle times and high repeatability	Standard operational speed
CHIP CONTROL	Advanced chip-formers and optimized coatings for better control	Basic chip evacuation system
INSERT REPLACEMENT	Easy replacement with a single screw, no additional tools needed	Requires replacement pins and special mounting devices



UBURR

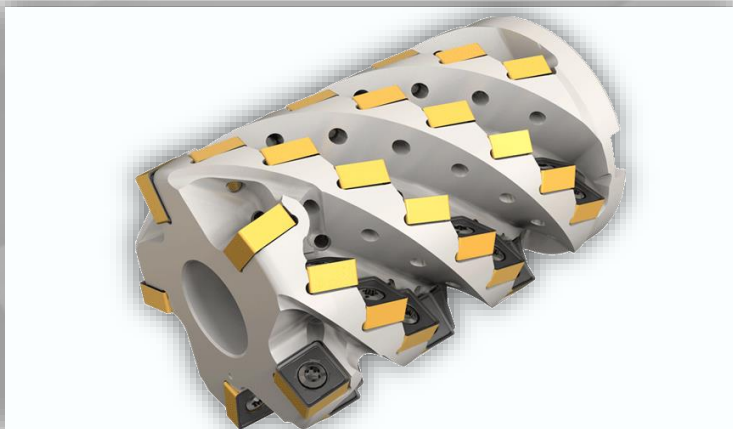
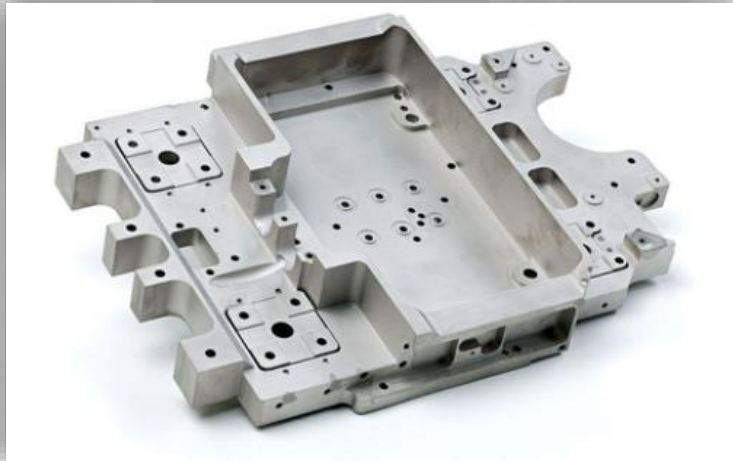
ONE PASS SOLUTION TO FRONT
AND BACK HOLE-DEBURRING



NOGA **MT**
MACHINE TOOLS

UBURR-Blades

ONE PASS SOLUTION TO FRONT AND BACK HOLE-DEBURRING



ONE PASS voor ontbramen van voor- en achterzijde van gaten

- **Tijdbesparing**
- **Consistente resultaten zonder machine-stop**
- **Betrouwbaarheid en duurzaamheid**
- **Eenvoudige mesvervanging**
- **Kraspreventie**
- **Minimaal aantal mes-typen nodig**
- **Inzetbaar diverse op materialen**



ace

and
K, N, S including composite

and
materials

e holder.

UBURR-TOOL RANGE



Ød Range of Ø2.5-25mm (.098-.984")



UBURR-BLADE RANGE

SIZE 2.5 BLADE ⁽¹⁾ FOR PILOT HOLE $\varnothing 2.5 (0.098") \leq d < \varnothing 3.0 (0.118")$

BLADE SKU	DESIGNATION	DESCRIPTION	
NEW! UB2020 ⁽¹⁾	UB-TSB-2.5-PL	HSS Blade size 2.5 without coating and type P chip-former	
NEW! UB2022 ⁽¹⁾	UB-TSB-2.5-PL-NCT	HSS Blade size 2.5 with TiAlN coating and type P chip-former	

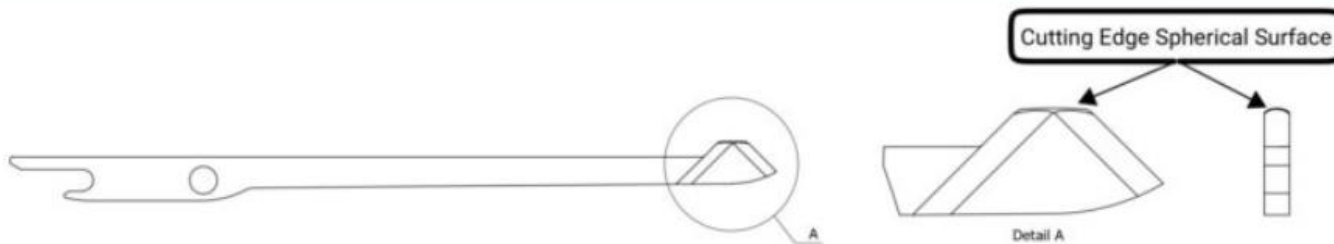
SIZE 3 BLADE FOR PILOT HOLE $\varnothing 3.0 (0.118") \leq d < \varnothing 5.0 (0.197")$

BLADE SKU	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	
NEW! UB2034	UB-TSB-3-ML-NCT	HSS blade size 3 with TiAlN coating and type M chip-former	
NEW! UB2036	UB-SCB-3-PL-NCT	Carbide blade size 3 with TiAlN coating and type P chip-former	
NEW! UB2038	UB-SCB-3-ML-NCT	Carbide blade size 3 with TiAlN coating and type M chip-former	

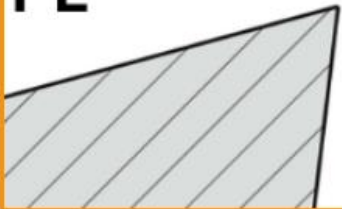
SIZE 5 BLADE FOR PILOT HOLE $d \geq \varnothing 5.0 (0.197")$

BLADE SKU	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	
NEW! UB2063	UB-TSB-5-ML-NCT	HSS blade size 3 with TiAlN coating and type M chip-former	
NEW! UB2067	UB-SCB-5-PL-NCT	Carbide blade size 5 with TiAlN coating and type P chip-former	
NEW! UB2069	UB-SCB-5-ML-NCT	Carbide blade size 5 with TiAlN coating and type M chip-former	

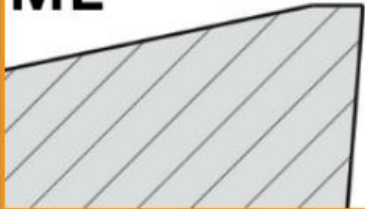
Blade Cutting Edge Geometry



PL



ML



PL – Positive cutting land

Suitable for all around purpose and ISO P, M, K, N, S including composite materials

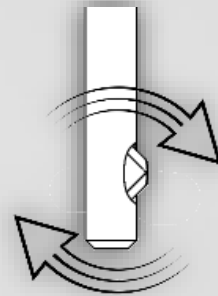
ML – Medium cutting land

Suitable for ISO P, M, K, S, H materials

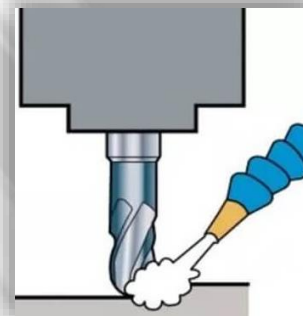


UBURR-Machining Werkwijze

- **Gereedschapsrotatie:** de **UBURR**-gereedschappen zijn geschikt voor rechtsdraaiend bewerken en klokwijzerzin rotatie.



- **Koeling:** de **UBURR**-ontbraamgereedschappen moeten werken met externe koeling om spanen en krullen uit de snijzone te verwijderen, soepele spaanafvoer te garanderen, en tevens voor betere temperatuurbeheersing om oververhitting te vermijden en de langere standtijd te behouden.



MATERIAL GROUPS

Based on ISO 513 and VDI

Based on ISO 513 and VDI							HSS Blades		Solid Carbide Blades											
3323 standards ISO	Material		Condition	Hardness HB	Material Group No.	As is		v _c - cutting speed ⁽¹⁾		v _c - cutting speed ⁽¹⁾		f _z - cutting feed ⁽¹⁾		Recommended Chip-former	Coolant					
						AISI/SAE/ASTM	DIN W.-Nr.	Uncoated		Coated		Coated				mm/t	ipt			
								m/min. / (sfm)	m/min. / (sfm)	m/min. / (sfm)	m/min. / (sfm)	m/min. / (sfm)	m/min. / (sfm)							
P	Non-alloy steel and cast steel, free cutting steel	<0.25% C	Annealed	125	1	1020	1.0044	25-45 / (80-150)	45-65 / (100-165)	60-120 / (200-360)	0.08-0.20	0.003-0.008	PL / ML	Air / Wet						
		≥0.25% C	Annealed	190	2	1035	1.0501													
		<0.55% C	Quenched and tempered	250	3	1045	1.1201													
		≥0.55% C	Annealed	220	4	1055	1.0535													
			Quenched and tempered	300	5	1060	1.1221													
	Low alloy and cast steel (less than 5% of alloying elements)	Quenched and tempered	Annealed	200	6	G92600	1.5028	20-45 / (65-150)	35-65 / (115-165)	50-120 / (165-395)	0.08-0.20	0.003-0.008	PL / ML							
			275	7	4130	1.7218														
			300	8	4142	1.2332														
	High alloyed steel, cast steel and tool steel	Quenched and tempered	350	9	5045	1.7006	20-40 / (65-130)	35-55 / (115-180)	50-100 / (165-330)											
			Annealed	200	10	H13	1.2344	15-35 / (50-115)	30-50 / (100-165)	45-90 / (150-295)	0.08-0.15	0.003-0.006	PL / ML							
Quenched and tempered	325	11	M33	1.3249																
Stainless steel and cast steel	Ferritic/martensitic	200	12	420	1.4021															
	Martensitic	240	13																	
M	Stainless steel and cast steel		Austenitic, duplex	180	14	304L	1.4306	15-30 / (50-100)	30-55 / (100-180)	50-100 / (165-330)	0.08-0.15	0.003-0.006	PL	Wet						
K	Gray cast iron (GG)	Ferritic / pearlitic	180	15	Class 25	0.6015	20-35 / (65-115)	35-55 / (115-180)	60-120 / (200-395)	0.08-0.25	0.003-0.012	PL	Air / Wet							
		Pearlitic / martensitic	260	16	Grade H20	0.36037														
	Nodular cast iron (GGG)	Ferritic	160	17	60-40-18	0.7043	30-70 / (100-230)	40-90 / (130-295)	50-100 / (165-330)	0.08-0.20	0.005-0.008	PL								
		Pearlitic	250	18	F33500	0.7050														
	Malleable cast iron	Ferritic	130	19	A47	0.8135														
Pearlitic		230	20	A220 Class	0.8155															
N	Aluminum-wrought alloys	Not hardenable	60	21	5005	3.3315	50-70 / (165-230)	75-120 / (245-395)	100-160 / (330-525)	0.10-0.30	0.004-0.012	PL	Wet							
		Hardenable	100	22	7075	3.4365														
	Aluminum-cast alloys	≤12% Si	75	23	518.0	3.3292														
		>12% Si	90	24	515.0	3.3241														
	Copper alloys	>1% Pb	High temperature	130	25	390.0	30-60 / (100-200)	45-100 / (150-330)	90-130 / (295-425)											
		Free cutting	110	26	C36000	2.0375														
		Brass	90	27	C22000	2.0230														
		Electrolytic copper	100	28	C63000	2.0966														
	Non metallic	Duroplastics, fiber plastics	70 Shore D	29	Bakelite		60-100 / (195-330)	90-150 / (295-490)	180-305 / (600-1000)											
		Hard rubber	55 Shore D	30	Ebonite															
S	High temperature alloys	Fe based	Annealed	200	31	330	1.4864	10-15 / (33-50)	15-35 / (50-115)	40-80 / (130-260)	0.10-0.20	0.005-0.008	PL							
			Hardened	280	32	S590	1.4977													
		Ni or Co based	Annealed	250	33	Incoloy 825	2.4858	Not recommended	10-15 / (33-50)	25-40 / (80-130)										
			Hardened	350	34	Inconel 718	2.4668													
			Cast	320	35	Nimocast PK24	2.4674													
	Titanium alloys	Pure	190	36	Titanium G.1	3.7024	10-15 / (33-50)	15-20 / (50-65)	30-60 / (100-180)											
Alpha+beta alloys, hardened	310	37	Titanium G.5	3.7165																
H	Hardened steel	Hardened	55 HRC	38	HARDOX 500		Not recommended	10-20 / (30-65)	30-50 / (100-165)	0.04-0.06	0.0015-0.0024	ML / HL	Air							
		Hardened	60 HRC	39	HARDOX Extreme															
	Chilled cast iron	Cast	400	40	A532 IIIA 25% Cr	0.9650								10-20 / (30-65)	30-50 / (100-165)					
	Cast iron	Hardened	55 HRC	41	A532 IID 20% CrMo	0.9645														
C	Carbon fiber reinforced plastics (CFRP)	Cured	M70 to M90 HRM		-		Not recommended		90-140 / (295-460)	0.05-0.25	0.002-0.010	PL and special diamond coating NCD or DLC	Air / Wet							
	Glass fiber reinforced plastics (GFRP)		M80 to M100 HRM						90-350 / (295-1150)											



UBURR

Blade verandering

BLADE INSERTION

UBURR



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



Push the blade to the tool pocket.



Lock the screw clockwise.

BLADE REMOVAL

UBURR



Remove the blade: Unlock the screw with Allen Key counterclockwise turn of the locking screw.



Push the blade by hexagon key through the technical hole.

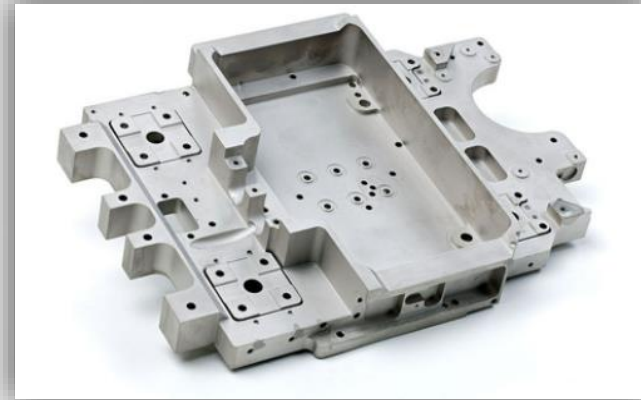
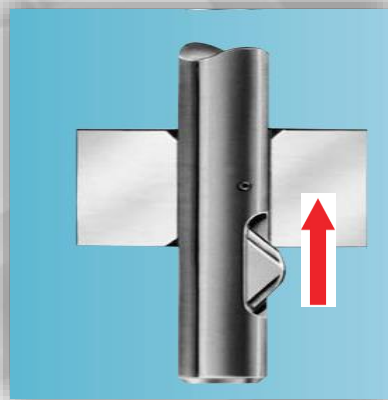
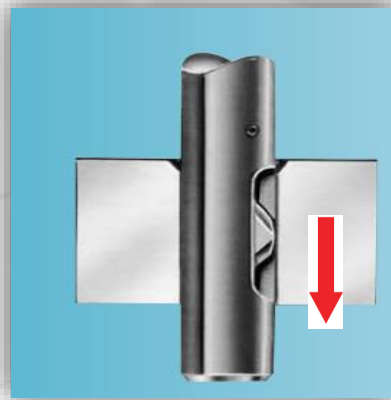
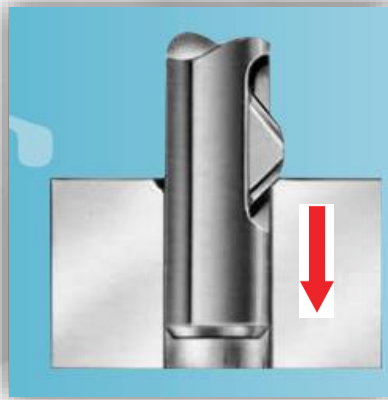


Pull up the blade from the holder.



UBURR Tool path

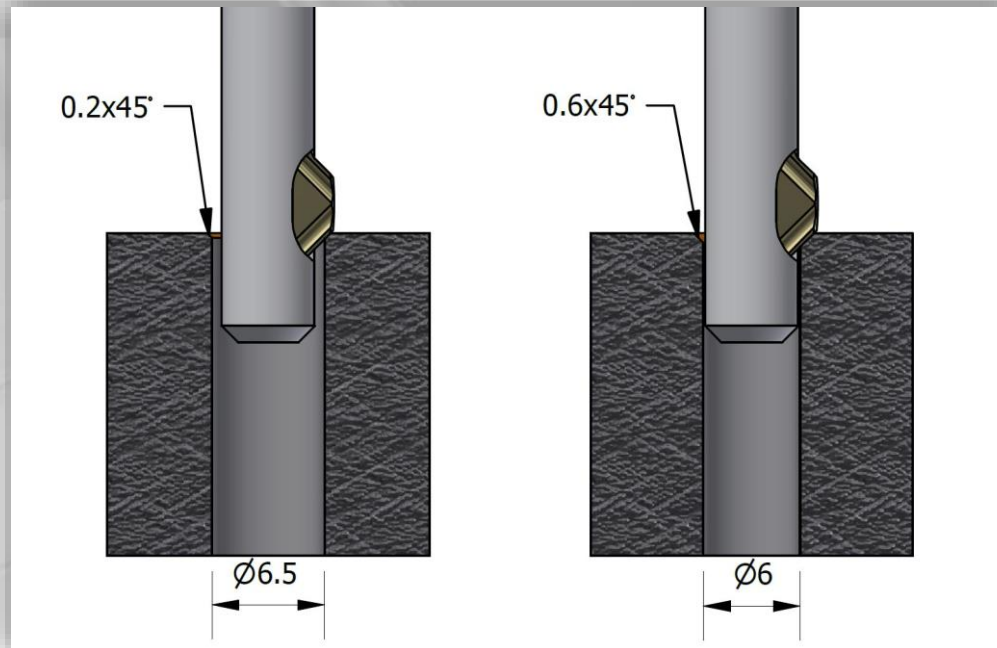
1. **UBURR**-gereedschappen verwijderen de braam van het voorvlak van het gat met een uniek flexibel mes.
2. Het mes schuift automatisch in de houder terug naarmate de druk op het mes toeneemt.
3. De gereedschappen verwijderen de braam van de achterzijde van het gat in dezelfde spilrichting door omhoog te bewegen.



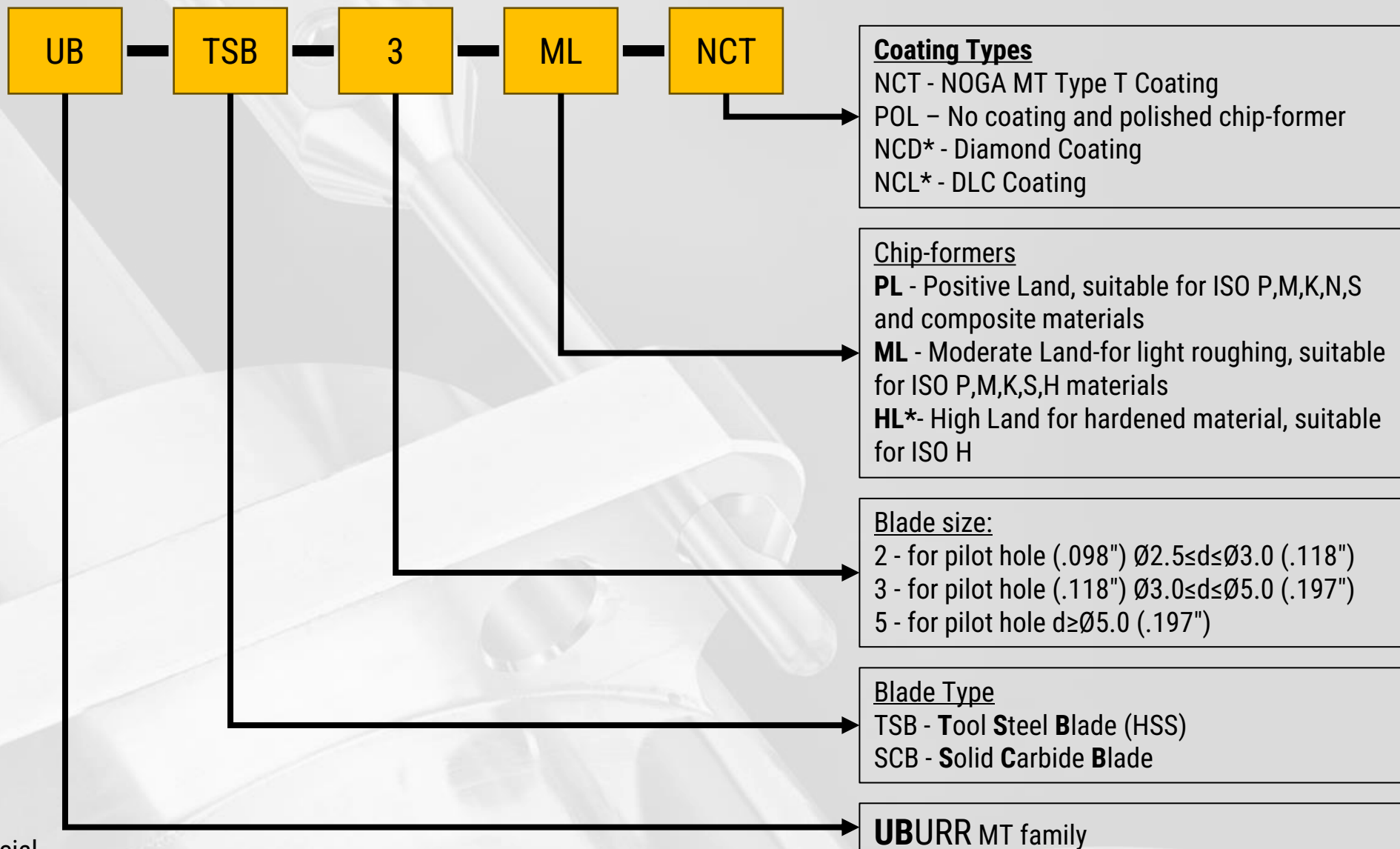
UBURR

Tool selection

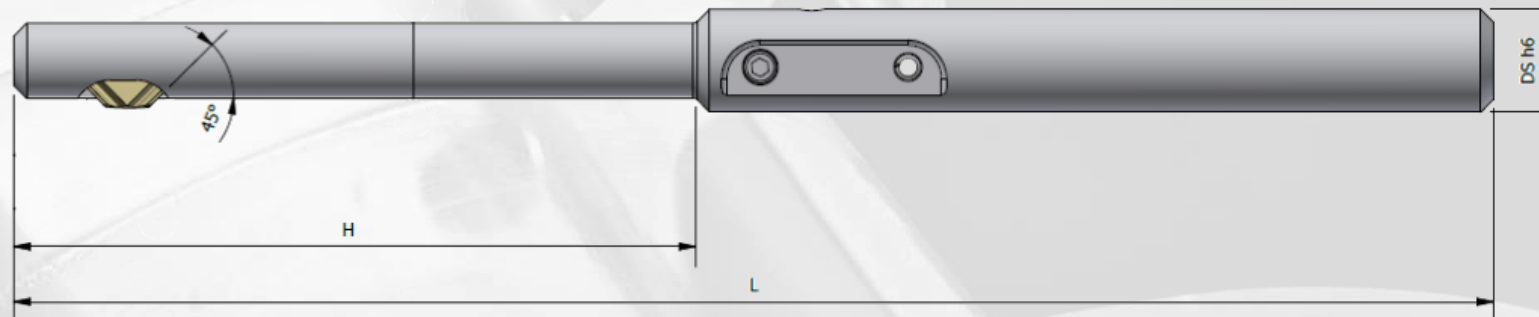
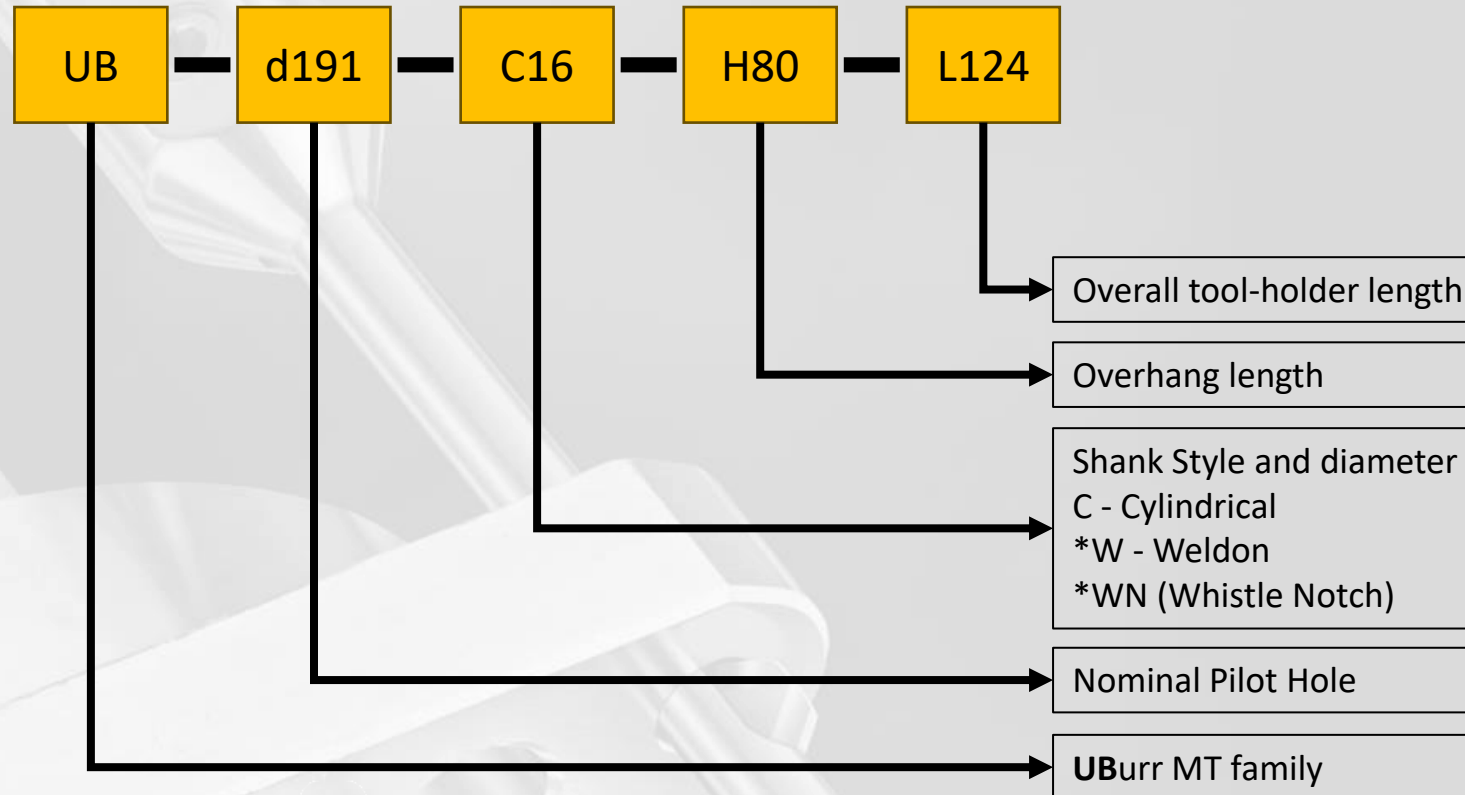
- De afschuining kan variëren tussen **0,2–0,5 mm (.008"–.02")**.
- Indien de diameter van het vorgeboorde gat dicht bij de minimale aanbevolen diameter van het gereedschap ligt (zoals vermeld in de artikeltabel), wordt de afschuining groter, en omgekeerd.
- Bijvoorbeeld: met het gereedschap **UBS-d060-C08-H53-L115 (SKU UB3006)** en een vorgeboord gat van $\varnothing 6,0$ mm ontstaat een grotere afschuining vergeleken met een gat van $\varnothing 6,5$ mm.



Blades coding and ordering



Tool-holders coding and ordering



UBURR

Case Study-Tool-holder

Industrie: Cutting Tools Manufacture

Doel: Verwijderen van bramen van de achterzijde van geboorde gaten voor klemschroeven

Toepassingsdetails:

- Material: AISI 4340, Wr N.1.6928 with 45HRc hardness
- Pilot Holes: Ø5mm / .197"
- Pilot Hole Length: H1=50mm / 1.97"
- Machine: Hermle C50
- Production Volume: 5000 boors/month for one family of tools.

Tool: UB1050; UB-d050-C08-H53-L115

Blade: UB2060; UB-TSB-5-PL

Machining parameters:

Ød		S	F		v _c		f _z		Coolant
Pilot Holde		Spindle Speed	Table Feed		Cutting Speed		Feed per tooth		
mm	Inch	RPM	mm/min	inch/min.	m/min.	sfm	mm	inch	
5.0	0.315	2500	250	10	40	131	0.10	0.004	External Air

Results: The burrs were successfully removed, leaving 0.25x45° chamfers.

The customer saved roughly ~14 hours on manual work in 1 month.

Before



After



Case Study-Transmission Shaft

Industrie: Automotive

Doel: Vergelijkingstesten met concurrenten voor het verwijderen van bramen aan voor- en achterzijde van geboorde gaten

Toepassingsdetails:

- Part: Transmission Shaft
- Material: AISI 4340, Wr N.1.6928
- Pilot Holes: Ø2.5 and Ø3.0mm / .098 and .315"
- Pilot Holes Length: H1=35mm / 1.38"
- Production Volume: 45000 bores/month

Tools:

- UB1030; UB-d030-C08-H29-L85
- UB2180MS; UB-d025-C08-H29-L65

Blade: UB2030; UB-TSB-3-PL

Machining parameters:

Ød		S	F		v _c		f _z		Coolant
Pilot Holde		Spindle Speed	Table Feed		Cutting Speed		Feed per tooth		
mm	Inch	RPM	mm/min	inch/min.	m/min.	sfm	mm	inch	
2.5	0.098	2000	500	20	16	52	0.25	0.01	External Emulsion
3.0	0.118	2000	500	20	19	62	0.25	0.01	External Emulsion



Case Study-Transmission Shaft

Results:

	Ød	
	Pilot Holde	
	2.5mm / 0.098"	3.0mm / 0.118"
	Numbers of Holes	
NOGA UBURR (HSS Blade)	210	1300
Competitor (HSS Blade)	100	500

De klant uitte grote tevredenheid over de resultaten, met name de verbeterde standtijd en oppervlakteafwerking, bevestigd met een endoscoop.



Case Study-Medical Arthroscopy Scissors

Industrie: Medical

Doel: Bramen verwijderen van voor- en achterzijde van geboorde gaten voor artroscopiescharen.
Het artroscopiescharnier is een herbruikbaar systeem dat hoge kwaliteit, duurzaamheid en nauwkeurige tactiliteit integreert in elk instrument, om een optimale oplossing voor elke hoek te bieden.

Toepassingsdetails:

- Material: 17-4 PH, Wr N.1.4542
- Pilot Holes: Ø2.5 and Ø3.0mm / .098 and .315"
- Pilot Holes Length: H1=20mm and H2=6mm / .787" and .236"
- Machine: DMG MURI CMX 50U
- Production Volume: 7000 bores/month

Tool-holder

- UB2500; UBS-d025-C08-H29-L65
- UB3000; UBS-d030-C08-H29-L85

Blades

- UB2022; UB-TSB-2.5-PL-NCT
- UB2032; UBS-TSB-3.0-PL-NCT

Machining parameters:

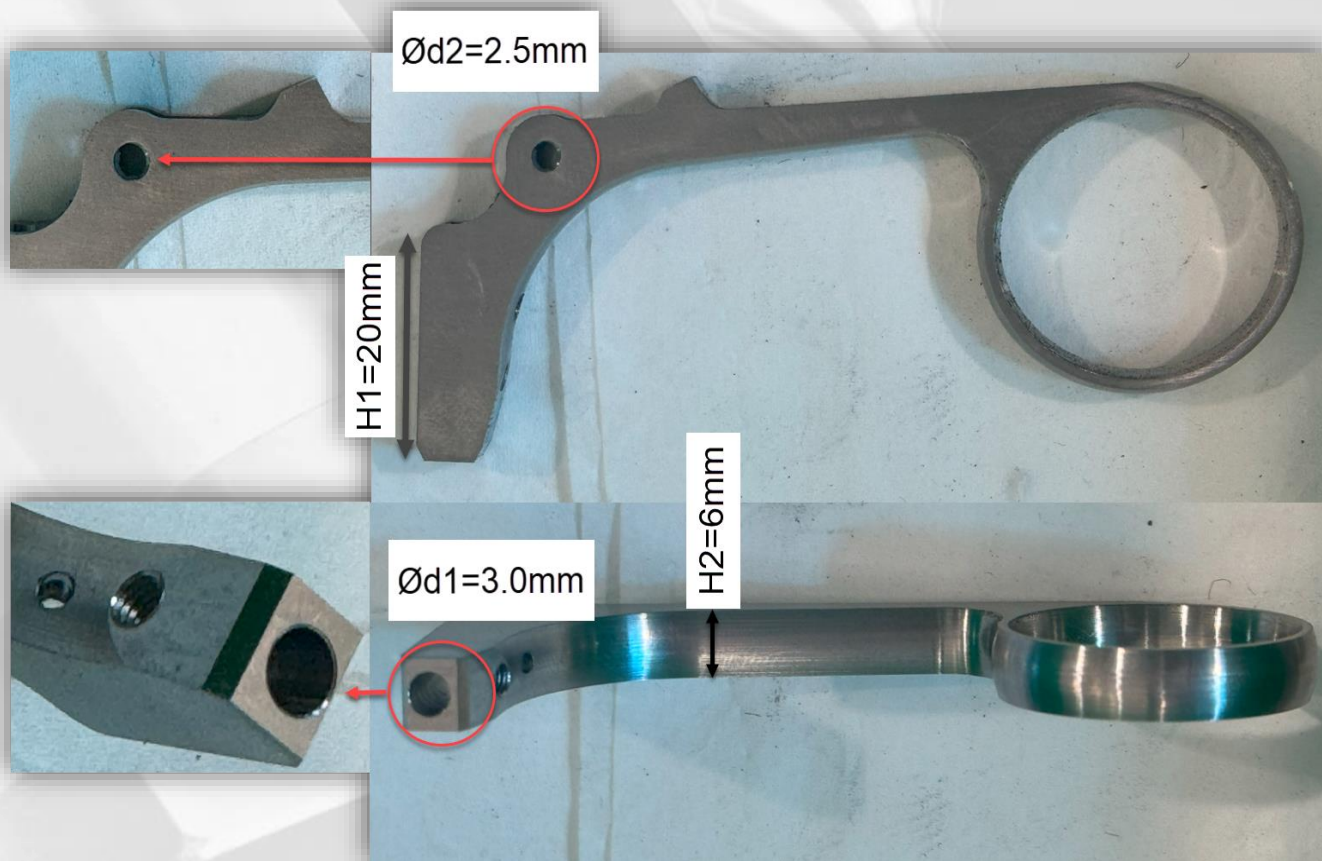
Ød		S	F		v _c		f _z		Coolant
Pilot Holde		Spindle Speed	Table Feed		Cutting Speed		Feed per tooth		
mm	Inch	RPM	mm/min	inch/min.	m/min.	sfm	mm	inch	
2.5	0.098	2000	500	20	16	52	0.25	0.01	External Emulsion
3.0	0.118	2000	500	20	19	62	0.25	0.01	External Emulsion



Case Study-Medical Arthroscopy Scissors

Resultaten: De bramen werden effectief verwijderd, resulterend in afschuiningen van **0,2 x 45°**.

De klant bespaarde ongeveer **20 uur handmatig werk** in één maand.



Case Study-Hardened Materials

Industrie: Algemeen

Doel: Testen van UBURR-gereedschappen op geharde materialen en verwijderen van bramen aan voor- en achterzijde van geboorde gaten.

Toepassingsdetails:

- Material: AISI H13, Wr N.1.2344 pallets with **60HRc hardness**
- Pilot Holes: Ø7mm / .276"
- Pilot Holes Length: H1=25mm / .984"
- Machine: DMG Mori Seiki AKIRA Mi745

Tool: UB1070; UB-d070-C08-H53-L115

Blade: UB2062; UB-TSB-5-PL-NCT (Coated with type T coating)

Machining parameters:

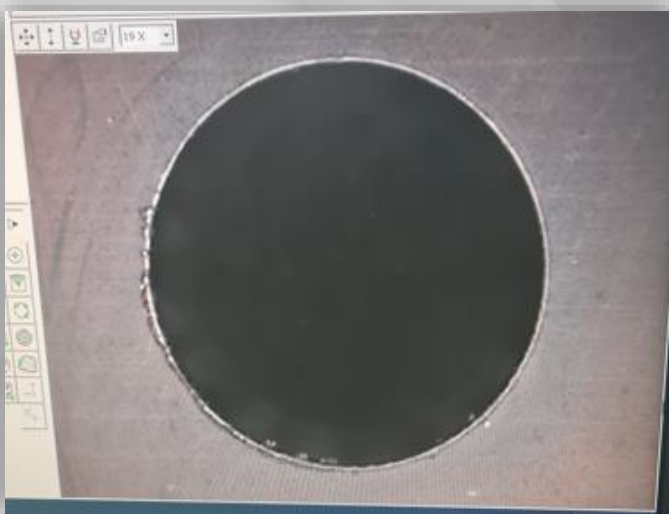
Ød		S	F		v _c		f _z		Coolant
Pilot Holde		Spindle Speed	Table Feed		Cutting Speed		Feed per tooth		
mm	Inch	RPM	mm/min	inch/min.	m/min.	sfm	mm	inch	
7.0	.276"	700	140	6	15	49	0.2	0.008	External Air



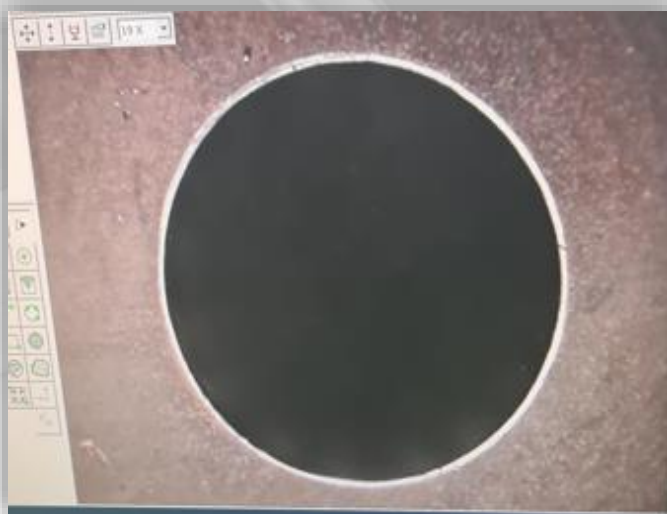
Case Study-Hardened Materials

Resultaten: De bramen werden effectief verwijderd, met afschuiningen van **0,2 x 45°**, zonder significante slijtage na 50 gaten.

Before



After



Case Study-Deburring threads

Industrie: Algemeen

Doel: Evalueren van UBURR-gereedschappen op gesneden schroefdraad en bramen verwijderen van voor- en achterzijde van geboorde gaten..

Toepassingsdetails:

- **Material:** AISI 4340, Wr N.1.6928 Tool Steel
with 38HRc hardness
- **Pilot Holes:** Ø8.5mm / 0.335"
- **Pilot Hole Length:** H1=20mm / 0.787"
- **Machine:** DMG Mori Seiki AKIRA Mi745

Tool: UB1085; UB-d085-C10-H53-L115

Blade: UB2060; UB-TSB-5-PL

Machining parameters:



Ød Pilot Holde		S Spindle Speed	F Table Feed		v _c Cutting Speed		f _z Feed per tooth		Coolant
mm	Inch	RPM	mm/min	inch/min.	m/min.	sfm	mm	inch	
8.5	0.335"	800	200	8	22	72	0.25	0.01	

Case Study-Deburring threads

Resultaten: De bramen werden effectief verwijderd, met afschuiningen van **0,2 x 45°**, zonder significante slijtage na 50 gaten.



UBURR

Case Study-Thailand

- **Oil & Gas industry**
- UB1110 UB-d110-C10-H80-L125
- Tool Dia 10.0mm
- Material: Cast Steel
- S=1500RPM
- F=300mm/min



Before



After



Precipitation Hardened AISI 17-4 PH (DIN W.-Nr. 1.2379 / SUS 630)

- **Hoge sterkte:** bezit sterke en harde eigenschappen, waardoor gereedschappen zware belastingen kunnen weerstaan en langdurig snijvermogen behouden.
- **Taatheid:** ondanks de sterkte blijft de taatheid goed, waardoor het schokken doorstaat zonder te breken en betrouwbaarheid in zware omstandigheden garandeert.
- **Slijtvastheid:** uitstekende weerstand tegen slijtage, minder schade, langere standtijd, minder vervangingen.
- **Verspaanbaarheid:** bekend om eenvoudige bewerkbaarheid, maakt het mogelijk om precieze en complexe gereedschapsontwerpen te realiseren.
- **Warmtebestendigheid:** behoudt prestaties bij hoge temperaturen, gunstig voor hoogsnelheid-bewerkingen.
- **Corrosiebestendigheid:** uitstekende weerstand tegen corrosie, ideaal in vochtige of chemische omgevingen, verlengt de levensduur van gereedschappen.
- **Milieuvriendelijk:** NOGA MT-gereedschappen ondergaan een passiveringsproces waardoor extra coatings en chemicaliën overbodig zijn. Dit vereenvoudigt het proces, vermindert de milieu-impact en zorgt voor een meer duurzame corrosiebescherming.



NOGA **MT**
MACHINE TOOLS

Thank you.

VAN CUTSEM tools

Quality tools for metalworking

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