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China - 200051 Shanghai

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TOOLHOLDERS

HYDRONUT

REFROIDISSEMENT HAUTE PERFORMANCE



SCHAUBLIN

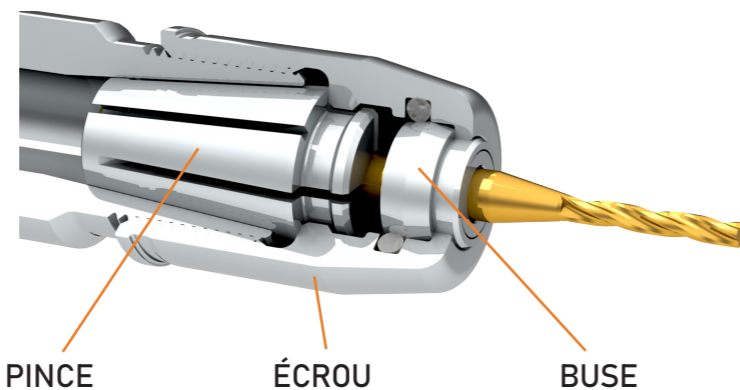
HYDRONUT

PATENT PENDING

La nouvelle solution de SCHAUBLIN pour amener efficacement le liquide d'arrosage sur les arêtes de coupe.

L'écrou est équipé d'une buse qui accélère et dirige le liquide de refroidissement, créant un flux concentrique et stable.

Par rapport aux solutions existantes:

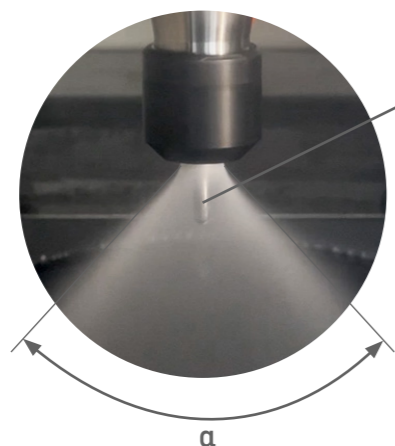


NON-HYDRONUT

Angle de dispersion élevé (α)

Une vitesse de rotation élevée augmente la dispersion du liquide de refroidissement. L'effet de refroidissement est loin de la zone de coupe.

» MAUVAISE EVACUATION DES COPEAUX



Concentration à faible débit

La densité de flux est faible, seules quelques gouttes sont dirigées vers les arêtes de coupe. Beaucoup de chaleur pénètre dans l'outil.

» REFROIDISSEMENT INEFFICACE

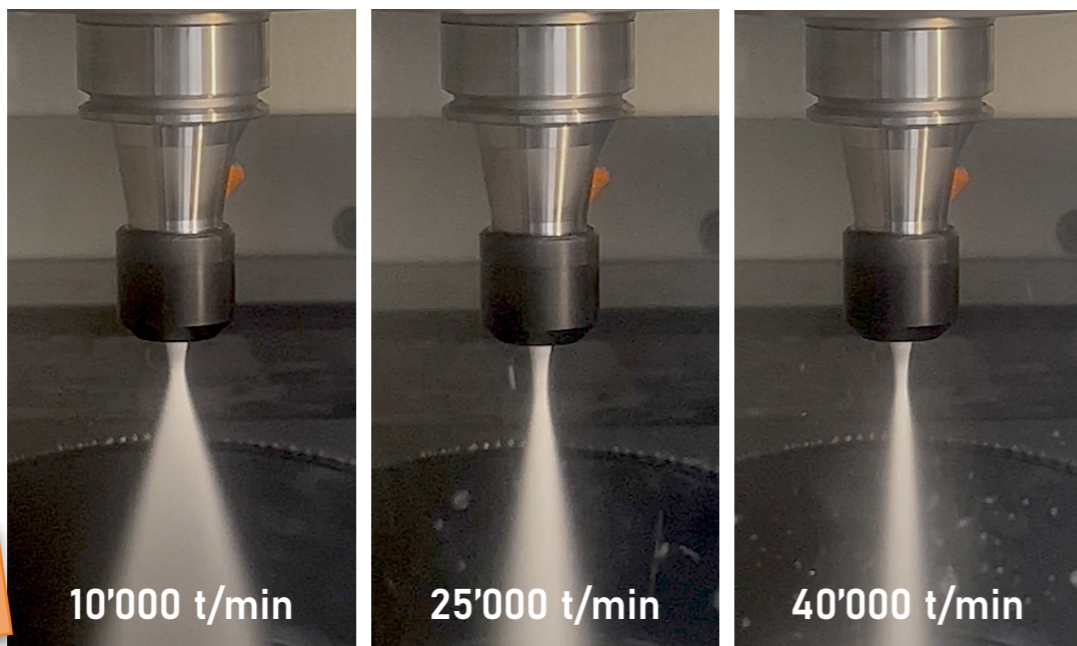
Ce que la nouvelle technologie HydroNut peut réaliser:

Aucun angle de dispersion

» Le fluide ne se disperse qu'après le contact avec l'outil.

Concentration à haut débit

» L'outil n'est jamais visible à travers le jet de refroidissement.



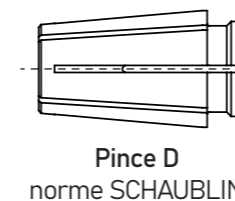
Pression: 40 bars; 580 PSI

SOLUTION MODULAIRE

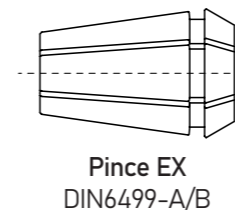
Adapté aux outils avec arrosage par le centre ou aux outils standards.

La même configuration pince + écrou peut être équipée d'un disque étanche ou d'une buse :

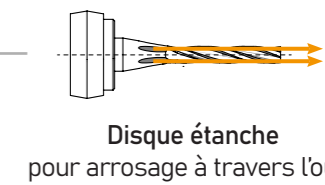
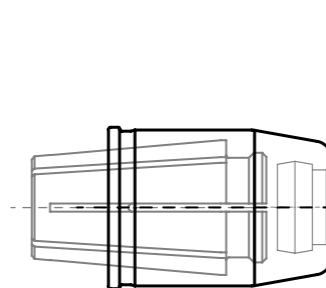
- **DISQUE ÉTANCHE** » arrosage à travers l'outil pour outils avec trous intérieurs
- **BUSE** » arrosage périphérique pour outils standards



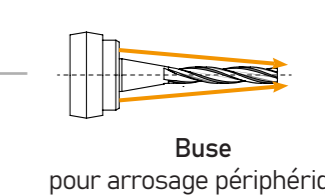
Pince D norme SCHAUBLIN



Pince EX DIN6499-A/B



Disque étanche pour arrosage à travers l'outil



Buse pour arrosage périphérique

Type	PINCE		ÉCROU		DISQUE		Clé	Tête	Clé dynamométrique
	Art.	Ø-serrage [mm]	Art.	Filet	Étanche Art.	Buse Art.			
D10	74-10000	0.5 - 6.0	68-10850	M12x0.75	68-10791	89-96010	68-99089	68-99199	656055 25
D12	74-12000	0.5 - 7.0	68-12850	M15x0.75	68-12791	89-96012	68-99092	68-99201	656055 25
D14	74-14000	0.5 - 9.0	68-14850	M17x1	68-14791	89-96014	68-99092	68-99201	656055 25
D16	74-16000	0.5 - 10.0	68-16850	M20x1	68-16791	89-96016	68-99094	68-99202	656055 60
D20	74-20000	0.5 - 12.7	68-20850	M24x1	68-20791	89-96020	68-99095	68-99203	656055 60
D24	74-24000	0.5 - 16.0	68-24790	M28x1	68-24791	-	-	-	-
D29	74-29000	1.0 - 20.0	68-29790	M34x1	68-29791	-	-	-	-
EX12	75-12200	0.5 - 7.0	61-12850	M14x0.75	68-12791	89-96012	68-99091	68-99205	656055 25
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HYDRONUT

HOCHWIRKSAME KÜHLUNG



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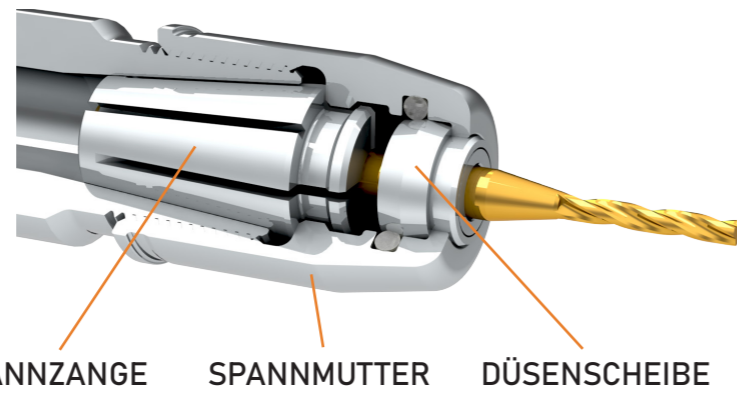
HYDRONUT

PATENT PENDING

Die neuesten Produkte von SCHAUBLIN für eine **effiziente Zuführung des Kühlschmierstoffes** an die Werkzeugschneide.

Die Mutter ist ausgestattet mit einer Düse, welche den Kühlschmierstoff in einem konzentrierten Strahl **beschleunigt** und **orientiert**.

Vergleich mit herkömmlichen Lösungen:

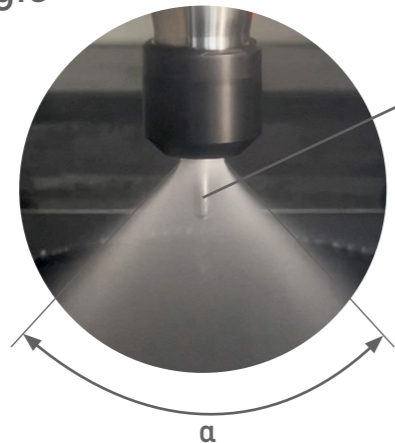


OHNE HYDRONUT Technologie

Grosser Streuwinkel (α)

Eine hohe Drehgeschwindigkeit versprüht den Kühlschmierstoff. Der Kühleffekt verfehlt seine direkte Wirkung in der Bearbeitungszone.

» SCHLECHTE SPANABFUHR



Strömung mit geringer Dichte

Nur wenige, kleinste Tröpfchen finden den direkten Weg zur Bearbeitungszone. Die Bearbeitungswärme fliesst somit hauptsächlich ins Werkzeug.

» INEFFIZIENTE KÜHLWIRKUNG

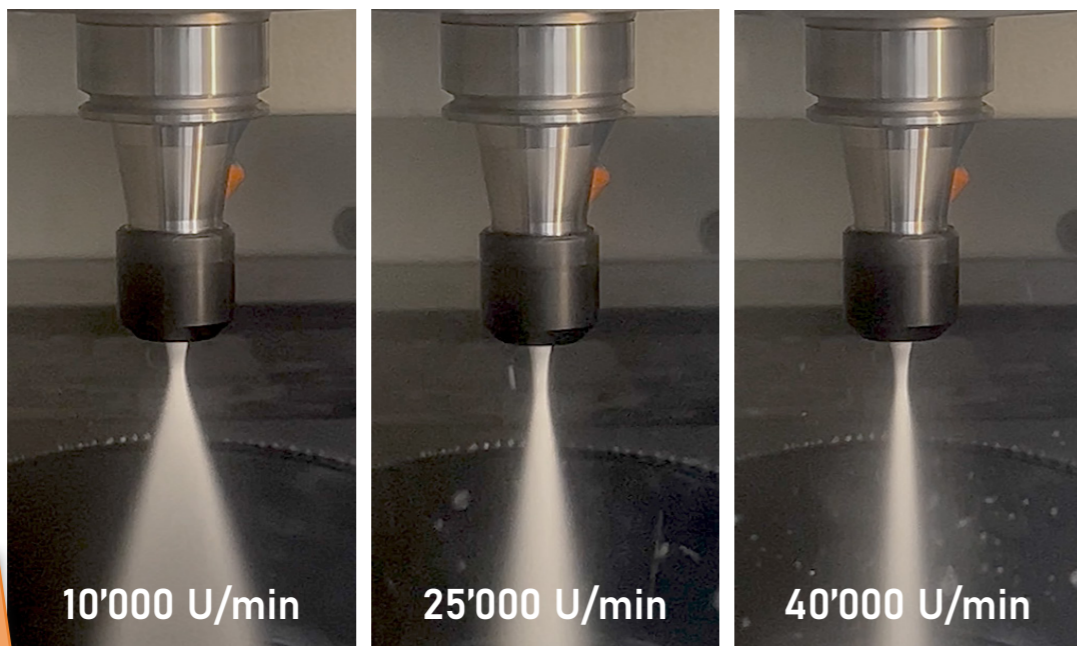
Mit der neuen HYDRONUT Technologie:

Kein Streuwinkel

» Keine Streuung des Kühlschmiermittels bis zum Kontakt mit dem Werkzeug, auch bei hoher Drehzahl.

Hohe Strömungsdichte

» Das Werkzeug bleibt unter dem dichten Kühlmittelstrahl unsichtbar.



Druck: 40 bars; 580 PSI

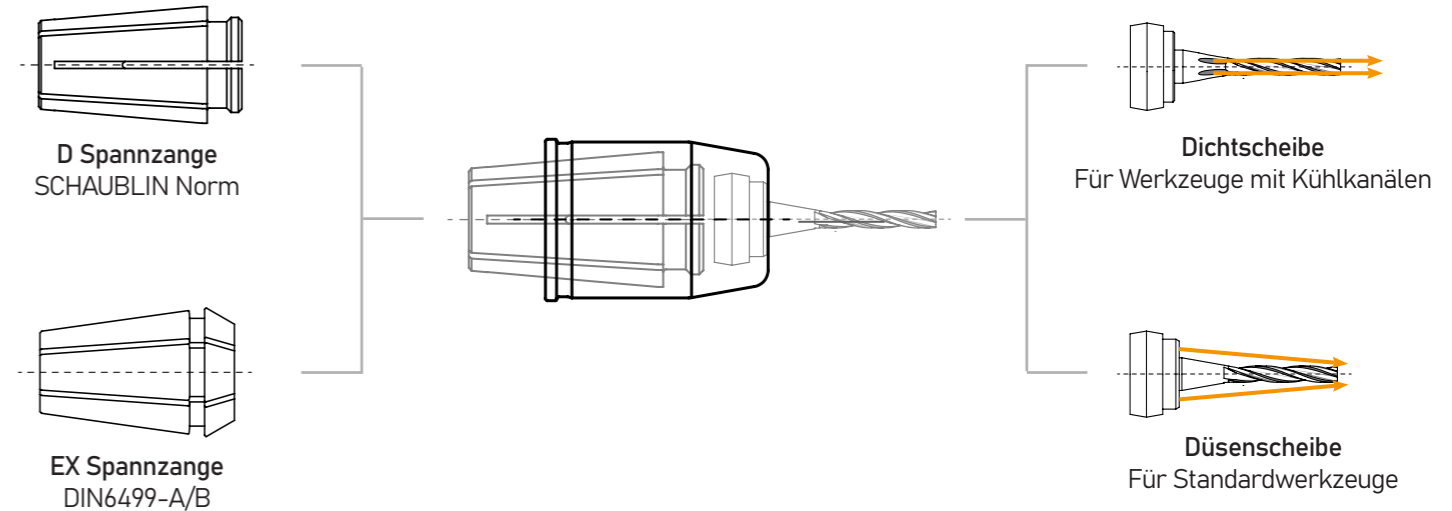
Bis zu 2x höhere Werkzeugstandzeit

MODULARES SYSTEM

Wahlweise für Werkzeuge mit **Kühlkanälen** oder **Standardwerkzeuge**.

Dieselbe Spannzange und Mutter können wahlweise mit einer Dichtscheibe oder einer Düsenscheibe verwendet werden:

- **DICHTSCHEIBE** » Innenkühlung für Werkzeuge mit Kühlkanälen
- **DÜSENSCHEIBE** » Aussenkühlung mit Standardwerkzeugen



Typ	SPANNZANGE		MUTTER		SCHEIBE		Schlüssel	Einsatz	Drehmoment-schlüssel
	Art.	Ø-Bereich [mm]	Art.	Gewinde	Dichtung Art.	Düse Art.			
D10	74-10000	0.5 - 6.0	68-10850	M12x0.75	68-10791	89-96010	68-99089	68-99199	656055 25
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D20	74-20000	0.5 - 12.7	68-20850	M24x1	68-20791	89-96020	68-99095	68-99203	656055 60
D24	74-24000	0.5 - 16.0	68-24790	M28x1	68-24791	-	-	-	-
D29	74-29000	1.0 - 20.0	68-29790	M34x1	68-29791	-	-	-	-
EX12	75-12200	0.5 - 7.0	61-12850	M14x0.75	68-12791	89-96012	68-99091	68-99205	656055 25
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TOOLHOLDERS

HYDRONUT

HIGH PERFORMANCE COOLING



SCHAUBLIN

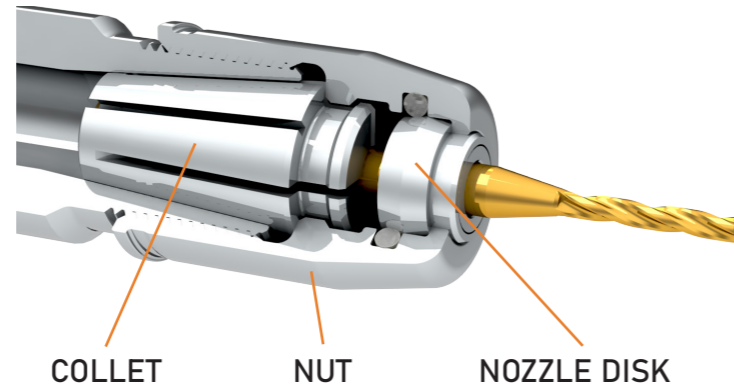
HYDRONUT

PATENT PENDING

The newest solution by SCHAUBLIN to **efficiently bring fluid** to the cutting edge.

The nut is equipped with nozzle, which **accelerates and directs** the coolant, creating a concentric and stable flow.

Compared to existing solutions:



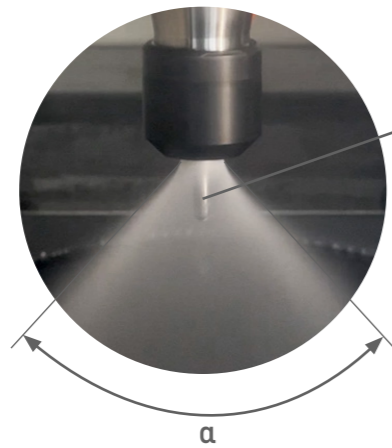
NON-HYDRONUT

High dispersion angle (α)

High rotational speed increases the dispersion of the coolant.

The cooling effect is lost far away from the cutting area.

» BAD CHIP EVACUATION



Low flow concentration

The density of the flow is weak, only few droplets are directed to the cutting edge. A lot of heat penetrates into the tool.

» INEFFICIENT COOLING

The new technology of HydroNut can achieve:

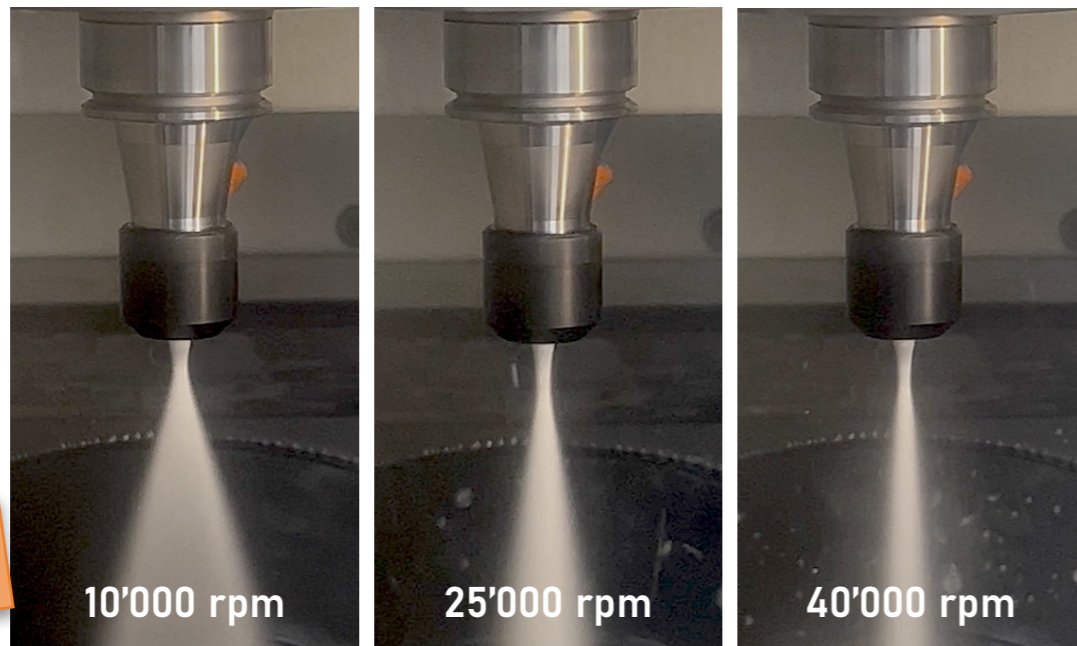
No dispersion angle

» The fluid disperses only after the contact with the tool.

High flow concentration

» The tool is never visible through the cooling jet.

Up to 2x extended tool-life



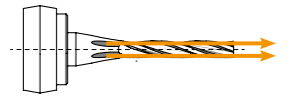
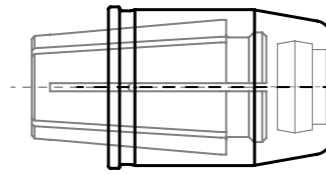
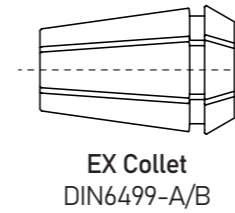
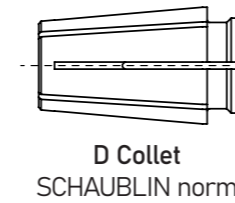
Pressure: 40 bar, 580 PSI

MODULAR SOLUTION

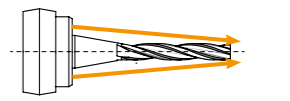
Suitable for **through-coolant** or **standard** tools.

The same collet + nut configuration can be equipped with sealing or nozzle disk:

- **SEALING DISK** » through cooling for tools with inner holes
- **NOZZLE DISK** » peripheral cooling for standard tools



Sealing disk for through-coolant tools



Nozzle disk for peripheral cooling

Type	COLLET		NUT		DISK		Wrench	Head	Torque wrench
	Art.	Ø range [mm]	Art.	Thread	Sealing Art.	Nozzle Art.			
D10	74-10000	0.5 - 6.0	68-10850	M12x0.75	68-10791	89-96010	68-99089	68-99199	656055 25
D12	74-12000	0.5 - 7.0	68-12850	M15x0.75	68-12791	89-96012	68-99092	68-99201	656055 25
D14	74-14000	0.5 - 9.0	68-14850	M17x1	68-14791	89-96014	68-99092	68-99201	656055 25
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D20	74-20000	0.5 - 12.7	68-20850	M24x1	68-20791	89-96020	68-99095	68-99203	656055 60
D24	74-24000	0.5 - 16.0	68-24790	M28x1	68-24791	-	-	-	-
D29	74-29000	1.0 - 20.0	68-29790	M34x1	68-29791	-	-	-	-
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