

# DEEPLY ROOTED IN EVERY MATERIAL AND INDUSTRY

# CVD - PVD - CBN - CERAMICS - PCD

tungaloy.com ntkcuttingtools.com



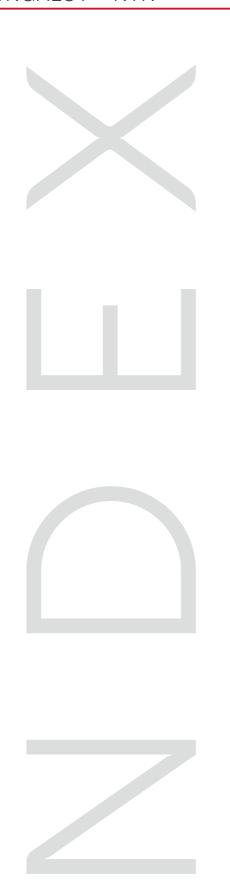


### Welcome to the Powerhouse of Precision: Tungaloy + NTK Highlights!

Unveil the epitome of innovation and expertise. Tungaloy and NTK, a dynamic alliance, form a powerhouse that goes beyond expectations. Together, we redefine the landscape as a comprehensive full material supplier, offering solutions tailored to every material type.

At the core of our excellence lies cutting-edge manufacturing for PVD, CVD, CBN, PCD, and Ceramics, covering all machining needs. This union is not just arithmetic; it's an equation where 1+1>2, showcasing that the whole is truly greater than the sum of its parts.

Deeply rooted in every material and industry



# GRADES - 6

#### **CVD** grades

T9200 series

T6200 series

T500 series

#### **PVD** grades

AH6200 series

AH9130

AH7020/AH7030

#### Miniature Machining

SH7025

AH7025

ZM3/TM4

NTK650

ST4

DM4/DT4

#### **CBN** grades

SBN30

BXA10

BXA20

#### **PCD** grades

PD1/PD2

DX160 / DX200

#### **CERAMICS** grades

JX1/JX3

SX3/SX9

SX6

HC1/HW2

HC2

# TURNING - 22

AddMultiTurn

Y-axis Turning Solutions

BoreMeister

ModuMiniTurn

MultiFunctional Tools

TinyMini-Turn

Thread Whirling

ShaperDuo

The Front Max

TMV-WP Chipbreaker

DS-ACH-OH Toolholder Series

## GROOVING - 44

HighFeed Milling

TungForce-Rec

TungMeister

DoMultiRec

TungTap

JRF Cutter

Ceramatic

## HOLE MAKING - 70

MILLING - 56

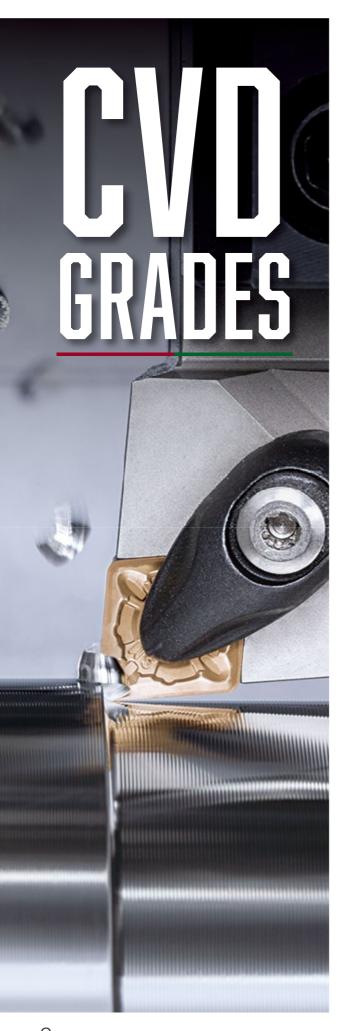
Head Exchangeable drills

Modular DrillMeister series

DeepTriDrill

ReamMeister













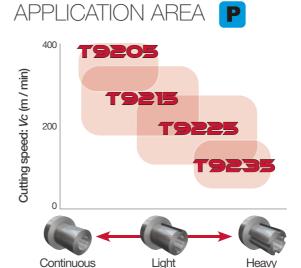
Heavy

Interrupted



CVD grade series with outstanding productivity, especially for steel turning

Nearly unbreakable CVD series for improved machining efficiency



Interrupted

Continuous





Highly reliable CVD grade series for high-speed stainless steel turning

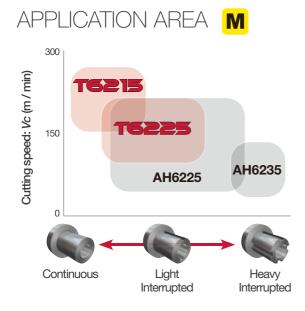
Complete grade line up for stainless steel turning

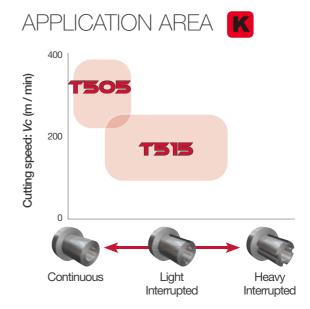


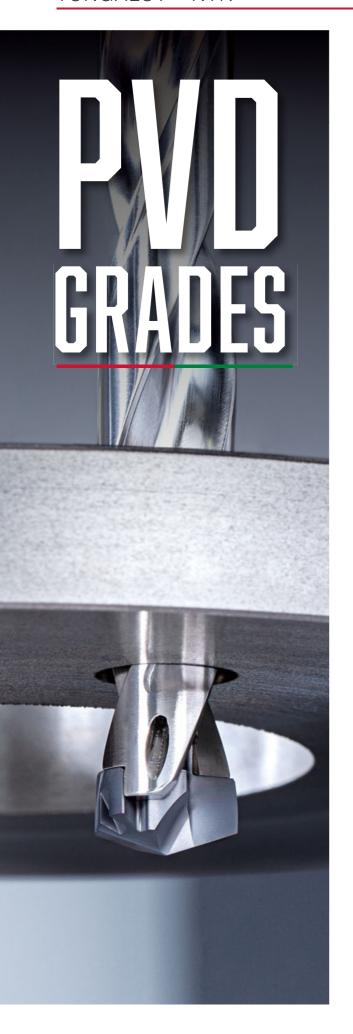
# **T500 K**

Most optimal CVD grade series for high speed machining of cast iron

The thickest coating layer of all Tungaloy's CVD grades ever





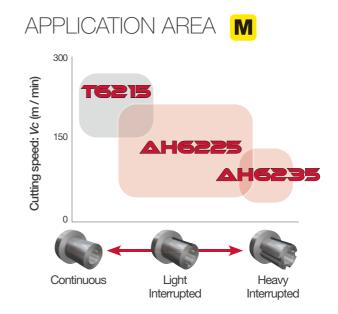




## **AH5200** M

Highly reliable PVD grade series for light and heavey interrupted stainless steel turning

Complete grade lineup for stainless steel turning







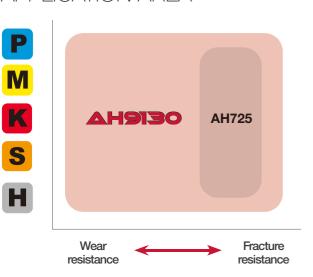
The latest PVD grade developed specifically for hole making applications

A good combination of wear and fracture resistance enhances the grade's tool life and wear prediction.

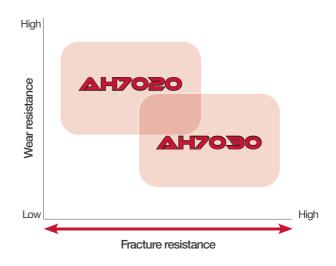


Combining wear resistance and fracture toughness, AH7020 and AH7030 deliver long tool life and process stability, from high-speed machining in steel and cast iron to unstable drilling conditions across all material groups.

#### APPLICATION AREA



#### APPLICATION AREA









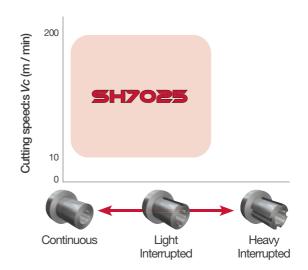


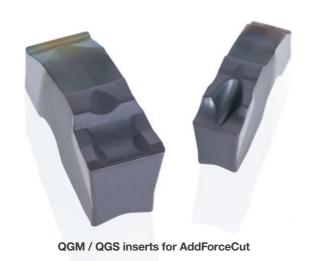


Superior surface quality in small part machining is achieved with a unique columnar-structured TiCN coating and multilayered TiAIN coating

Superior surface quality and process security in small part machining

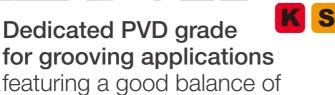
#### APPLICATION AREA







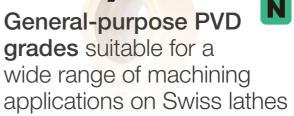




AH7025 uses the world's first coating technology of a nano-scale multi-layered AlTiN PVD coating with high Al content.

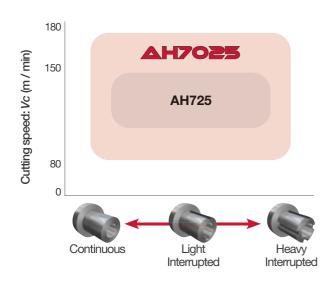
wear and chipping resistance.

# ZM3/TM4 PM

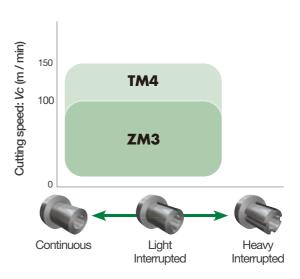


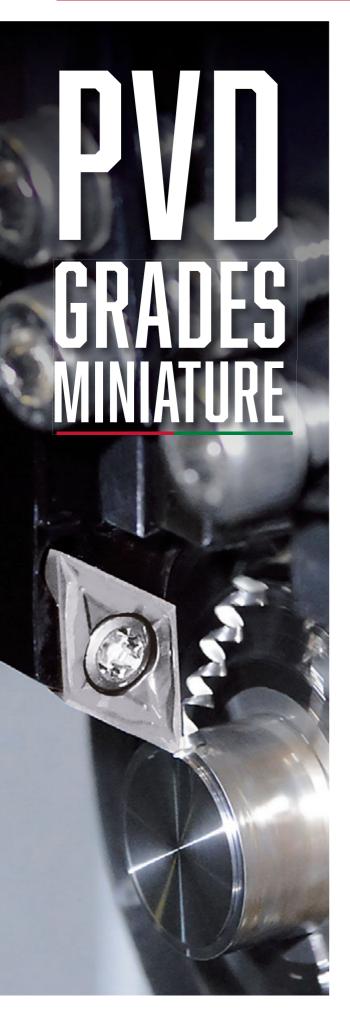
Featuring both excellent adhesion and wear resistance

#### APPLICATION AREA



#### APPLICATION AREA







# NTK650 P M S





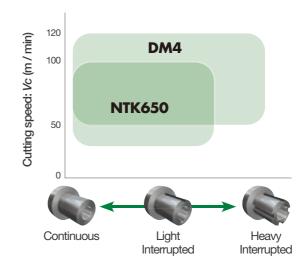


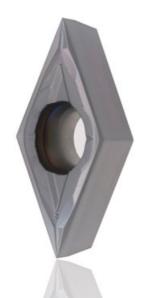
**Outstanding productive PVD** grade for various material groups and applications

Latest HiPIMS coating technology for Improvement of surface-smoothness and suppression of imperfections in film









ST4<sub>M</sub>

Dedicated PVD grade for stainless steel machining with high hardness and oxidation resistance

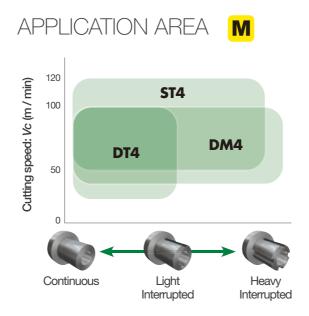
Outstanding tool life with efficient machining of difficult to cut stainless steels and steels



DM4/DT4<sup>M</sup> s

High productive PVD grades for heat resistant alloys and titanium alloys

Featuring an unparalleled stable machining even during high temperature machining conditions

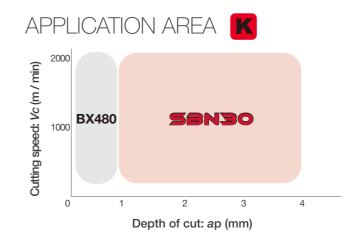






Solid CBN grade for high speed machining of cast iron

Enables deeper cuts and higher feeds with exceptional wear and fracture resistance in cast iron machining.







CBN Grade for continuous hardened steel turning

Incredible reliability with excellent wear resistance





Versatile **CBN grade** for continuous to light interrupted hardened steel turning

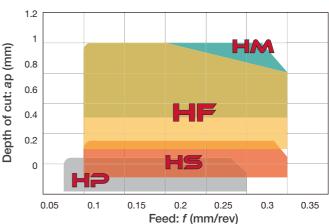
Enables stable machining at low to medium cutting speed

# APPLICATION AREA (ight light light

### HARDBREAKER

SERIES

**CBN** chipbreaker series for hardened steel



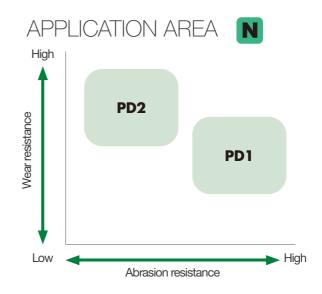




# PD1/PD2 N

Excellent durable PCD grades with sharp cutting edge and increased chipping resistance for higher performance

3D chipbreaker selection exhibiting increased sharpness and excellent adhesion resistance

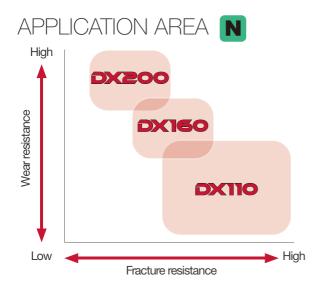






An extremely wear-resistant PCD grade, suitable for finishing aluminum and copper alloys

featuring strongly-bonded diamond grains that prevents the grains from breaking off during machining





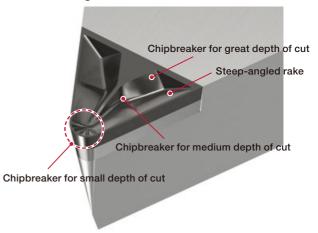


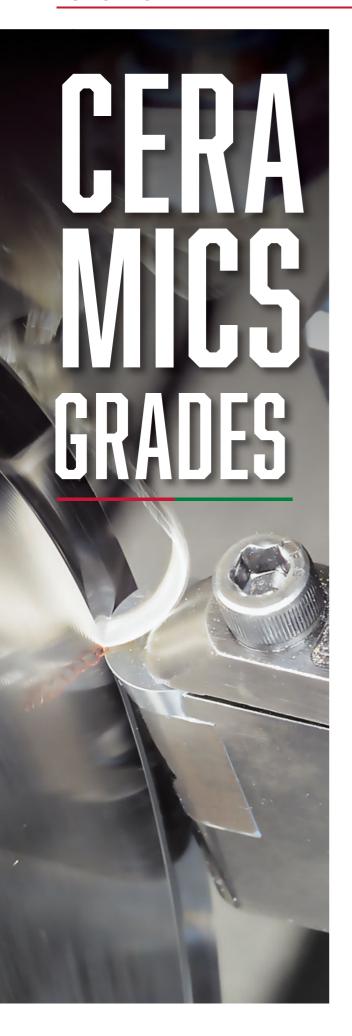
100% diamond grade perfect for machining tungsten carbide and other superhard non-ferrous metals

Featuring a sharp cutting edge that provides excellent surface finish



PCD inserts with **3D chipbreaker** for excellent chip control, suitable for both roughing and finishing operations. Available for **DX110** and **DX160** grade series

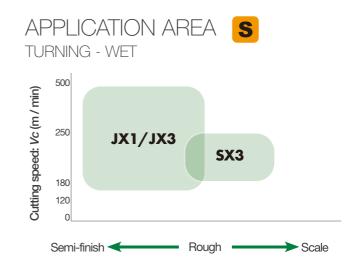






**BIDEMICS Line** a **NEW ERA** of turning for Heat resistant alloys with ultra-high productivity

Roughing to semi-finishing of heat resistant alloys with higher quality and longer tool life than whisker ceramics



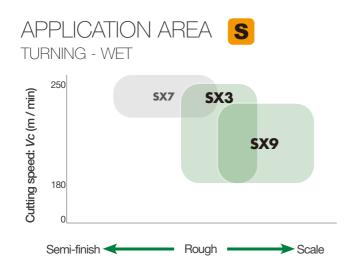


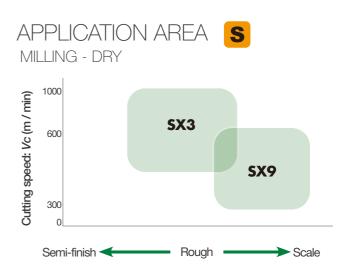
First recommendation for heat resistant alloys machining for high-speed turning and milling with stable performance

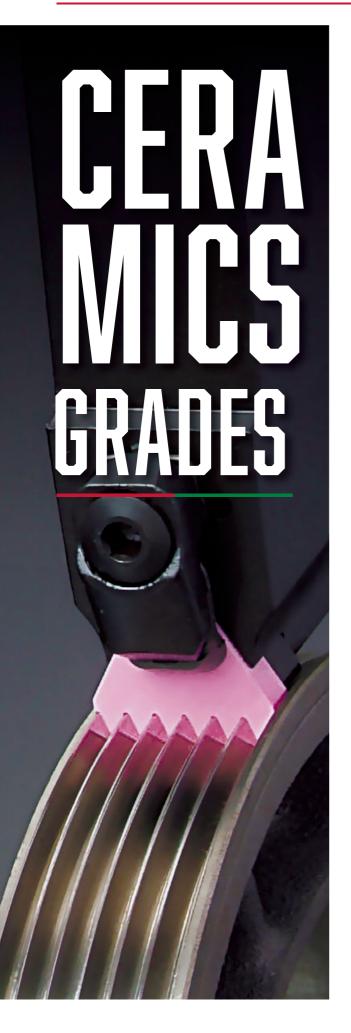
Machines wide range of conditions in materials from the commonly used heat resistant alloys like Inconel 718 to the newer generation of materials like Rene



Best grade for roughing heat resistant alloys like Inconel 718 with scale





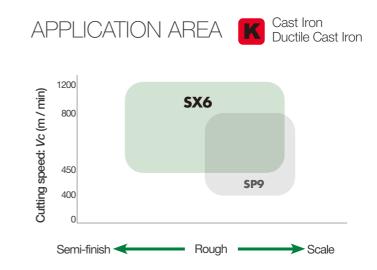




SX6 K

# First recommendation for rough turning and milling cast iron

Ceramic grades series with outstanding boundary wear resistance and thermal shock resistance





# HC1/HW2

Unparalleled ceramic series for finishing gray cast iron

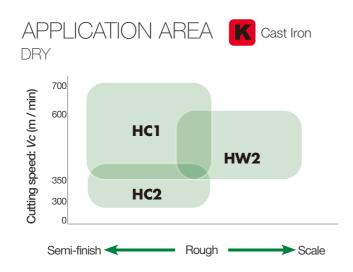
High-speed performance is achievable with the thermally and chemically stable alumina ceramic blend

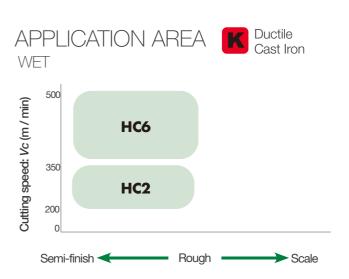


# HC2 K

Multi-purpose grade capable of machining gray cast iron and ductile cast iron

Well balanced grade between wear resistance and chipping resistance





# ADDMTÜRN

# THE ULTIMATE TOOL FOR MULTIPLICITY





Square shank tool holder with internal coolant supply

# Front Turning, Back Turning, Profiling, and Face Turning, with **ONE SINGLE TOOL**

AddMultiTurn ensures stable clamping, supports high-feed machining, and delivers excellent surface finish with integrated wipers. Its versatile geometries enable multiple processes in one operation, maximizing productivity.





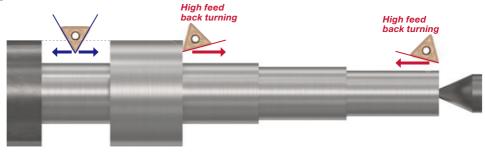




#### **TCMT** type

Single sided, 3 cutting edges Max feed rate: 2 mm/rev

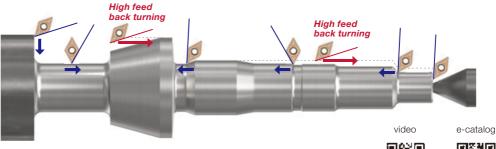




#### **DCMT** type

Single sided, 2 cutting edges Max feed rate: 1.2 mm/rev

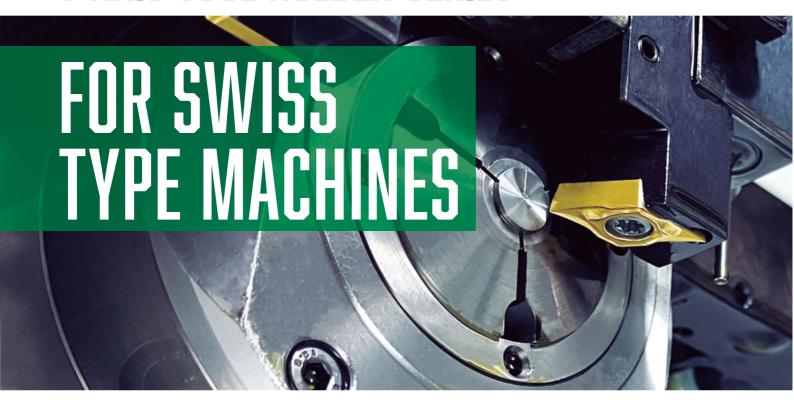








# Y-AXIS TOOL HOLDER SERIES

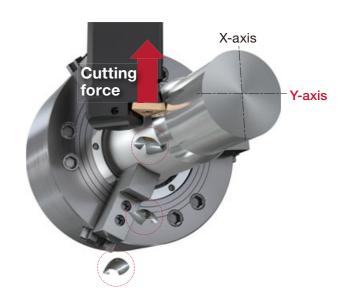


### A turning point to increase your productivity

By using the Y-axis instead of the conventional X-axis the tool can direct the cutting force in the longitudinal axis of the holder, the strongest part of the tool. This provides more security during the cutting process.

By simply rotating the tool along the axis, the cutting edge angle can be set to an optimum angle that enables the most effective entry into the cut.

The same tool can be used when turning either from the end of the part towards the chuck or turning away from the chuck to the end of the part.

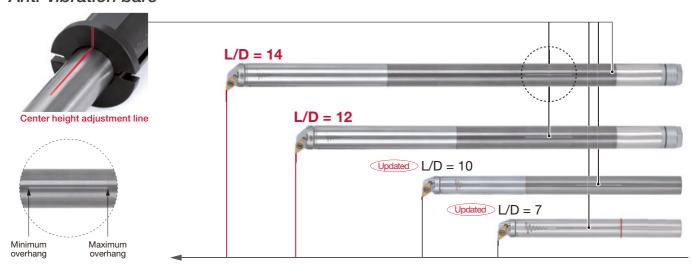


more info





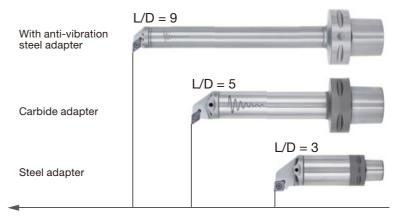
#### Anti-vibration bars



#### Steel shank



#### PSC adapters



# BOREMEISTER

# VIBRATION-FREE SOLUTION FOR DEEP HOLE BORING

High-stability and precision

Ultimate solution to conquer tool overhang challenges, chattering, noise and short tool life of up to 14xD.

Exchangeable head boring tool system with serrated interfaces for high precision and high rigidity indexing.

Through-coolant capability allows smooth chip evacuation in deep boring operations of up to 10xD.

PSC holders are also available, allowing coupling with a range of machine tools.

Dedicated setting device allows quick and accurate center height settings of the boring bar. A wide range of boring heads are available, providing high parts quality in various boring operations









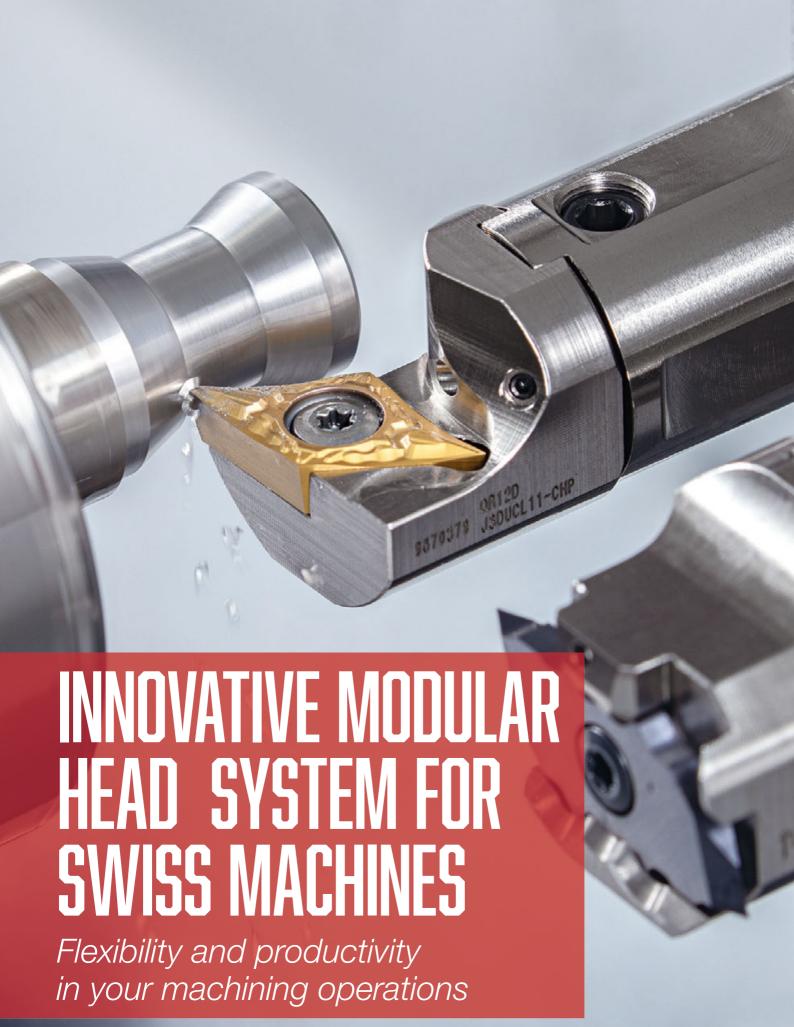
AddInternalCut, TungCut, and AddForceCut heads











# MODUMTURN

Modularity and productivity with a wide selection of turning, grooving and threading heads



Quick head changes allow fast tool setup. The unique coupling ensures stable connection and precise repeatability.

Positioning accuracy for the same insert: ±5 µm

**Round shank toolholders** for back machining

New ER11 collet connection and TinyMini-Turn holders

QC10, QC12 & QC16 type series

**ModuMiniTurn** offers precision internal coolant delivery, which improves chip control and tool life.



# MULTIFUNCTIONAL TOOLS FOR DRILLING AND TURNING

Reduced machine downtime thanks to eliminating the need for tool changes.

Minimum bore diameter: DMIN (mm)

TIN	JYM	HUF	RNM	ULTI	TUNGEMINI									
ø3	ø4	ø5	ø6	ø7	ø8	ø10	ø12	ø14	ø16	ø18	ø20	ø25	ø32	
	Solid carbide boring bar					Indexable								





#### **TBMFR07...**

From drilling to internal, external, and face turning L/D = 2 & 3



Three strategically positioned coolant grooves ensure effective chip evacuation and control.





# MINIATURE SOLID BORING TOOLS FOR HIGH ACCURACY

Efficiency and profitability to your small boring operations as small as Ø0.6 mm

New *SH725* insert grade provides a good combination of wear and fracture resistance, ensuring long tool life and wear prediction.

Expanded indexable type holders, and inserts with 3D chip breaker for better chip control.

Ideal for machining extremely small diameter bores in a wide range of materials.

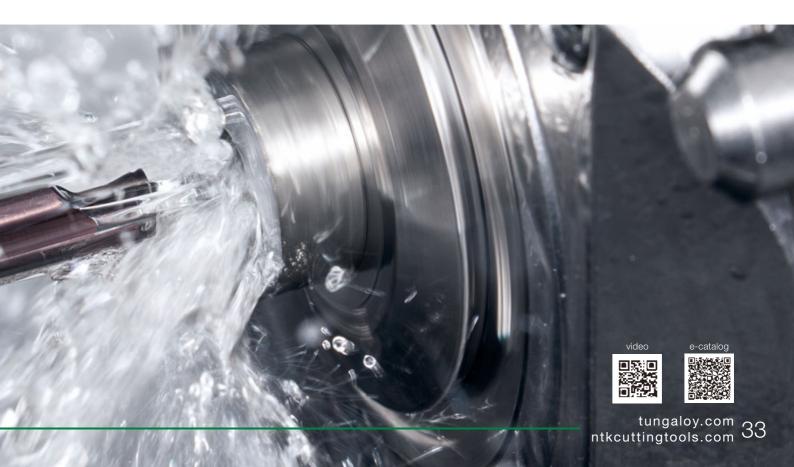


Available with a wide selection of heads for boring, profiling, chamfering, threading and grooving

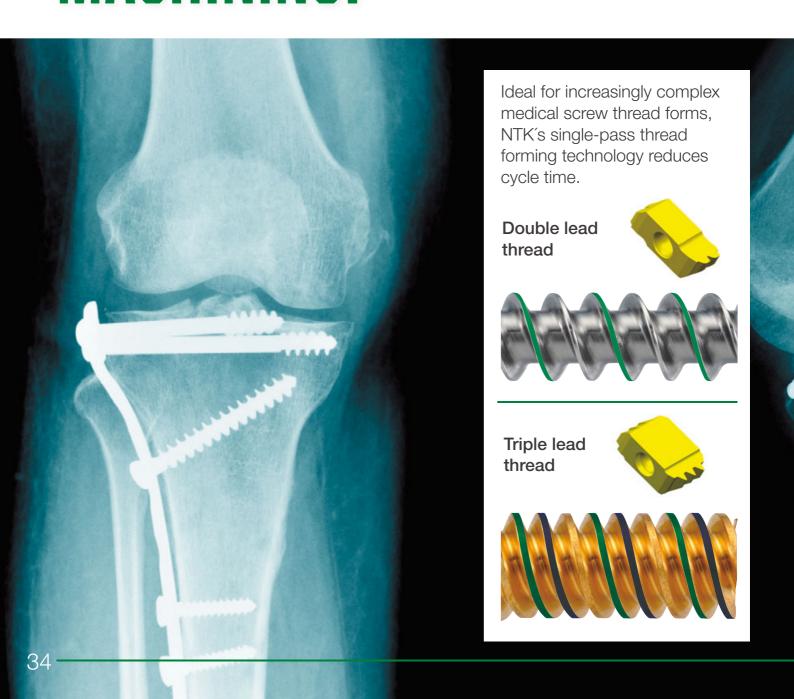


Additionally offered with CBN **BX310** uncoated grade, suitable for bore diameters as small as 2.8 mm.

Available in three minimum bore diameters (DMIN): 2.8, 4 and 5 mm, and in 2xD and 3xD tool lengths



# MAXIMIZE EFFICIENCY: ONE SINGLE PASS, MULTI-LEAD THREADS MACHINING!



# **Thread Whirling**



Cutting-edge system for unparalleled productivity in screw manufacturing, such as dental implant and bone screws

# **Thread Whirling-ECO**

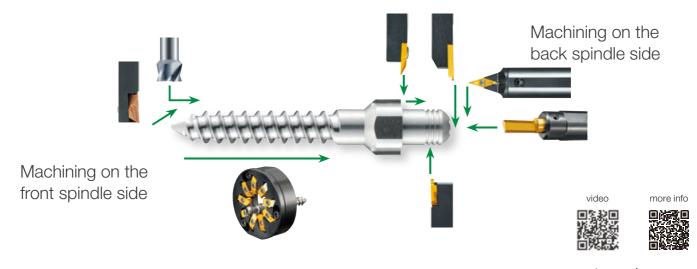
Same performance with an economical advantage

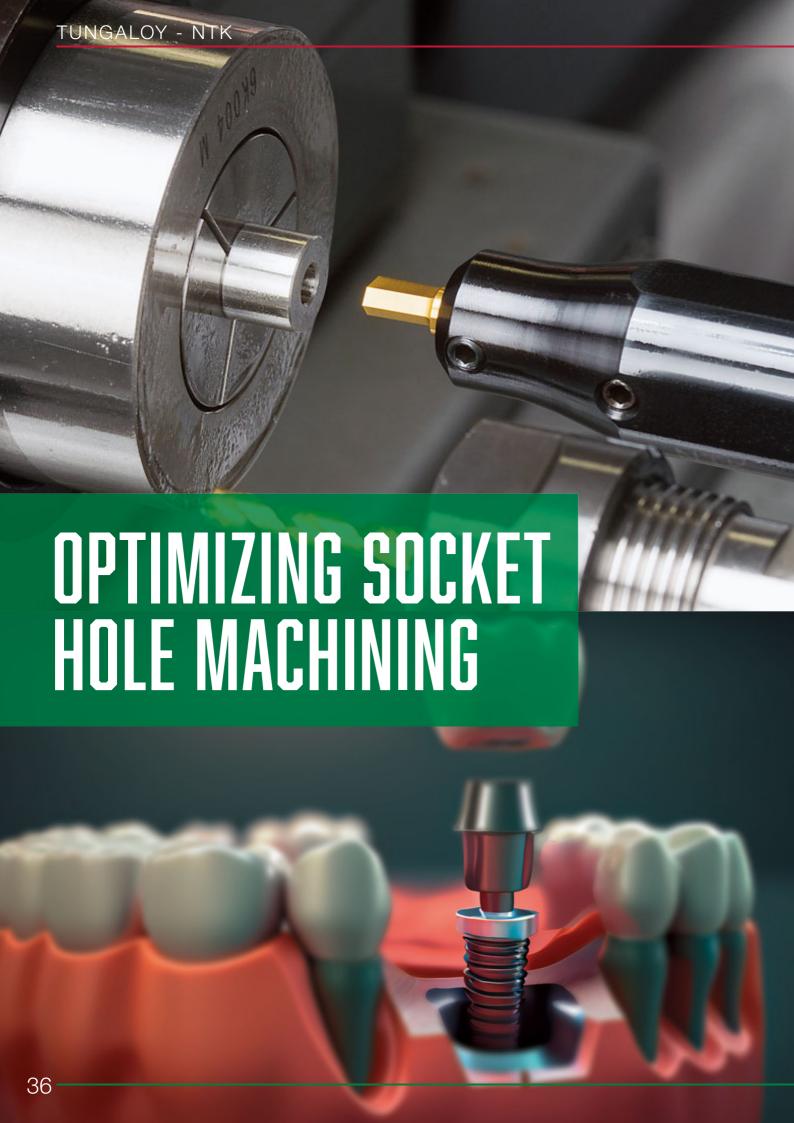






Tooling layout





# **SHAPER DUO**

Hexalobular (6-lobe)



T6-T30

Hexagon



HEX 1.0 - 8.0

Square



AF 2.0 - 8.0

### Ideal for a variety of applications







### Hexagon & Square socket process comparison

	Tool pressure	Cycle time	Flexibility	Tool cost	
Shaper Duo	A B		乃	A B	Less tool pressure, especially good for small diameter parts. One insert can machine a range of socket sizes
Broach	-	A A	-	-	You need a tool for each socket size

### Hexalobular (6-lobe) socket process comparison

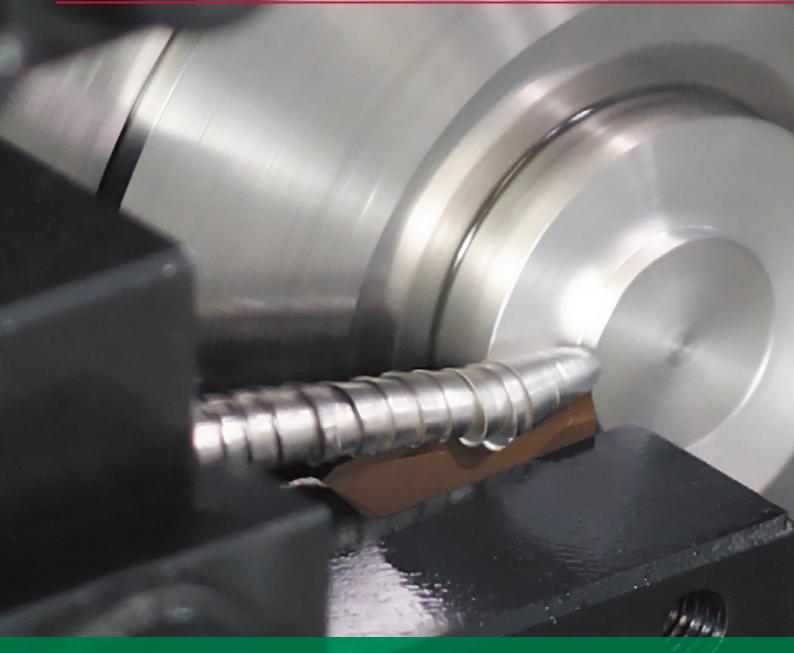
	Tool pres- sure	Cycle time	Tool Cost	High speed spindle	Program	
Shaper Duo	MB.		個	Not necessary	Simple	No need for a high speed spindle
Milling	d		-	Necessary	Complicated	Requires high speed spindle



Hexagon socket : AF 1.0 mm - 1.4 mm

For Abutment screws



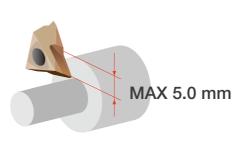


# EFFICIENT SINGLE-PASS TURNING WITH DEPTHS OF CUT UP TO 5.0 MM

Reduce Cycle Time, Minimize Insert Wear, and Extend Tool Life

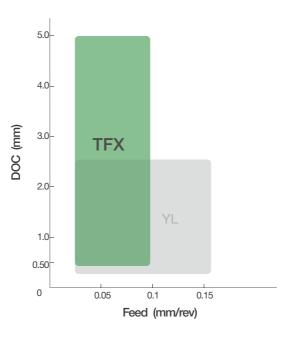
# **The Front Max**

Revolutionary Chipbreaker Design Delivers Superior Chip Control and Surface Finish





### APPLICATION RANGE







### **Specialized for**



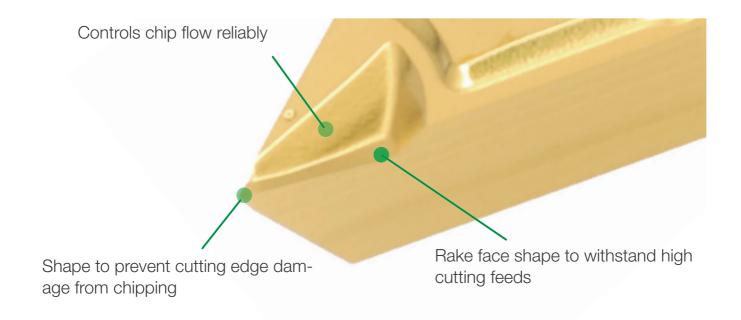
\* LFV is a registered trademark of Citizen Watch Co., Ltd.

# VIBRATION MACHINING: THE UNARGUABLY PREMIER CHIPBREAKER SOLUTION

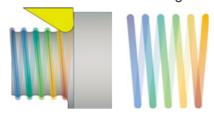
# **TMV-WP Chipbreaker**

Outstanding chipbreaker for vibration machining, ensuring long tool life and stable chip evacuation even in the most challenging scenarios

**TMV-WP insert, with build-in wiper, delivers superior surface finish** even at high feed rates, contributing to longer tool life by enabling increased feed.

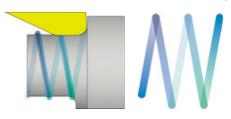


### Conventional Tool Path Length



Conventional feed: **0.05 mm/rev**Tool path length: **31.4 m** 

### TMV-WP Halves Your Tool-Path Length at High Feeds



TMV-WP feed: **0.10 mm/rev**Tool path length: **15.7 m** 

Faster cycle times thanks to higher feed rates

Wiper geometry preserves a fine surface finish

Higher feed = shorter tool-path length = longer tool life

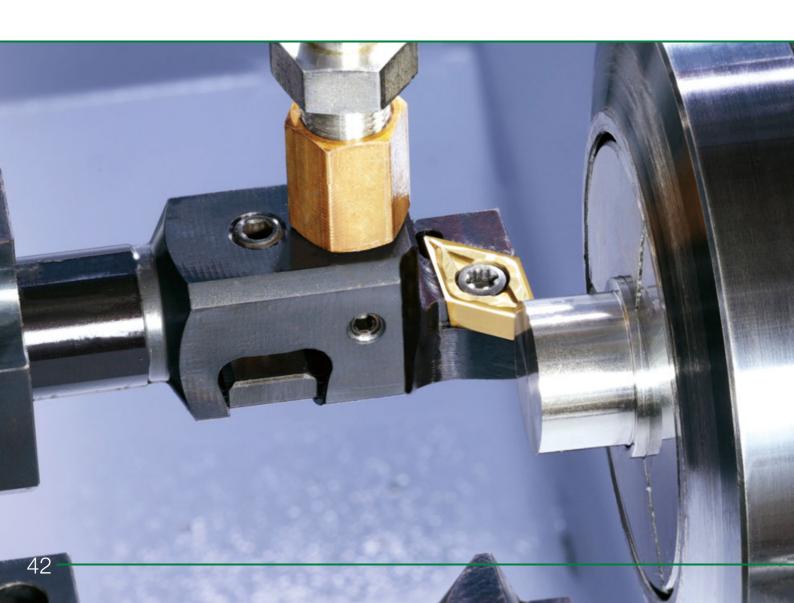
video





# SPECIAL HOLDER SERIES DESIGNED FOR PRECISE Y-AXIS CUTTING EDGE ADJUSTMENT

For machines without Y-2 Axis capabilities



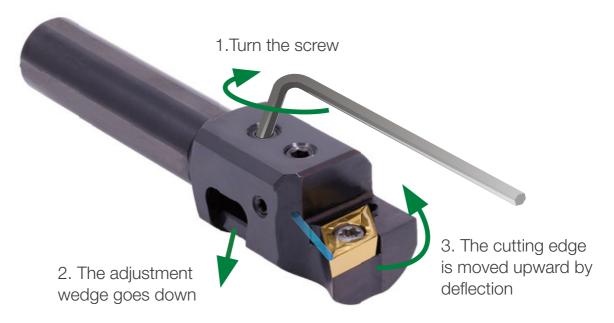
# **DS-ACH-OH toolholder series**

# Wedge mechanism adjusts centerline height of the cutting edge by turning a set screw with a wrench

Range of centerline adjustment: 0 - 0.2 mm

Height adjustment of the cutting edge is done by turning a screw and bending the tip of the holder with a wedge mechanism.

Patented holder design improves rigidity, compared to conventional holders, to eliminate vibration



The new toolholder series features an internal oil-through coolant system that delivers fluid directly to the cutting tip, improving chip evacuation and thermal control during turning operations.

Angle of rotation	Cutting edge height Increase
180°	0.05
360°	0.10
540°	0.20
720°	0.30

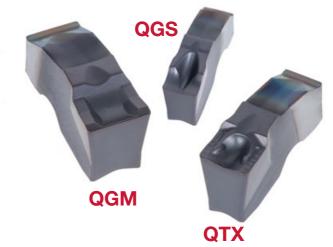


# ADDFCUT

Newly designed insert profile ensures unobstructed chip flow and consistent chip evacuation.

The insert is locked in three positions with the use of an insert stopper in the pocket. This design provides extremely rigid insert clamping.

**QGM**, **QGS** and **QTX** inserts **CW** = 2, 3, 4, 5, 6 and 8 mm **CDX Max** = 41 mm







# APPLICATIONS OF DEEP GROOVING AND PARTING-OFF

video



e-catalog



# UNIQUE 4-EDGED INSERT FOR SMALL INTERNAL GROOVING OPERATIONS

Stability and repeatability in small internal grooving operations with the unique insert clamping system



# ADDICUT

The innovative clamping system eliminates insert movement caused by cutting forces.

Through-coolant holder delivers coolant from the outlet located near the insert, promoting effective chip evacuation from the cutting area.

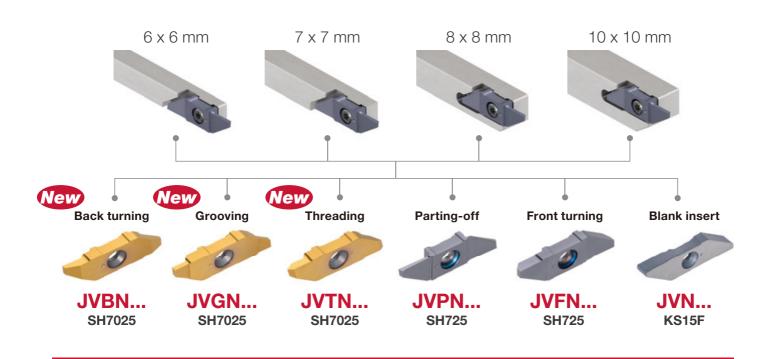
Neutral designed insert can be mounted on either right- or left-handed holder.





# DUOFCUT

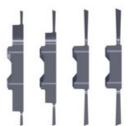
New flexible tool series with unique insert clamping system.
Ideal for machining small parts with 12 mm or smaller diameters.











Groove widths available from 0.5 to 1 mm





# TINYCUT

# Internal grooving and thread turning tool series for bores as small as ø5 mm

Tool body with through coolant technology. It offers unmatched precision and edge repeatability, thanks to its unique clamping system for rigid stability.

Featuring the latest PVD insert grade, **SH7025**, for superior surface quality and process security.





MGR Grooving



MGR Profiling (Full R)



MTR Threading





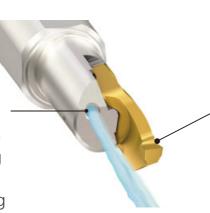


# FACEMCUT

Deep face grooving of up to 10 mm DAXN (minimum face grooving diameter) and up to 9 mm groove depth is possible

### Internal coolant system

Coolants are directed to the optimal position close to the cutting tip, allowing excellent chip evacuation during deep face grooving



### Effective chip redirector

Optimized geometry that effectively redirects chips out of the groove and to the side.

Eliminates bird nesting of chips during machining

Effectively removes chips out of the cutting area and eliminates bird nesting.

Extremely rigid insert clamping ensures tool stability during deep face grooving operations.

Sharp cutting edge, combined with **SH7025**, the latest PVD grade, provides long tool life and superior surface quality.







### TUNGCUT

New 3D chipbreaker inserts: **CBN-tipped** for profiling hardened steel parts, **PCD** for grooving and groove-turning non-ferrous metals.





WavyJoint technology ensures secure CBN tip bonding.

### **CBN STR type**

Profile insert with 3D chipbreaker that delivers excellent chip control during hard part turning. CW = 3 - 5 mm





### **PCD STX type**

PCD insert for grooving and turning non-ferrous metals, featuring a 3D chipbreaker and chip guiding design for reliable chip control. Available in right- and left-hand versions.

CW = 2 - 5 mm



Enhanced chatter resistance is achieved through optimized screw placement, which strengthens the insert clamping capability.

Larger pockets facilitate more effective and smooth chip evacuation.

Toolholder series featuring an internal coolant system ensure optimal performance.



### DGS\*S

Lower cutting force and superior sharpness

CW = 0.8 - 3 mm



### DTR\*S

Full radius type **CW** = 2 - 3 mm



### STV\*S

For profiling applications



S-CTIRS-H



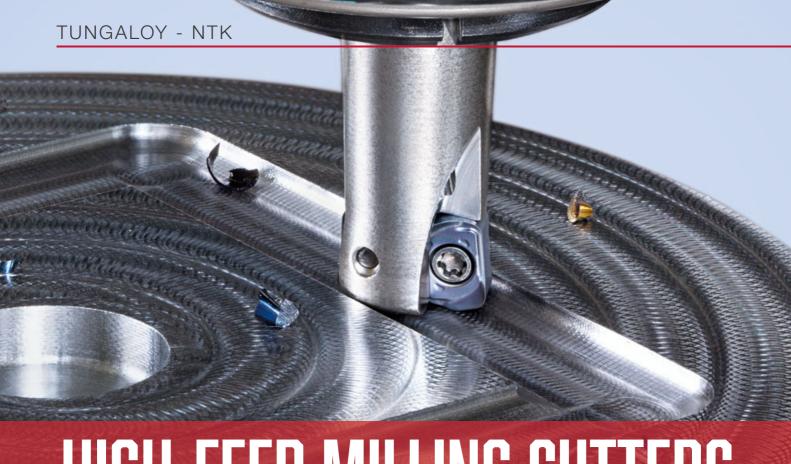
**□**\$\*\*\*



CTIR\*\*S

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# HIGH-FEED MILLING CUTTERS



Small diameter high-feed milling cutter for expanded application coverage, featuring cutter bodies as small as Ø8 mm

### **Cutter bodies:**

Shank type: **EXN02R...** (Short type) **EXN02R\*\*L** (Long type)

EXNUZR\*\*\*L (Long type

 $DCX = \emptyset 8 - \emptyset 25 \text{ mm}$ 





### LNMU02-MM

Double-sided, 4-edged insert APMX = 0.5 mm







# FOR MAXIMUM PERFORMANCE



The cutter's small entry angle ensures smooth material access, perfect for long reach applications

### **Cutter bodies:**

Bore type: **TXWX03** DCX =  $\emptyset 40 - \emptyset 80$  mm Shank type: **EXWX03** DCX =  $\emptyset 16 - \emptyset 40$  mm Modular type: **HXWX03** DCX =  $\emptyset 16 - \emptyset 40$  mm



### MM

For General purpose chipbreaker APMX = 1 mm



ML New

For low cutting forces chipbreaker APMX = 1 mm



MS New

For stainless steel chipbreaker APMX = 1 mm

















Extremely secure insert clamping, V shape design prevents insert movement during machining.





### **AV\*T18**

Max. depth of cut: 16.5 mm

### **Cutter bodies:**

Shank type:

### EPAV18

 $DC = \emptyset 25 - \emptyset 63 \text{ mm}$ Bore type:

### TPAV18

 $DC = \emptyset 40 - \emptyset 160 \text{ mm}$ 



### **AV\*T12**

Max. depth of cut: 11.5 mm

### **Cutter bodies:**

Shank type:

### EPAV12

 $DC = \emptyset 12 - \emptyset 32 \text{ mm}$ Modular type:

### HPAV12-M

 $DC = \emptyset 16 - \emptyset 40 \text{ mm}$ Bore type:

### TPAV12

 $DC = \emptyset 50 - \emptyset 63 \text{ mm}$ 



### **AVGT06**

Max. depth of cut: 6 mm

### **Cutter bodies:**

Shank type:

### EPAV06

 $DC = \emptyset 8 - \emptyset 32 \text{ mm}$ Modular type:

### HPAV06-M/S

 $DC = \varnothing 10 - \varnothing 16 \text{ mm}$ 

### Bore type:

### TPAV06

 $DC = \emptyset 40 \text{ mm}$ 



### **AVMT04**

Max. depth of cut: 4 mm

### **Cutter bodies:**

Shank type:

### EPAV04

 $DC = \emptyset6 - \emptyset16 \text{ mm}$ 

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### TUNGMEISTER

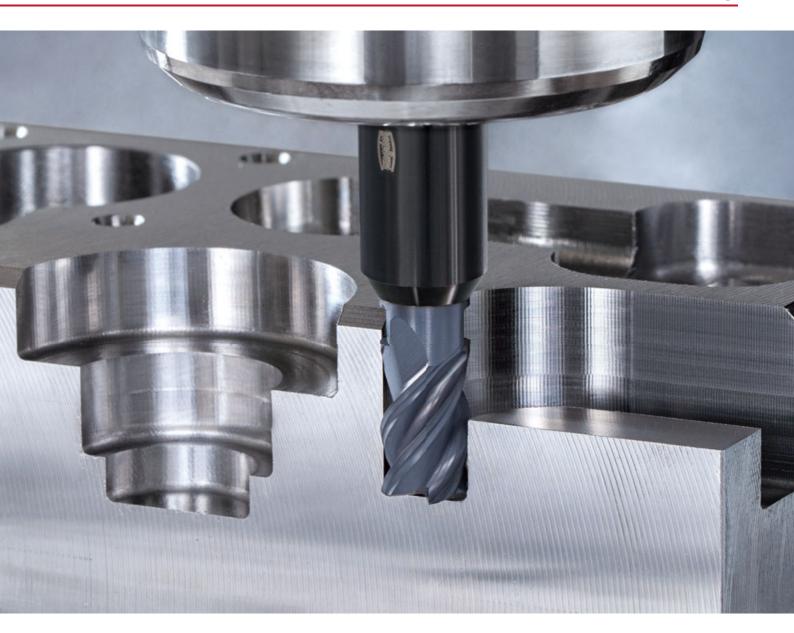


# MORE THAN 13,000 POSSIBLE COMBINATIONS

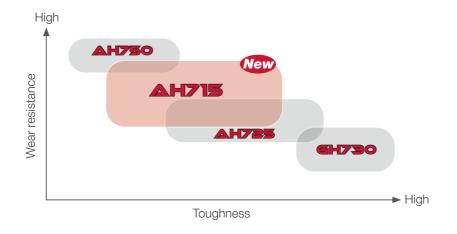
Easy and accurate head-holder coupling provides reduced tool change time and high accuracy of cutting point repeatability

Offers milling solutions for square shoulder milling, high feed milling, ball nose milling, chamfering, hole making, and slotting.

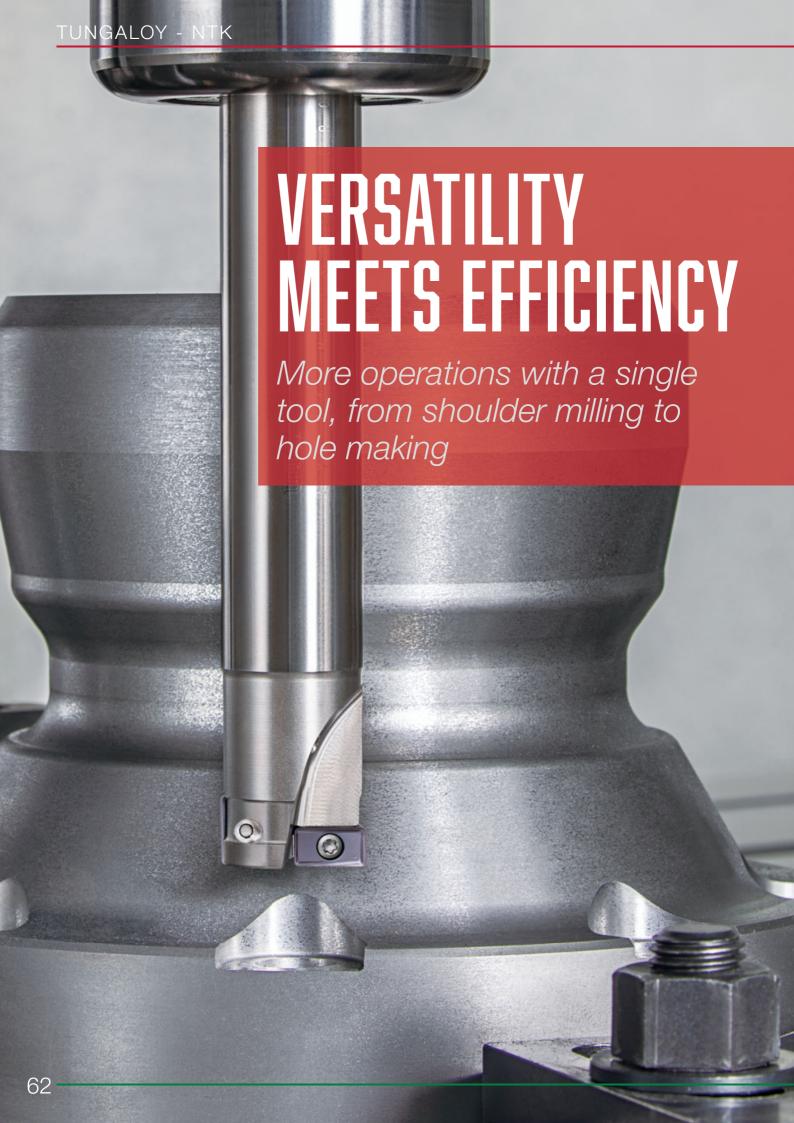
A flexible mix of heads and holders allows an optimum tool assembly in all end milling applications.



Boost performance with the latest **AH715** PVD grade, featuring improved tool life in a wide group of materials.









Innovative four-edged inserts provide ultimate machining flexibility and economy. All-round cutter with center cutting capability provides ultimate machining versatility

### **Applications capabilities**





























Face millina

millina

millina (with R)

(with R)

millina

Pocketing Ramping

Profiling

Plunging

enlarging

Drilling Counterboring

### **Cutter bodies:**

Shank type: **EVLX06/08/10/12/16/19...** (Short type)  $DC = \emptyset 12 - \emptyset 40 \text{ mm}$ 

**EVLX06/08/10/12/16/19\*\*L** (Long type) DC = Ø12 – Ø40 mm

Modular type: **HVLX06/08/10/12/16...** DC = Ø12 – Ø33 mm

### LX\*U-MM/AM

General-purpose chipbreaker

MM











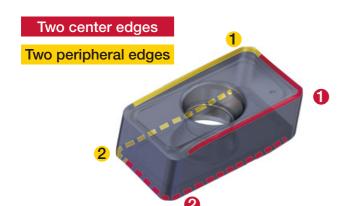






Non-ferrous machining chipbreaker

Tool dia. DC (mm)	ø12, ø13	ø16, ø17	ø20, ø21	ø25, ø26	ø32, ø33	ø40
APMX (mm)	5	7	9	11	14.5	18
Insert size	06	08	10	12	16	19



A single insert can be used either for center edge or peripheral edge and can be used twice in each position - four cutting edges for highest insert economy.











### TUNGTAP

Tungaloy taps feature high-speed steel with advanced treatments and coatings for longer life and better performance.

**Steam Tempered (HB060, HD070):** Reduces friction and prevents cold welding.

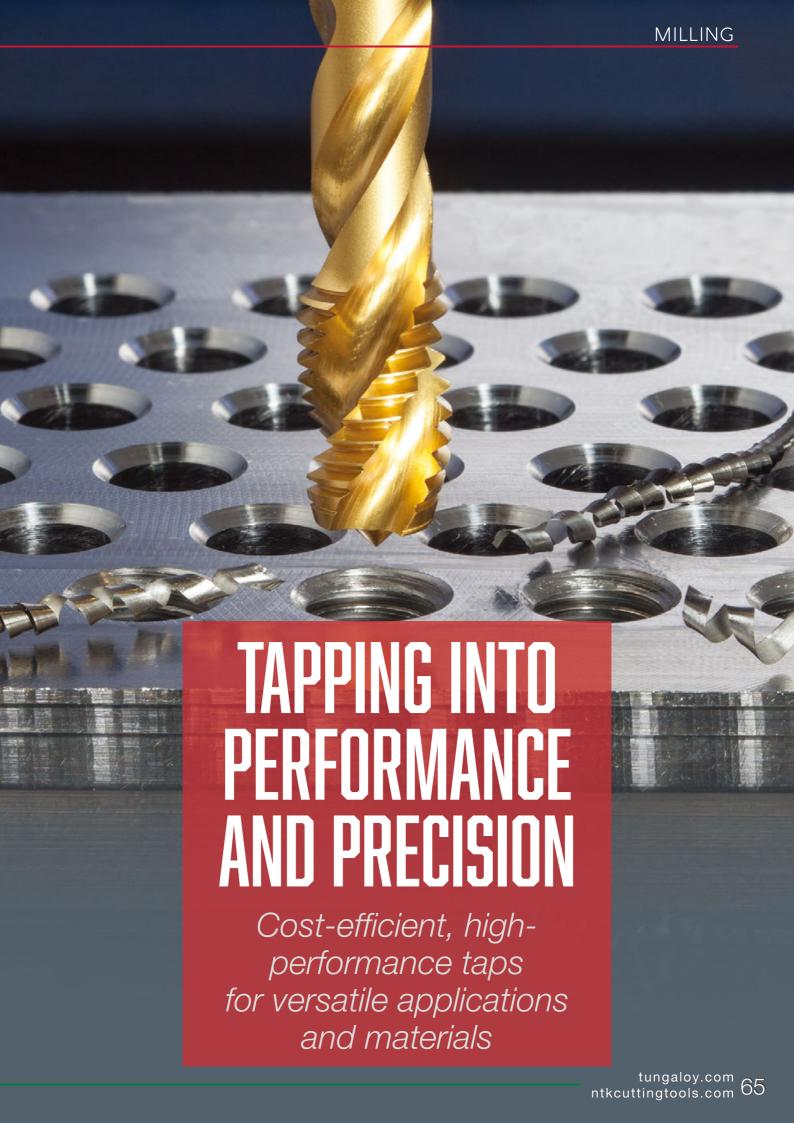
**Nitriding (NB060, NB070):** For abrasive materials like cast iron and high-silicon aluminum.

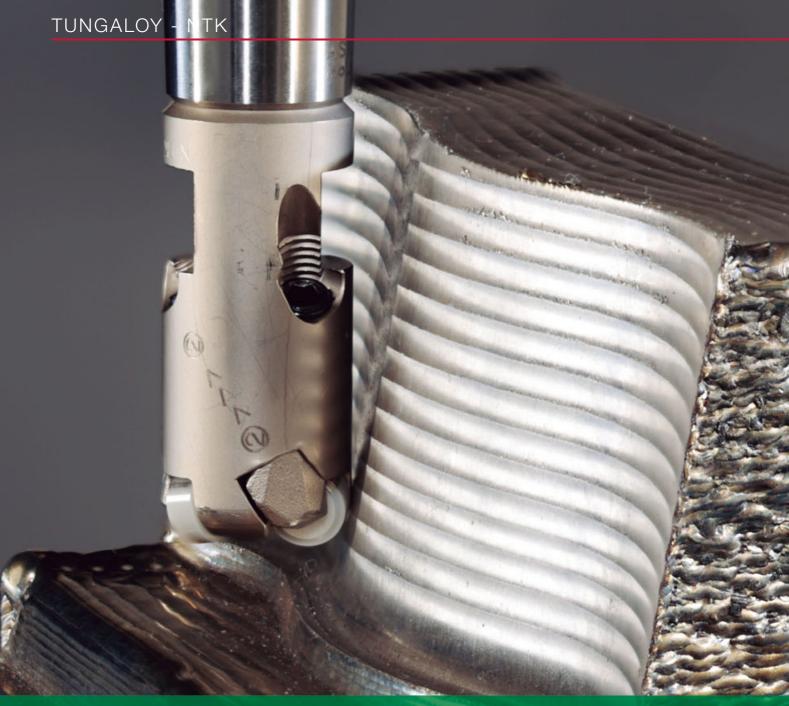
**TiN (PB060, PB070):** General-purpose golden coating, ~2,300 HV, heat resistant to 600°C.

**TiCN (GB060, GB070):** Tough coating for difficult steels, ~3,000 HV.

**TiAIN (AB060, AB070):** For high-speed, high-temp use; ~3,000 HV, resists up to 800°C.

**DLC (DB070):** Low-friction coating for non-ferrous materials.





# UNBEATABLE CERAMIC CUTTER: AS SMALL AS 016 MM FEATURING 3 INDEXABLE INSERTS



# **JRF CUTTER**

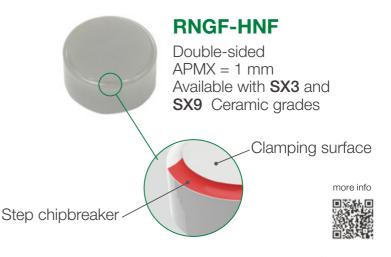
Enhanced clamping system prevents insert movements and ensures high stability during machining

Unique step chipbreaker: reduces flaking by lowering the cutting edge from the clamping surface of conventional tools (positive inserts)

### **Cutter bodies:**

Shank type: JRF...

DCX = Ø16, Ø20, Ø25 and Ø32 mm





# **CERAMATIC**

Productive Ceramic Endmills series achieves rough milling operations in nickel-based alloys up to 10 times faster than carbide tools

### RCE-H4 (SX9)

4 Flutes

DC = Ø8 - Ø12.7 mm APMX = 0.5 - 9.525 mm

### RCE-J6 (SX9)

6 Flutes

 $DC = \emptyset 8 - \emptyset 12.7 \text{ mm}$ APMX = 0.5 - 9.525 mm



# UNLEASHING PRODUCTIVITY AND EFFICIENCY, A REFERENT IN CERAMIC ENDMILLS





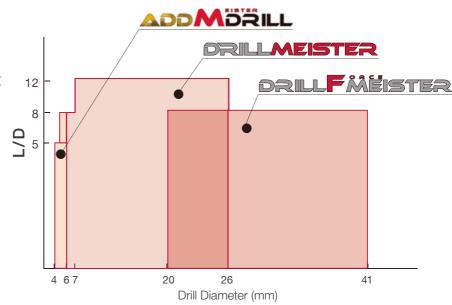
OUTSTANDING RANGE OF HEAD EXCHANGEABLE DRILLS

Exchangeable head drill systems for superior drilling performance and long tool life

Quick drill tip change for reduced machine downtime.

Tool inventory and management costs are significantly reduced as there is no need for regrinding.

Drill bodies are offered in a wide range of sizes and styles, allowing optimal tool assembly for secure and productive drilling.



### **ADDMÖÄILL**



DMP
Drill dia.:
ø4 - ø5.9 mm

General purpose drilling head ideal for various drilling applications



DMC Drill dia.: ø4 - ø5.9 mm

High precision drilling head with self-centering chisel edge



New DMF

Drill dia.: ø4 - ø5.9 mm

180° flat edges for counterboring and flat bottoms



e-catalog



### DRILLMEISTER



DMP Drill dia.: ø6 - ø25.9 mm

General purpose drilling head ideal for various drilling applications



DMC Drill dia.: ø6 - ø25.9 mm

High-precision head with double margin and self-centering edge



DMF Drill dia.: ø6 - ø25.9 mm

180° flat edges for counterboring and flat bottoms



DMH Drill dia.: ø6 - ø25.9 mm

General purpose head with enhanced cutting edge



**DMN** 

Drill dia.: ø6.8 - ø19.5 mm

Drill head with sharp edges for non-ferrous materials



**DMM New** Drill dia.: ø10 - ø16.7 mm

General purpose drilling head for Stainless Steel materials



e-catalog



### DRILLFÄËISTER



SMC

Drill dia.: ø20 - ø33 mm

High precision drilling head with self-centering chisel edge



SMP

Drill dia.: ø20 - ø41 mm

General purpose drilling head ideal for various drilling applications



**SMF** 

Drill dia.: ø20 - ø41 mm

For efficient drilling of flat-bottom holes



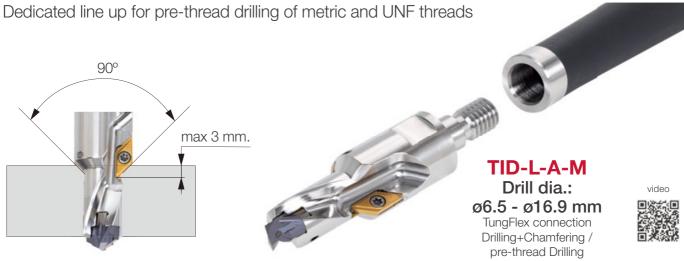
# ON THE EDGE OF STABLE ORILL EFFICIENCY

Modular drill series featuring superb stability and high-rigidity during drilling, even in setups with long tool overhangs. While minimizing machine downtime through their quick tool change capability





Stable chamfering capability with less chattering due to dedicate insert design for chamfering



INTRODUCING SPECIAL DRILLING TOOLS AND THEIR DRAWING SYSTEM

Discover Tungaloy's platform for creating simple diagrams instantly, anywhere. Explore the 'Drawing System for Special Drilling Tools'! Enter tool details to swiftly generate diagrams illustrating special drilling tools with chamfering or boring functions.

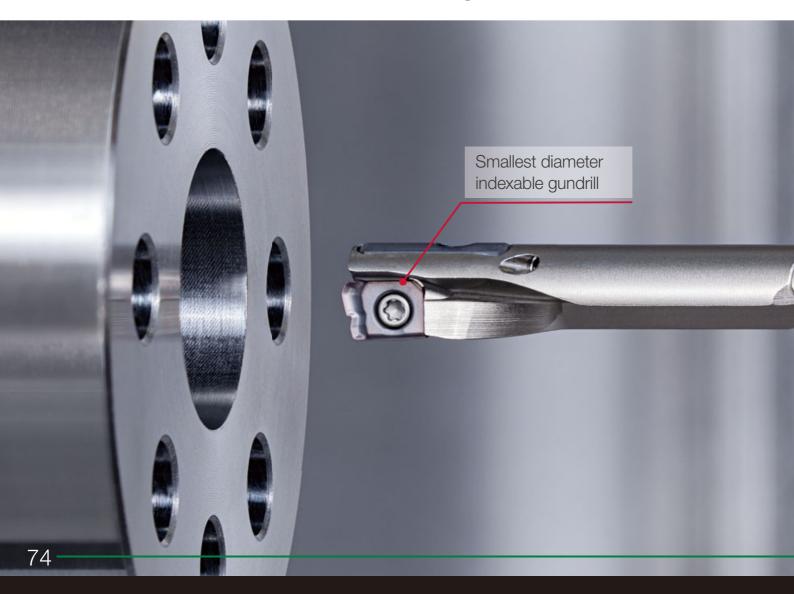




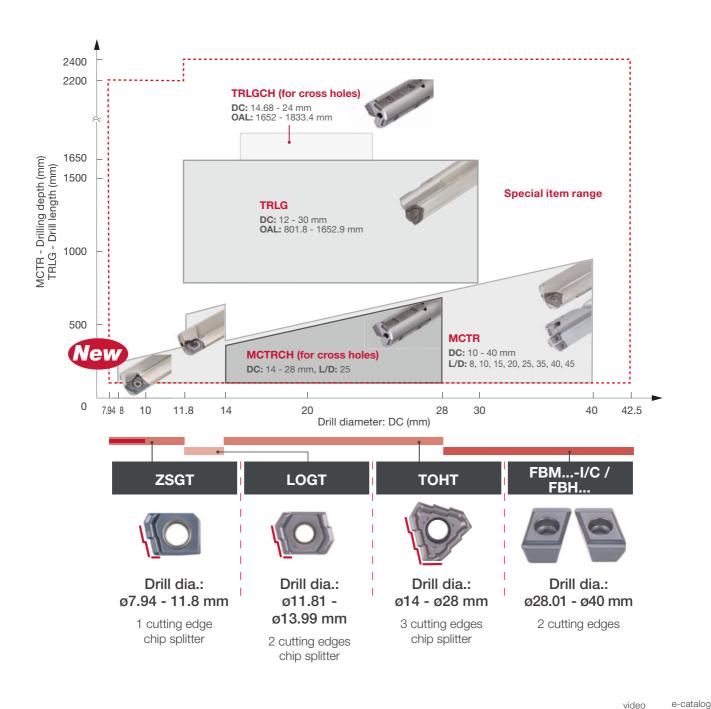
# DEEPTÖRILL

# THE SMALLEST AND DEEPEST HOLES WITH AN INDEXABLE GUNDRILL

Wide range of indexable deep drilling solutions to your machining needs



### Remarkable deep drilling solutions for gundrill machines, lathe and CNC machining centers to cover applications from 7.94 mm to 40 mm









Exchangeable head reamer for H7 hole accuracy in  $\emptyset 10 - 32 \text{ mm}$  and 1.5 xD - 8 xD

A quick-change twist lock mechanism allows for swift tool changes.

Increased productivity thanks to high speed machining.

Minimizes costs by avoiding the needs for regrinding and re-coating.

Eliminates unstable part quality and tool life due to inconsistent re-coating quality.



Tools

### **Head Geometries**



AS type
Tool dia.:
ø10 - ø32 mm
for blind holes applications



BL type
Tool dia.:
ø10 - ø32 mm
for through holes applications





# REAMER FOR FINISHING HOLE OPERATION

# Worldwide Network

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Head Office & Production Facilities in Japan

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**Products: Cutting Tools** 

### **Nagoya Plant**

**Products: Cutting Tools** 

### **Kyushu Plant**

Products: PCBN PCD Tools Deep Hole Drills

### Nirasaki Plant

Products: Cutting Tools
Friction Materials (TungFric)
Wear Resistant Tools
Civil Engineering Tools

### NTK

Head Office & Production Facilities in Japan

### NTK CUTTING TOOLS Co., Ltd.

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https://www.ntkcuttingtools.com/br/

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