



BIG DAISHOWA

PRODUCT GUIDE

VOL. 3





TOOLING SYSTEMS OVERVIEW

BIG-PLUS, BIG CAPTO, HSK, N/C Lathe, CK/CKB 6-7

TOOL HOLDERS

COLLET CHUCKS

MEGA CHUCK Series, MEGA MICRO CHUCK, MEGA NEW BABY CHUCK,
MEGA ER GRIP, MEGA E CHUCK 8-9

MILLING CHUCKS

NEW Hi-POWER MILLING CHUCK, MEGA DOUBLE POWER CHUCK,
MEGA PERFECT GRIP 10-11

HYDRAULIC CHUCKS 11

TAP HOLDERS

MEGA SYNCHRO TAPPING HOLDER 12

BASIC ARBORS

Shrink Fit Holder, End Mill Holder, Shell Mill Holder,
Screw-On Holder, Face Mill, Blank Bar,
BIG CAPTO Shank, CKB Shank, Pull Stud Bolts 13

ANGLE HEADS & COOLANT INDUCERS

AG, AGU, Hi-JET HOLDER 14

SPEED INCREASERS

AIR POWER SPINDLE, HIGH SPINDLE 15

TURNING TOOLS

Dual-Contact for MTC (Type S/F), N/C Lathe, SMART DAMPER Turning,
HYDRAULIC CHUCKS for Swiss Lathes, Basic Arbors 16-17

ANTI-VIBRATION HOLDERS

SMART DAMPER System 18

BORING TOOLS

KAISER Boring System Overview, CK Rough Boring,
CK Fine Boring, CK7 Large Dia. Boring, Pin Turning,
Boring Accessories, KAISER Boring App 19-23

CUTTING TOOLS

INDEXABLE END MILLS & FACE MILLS

FULLCUT MILL, SPEED FINISHER, SURFACE MILL 24

CHAMFER/RADIUS MILLS & BACK COUNTERBORING TOOLS

C-CUTTER MINI, R-CUTTER, C-CUTTER, C-CUTTER MICRO,
BF-CUTTER, CENTER BOY, CK CHAMFERING TOOL,
C-CUTTER BOY, C-CENTERING CUTTER 25-26

SPHINX CUTTING TOOLS

Drilling, Reaming and Milling 27

SPERONI TOOL PRESETTING, MEASURING & MANAGEMENT

ESSENTIA, MAGIS, FUTURA, FUTURA AUTOSHRINK, PRO SHRINK
Control Software, Tool Management, Accessories 28-29

UNILOCK WORKHOLDING

Round Chucks, Preamsembled Chucks, Clamping Knobs and Balls,
Pallets, 5-Axis Chain Clamping, Multi-Axis Systems, Stabilizer System 30

MEASURING INSTRUMENTS

BASE MASTER, TOOL MASTER, LATHE MASTER, ACCU CENTER,
3D MASTER RED, CENTERING TOOL, POINT MASTER,
Dial Indicator Stands, DYNA TEST, DYNA CONTACT, DYNA FORCE,
LEVEL MASTER, ATC ALIGNMENT TOOL 31-33

ACCESSORIES

TOOL ASSEMBLY DEVICES

TOOL PRO, KOMBI GRIP, ST LOCK, TOOLING MATE,
TORQUE FIT, COLLET EJECTOR 34

CLEANERS

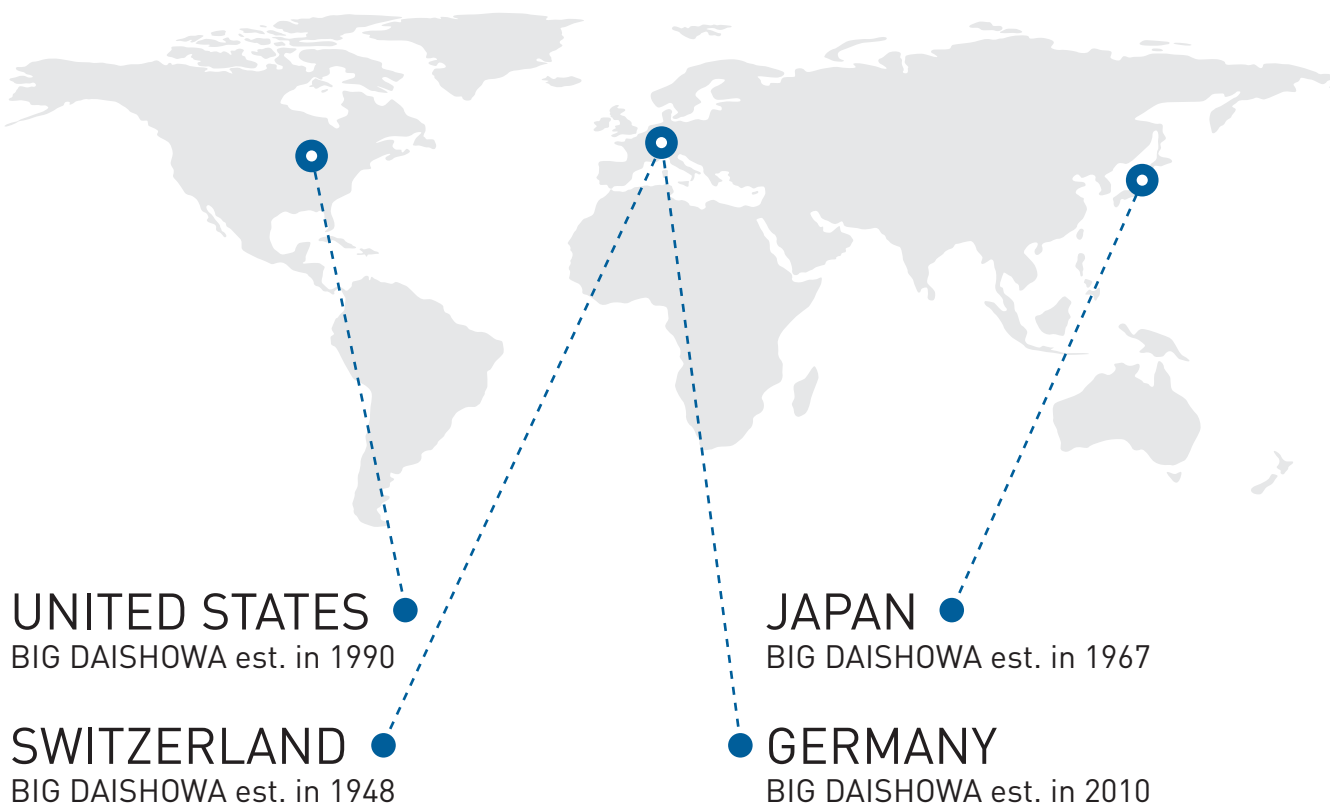
Tooling Cleaners, Spindle Cleaners, T-SLOT CLEAN,
CHIPFAN, CHIP BLOWER, BIG-PLUS CLEANER 35

HIGHER PERFORMANCE. GUARANTEED.

BIG DAISHOWA designs, manufactures and markets premium high-precision tooling systems and solutions for the automotive, military, aerospace, energy, and micro-technology industries. Our product portfolio comprises of more than 20,000 precision tools, which adhere to the highest quality standards. Our products are of the utmost quality—manufactured with materials and craftsmanship that enable superior performance. BIG DAISHOWA has grown into a well-recognized global manufacturer, with facilities in Japan, Switzerland, Germany and the USA.

We have exceptionally high standards for the products we represent. Not every shop requires extreme accuracy or total efficiency. But for those that do, there is no better partner than BIG DAISHOWA. If your challenge is to manufacture with greater responsibility and accuracy, and to find products and processes to improve the efficiency of your applications, we want to partner with you.

BIG DAISHOWA delivers the most accurate and efficient tooling solutions – guaranteed.



BIG DAISHOWA – USA



BIG DAISHOWA – JAPAN



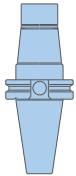
BIG DAISHOWA – SWITZERLAND



BIG DAISHOWA – GERMANY

TOTAL TOOLING SOLUTIONS

BIG DAISHOWA offers a wide range of premium products for the highest performance guaranteed.



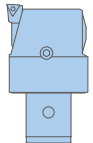
TOOL HOLDERS

- BIG-PLUS, HSK, BIG CAPTO
- Collet Chucks
- Milling Chucks
- Hydraulic Chucks
- Spindle Attachments



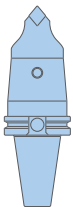
CUTTING TOOLS

- Indexable Cutting Tools
- Solid Carbide Cutting Tools
- High Speed Steel (HSS)



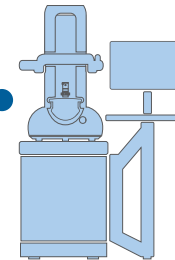
BORING TOOLS

- Rough Boring
- Fine Boring
- Large Dia. Boring
- Digital Boring
- Automatic Boring



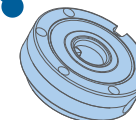
TURNING TOOLS

- CNC Lathe Tooling
- Muti-Axis Turning Tools
- Swiss Automatic Lathe Tooling



TOOL MEASURING & MANAGEMENT

- Tool Presetters
- Tool Management
- Measuring Devices



ZERO-POINT WORKHOLDING

- Round Chucks
- Preassembled Chucks
- Multi-Axis Systems
- Chain Clamping
- Stabilizer System

BIG-PLUS TOOLING SYSTEM

Simultaneous Taper & Flange Fit

BIG-PLUS surpasses all other spindle concepts while offering interchangeability with existing machines and tool holders.

- Improved surface finish & dimensional accuracy
- Extended tool life
- Prevention of fretting corrosion caused by heavy cutting
- Elimination of Z-axial movement at high speeds



The BIG-PLUS spindle system is based on the most current available standards in ASME B5.50, JIS B6339 and DIN 69871.



BIG-PLUS Spindle System Machine Builders

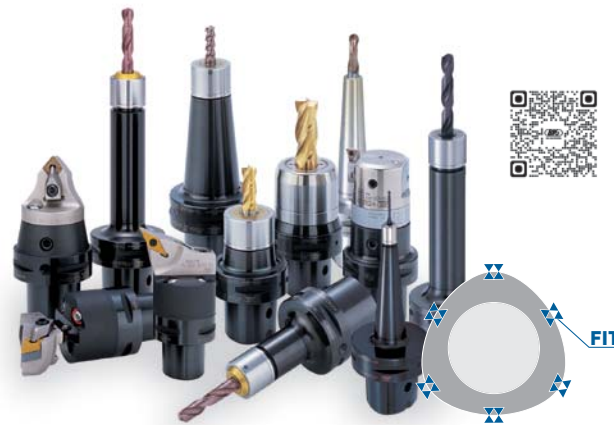
ACCURAY, **ADVANCED MACHINE**, ALEX-TECH, AMS, ANCA, AONO GIKEN, ARES, ASADA SEIKI, ASA TECH, AWEA, BERG SPANNTECHNIK, BFW, BOST, BROTHOR, CERI, CHEVALIER, CHUO-SEIKI, CITIZEN, COLGAR, D.S. TECHNOLOGIE, DAH LIH, DAITO, DAIYA SEIKI, DIXI, DMC, DMG MORI PRECISION BORING, DMG MORI SEIKI, DOOSAN, **DYNOMAX**, EGIN-HEINISCH, EGURO, EMCO, ENSHU, FADAL, ANUC, FEELER, FEMCO, FIRST, FIRST, **FISCHER**, FOREST-LINE, FPT, FRANZ KESSLER, GIDDINGS & LEWIS, GMN, GROB, **GTI**, HAIDE, HARDINGE, HARTFORD, HEYLIGENSTADT, HISION, HNK, HOMMA, HORKOS, HOWA, HSD, HST, HURCO, HWACHEON, IBAG, IBARMIA INNOVATEK, IKEGAI, INOUE KOSOKU KIKAI, JHENG TAI, JOBS, JOHNFORD, JTEKT MACHINE SYSTEMS, JTEKT, JUNGWOO M.S., JYOTI, KARATS, KASHIFUJI, KASWIN, KENTURN, KIRA, KITAMURA, KIWA, KMT, KOMATSU NTC, KONDIA, KOYO, KPTEC, LAZZATI, LMW, MAG, MAGNIX, MAKINO, MAKINO SEIKI, MANDELLI, MATSUURA, MAZAK, MCM, MECTRON, MILLTRONICS, MITSUI SEIKI, MOTOKUBO, MTE, MYL, N.S.S., NACHI, NAKAMURA, NEWAY, NICOLAS CORREA, NIDEC MACHINE TOOL, NIDEC OKK, NIIGATA, NIPPON BEARING, NISHIJIMAX, NISSIN-MFG, NOMURA, **NORTHLAND TOOL**, NSK, NUMEN, O-M, OBATAKE, OHTORI, OKUMA, OMLAT, OMY, OVERMACH, PAMA, **PDS**, PIETRO CARNAGHI, PMC, QUASER, REIDEN, ROKU ROKU, ROYAL, RS TEC, SAJO, SEMA, SEMPUCO, **SETCO**, SHAN RONG, SHIBAURA, SHODA, SHW, SKF USA, SKG, SKODA, SKYNC, SMEC, SNK, SODICK, SORALUCE, SPINDER, SPINTEC, SPINTRUE, **SPS**, STARRAGHECKERT, STUDER, SUFENG, SUGINO, SUNWOO, **SUPERIOR SPINDLE SERVICE**, SWIFT, TAJMAC-ZPS, TAKAMAZ KIKAI, KOUGYOU, TAKISAWA, TANABE, THETA, TONGTAI, TOS KURIM, TOS VARNSDORF, TOYO SEIKI, TSUDAKOMA, TSUGAMI, UGINT, UTSUNOMIYA, VICTOR TAICHUNG, VTEC, YU CHENG, WALDRICH COBURG, WELE, WIA, YAMASAKI GIKEN, YAMASHINA SEIKI, YASDA, YASUNAGA, YCM, YU HUNG, ZAYER

[As of April 2024]

BIG CAPTO TOOLING SYSTEM, ISO 26623-1

Polygon tapered dual-contact system (1:20 taper) where the face and taper of a machine spindle and tool holder are in contact. This modular tooling system strengthens the performance of milling and turning operations for MTCs.

The trademark Capto is licensed from Sandvik Coromant.



Variety

A wide variety of rotary tool holders such as the high-precision MEGA CHUCK series are available, as well as a modular turning tool system for MTCs.

Excellent Repeatability

The perfect fit of the polygon taper to drive spindle rotation ensures high repeatability.

Excellent Runout Accuracy

The combination of a self-centering 1:20 taper and the long taper edge ensures stable runout accuracy.



HSK TOOLING SYSTEM

Dual-contact system featuring a 1:10 taper in accordance to ISO & DIN standards. Since HSK is a hollow taper shank, the material plays a critical role for optimum performance. We use carefully selected high-grade alloy steels, and all critical features are finished after heat treatment.



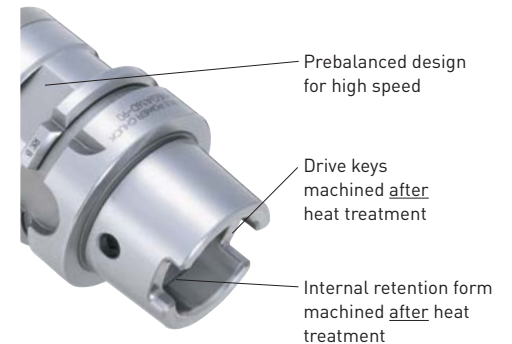
A Variety of HSK Types and Sizes

Form A: 25/32/40/50/63/80/100/125

Form E: 25/32/40/50

Form F: 63/80

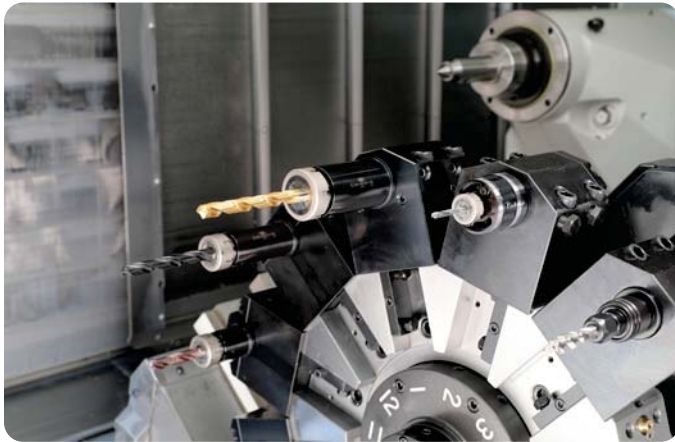
Form T: 50/63/100



N/C LATHE TOOLING SYSTEM

Improving The Efficiency of NC Lathes and Supporting Productivity Through Reliable Technology

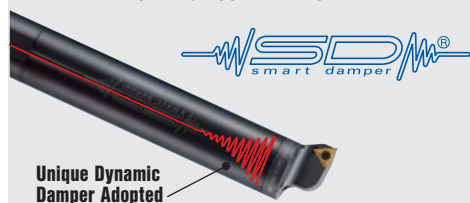
BIG DAISHOWA's N/C Lathe Tooling series integrates high-precision holders and damping technologies to optimize turning, tapping, and centering tasks. Featuring innovations like the MEGA ER GRIP for repeatable accuracy and the SMART DAMPER BORING BAR for vibration control, these solutions support increased tool life, reduced cycle times, and improved surface finishes.



A Wide Range of Tools Engineered to Enhance Lathe Operations and Maximize Efficiency



SMART DAMPER BORING BAR INTERNAL TURNING TOOL WITH BUILT-IN DAMPER



CK/CKB TOOLING SYSTEM

Based on a cylindrical connection with radial locking screw, the world-famous modular precision tool system by KAISER has continuously been improved over the years, and has adapted to customer's needs and the increases in machine tool performance. Compatibility to existing tools has always been a requirement for newer designs. This means that all KAISER connections are almost 100% compatible, and all the components are in stock.

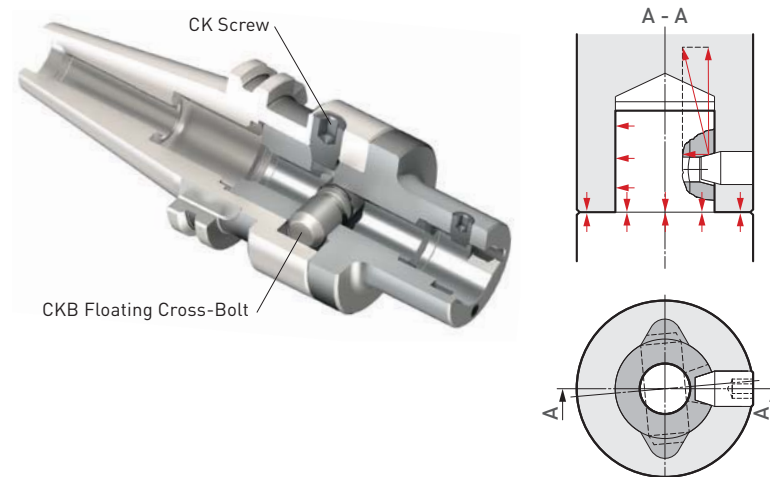


CV/BCV BT/BBT HSK BIG CAPTO

Highly Efficient and Easy to Handle

The modular components are clamped with the lateral locking screw (CK-screw). The floating cross bolt is automatically centered in the trapezoid-shaped recesses in the mating part and ensures an absolutely uniform distribution of the torque forces.

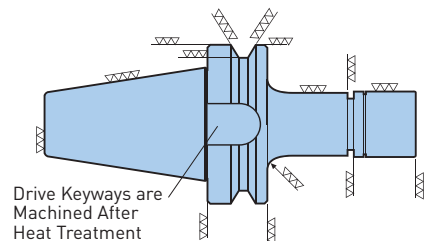
- Simple, efficient operation — no special equipment or tools needed
- Maximum rigidity due to high preloading forces and large contact surfaces
- Precise cutting edge location even when using several adapters
- High interchange accuracy, maximum radial change error is .0001"



MEGA[®] CHUCK SERIES



Wide variety of collets and chuck bodies to cover all high-speed ultra-precision machining applications.

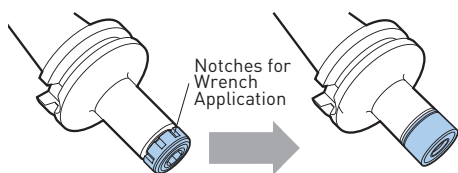


Precision Ground and Balanced for High Speed Machining

MEGA CHUCKS are micro-mirror finished on all surfaces to ensure perfect concentricity for high-speed machining. The MEGA CHUCKS are then balanced with a high-precision dynamic balancing machine.

Notch-Free MEGA NUT Design Prevents Vibration & Reduces Noise

Vibration at high speeds is eliminated with the use of notch-free nuts, which offer superior balance and concentricity. This ideal nut design not only reduces whistling noise and splattering coolant, but also ensures increased strength of the nut itself.



BCV BBT HSK BIG CAPTO



MEGA MICRO CHUCK[®]



Clamping Range: ϕ .018"-.317"

For micro drill & end mill applications.

Super slim design with ϕ .394" nut prevents interference with workpieces and jigs.

Super slim tapered design adds rigidity during micro end milling.

MEGA MICRO SEALED & JET COOLANT NUT

For MEGA MICRO 6S & 8S.

Unique design increases sealing performance with higher coolant pressure to create a perfect seal.



World's Smallest Clamping Intervals



MEGA MICRO COLLET

Wide coverage for small shanks is available with clamping intervals of ϕ .004" (ϕ .1mm).

Compact in size, but excellent clamping force for small precision applications.

WRENCHES



The MEGA WRENCH has a uniquely designed one-way clutch system with a roller bearing and ratchet function that is capable of safely and evenly applying force on the entire nut periphery.

AVAILABLE WITH
DIGITAL READOUT



MEGA NEW BABY CHUCK[®]



Clamping Range: ϕ .010"-1.000"

For drills, reamers, taps and finishing end mills.

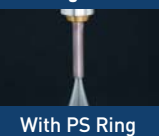
World's highest precision & multi-purpose collet chuck system is recognized by the market for its high-speed application and guaranteed 1 micron runout.

Two-Way Coolant Sealed Collet Nut MEGA PERFECT SEAL

Unique design increases sealing performance with higher coolant pressure. Remove the PS Ring to supply coolant to the cutting tool periphery.

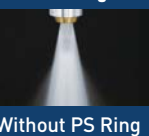


Through Tools



With PS Ring

Jet Through



Without PS Ring

MAX COOLANT
PRESSURE
**1,000
PSI**

High-Precision Collet, Close to Submicron



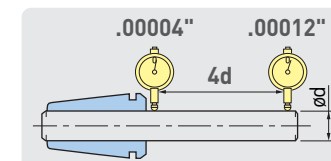
NEW BABY COLLET

The world's highest precision collet was developed based on BIG's long experience and know-how, and each collet is inspected twice to guarantee the maximum runout tolerance permitted.



All BIG Collets are AA Grade and inspected twice for accuracy

Guaranteed Max Runout



MEGA ER[®] GRIP



**MAX
35,000
RPM**

MEGA ER NUT

A notch-free nut prevents vibration and noise. Steel balls in the thrust bearing are retained by a mechanism inside the nut designed for high-speed operation.

MEGA NUT is the recommended nut to achieve high accuracy and clamping force.

CLAMPING RANGE: ϕ .075"-.787"

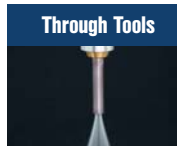
For drills, reamers, taps and finishing end mills.

The total precision of our collet, nut and body when used together shatter the common standard of ER collet chucks. Incredibly low runout will provide dramatic payback by improving machining capability & reducing production costs.



MEGA ER PERFECT SEAL

For two-way coolant supply.



Through Tools



Jet Through



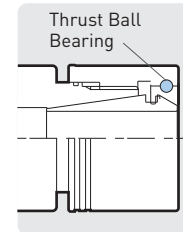
MEGA ER SOLID NUT

Slot-free outer diameter increases rigidity of the nut.



ER NUT

Basic nut with surface treatment for friction reduction.



Thrust Ball Bearing

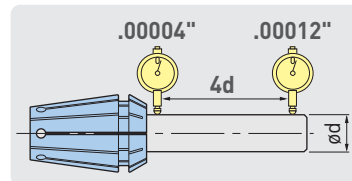
Best Runout Accuracy in The World



ERC COLLET

Each ERC collet is inspected twice (0° and 180°) at four times diameter to guarantee the runout accuracy.

Guaranteed Max Runout

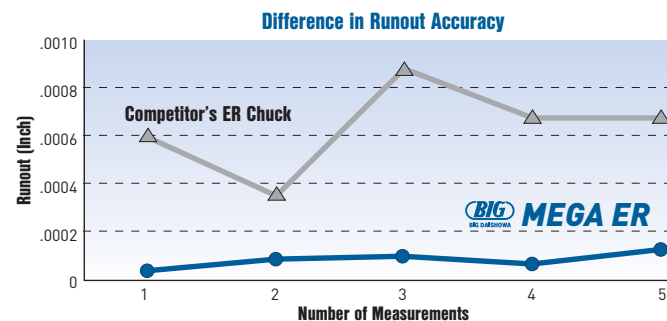
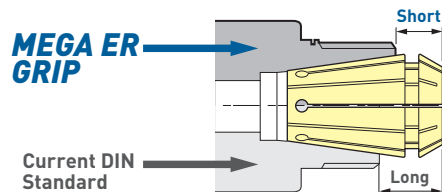


**1 μ m
AT COLLET NOSE**
3 μ m at end of test bar

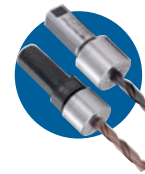
All BIG Collets are AA Grade and inspected twice for accuracy

High Rigidity Body

By increasing the contact length of the internal taper of chuck bodies, the undesired overhang of the collet is reduced. This modification of the current DIN standard improves 3 of the most important requirements a collet chuck: rigidity, runout accuracy & clamping force.



High-precision runout accuracy less than .00012" (3 μ m) at 4xD improves the workpiece surface finish and extends tool life. Repeatability has less than .00006" (1.5 μ m) of variance.



Also available in N/C lathe type. See pg. 17.

MEGA E CHUCK[®]



**MAX
40,000
RPM**

Clamping Range: ϕ .125"-.500"

Exclusively for high-speed finish end milling.

The advanced tapered body technology enhances rigidity to prevent chatter and deflection with precision.

MEGA E PERFECT SEAL

Optional sealed collet nut for coolant through tools.

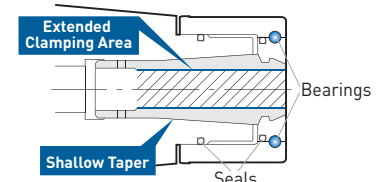
Remove the internal PS Ring to supply coolant to the cutting tool periphery.

However, by using the standard MEGA E NUT, coolant can still be directed to the cutting tool through slits in the collet, as seen above.



Slit-Through Coolant with Standard MEGA E NUT

Powerful Clamping Force



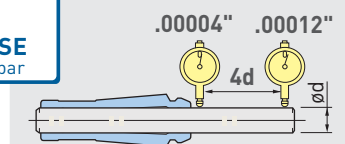
MEGA E COLLET

Exact sizes, shallow taper and extended clamping length enhances the clamping and self-centering forces for stable performance.

**1 μ m
AT COLLET NOSE**
3 μ m at end of test bar

All BIG Collets are AA Grade and inspected twice for accuracy

Guaranteed Max Runout



NEW HI-POWER MILLING CHUCK



Clamping Range: ϕ .500"-1.500" (12-42mm)

For heavy-duty end milling.

The thick wall body and high gripping force ensures high rigidity and stable performance. Fine and narrow slits in the body make the clamping part deform properly to ensure even and strong gripping force and stable runout. Now available in BIG-PLUS as standard.

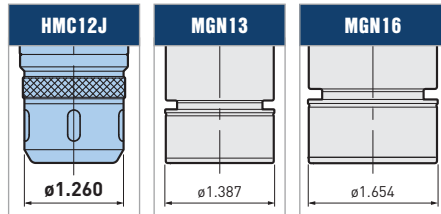
See PJC collets on pg. 11 for reduction and coolant delivery options.

Powerful Clamping for Heavy Cutting



HMCJ TYPE

Clamping Range:
Beginning at
 ϕ .500" (ϕ 12mm)

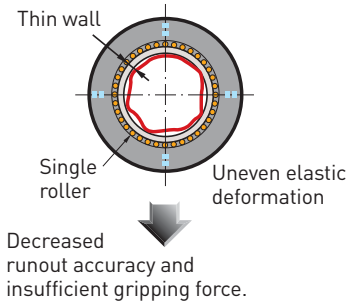


Jet Through



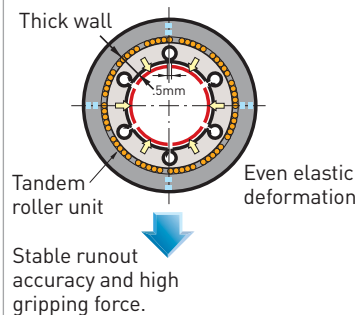
Also available in
 ϕ 32mm straight
shank type.

Conventional Milling Chucks



No escape route for oil film which causes processing failure. Remaining oil film reduces gripping power and may cause slip.

BIG HMC



The narrow slit maintains an escape route for any oil film.

MEGA DOUBLE POWER CHUCK®

**Clamping Range:
 ϕ .500"-1.500" (12-50mm)**

For heavy-duty end milling.

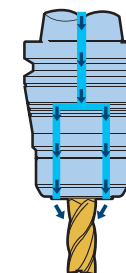
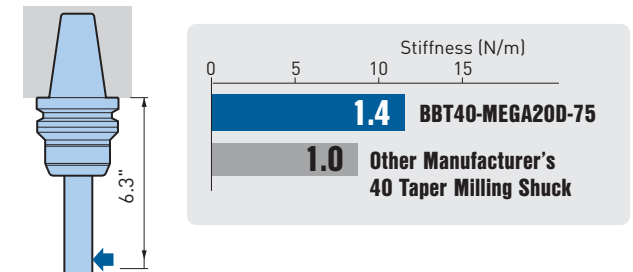
Complete contact of nut and body achieves high rigidity, close to that of an integral tool to ensure heavy cutting without chatter. Notch-free nut makes high speeds possible.

MAX
30,000
RPM



Powerful Clamping Force

Deflection test to compare with other manufacturer's milling chuck proves that the MEGA DOUBLE POWER CHUCK has achieved 1.4 times higher rigidity.

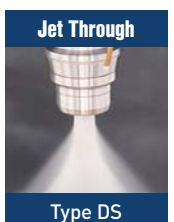


Secure Coolant Supply

Designed to delivered the most effective coolant supply.

Collets available for reduction and more directed coolant delivery. See pg. 11.

Coolant is reliably directed to cutting tool periphery from chuck nose.



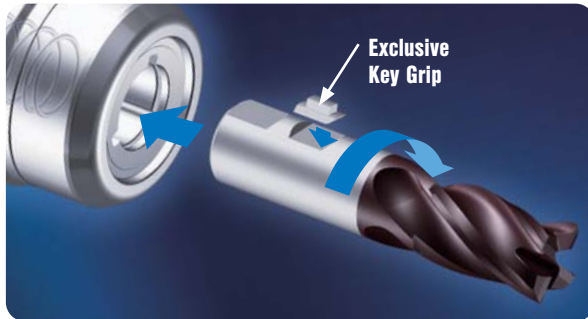
MEGA Perfect GRIP®



Clamping Range: ϕ .750"-1.250"

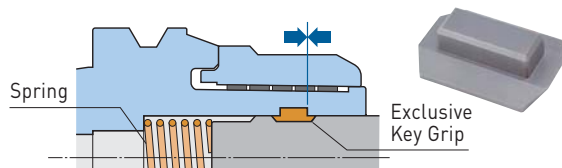
For heavy-duty end milling.

High-performance no-slip, anti-pullout milling chuck for use with standard Weldon flat milling cutters. MEGA PERFECT GRIP combines the cutting performance of heavy-duty milling chucks with security against pullout of solid side lock tool holders. High pressure and high volume, jet-through coolant is a standard feature providing an ideal solution for milling Heat Resistant Super Alloys (HRSA) such as titanium or inconel.



Non-Pullout Mechanism

The Key Grip engages in the groove of the chuck body to ensure no tool pullout and also maintains contact with the stopper pin to prevent slip under high torque.



HYDRAULIC CHUCK



Available in ϕ 4-20mm straight shank type.

High Precision Runout Accuracy Less Than .00012" (3 μ m) at 4xD

Achieve superior workpiece surface finish and longer tool life with high-precision runout accuracy of less than .00012" (3 μ m) at 4xD. Our cutting-edge technology ensures exceptional repeatability of less than .00006" (1.5 μ m).

Clamping Range: ϕ .250"-1.250" (ϕ 3-32mm)

For machining processes that demand exceptional accuracy and surface finish, our hydraulic chuck is the ideal choice. Whether you're using drills, reamers, ball mills, end mills, diamond reamers or grinding tools, our holder ensures outstanding performance.

JET THROUGH TYPE



Available in HSK-A63.

Clamping Range: ϕ .250"-.500" (ϕ 4-32mm)

Three coolant holes directed precisely to the cutting edges increase tool life and improve surface finishes.

SUPER SLIM TYPE



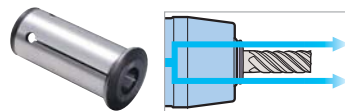
MAX
45,000
RPM

Available in HSK-E25/32/40 for ϕ 3mm shanks.

Clamping Range: ϕ .125"-.500" (ϕ 3-12mm)

Slim design is perfect for 5-axis machining, as it eliminates interference and enables smooth and efficient operation.

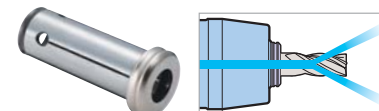
REDUCTION COLLETS



PJC

Clamping Range: ϕ .250"-1.000" ϕ 3-32mm

For coolant to cutting tool periphery in hydraulic and milling chucks.



PSC

Clamping Range: ϕ .250"-1.000" ϕ 3-25mm

For coolant-through tools in hydraulic chucks.



STRAIGHT COLLET

Clamping Range: ϕ .250"-1.000" ϕ 6-40mm

Reduction sleeve for smaller diameter cutters in milling chucks.

MEGA SYNCHRO[®] Tapping Holder

BCV

BBT

HSK

BIG CAPTO

CKB



MGT 6-MGT 20

Tapping Range: ANSI: No.0-NPT1", JIS/DIN/ISO: M1-M36

54 bodies and 276 tap holders available to improve thread quality and tool life during rigid tapping. Reduces thrust loads caused by synchronization errors up to 90%. Super slim nuts and varied length tap holders provide optimal access to confined areas which eliminates the need for special length taps.



Also available in straight shank & N/C lathe type. See pg. 17.



MGT 3

Tapping Range: ANSI: No.0-No.6, JIS/DIN/ISO: M1-M3



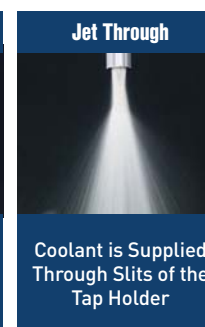
MGT 36

Tapping Range: ANSI: AU13/16-AU1-1/2, JIS/DIN/ISO: M20-M36



Coolant-Through Center Capability for All Models

Coolant is supplied through the tool and to the tool periphery simultaneously.

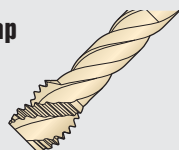


Secure Drive

The body and tap holder are fixed with a drive key in the rotation direction as well as the square of the tap.



Load To Tap

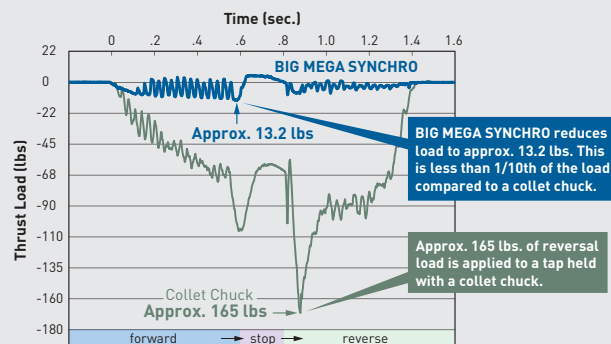


SPIRAL TAP

AU:1/4-20, N=1,000 RPM

Spiral grooves on spiral tap cause loading in the reverse direction, similar to an end mill.

- Measured by Kistler Dynamometer



MILLING HOLDERS



SHRINK FIT HOLDER
Clamping Range: 4-20mm

JET THROUGH TYPE
Clamping Range: ϕ .250"-1.250"
Gage Length: 3.500"-6.500"

BCV BBT HSK BIG CAPTO



SLIM TYPE
Clamping Range: 6-12mm
JET THROUGH TYPE
Clamping Range: ϕ .236"-.472"



END MILL HOLDER
Clamping Range: ϕ .250"-2.500" (6-50mm)
Gage Length: 3.000"-8.000"

BCV BBT HSK BIG CAPTO



SHELL MILL HOLDER
Pilot Range: ϕ .750"-2.500"
Gage Length: 2.000"-12.000"

BCV BBT HSK BIG CAPTO



Available in high rigidity type
ASME B5.50-2015.



SCREW-ON HOLDER
Connection Sizes: M8, M10, M12, and M16

BCV BBT HSK



**SMART DAMPER
FACE MILL**
Arbor Type

BBT



FACE MILL
Arbor Type A / B / C

BCV BBT



BLANK BAR
Body Size: ϕ 2.500"-6.000"
Gage Length: 6.000"-8.000"

BCV BBT

MODULAR HOLDERS



BIG CAPTO SHANK
BCV40: C5/6
BCV50: C5/6/8
BBT40: C3/4/5/6
BBT50: C3/4/5/6/8

The trademark Capto is licensed from Sandvik Coromant.



KAISER CKB SHANK
For entire modular system overview, see pg. 19.

PULL STUD BOLTS



Tensile strength is improved by utilizing tool steel (H13) or die steel. Strong centrifugal forces can cause tool holders to be pulled out of the machine spindle at high speeds, but our high tensile strength retention knobs provide essential protection against this. Ensure optimal performance and safety with our top-quality pull stud bolts.

ANGLE HEAD

BCV BBT HSK



Innovative Sealing Method

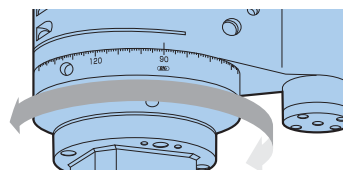
The advanced non-contact sealing method prevents coolant and particle contamination better than any other sealing method.



Innovative Seals

Cutter Head Adjustable 360°

All cutter heads are adjustable a full 360°. Reference faces are provided on both sides for easy setting of cutter direction.



Wide range of compact and rigid heads, from fixed 90° milling chuck types to universal angle types, suitable for all types of machining applications to eliminate multiple setups.

A Variety of Compact and Rigid Heads Suitable for All Types of Machining Applications

AG90 NBS TYPE

ø.010"-.787"
High-precision collet chuck system



AG90 TWIN HEAD

ø.059"-.394"



AG90 LONG TYPE

ø.010"-.787"



AGU UNIVERSAL TYPE

ø.098"-.787"
Angle adjustment by 1° increments



AGU30 TYPE

ø.098"-.787"
30° limited version



AG90 HMC TYPE

ø.250"-1.250" (ø32mm)
high-power design



AG90 COMPACT TYPE

ø.098"-.512"
For drilling/tapping



AG45 NBS TYPE

ø.060"-.512"
45° spindle angle



AG90 BUILD-UP TYPE

Interchangeable adapter system



Also Available in Center Through Type
TAG90 HMC TYPE
TAG90 BUILD-UP TYPE



AG90 SLENDER DRIVE

ø.118"-.236"
Min. ø1.18" bore



Special Versions Available

HI-JET HOLDER

MAX COOLANT PRESSURE
284
PSI

MAX
10,000
RPM



Coolant inducer designed with the bearings in a separate housing from the coolant. This eliminates coolant leakage into the bearings and wear damage to the body, extending the life of the tool.

Four Types of HI-JET HOLDERS



NEW BABY CHUCK



TG Collet Chuck

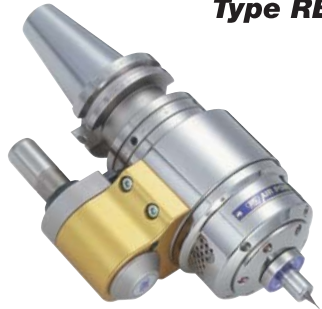


Side Lock



CKB Shank

AIR POWER SPINDLE Type RBX



BCV BBT HSK



RBX5

MAX
50,000
RPM

RBX7

MAX
80,000
RPM

No Need to Rotate Machine Spindle

Clamping Range: $\phi.018"$ -.159"

Super precise air-driven spindle technology enables high-speed micro machining on existing machining centers.

RBX TYPE

For small diameter drills and end mills. Air supplied via stop block or through the machine spindle. All models have variable speed.

World's Smallest Clamping Intervals



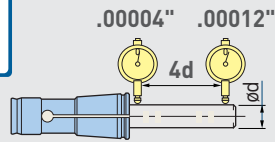
MEGA MICRO COLLET

- Wide coverage for small shanks is available with clamping intervals of $\phi.004"$ ($\phi.1\text{mm}$)
- Compact in size; excellent clamping force for small precision applications



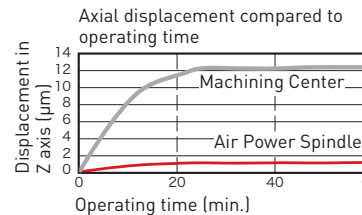
All BIG Collets are AA Grade and inspected twice for accuracy

Guaranteed Max Runout



Minimal Thermal Displacement

The air turbine drive prevents thermal expansion of the spindle, which is essential for die sinking and high accuracy micro machining.



Drastic Time Reduction and Superior Surface Finish



Machining Time:
450 Min.

Drastic time reduction!
Improved surface finish!

Machining Time:
120 Min.

with machining center
20,000 RPM

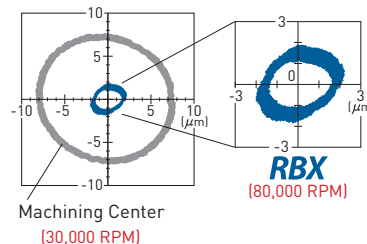
with AIR POWER SPINDLE
80,000 RPM

Map of Japan milled with R.004" ball nose end mill.
Material: Prehardened Steel HRC40

Dynamic Runout Accuracy

High runout accuracy with the MEGA MICRO COLLET, even at high speeds of 80,000 RPM.

Plotted position of a test bar at the max. spindle speed



HIGH SPINDLE



MAX
20,000
RPM



Clamping Range: $\phi.059"$ -.630"

Multiplies existing machining center spindle speed 4, 5 or 6 times.

Higher speed machining increases productivity with greater accuracy and superior finishes.



High Precision Collet

NEW BABY COLLET

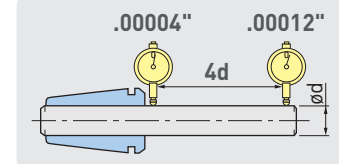
Clamping Range: $\phi.010"$ -1.000" & $\phi.5$ -25.4mm

The world's highest precision collet was developed based on BIG's long experience and know-how. Each collet is inspected twice to guarantee the maximum runout tolerance permitted.



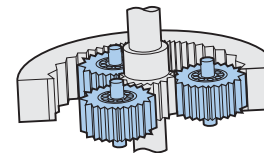
All BIG Collets are AA Grade and inspected twice for accuracy

Guaranteed Max Runout



Reinforced Gear Driving System

The planetary gears achieve smooth operation with minimal heat generation and high torque transmission.



Multi-Directional Coolant Supply

Universal coolant nozzles are capable of being adjusted to suit the length of the cutting tool, ensuring the maximum coolant delivery to the cutting edge.

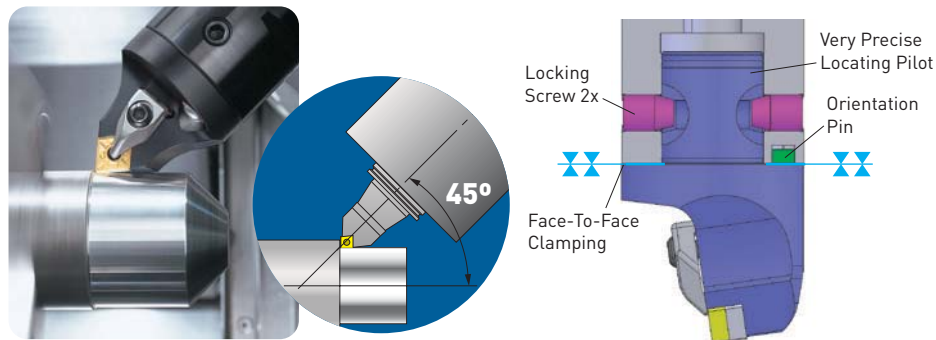


DUAL-CONTACT FOR MTC

The first modular tooling system for turning applications on MTCs (Mill-Turn Centers). This system offers improved efficiency, heat treatment, material selection, and optimal tool lengths. Replacing broken inserts is now a hassle-free and cost-effective process.



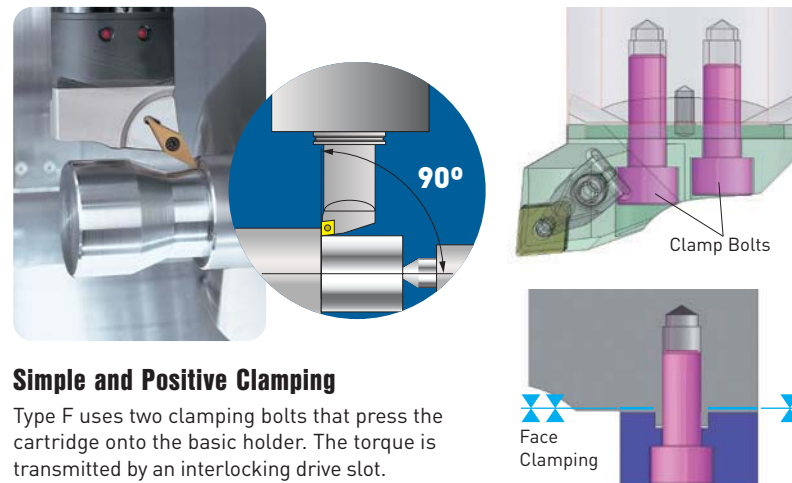
45° TILT STYLE TYPE S



Secure and Rigid Clamping

Type S Cartridges are mounted in the basic holder using a precision-ground pilot and two opposing 15° tapered radial screws. A slight socket offset ensures high face-to-face clamping force. A locating pin ensures precise positioning and torque transfer.

RIGHT ANGLE STYLE TYPE F

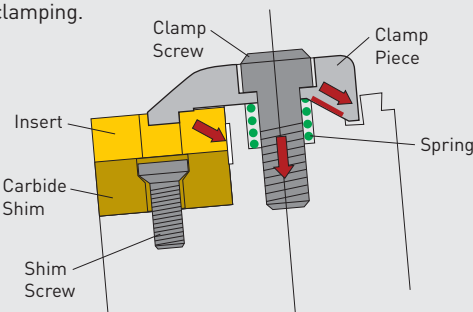


Simple and Positive Clamping

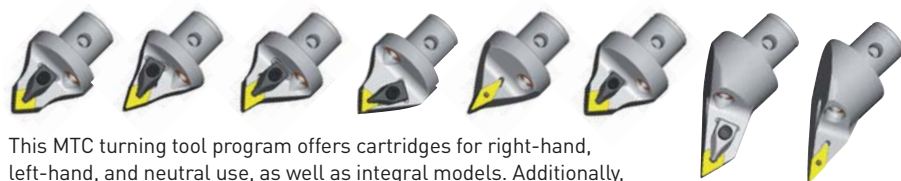
Type F uses two clamping bolts that press the cartridge onto the basic holder. The torque is transmitted by an interlocking drive slot.

Safe and Easy Clamping of Inserts

The double-clamping system simultaneously pushes an insert downward and draws it into the contact faces to achieve secure and rigid clamping.



15 Cartridges For 45° Tilt Style Type S



This MTC turning tool program offers cartridges for right-hand, left-hand, and neutral use, as well as integral models. Additionally, square tool holders and boring bar holders are available.



24 Cartridges For 90° Right Angle Style Type F



This MTC turning tool program offers cartridges for right-hand and left-hand. Additionally, square tool holders and boring bar holders are available.

N/C LATHE

Holders for Small Lathes and Tapping Attachments



MEGA MICRO CHUCK

Clamping Range: $\phi.018$ "-.317"
($\phi.45$ -8.05mm)

For Micro Drills, Reamers, Taps
and Finishing End Mills



MEGA SYNCHRO

Tapping Range: No.0-No.6
(M1-M3)

For Micro Taps



NEW BABY CHUCK

Clamping Range: $\phi.010$ "-.787"
($\phi.25$ -20mm)

For Drills, Reamers, Taps
and Small Tool Bits



MEGA ER GRIP

Clamping Range: $\phi.108$ "-.787"
($\phi2.75$ -20mm)

For Drills, Reamers, Taps
and Finishing End Mills

HYDRAULIC CHUCKS FOR SWISS-TYPE AUTOMATIC LATHES

Safe and Quick Operation

The ability to change cutting tools with a single T-wrench
drastically reduces the time required for tool changes.



STANDARD TYPE

- Easy to install in various tool posts
- Tighten from the tool side



F TYPE

- Ideal for use on a front tool post
- Tighten from the opposite side of the tool



R/B TYPE

- For both upper or lower tool post position
- Tightening at an offset position in the tool side

SMART DAMPER TURNING

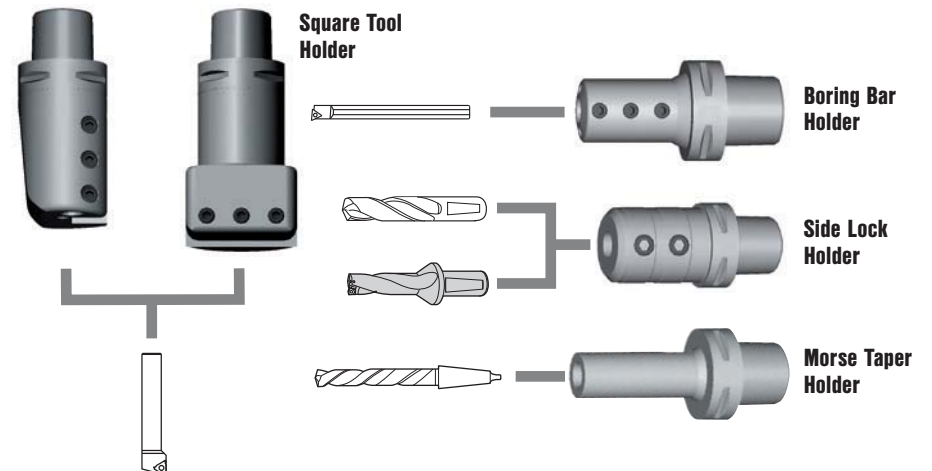
Integrated Damping System for Turning

Unprecedented machining depths without chatter
is made possible with this heavyweight, strengthened
dynamic damper.

- Machining Dia.: $\phi1.57$ or more
- Protrusion: L/D $\phi7 \times d$
- Six cartridge geometries



BASIC ARBORS FOR MTC



SMART DAMPER (PAT. 9027720)

Unique Dynamic Damper Eliminates Chatter



Our innovative, patented damper system uniquely combines counter-damping and friction damping in one integrated solution. The counterweight design maximizes frictional damper, effectively eliminating chatter and significantly enhancing machining precision.

Fine Boring of Ductile Cast Iron (FCD500)

| Tool Holder | Cutting Speed (SFM) | | | | Result |
|--|---------------------|-----|-----|-----|--|
| | 80 | 165 | 325 | 500 | |
| Competitor (w/o damping system) | ○ | × | × | × | Outperforms competitor's holder by 6X higher productivity. |
| SMART DAMPER Built-in damping mechanism | ○ | ○ | ○ | ◎ | Superior surface finish and better tool life due to the increased cutting speed. |

× = Vibration ○ = Acceptable ◎ = Excellent Surface Finish

Cutting Conditions

Machine: HMC (BBT50) BIG-PLUS
Boring Dia: $\phi 2.677''$
Depth of Hole: 16" (L/D=6:1)
Insert Nose Radius: R.016"
Feed Rate: .008"/rev.
Depth of Cut: .012"/ ϕ

FACE MILL (ARBOR TYPE WITH BUILT-IN DAMPER)

For Face Milling with Long Projection Length

Pilot: $\phi 22\text{mm}$, $\phi 27\text{mm}$ & $\phi 32\text{mm}$ / $\phi .750''$ & $\phi 1.000''$



INTERNAL TURNING TOOL

(BORING BAR WITH BUILT-IN DAMPER)

For Face Milling with Long Projection Length



Cartridges can be exchanged according to the application.

CK BORING SERIES (WITH BUILT-IN DAMPER)

High-Efficiency Deep Hole Finish Boring Is Available



EWN BORING HEAD TYPE

The EWN Boring Head functions are maintained, featuring integrated damper.

SW BORING HEAD TYPE PAT.

Damper located closer to the cutting edge provides greater damping effect.

CK SHANK TYPE PAT.

A damper is built into the CK Shank. L/D = 6x

CK EXTENSION TYPE PAT.

Just combine it with your standard CK Boring Head/Shank to achieve damping countermeasures.

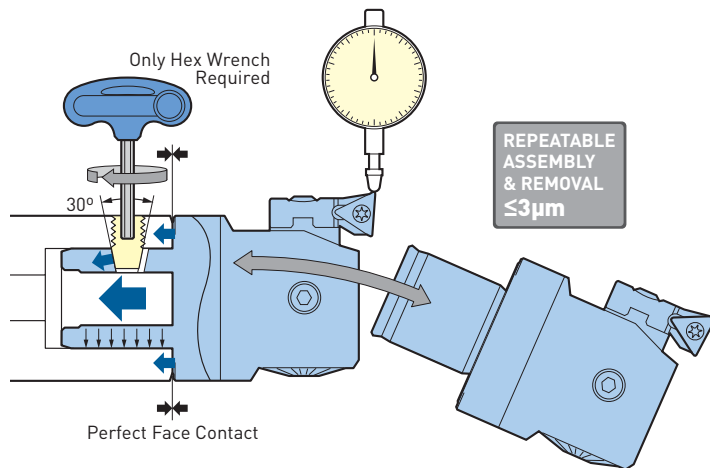
Eliminates Chatter in Internal Turning

The heaviest damper in the SMART DAMPER series instantly absorbs chatter in both rough and finish operations.

KAISER BORING SYSTEM



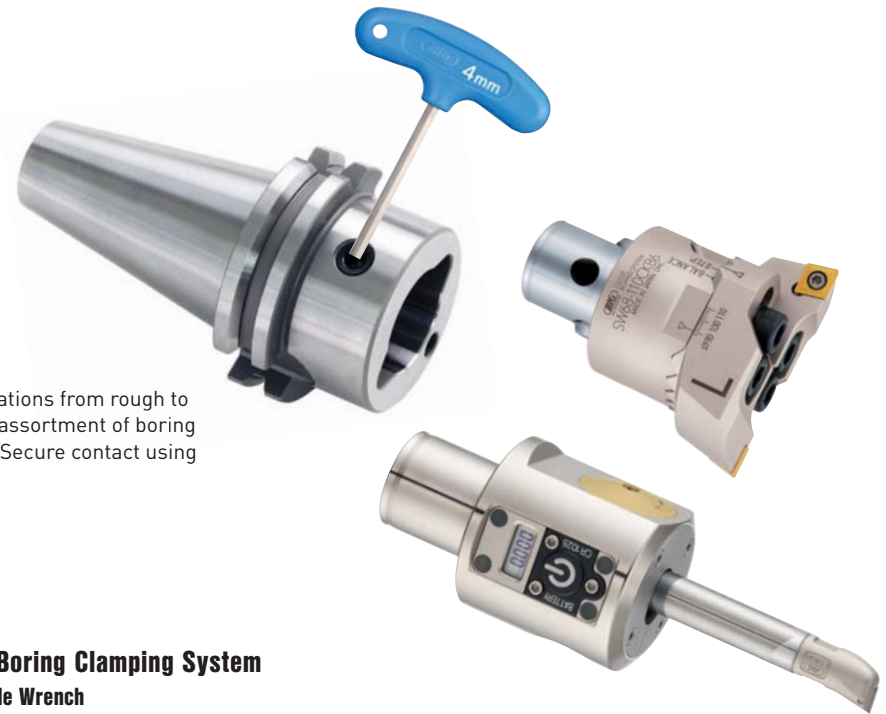
Supports various applications from rough to fine boring with a large assortment of boring heads and accessories. Secure contact using a single wrench.



The Simplest Modular Boring Clamping System

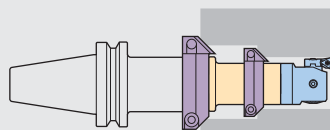
Secure Contact Using a Single Wrench

The CK modular system is a simple method for securely and powerfully clamping multiple components with a single wrench. Moreover, even if the same boring head is repeatedly attached and removed, the cutting edge position does not vary by 2 microns (.00008"). This accurate clamping allows boring diameter setup to be done with a boring head only, increasing the machine utilization and drastically reducing labor.

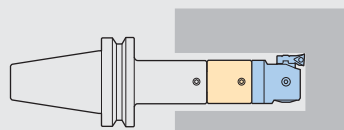


Rapid Adaptation To Special Tools

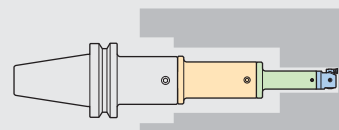
Modular system that can be used to assemble special tools with standard items allows for flexibility.



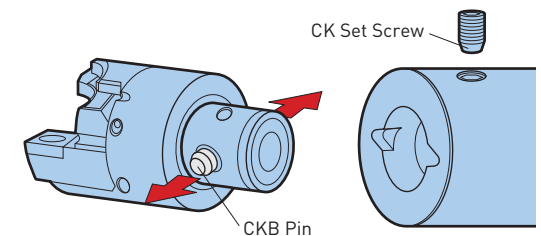
Chamfering



Extension



Reduction



Safe Structure at High Torque

Adopts a proprietary CKB pin for high cutting torque. The CKB pin is a floating type which gives it good horizontal balance, damping cutting torque and making it possible to withstand heavy duty torque.

ROUGH BORING HEADS

Designed for Ultimate Performance and Versatility

SW BORING HEAD



CKB1-CKB7

Range: $\phi.787''$ – $8.000''$

Designed with ultimate performance and versatility in mind. Balanced or stepped cutting by simply switching mounting locations of the insert holders which feature varied heights.



SW BORING HEAD SMART DAMPER (PAT. 9027720)

Roughing Head with Built-In Damper

CKB1-CKB7

Range: $\phi.787''$ – $8.000''$

- Smart Damper with SW head
- Closely adjacent vibrating point and damper achieve a high damping effect



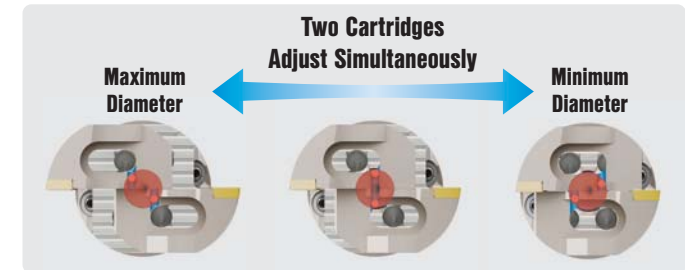
NEW

SWS BORING HEAD

E TYPE FOR BLIND HOLES (TO SHAPE FLAT SURFACES)

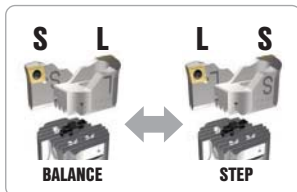
Range: $\phi1.614''$ – $4.331''$

The KAISER SWS Boring Head is ideal for setups without a presetter, allowing quick, precise diameter adjustments. The Synchro Setter links both cartridges for simultaneous adjustment, with final diameter setting done using a basic measuring tool like a micrometer or caliper.



20

BORING TOOLS



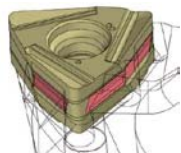
Adapted for both balance and step cutting by simple replacement of standard cartridges (for blind holes).



SW CARTRIDGE (TYPE N) Strong Contact Mechanism

NEW

The cartridge's original mechanism securely supports the insert's side-strip, providing high-strength and dependable clamping for reliable machining performance.

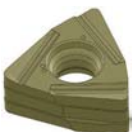


ZN INSERT

Highly Efficient 6-Corner Insert

NEW

Featuring unique double-sided negative-positive inserts with 6 cutting edges, this design maximizes insert usage economy. The thick insert also offers enhanced resistance to edge chipping, especially during interrupted cuts.



MW BORING HEAD

Boring Tool for Small-Diameter 2-Flute Roughing

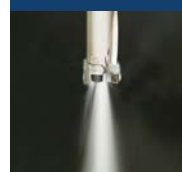
Range: $\phi.630''$ – $.827''$

Adjustable twin cutter boring tool on a $\phi20\text{mm}$ shank — ideal solution for rough and semi-fine boring of small die cast holes.

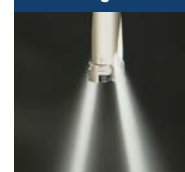
- Versatile straight shank
- Spiral groove for improved chip evacuation



Blind Hole



Through Hole



Center Through

In blind hole situations, center-through coolant aids in chip evacuation. The coolant hole can be closed by the stop screw when required.

FINE BORING HEADS (INSERT HOLDER TYPE)

Quick Micron-Level Adjustment



EWN BORING HEAD

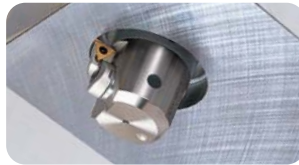
Prebalanced Design/Multifunction Head

Range: ϕ .787"-8.000"

- Prebalanced design supports high-speed boring
- Abundance of insert holders

Back Boring Available as Standard

Supports back boring by simply reversing the insert holder.



EWE BORING HEAD

Digital Boring Head

Range: ϕ 1.614"-8.000"

- Digital display allows the adjustment amount to be read at a glance
- Fully waterproof and dustproof structure (IP69K equivalent)



EWB BORING HEAD

High Speed

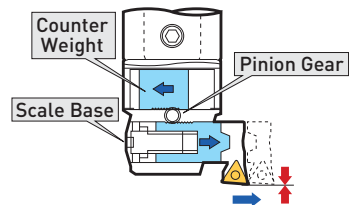
Range: ϕ 1.260"-4.134"

- .0005"/ ϕ scale



Built-In Automatic Precision Balancing Unit

The counter weight moves as the diameter is adjusted, allowing the balance to be automatically compensated.

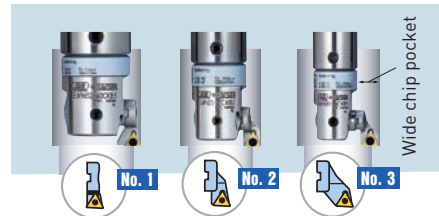


No Change to "Z" Dimension Even If Diameter is Adjusted



Emphasis on Chip Evacuation Properties

Replacing the insert holder makes it possible to secure sufficient clearance for chips.

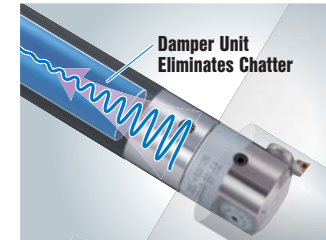


EWN BORING HEAD SMART DAMPER (PAT. 9027720)

Built-In Damper

Range: ϕ .787"-8.000"

- Integrated EWN BORING HEAD and SMART DAMPER
- Closely adjacent vibrating point and damper achieve a high damping effect



Chatter Suppressing Mechanism

Patented counterweight maximizes effect of the friction damper. Chatter is absorbed effectively and higher machining accuracy is achieved.

EWA BORING HEAD

Fully Automatic

Range: ϕ 68-134mm (with standard insert holders)

The EWA is an intelligent, fully automatic fine boring tool, which performs closed-loop boring operations. With the EWA there is no need to stop the machine tool to take measurements and manually adjust the boring tool, resulting in considerable time savings and minimized scrap.

- Up to ϕ 861mm with bridge tools
- Stroke: 22mm/ ϕ
- Boring precision of IT3
- Absolute linear sensor: precision 2 μ m

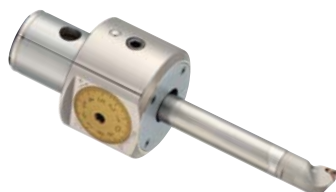


Fully Automatic Measuring and Cutting Process



FINE BORING HEADS (CENTRIC BORING BAR TYPE)

Expansive Tool Holder Series



EWN BORING HEAD

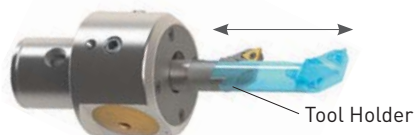
High Precision

Range: $\varnothing.039''$ - $2.126''$

- $.0002''/\varnothing$ scale plus $.00005''/\varnothing$ vernier
- Combine with carbide shank for stable deep-hole boring

Variable Tool Length Adjustment of the Tool Holder

Best cutting results are only reachable if the tool holder is as short as possible. The EWN features variable length adjustment of the tool holders which ensures the shortest and therefore the most rigid tool assembly.



Tool Holder

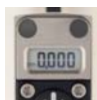
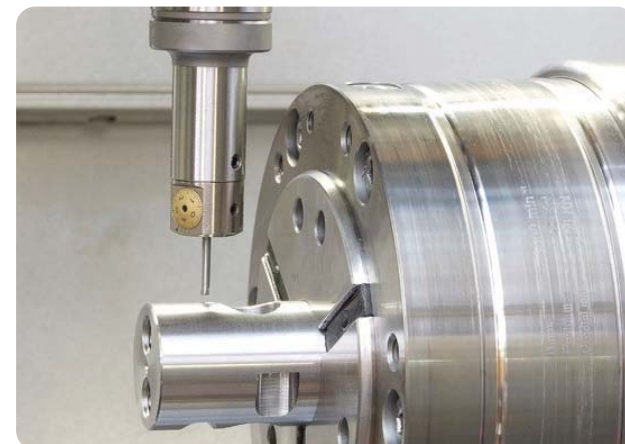


EWN04-15

Compact High Precision Boring Head

Range: $\varnothing.039''$ - $.591''$

- O.D. $\varnothing.728''$ ultra-compact design
- Max. 30,000min-1



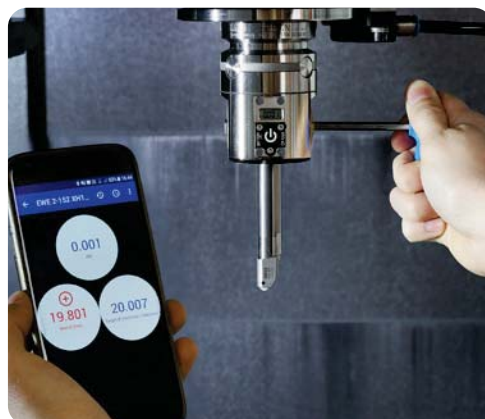
Resolution:
 $.00005''/\varnothing$
($.001\text{mm}/\varnothing$)

EWE BORING HEAD

Digital Boring Head

Range: $\varnothing.039''$ - $2.126''$

- Digital display allows the adjustment amount to be read at a glance
- Fully waterproof and dustproof structure (IP69K equivalent)



Electronic Components — Made by KAISER

All electronic components are entirely developed and manufactured in the electronic lab of KAISER in Switzerland. Before shipping, every digital boring head is calibrated and tested.

CK7 LARGE DIA. BORING SERIES



TW200 BORING HEAD (FOR ROUGHING)

Range: $\phi 7.874''$ - $32.677''$

- Large-diameter boring series compatible with high-speed



EWN200 BORING HEAD (FOR FINISHING)

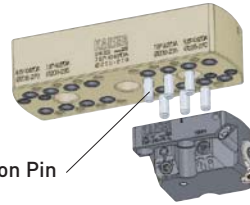
Range: $\phi 7.874''$ - $34.646''$

- Precision head with outstanding operability
- Back boring available



Center Through Supported

Reliable coolant supply to finishing and roughing cutting tool peripheries.



Position Pin

Using the position pin fastens the head or clamp base to the slide. Prevents the head from flying off due to high-speed rotation caused by programming errors.

Lighter Weight For Greater Speed Aluminum High Speed Type

Uses hardened aluminum components, tough yet lightweight. (Slide/Clamp Base)



PIN TURNING HEAD



Range: $\phi 0.020''$ - $27.008''$

- Achieve finishing accuracy not possible with interpolation.



ACCESSORIES

SMART DAMPER PAT.



Built-In Damper

- Reliable coolant supply to finishing and roughing cutting tool peripheries.
- Unique dynamic damper eliminates chatter.



CK Extension

Various Shanks and Accessories



Combine with a CK Shank for a wide range of applications not limited to boring.

KAISER BORING TOOL APP

Convenience at Your Fingertips



- Cutting data calculator
- Calculator for adjusting tools
- Access to operating manuals
- Tool overview
- Application data
- Store favorites
- Tool tips
- Metric and imperial units



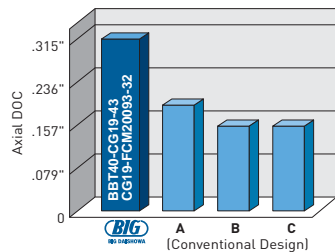
FULLCUT MILL

TYPE FCR

Ramping & Helical Milling Cutter

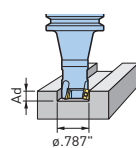
Cutter Diameter: ϕ .750"-1.250" (16-32mm)

Inserts designed for ramping make multi-functional cutting possible. For ramping, helical milling, peck-milling, grooving & shoulder milling.

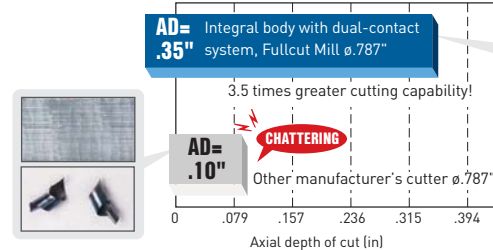


Cutting Conditions

Machine: BBT40 (BIG-PLUS)
Work Material: Carbon Steel
Cutter Speed: 495 SFM
Feed Rate: .004 IPT



Excellent Cutting Performance Even with #40 Taper Machine Tools



Excellent surface finish even under difficult cutting conditions.



Cutting Conditions

Machine Tool: BBT40 (BIG-PLUS)
Cutter: ϕ .787"
Work Material: Tool Steel
Spindle Speed: 2,400 RPM
Cutting Speed: 480 SFM
Feed Rate: .005 IPT



BIG-PLUS CAT & BT Integral Shank



Cylindrical Shank



HSK Integral Shank



Arbor Type
Cutter Dia.: ϕ 50/63/80/100mm



BIG CAPTO Integral Shank



Screw-On

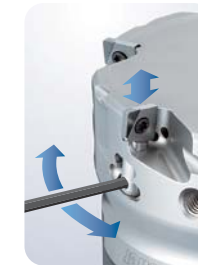
SPEED Finisher

High Speed Cutter for Aluminum and Cast Iron

Greatly Improves the Surface Finish in Ultra-High-Speed Machining

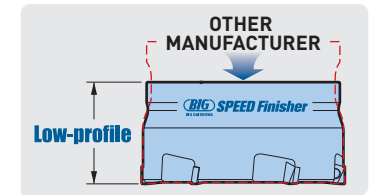
Cutter Diameter: ϕ 50, ϕ 63, ϕ 80, ϕ 100, ϕ 125, ϕ 160mm

Achieves $R_z = .55\mu\text{m}$ for die-cast aluminum ADC12 and $R_z = .67\mu\text{m}$ for gray cast iron FC250.



Quick Adjustment of Cutting Edge Height

Quick and precise cutting edge height adjustment within $1\mu\text{m}$ via a side-access lifting nut and fine-pitch screw. Simple design enables easy, accurate setup.



Lightweight and High Rigidity

Low-profile, lightweight body enhances rigidity, reduces vibration, and improves surface finish—ideal for compact machines like BT30 spindles.

SURFACE MILL



45° Approach Face Mill Cutter

Cutter Diameter: ϕ 50-100mm

This mill is designed to achieve superior surface finishes. It was created using the C-CUTTER MINI chamfering tool platform and uses the same inserts.

Cutting Conditions

Work Material: 1050 Steel
Cutting Speed: 656 SFM
Feed Rate: .008 IPT
Axial DOC: .039"
Radial DOC: 2.953"
Coolant: Dry

SURFACE MILL

$R_z=1.42$

Other

$R_z=9.04$

TYPE FCM

Square Shoulder & Slot Milling Cutter

Cutter Diameter: ϕ .750"-2.480" (16-50mm)

Low-resistance, high-efficiency cutter especially for cross-feed machining. For grooving & shoulder milling.



BIG-PLUS CAT & BT Integral Shank



HSK Integral Shank



BIG CAPTO Integral Shank



Cylindrical Shank



Screw-On



Shoulder Milling



Ramping



Helical Milling



Plunge Milling



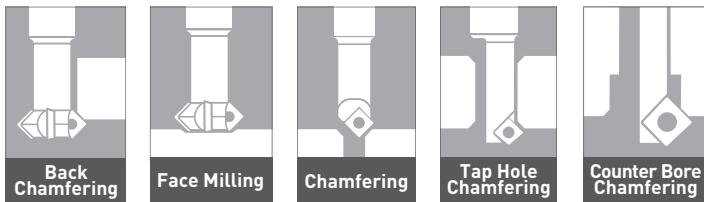
C-CUTTER mini



World's Smallest .197" Square Insert with Four Cutting Edges

Ultra High Feed Chamfer Mill

High-performance chamfer cutter increases the feed rate up to 400% by using four inserts and reducing the cutting diameter to the lowest limit. We offer various models that can do front chamfering at 30°/45°/60° angles, front/back chamfering at 45° angles, and even chamfering for bolt/tap holes that fit M8-M20 taps.



C-CUTTER



45° CKB SHANK TYPE

Chamfer Range: ϕ .197"-3.937"

The wide chamfering range reduces the need for multiple tool holders, cutting tool change times and enabling efficient magazine use and shorter machining cycles.

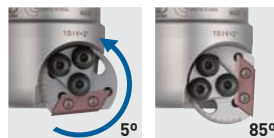


The long and parallelogram shaped insert achieves the ideal cutting performance for chamfering.

UNIVERSAL TYPE

Chamfer Range: ϕ .217"-1.673"

Chamfering angle adjustment from 5° to 85° with a hex key.



UNIVERSAL TYPE

Adjustment from 5° to 85° with a hex key.

CK TYPE

R-CUTTER



Ultra High Feed Radius Chamfer Mill

Front and back radius chamfering of .02"-.16". Single-insert models or four-insert models for higher feed rates.

Four Indexes

The unique insert geometry offers excellent sharpness. A high rake angle reduces cutting resistance and minimizes burr generation.

C-CUTTER micro



3 FLUTES

Effective Twisted Edges



CrN Coating

CUTTER DIAMETER: ϕ .075"-.311"

Ultra-fine diameter allows both front and back chamfering even on workpieces with complex shapes.

BF-CUTTER



Back spot facing for cap bolt holes ϕ .433"-1.890".

- Cap bolt size M6-M30
- Indexable inserts save money
- Coolant through



CENTER BOY



Centering and Chamfering Tool

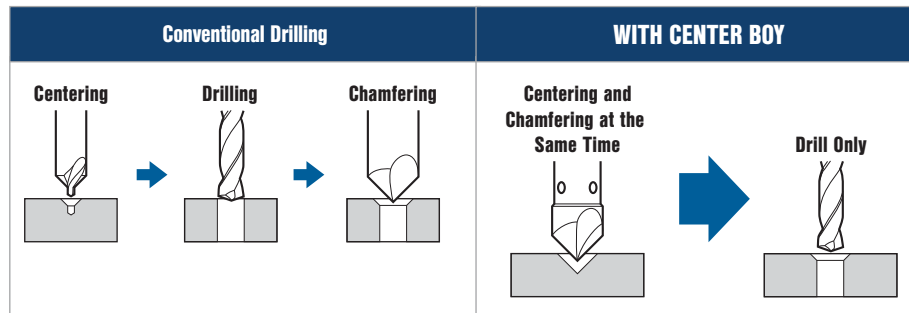
Accurate positioning in drilling and chamfering can be performed simultaneously.



Highly Accurate Replaceable Insert

- Sharp cutting with optimum cutting edge
- No more regrinding
- Minimum interference with a slim, extended shank
- 90° and 120°

Ease of Operation Shortens Cycle Time



CUTTER BOY

Chamfering Tool

Hole Diameter:
ø.20"-.985"

The carbide guide prevents chatter on bench drilling machines. A cost-effective three-corner insert is available.



Carbide Guide

Chamfering Tool for Drill Press



Carbide Guide Allows Stable Cutting

Carbide guide allows stable cutting and prevents triangular chamfering. It does not damage the body, extending the life.

Insert Does Not Need to be Reground

Inserts do not require regrinding. Moreover, the carbide coating insert with 3 usable corners offers lower cost and extended tool life.

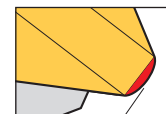
C-CENTERING CUTTER

Capable of both spot drilling and chamfering.



Prevents Chipping During Spot Drilling

As the nose radius on the insert forms negative land, it has high chipping resistance, and the tool life is significantly extended.



Negative Land

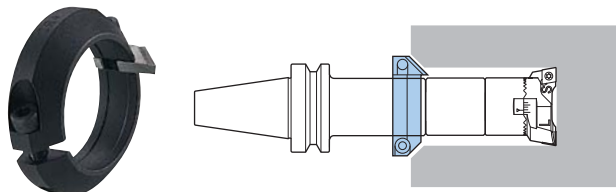
3 Insert Type Immediate Evacuation of Chips with Coolant Supply

By providing coolant holes, it is possible to cool the cutting edge and immediately discharge the chips.



CK CHAMFERING TOOL

Mount the CK Chamfering Tool onto the CK Shank body at the desired location for easy chamfering and boring in a single setup.



SPHINX cutting tools are engineered for exceptional tool life, precision, and process reliability. With a wide selection of unique drill point geometries, flute lengths, and shank diameters, SPHINX delivers the versatility needed to tackle even the most demanding applications.



DRILLING & REAMING

CENTERING

Diameter Range: ϕ .50-20mm

Ensures exact starts and hole positioning.



PILOT

Diameter Range: ϕ .10-6.00mm

Ideal for >10xD or < ϕ 1.00mm drills, pilot drills improve positioning and extend tool life.



MICRO / MICRO DEEP HOLE

Diameter Range: ϕ .03-3.175mm

Micro Drills that are made of fine-grained solid carbide and deliver exceptional tool life and consistent process reliability.



HIGH-PERFORMANCE

Diameter Range: ϕ .30-20.00mm

Engineered coatings suit both common and exotic materials, with internal coolant solutions available in multiple sizes.



TWIST

Diameter Range: ϕ .30-20.00mm

Optimized for performance and cost-efficiency, our micro and high-performance drills feature advanced geometries in a wide range of sizes.



DRILL REAMER / REAMER

Diameter Range: ϕ .20-14.00mm

Drill reamers engineered with three distinct margins, delivering superior stability and performance that set them apart from the competition.



MILLING

ENGRAVING MILL

Diameter Range: ϕ .02-.15mm

Precision tools for creating defined, high-quality surface features.



MICRO END MILL

Diameter Range: ϕ .20-3.00mm

Boosts productivity and handles demanding applications with fine-grain carbide and a reinforced shank for stability.



MICRO BALL MILL

Diameter Range: ϕ .20-2.80mm

Precision edge prep ensures accurate micro-geometry on even the smallest features.



SQUARE END MILL

Diameter Range: ϕ 1.50-20.00mm

Provides precise, sharp edges and flat cuts.



DEBURRING

Diameter Range: ϕ .10-6.00mm

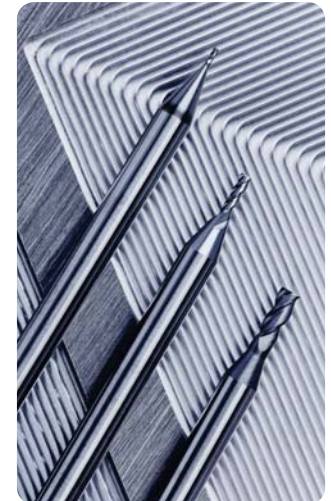
Delivers smooth, clean edges by removing sharp burrs, improving part quality and safety.



SINGLE TOOTH MILL

Diameter Range: ϕ .20-3.00mm

Offers precise, efficient material removal with a single cutting edge.



All SPERONI measuring instruments are built with aged pearlitic cast iron for thermal stability and feature high-precision guideways and glass scales to ensure measurement accuracy. All software is developed and maintained in-house by SPERONI, delivering reliability and continuous innovation.

ESSENTIA



Designed for Maximum Ergonomics

The ESSENTIA is an entry-level tool presetting and measuring system. The robust structure and software interface allow customers to benefit from an entry-level unit.

With an ESSENTIA, efficiently measure tools, easily and independently of the operator to achieve full machining productivity. Deliver results right next to your CNC machine.



Rapid X & Z Axes Movement



High Precision ISO 50 Spindle



Hi-Res Camera with 45x Magnification Optics



Guarantees Maximum Isotaticity

MAGIS

elegantly simple

Intuitive Vision System

The MAGIS is a PC-based control and image processing system is supplied with a high-resolution monitor for a crisp and clear visualization of data.

The graphical interface and powerful online help function guarantee a trouble-free and secure experience.

AVAILABLE WITH
CNC OPTION



X & Z-Axis Knobs for the Micrometric Movement



Rapid Axis Movement



High Precision Spindle with Integrated Calibration Edge



PRO SHRINK



Tubechiller Combination Shrink And Cooling System

The PRO SHRINK system continuously monitors the temperature of the shrink-fit chuck during the inductive heating process. Once the chuck reaches the predefined temperature, the system automatically stops heating, preventing the risk of overheating.

Touch Display

- Navigation menu
- Graphic visualization of the shrinking and cooling process
- Simple parameter input with USB
- Operator-defined parameter lists
- Avoid operating errors through individual menu configuration

FUTURA

FUTURE PROOF TECHNOLOGY

Unparalleled Precision, Repeatability and Longevity

The FUTURA product line represents the most advanced and complete line of vertical tool presetting and measuring machines in its class. The modular design offers the right solution for every measuring need and guarantees full upgradeability for future needs.



Rapid X & Z Axis Movement Device



Integral ISO 50 Spindle with Calibration Edge



X & Z-Axis Knobs for the Micrometric Movement



Optimized Cockpit for the Commands

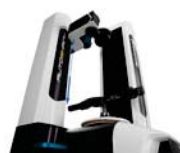
AUTOSHRINK

FUTURE PROOF TECHNOLOGY



Fully Automatic Preset, Measure and Shrink-Fit System

SPERONI was the first company to develop an integrated presetting and shrink-fit system. The leader in terms of functionality, total accuracy and safety, the AUTOSHRINK is the only hands-off fully automatic solution on the market.



Automatic Integrated Shrinking



Shrink Tools from 3-32mm in Diameter



Integrated and Automatic Cooling System

CONTROL SOFTWARE

At the heart of the presetters is the control software designed to maximize efficiency and reliability for all tool measurement and management needs.



SIMPLE VISION & ESSENTIA

Standard software offered with a SPERONI tool presetter.

- Flying cross-hair
- Full screen function and zoom to 120x
- 45x standard magnification
- Over 150 measuring icons
- Dial indicator and runout functions



EDGE 2.0

Control and image processing system for tool management, user management, tool inspection and CAD interfacing.

- Full tool management
- Pictures and graphics management
- Quick report management
- History tracking
- Automatic data backup



EDGE PRO

Control and image processing system for manual and CNC configurations.

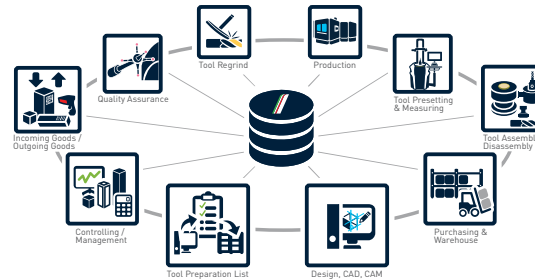
- User management
- Jobs management
- Components management
- Manual and full CNC management
- Dedicated measurement cycles

TOOL MANAGEMENT

INTELLIGO

Tool Management Solution Software

Provides comprehensive management of warehouses, locations, costs, tool assemblies and disassemblies, and post-processors. With a centralized database, it streamlines organization and eliminates duplicate data.



SPI - SIMPLE POST INTERFACE

Hands-Off Post-Processor Interface

Simply measure your tool with your tool presetter, print a label and place it on the tool. Scan the QR code with the SPI bar code scanner to transfer the offset data directly to your machine tool's control.



SPI LITE

SPI SCANNER

UBI

Easily Locate Tools

The electronically controlled UBI station gives maximum flexibility to allocate and manage all tool components and tool assemblies.

The required INTELLIGO software will allow and manage access to the entire cabinet, individual drawers or drawer compartments for your specific UBI module.



ACCESSORIES



ADAPTERS

Expand your presetter's capabilities with adapters for different taper sizes. Reduction adapters are available for ISO, HSK and BIG CAPTO tapers.

SECOND CCD CAMERA

Equipped with a dedicated inspection light. Field of view is 6mm x 4.5mm and has a visual magnification of 45x with a zoom function of 120x magnification.



Fixed



Swing Arm



TOUCH-SCREEN MONITOR

The touch-screen technology upgrade makes it easier for you to access and use all of the SPERONI software features without relying on the keyboard or mouse.

SPERONI WORKBENCHES

Steel workbench with ventilation, lockable storage, and comfortable workspace for presetting.



ROUND CHUCKS

The round UNILOCK chucks come in diameters from $\varnothing 90$ -176mm [3.543"-6.929"] and body styles to fit a variety of applications. Chucks can be supplied with single notches, multiple notches or bushing holes for timing. Most body forms allow the use of turbo-assisted clamping for higher retention forces.



CLAMPING KNOBS AND BALLS

Can be attached to fixtures or directly to workpieces. Our standard knobs can be mounted in a blind hole from the bottom or pulled up from the top.



PALLETS

Pallets are provided fully assembled with their required quantity of UNILOCK knobs and lifting handles. Available in either steel or aluminum.



5-AXIS CHAIN CLAMPING

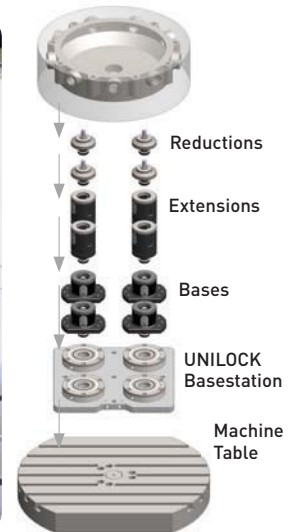
The Most Flexible Clamping Solution for Round and Odd Shaped Workpieces

This versatile raw material clammer is designed for quick setup on existing UNILOCK clamping chucks, enabling efficient and secure machining of round, bulky, or irregularly shaped workpieces. It delivers high clamping force and supports loads up to 2 tons. With multiple assembly options, it offers flexible and reliable workholding for demanding machining applications.



MULTI-AXIS SYSTEMS

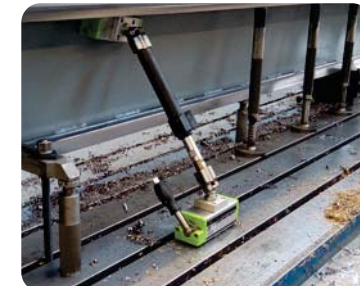
Multi-axis workholding products offer flexible, functional solutions that secure workpieces without blocking top or side access. They enable reorientation for additional machining without unclamping.



STABILIZER SYSTEM

Provides lateral support for tall parts during machining, welding or assembly processes. Allowing the transfer of loads down to the table or base.

- Fine adjustment allows for adjusting the position of parts
- Magnetic base option
- Five fixed length extensions
- Two adjustable length bases



PREASSEMBLED CHUCKS

These chucks are sold mounted to a base plate. The base plate provides easy mounting of the chucks to the machine table as well as a pre-plumbed air supply. All bases provide either notches or a ground edge to square the chucks to the machine table.



BASE MASTER

Instantly Detect Position of the Cutting Edge and the Workpiece

High-precision offset & detection tool available for various tool materials and diameters.



BM-2H / BM-50H

LED lamp illuminates at 2" (50mm) from the reference surface, and features .00004" repeatability.



BM-2MH / BM-50MH*

Cutting edge position detection for $\phi.002$ " tool diameters.



BMM-20D*

World's smallest tool offset sensor with diameter of $\phi.787$ " ($\phi 20$ mm).



BM-2GH / BM-50GH*

Electronic detection of cutting edge position.



BM-100GH

Easily visible measuring surface, even with large machines.



BMM-10H

10mm ultra-thin design.

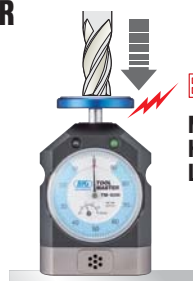


BMM-20H*

Compact and lightweight design for lathe or mill.

*For all materials, including non-conductive cutting tools and workpieces. All the same features as the original BM, including a magnetic base that mounts the unit horizontally, vertically or at any angle.

TOOL MASTER



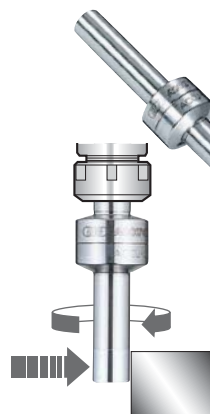
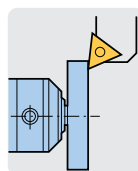
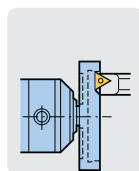
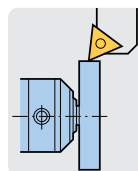
DEEP!
Notifies the Height with LED and Buzzer

Defines work offsets and tool lengths for all materials, including non-conductive. Adjustable height and an easy-to-read large dial. Also includes an approach LED lamp and sound.

LATHE MASTER



Quick setup of the cutting edge position without trial cutting. Capable of measuring external, internal and facing tools.



ACCU CENTER

High precision edge finder suitable for all materials. Repeatability within $3\mu\text{m}$.

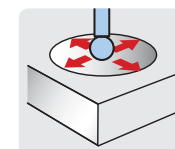
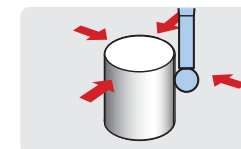
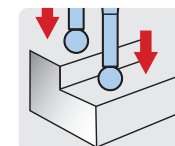
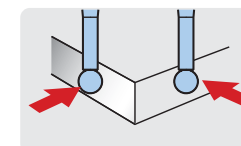


3D MASTER RED



3-Axis Measurement Tool (X, Y & Z)

- Compact design
- Applicable for all work materials
- Carbide tip stylus



CENTERING TOOL



Static Dial Gage

- Centering the tool holder is simplified since the dial gage position is static and in front
- Easy setting with a fine adjustment mechanism (adjustment amount: $.079$ ")
- Magnetic base allows for flexible mounting positions

POINT MASTER PRO 3-D Touch Probe

For all cutting tools, workpieces and machine tools.



POINT MASTER

For use with conductive cutting tools, workpieces, and machine tools. Detection with LED and sound.



DIAL INDICATOR STANDS

Articulated Stands For The Demanding User

Offering the highest positioning precision and exact measurements in the μm range.

- High clamping force thanks to a strong internal cam structure
- Extremely flexible with 360 degrees freedom of positioning controlled by one progressive clamping star grip
- Ideal design for use in measurement, inspection (quality control) and machining
- Ultra strong earth magnet holds stand firmly in place
- Each stand is equipped standard with (1) magnet, (2) extension arms, (1) dgh dove-tail adapter and (1) cylindrical gage adapter ($\varnothing.375"$)



For gluing, welding or soldering. Resolves all challenging angle-related issues.



DynaTest



The cause of machine tool runout stems from wear of the spindle bearings. Regular inspection with DYNA TEST helps identify potential problems and can reduce downtime and costly repairs of the machine tool spindle.

- Precision test bar for static runout accuracy
- Produced under a strict quality control process; calibration certificate available upon request as per ISO 9000 requirements

BCV BBT HSK BIG CAPTO



Precision Standards of BIG DAISHOWA Test Arbors

| | |
|---------------|--------------------------------|
| Runout | .002mm (.00008) |
| Roundness | .001mm (.00004) |
| Cylindricity | .003mm (.00012) |
| Roughness | Ra: .1 μm (.000004) |
| Taper Contact | AT1 |
| Diameter ToL. | $\pm.005\text{mm}$ (.0002) |

Certified Runout of ≤ 1 Micron at Test Bar Nose and ≤ 3 Microns at End of Test Bar

DYNA CONTACT

The ceramic taper gage is for inspecting machine spindle tapers. With just a glance, it clearly displays Prussian blue, making it easy to identify any issues. This simple yet effective device is for any machine operator or technician looking to maintain the proper functioning of their equipment.



DYNA FORCE

Regularly measuring the spindle retention force helps prevent unknown decreased rigidity, which can cause vibrations, lower machining quality, and shorten the lifespan of tools. A full-length taper stabilizes the value of measurements.



LEVEL MASTER

**LED & BUZZER
INDICATION**

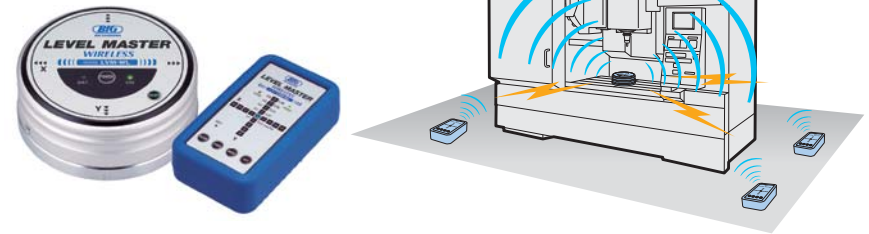
Device for the leveling of machine tool tables.

- Simultaneous two-axis detection leveler
- LED and buzzer indication when leveling is complete
- Uses optical level sensor technology
- 10 micron per meter precision (.01mm/m)

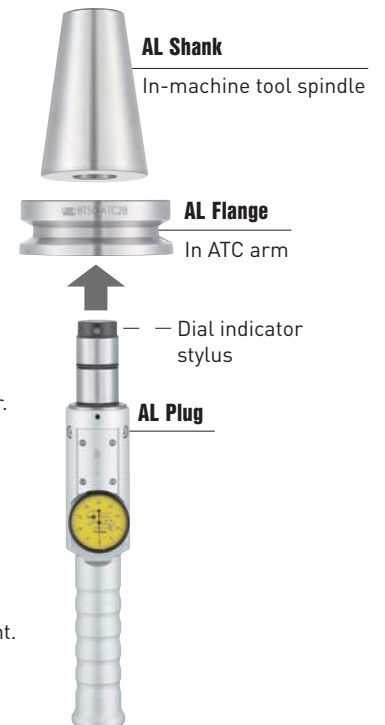


WIRELESS TYPE

Easy and quick leveling with a single operator.



ATC ALIGNMENT TOOL



For the maintenance of a machine tool spindle. Measure the misalignment between the ATC arm and the machine tool spindle or magazine pot center.

How To Use

1. Load the AL Shank in the machine spindle and mount the AL Flange on the ATC arm.
2. Insert the AL Plug into the AL Flange.
3. Rotate the AL Plug and read the values of the dial indicator. This direction is the eccentric direction. Half of the gap of the values is the eccentric amount.
4. Adjust the position of the ATC arm so that the front end of the AL Plug will be inserted into the AL Flange fully.

TOOL PRO

Unique tool holding device for the assembly and disassembly of tooling. Depressing the large gold button permits the adapter to rotate 360° and lock in 45° increments. Integral taper units and modular taper units for nearly all shank styles.

STANDARD



VARIO



Quick-change system uses one permanently mounted base unit and multiple adapters for different types and sizes of tool shanks.

SPIN



TOOL PRO STAND

Safe and secure tool assembly stationed anywhere on the shop floor.



Full 360° radial tool rotation permits easy access to large diameter tools.

KOMBI GRIP

Innovative two-way clutch and needle roller clamping system ensures secure clamping at the tool flange periphery of HSK and polygon tapers.



TOOLING MATE

Replaceable adapters that feature drive keys to secure steep taper shanks, or a two-way clutch needle and roller clamping system for HSK and polygon taper shanks.



ST LOCK

Ideal fixture for the set-up of cylindrical shank tool holders. Clamps $\varnothing 20$, 25 & 32mm shanks by replacing the sleeve.



TORQUE FIT

Tooling fixture with tightening torque indicate function.

- Torque values of all BIG DAISHOWA collet chucks are preset
- Buzzer will sound near the correct torque to notify you
- User Mode allows setting of desired torque value

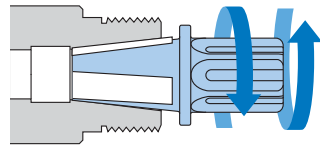


COLLET EJECTOR

Easily and quickly insert/remove small sizes of NEW BABY COLLETS from MEGA NUTS and NEW BABY NUTS.

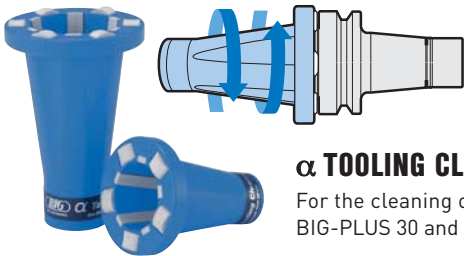


TOOLING CLEANERS



α TAPER CLEANER

Maintain the accuracy of collet chucks by cleaning the internal collet taper.



α TOOLING CLEANER

For the cleaning of both mating surfaces of BIG-PLUS 30 and 40 taper tool holders.

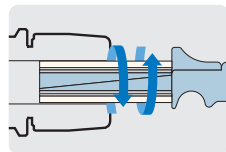
HSK EXTERNAL TAPER CLEANER

Cleaning strips will remove even large residual particles.



TK CLEANER

Perfectly cleans the clamping bore of a tool holder.



α WIPER CLEANER

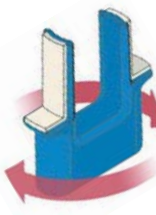
Easy cleaning of smaller cylindrical bores.

SPINDLE CLEANERS

Guarantees unbeatable cleanliness for tapered spindles, which helps maintain precision and extend the lifespan of machine tools, cutting tools, and tool holders.



Polygon Taper



T-SLOT CLEAN



Improve your work safety environment and efficiency of table cleaning. Save the time required to clean T-slots packed with chips.



T-Slots Packed with Difficult to Remove Chips



T-Slots Protected & Clear by T-Slot Clean

CHIP & COOLANT FAN



CHIPFAN

Fast, safe chip and coolant cleaning without stopping production

- 12,000 RPM Max
- Balanced integral design for high speed
- Made from high strength aluminum with anodized coating for long life and durability



CHIP BLOWER

- Reduce environmental impact
- Improved machine utilization rate
- Increased productivity
- Can be used with vertical and horizontal machining centers

BIG-PLUS CLEANER



Blowing air cleans the BIG-PLUS machine spindle face of all debris.



HIGHER PERFORMANCE. GUARANTEED.

Tool Holders | Boring Tools | Cutting Tools | Workholding | Tool Measuring

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