



HIGHLIGHTS

SERVICE – PRECISION – RELIABILITY

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A Group Company of  MITSUBISHI MATERIALS TOOLS EUROPE

MTEC STUTTGART

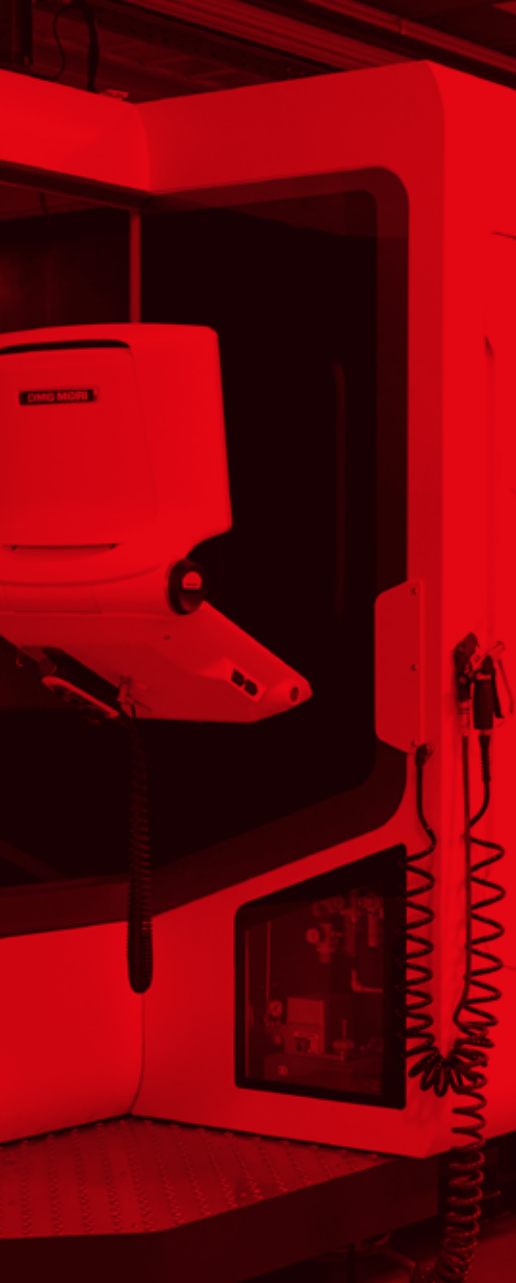
 MITSUBISHI MATERIALS TOOLS EUROPE

 **H.C. Starck**
TUNGSTEN POWDERS
A Group Company of  MITSUBISHI MATERIALS

 **MITSUBISHI MATERIALS**
ESPAÑA

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MITSUBISHI MATERIALS TECHNOLOGY & EDUCATION CENTRE (MTEC)

INNOVATIVE SOLUTIONS FOR SPECIFIC APPLICATIONS

Mitsubishi Materials has established a network of advanced Technology Centres (MTEC) in strategic locations around the world. These centres specialise in developing innovative, customized tooling solutions and offer a comprehensive range of complementary services, including project engineering, process optimization, cutting tests and machining simulations.

In Europe, Mitsubishi Materials operates two state-of-the-art Technology Centres, MTEC Stuttgart and MTEC Valencia. These centres serve as hubs for technical excellence and collaboration with customers. They are supported by a broad network of international application engineers who contribute their extensive expertise and insights into best practices to the project engineering process, ensuring the highest standards of product quality and performance.

In addition to technical support, the Technology Centres also serve as vital platforms for knowledge transfer. They host a variety of educational programmes, including professional training courses, hands-on workshops, and collaborative events. The programmes are designed to equip European customers with the skills and insights needed to stay ahead in an ever evolving manufacturing landscape.



Video MTEC

PRODUCTION IN EUROPE

MANUFACTURING CAPABILITIES IN EUROPE

Mitsubishi Materials operates state-of-the-art production facilities in Europe, including Mitsubishi Materials España and UFP, which was recently acquired by Mitsubishi Materials Tools Europe. These facilities manufacture high-performance standard tools and customised solutions that are engineered to meet the specific demands of a diverse range of industries.

The European manufacturing sites utilise the latest developments in precision engineering and cutting edge technologies to ensure that every tool is optimised for the most demanding applications.

The local manufacturing presence in Europe ensures faster lead times, greater flexibility and responsiveness, allowing customers to achieve optimal performance.



Video MME



Video UFP

RECONDITIONING SERVICE & SPECIAL TOOLS

COMPREHENSIVE TOOL SERVICES

Mitsubishi Materials is a comprehensive solution provider, offering expert support throughout the entire cutting tool lifecycle. This includes everything from the initial offer and tool design to precision production and responsive after-sales service.

Mitsubishi Materials Tools Europe now offers customers state-of-the-art reconditioning and recoating services, as well as a wide range of special tools. This has been made possible through the strategic integration of UFP (formerly U.F.P. S.r.l.) and Mitsubishi Materials España's modern facilities. These developments ensure first-class quality and unbeatable delivery times.

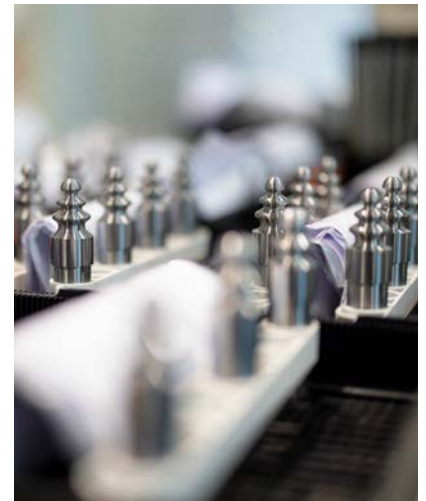
Serving a wide range of industries, including aerospace, medical, automotive, energy and defense, Mitsubishi Materials Tools Europe is committed to unlocking the full potential of cutting tools and maximising performance and productivity.



MME Special tools



UFP-Website



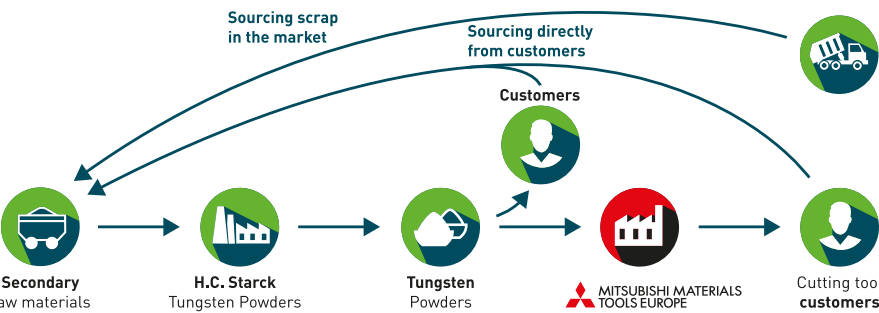
RECYCLING

SUSTAINABILITY AS A FUNDAMENTAL PRINCIPLE

Mitsubishi Materials is committed to sustainability, focusing on the recycling of carbide tools and developing solutions that contribute to a sustainable future. With the two group companies; Japan New Metals and H.C. Starck Tungsten Powders, Mitsubishi Materials is a world leader in the recycling of materials containing tungsten and one of the leading providers of tungsten powder.

H.C. Starck Tungsten Powders can extract pure tungsten from almost all forms of tungsten scrap and production waste, including mixed hardmetal, drills, end mills, inserts and drill bits. Tungsten recycling has been based at the headquarters in Goslar, Germany for more than 100 years.

H.C. Starck is also represented in other strategically relevant areas with powder production sites in Canada (Sarnia) and China (Ganzhou). These production sites are supported by numerous sales offices and other facilities within the Mitsubishi Materials Corporation Group.



Video H.C. Starck Tungsten Powders



TURNING

QUALITY – THE HIGHEST STANDARDS ACROSS ALL PRODUCTS AND SERVICES

Turning tools from Mitsubishi Materials embody this philosophy and have been convincing the global market for more than 90 years!

Mitsubishi Materials precision tools enrich the metalworking industry with durability, speed and accuracy.

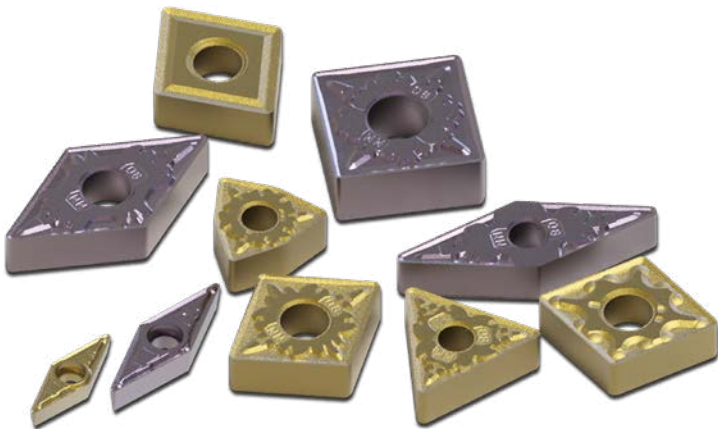
Whether it is a grooving tool, an ISO insert or a vibration damping boring bar, the extensive range of cutting tools has performance in mind.

MC7115/MC7125/ MP7135

CVD & PVD COATED GRADES FOR STAINLESS STEEL TURNING

These three new grades of inserts are dedicated to the machining of stainless steels. MC7115 for light cutting, MC7125 for general machining and MP7135 for heavy cutting applications.

Each grade has its own unique combination of coating layers of TiN, Al_2O_3 and TiCN. Additionally, they have innovative binding layers as the Super-Tough Grip for the upper coating layers and the Sub-Grip for the base layer. These bind the coating layers to the carbide substrate, substantially increasing tool life.



BENEFITS

- High wear resistance
- Durability for cost saving
- Versatility
- Three grades for the ideal choice



M

PRODUCT RANGE

- Grades: MC7115, MC7125, MP7135
- Geometries
- Negative: CNMG, CNMM, DNMG, SNMG, SNMM, TNMG, TNMX, VNMG, WNMG
- Positive: CCMT, CCMH, CPMH, DCMT, SCMT, TCMT, TPMH, VBMT, VCMT, WBMT, WCMT, WPMT
- Breaker: FM, GH, GM, HL, HM, LM, MA, MM, MV, RM, R/L-ES, SH

APPLICATIONS

- Continuous, medium and interrupted cutting
- MC7115 for high speed cutting of austenitic stainless steel
- MC7125 first recommendation for a wide application range
- MP7135 for intermittent cutting and forged and cast stainless steels

FEATURES

- Dedicated carbide base material and state-of-the-art coatings
- High coating adhesion strength for extended tool life

MC6115/MC6125/ MC6135

BRINGING THE ULTIMATE HIGH SPEED CUTTING PERFORMANCE

The CVD coated MC6115 and MC6125 grades, plus the MC6135 grade are the first recommendation for steel turning. They are suitable for a wide range of continuous through to heavy interrupted machining applications. The MC6100 series of grades has been developed to meet the demand of higher cutting speeds and increasing machining efficiency. By improving the existing technology, wear, fracture resistance and cutting edge stability have all been dramatically increased.

When utilised on conventional applications at high speeds, the three grades provide improved cutting edge stability.



BENEFITS

- Longer and stable tool life
- Reliable production process
- Higher productivity
- Lower cost per part
- Easy wear recognition



P

PRODUCT RANGE

- CVD coated grades: MC6115, MC6125, MC6135
- Geometries
- Negative: CNMG, CNMM, DNMG, DNMM, DNMX, RNMG, SNMG, SNMM, VNMG, WNMG, TNMG, TNMM, TNMX
- Chipbreaker: FH, FP, FS, FY, GH, HL, HM, HR, HV, HX, HZ, LP, MA, MH, MP, MS, MW, RP, SH, SW, SY
- Positive: CCMH, CCMT, CPMH, DCMT, DCMX, RCMT, RCMX, SCMT, SPMN, SPMR, TBMT, TCMT, TCMX, TPMH, TPMN, TPMR, TPMX, VBMT, VCMT, WBMT, WCMT, WPMT, XCMT
- Chipbreaker: FP, FV, LP, MP, M, VMW, RR, SW, SVX

APPLICATIONS

- General steel turning operations
- Roughing and finishing
- High speed cutting

FEATURES

- High fracture and wear resistance
- Improved coating adhesion with Super-Tough-Grip-Technology
- Improved crystal growth coating process with Super-Nano-Texture-Technology
- High resistance to peeling
- Gold coated outer layer for easy edge identification



MC5105/MC5115/ MC5125

CVD COATED GRADES FOR CAST IRON TURNING

The process of casting iron enables complex geometries to be formed in the component that is produced.

Different types of cast irons produce different chips when machined and can cause various types of damage to an insert. The complex shapes produced in castings also creates challenges because contact with the workpiece can suddenly change from continuous to interrupted cutting. In response to these challenges, Mitsubishi Materials has created the MC5100 series that is able to successfully machine all types of cast irons and component geometries.



BENEFITS

- High wear resistance
- Excellent fracture resistance
- Durability
- Stability
- Versatility
- Abrasion resistance



K

PRODUCT RANGE

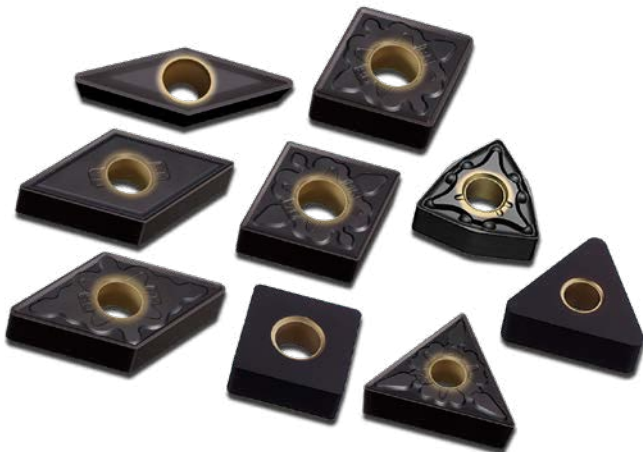
- Grades: MC5105, MC5115, MC5125
- Geometries
- Negative: CNMA, CNMG, CNMM, DNMA, DNMG, DNMM, SNMA, SNMA, SNMN, TNMA, TNMG, TNMN, VNMA, VNMG, WNMA, WNMG, DNMX, TNMX
- Positive: CCMT, CCMW, DCMT, DCMW, RCMX, SCMT, SCMW, TCMT, TCMW, TPMH, VBMT, VBMW, VCMT, VCMW, WPMT
- Breaker: GH, GK, LK, STD, MA, MH, MK, MP, MV, RK, SH
- Wiper: MW, SW

APPLICATIONS

- Continuous, medium and interrupted cutting
- MC5105 for high speed cutting of gray cast iron
- MC5115 first recommended grade for ductile cast iron
- MC5125 for heavy interrupted cutting of ductile cast iron

FEATURES

- Super nano-texture technology
- High hardness carbide base material
- Thickest Al_2O_3 coating layer
- New adhesion layer for improved peeling resistance
- Intermediate layer microstructure for stability
- TiCN layer for heavy interrupted cutting



XB SERIES

VERSATILE RANGE OF COMPLEX TURNING APPLICATIONS WITH ONE HOLDER

A complete range of new tools with high-quality cutting edges and excellent sharpness for a variety of applications are now available. Experience the efficiency and stability provided by this new indexable turning tool.

EASY AND ACCURATE

The multi-functionality provided by the rigid six sided clamping of the insert to the head enables accuracy and easy setting when replacing inserts.



BENEFITS

- High precision
- Economical
- Versatile
- Reduced inventory
- High volume through coolant



PRODUCT RANGE

Geometries

- Holders: XBSH_S XBSH_S-C XBSH_C-C
- Grade: MPB115

APPLICATIONS

- Pre chamfering
- Threading
- Boring
- Back boring
- Copying (Profiling)
- Grooving (Flat & round type)
- Insidegrooving
- Facegrooving

FEATURES

- Multitude of inserts for complex applications
- Highly rigid design
- With or without through coolant
- High pressure coolant with SLV sleeve



MICRO MINI BORING BAR

FOR HIGH PRECISION SMALL PARTS MACHINING

Ideal for small-diameter boring of steels and stainless steel. Economical, solid shank type with two cutting edges. A cutting edge on each end provides reduced tooling costs.

MULTI PURPOSE BORING BAR

The multi-functionality of the Micro-Mini twin enables a wide application range that covers boring, grooving and threading and is available with or without a chipbreaker.



BENEFITS

- High precision
- Economical
- Dual cutting edges
- Small diameter capability
- Versatile



PRODUCT RANGE

- Grades: MS7025/MS9025/VP Grade/TF15

APPLICATIONS

- Internal machining
- Internal copying
- Internal grooving
- Internal threading
- Precision machining

FEATURES

- Various grades for machining a wide range of materials
- High precision geometries
- Grades ideal for small tools machining
- With and without chipbreaker
- Machining diameter 2.2 mm – 8.2 mm
- Double ended cutting edges
- Multi-purpose use boring bar

MICRO MINI PLUS

COMPLETE RANGE OF SMALL-DIAMETER SOLID BARS

Solid boring bars for small parts machining, for a wide array of applications. Featuring an intuitive positioning mechanism for quick setup, enabling enhanced productivity. A dedicated PVD-coated grade MPB115 combines a high-stability carbide substrate with a multilayer PVD coating for exceptional heat and wear resistance. Perfect for demanding small parts manufacturing, these solutions deliver reliability and efficiency.



BENEFITS

- Reduced cutting heat for longer, stable tool life
- Safer machining process with reduced manual adjustment
- Higher productivity – optimized geometries for different materials
- Excellent heat and wear resistance



PRODUCT RANGE

- PVD coated grades: MPB115, MPB715, MPB915, MPB905

APPLICATIONS

- Boring & Profiling
- Back Boring
- Grooving
- Face Grooving
- Pre-Chamfering
- Threading

FEATURES

- All solid bars feature internal coolant supply
- Easy Setup with Positioning Mechanism
- Four dedicated multilayer PVD-coated grades
- Dedicated carbide substrates for high cutting-edge stability
- Excellent performance in finishing operations

MODULAR MICRO

QUICK-CHANGE SYSTEM FOR GANG-TYPE AUTOMATIC LATHES

In Swiss-type lathes, comb-type tool posts are widely used for turning operations. The tools mounted on these tool posts are usually screw-on design, making insert replacement inside the machine impractical due to limited working space. Modular Micro was developed with the aim of achieving a quick-change design that allows only the head to be attached and detached while keeping the shank mount in place. This enables easy tool changes while ensuring repeatability within 5 µm, enhancing process reliability. By reducing setup time, down time is minimised, thereby improving productivity.



BENEFITS

- Reduced tool change setup time
- Precision Repeatability
- Compatible with direct coolant turret systems of machine tool manufacturers
- Reduced tool cost and reduced inventory



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PRODUCT RANGE

Modular Micro Head/Modular Micro Holder

- Head type geometries: CC..06, CC..09, DC..07, DC..11, VB..11, VC..11, VP..08
- KAPR cutting edge angle: 95°, 107.5°, 93°, 62.5°, 72.5°

APPLICATIONS

- Gang type automatic lathes
- Swiss type machines
- Small parts machining
- Precision machining

FEATURES

- Quick-change system
- Double face contact
- Direct coolant supply
- Various heads available

MP3115/ MX3115

COATED AND UNCOATED CERMET GRADE FOR TURNING STEEL

Unmatched performance from cutting-edge cermet technology. Delivering exceptional dimensional stability and surface finishes. Advanced smooth surface treatment and optimized structure minimizes workpiece deformation to ensure long-lasting surface quality.

Tough internal structure and a protective oxide layer, prevents oxidation, reduces wear and boosts chipping resistance. Perfect for stable, high-quality finishing operations.



BENEFITS

- High-quality finished surface
- Suppresses dimensional changes of the workpiece
- Improved wear and chipping resistance under high-speed cutting
- Higher productivity
- Lower cost per part



P

PRODUCT RANGE

- PVD coated Cermet grade: MP3115
- Uncoated cermet grade: MX3115

Geometries

- Negative: TN
- Chipbreaker: R-F, L-F
- Positive: CC CP DC TB TC TN TP
- Chipbreaker: SRF, FP, FV, LP, MP, RF, SN, SS, SW,

APPLICATIONS

- Light – Finish & Medium cutting
- Mild – Carbon and Alloy steel turning operations
- High speed cutting

FEATURES

- AlTiN-AlCrN nano-multilayer coating
- Surface structure with enhanced wear resistance
- Optimised binder-phase structure
- Higher welding resistance

MS6015/MS7025/ MS9025

MS TURNING SERIES – PVD COATED GRADES FOR HIGH PRECISION AND SMALL PARTS MACHINING

The MS turning insert grades have been developed for a wide range of small parts machining in steels, stainless and difficult-to-cut materials.

Ideal for different and ever more complex materials and workpiece geometries with ever tighter dimensional tolerances.



BENEFITS

- Improved application range
- Excellent reliability
- Wide choice of geometries
- Ideal for high precision
- Breaks chips efficiently



S

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PRODUCT RANGE

- PVD coated grades: MS6015, MS7025, MS9025

Geometries

- Positive: CCET, CCGH, CCGT, DCET, DCGT, VCGT, GTBT, GTCT, TNGG, VBG, VPGT
- Chipbreaker: R/L-FS, FS-P, R/L-SRF, R/L-F, LS-P, R/L-SS, R/L-SN, SMG

APPLICATIONS

- Small parts machining
- Tight tolerance components
- Steels, stainless and difficult-to-cut materials
- Controlled vibration machining

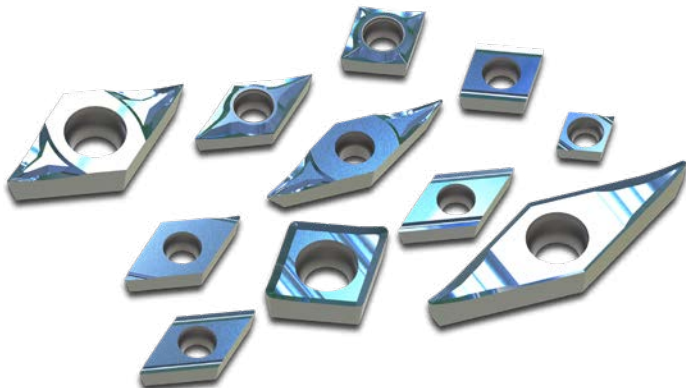
FEATURES

- Coatings adapted to different workpieces
- Improved carbide base material
- Precise Nano multi-layer coating
- Dramatically improved wear resistance

LC2005

DLC COATED GRADE WITH THIN-FILM TECHNOLOGY FOR PRECISION MACHINING OF NON-FERROUS METALS

DLC coating is a film that possesses both the hardness of diamond and the lubricity of graphite. Ideally suited for aluminium alloy machining due to its excellent wear resistance and anti-adhesion properties. Hydrogen-free DLC films have high hardness and provide superior wear and heat resistance. However, hydrogen-free DLC faces the challenge of being prone to peeling due to the significant hardness difference from the substrate. Mitsubishi Materials has overcome this challenge by adopting a newly developed thin hydrogen-free DLC film with improved adhesion, thereby achieving an excellent balance of wear resistance and strong adhesion to the substrate.



BENEFITS

- Ideal for machining high-precision components requiring excellent surface finishes
- Extended tool life
- High adhesion properties, suppressing sudden dimensional discrepancies
- Longer tool life leads to more environmentally friendly products



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Aluminium Alloys (Low and high SI content)

PRODUCT RANGE

- DLC coated grade: LC2005
- Geometries
- Positive: CC, DC, VC, VP (Precision tolerance)
 - Chipbreaker: SRF, SS, S-P, AZ, FS-P, FSF-P

APPLICATIONS

- Vc 200 – 700 m/min

FEATURES

- Hydrogen free
- Outstanding adhesion
- Thin coating effective for precision machining
- High hardness with excellent wear resistance
- High film peeling & chipping resistance

BC8210/BC8220

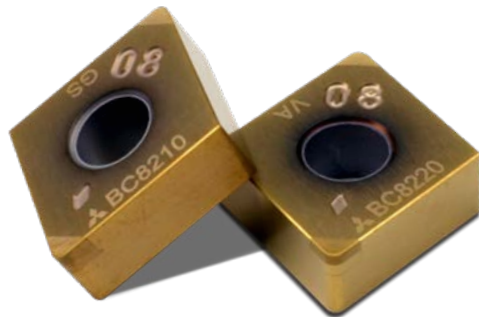
THE NEXT GENERATION OF COATED PCBN GRADES FOR MACHINING HARDENED STEELS

The grades BC8210 and BC8220 are the newest, innovative PcBN grades for turning hard materials in continuous, light and medium interrupted cutting applications.

The new grades offer excellent resistance to flank and crater wear. Along with an increased chipping resistance, they provide a more stable machining process and enable long tool life over a wide range of high speed applications.

The new BP chipbreaker in combination with the grade BC8220 was developed to provide the advantage of improved chip control during smaller depths of cut machining and over a wide feed range.

The gold coated outer layer makes it easier to detect wear and easily defines used cutting edges.



BENEFITS

- Easy wear recognition with the gold outer layer
- Reduced flank wear and good surface finishes
- High resistance to peeling
- Excellent chipping, fracture and crater wear resistance
- Smaller depths of cut with the new BP chipbreaker

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PRODUCT RANGE

- PVD coated grades: BC8220, BC8210
- Geometries
- Negative: CNGA, CNMG, DNGA, DNGM, SNGA, TNGA, VNGA, WNGA
- Positive: CCGT, CCGW, CPGB, DCGW, DCGT, TPGB, VBGW, VCGW
- Honing types: FS, GA, GH, GS, TA, TH, TS, VA
- Chipbreakers: BF, BM, BP, BL, BR
- Wiper: WS, WS2JR, WS2JL

APPLICATIONS

- General hard turning applications
- Continuous, light and medium interrupted cutting
- High speed machining
- New BP chipbreaker for improved chip control for smaller depths of cut below 0.4mm.

FEATURES

- Gold coated outer layer
- High adhesion strength between substrate and coating
- New ultra micro grain heat-resistant binder
- The BP breaker's positive rake angle and breaker wall is highly effective at breaking chips
- Super multi-layer ceramic PVD coating



DRILLING

PERFORMANCE – REDEFINING THE PARAMETERS

The modern manufacturing industry is fast moving, therefore Mitsubishi Materials continuously strives to be at the forefront of the market.

In a constant exchange with partners and clients, solutions are offered for every application.

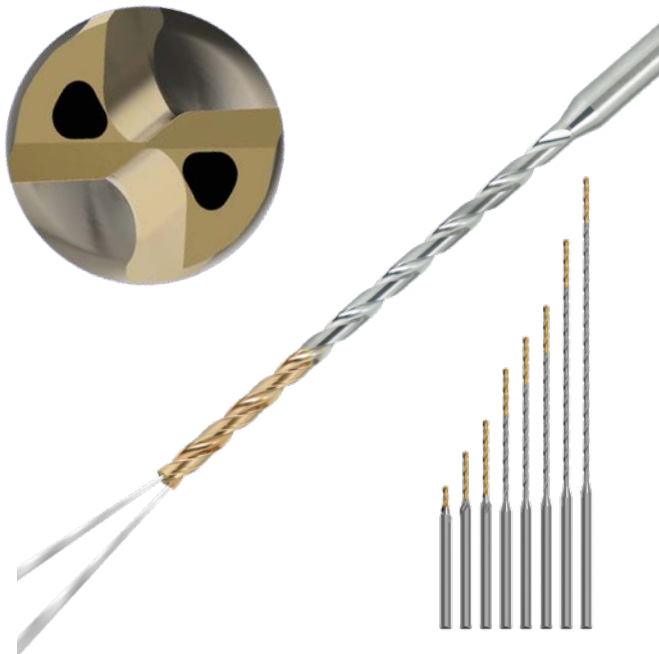
From the indexable insert drill MVX for hole depths up to $6xD$, through to the extra deep-hole MPS1, to the exchangeable head type DXAS drills for steel machining, Mitsubishi Materials offers a wide range of individual solutions.

MINI DVAS

SOLID CARBIDE DRILL SERIES FOR FAST, RELIABLE AND ACCURATE DRILLING

The MINI DVAS drills can perform at higher feeds and speeds meaning faster drilling cycles. They ensure high machining efficiency, high precision and increased tool life.

Straighter holes and improved dimensional accuracy are enabled by using the DVAS drills. The tool life exceeds all normal expectations.



BENEFITS

- High process stability
- High accuracy
- Efficient chip removal
- Increased coolant volume
- Reduced cutting force during drilling



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PRODUCT RANGE

- Diameter: DC Ø1 – 2.9 mm
- Length: 2 – 50 L/D
- Double point angle: 139°/141°

APPLICATIONS

- General applications
- Deep hole drilling L/D = 50

FEATURES

- Advanced coolant hole
- New XR point thinning
- Tough and sharp cutting edge design
- New coated grade DP1120
- Unique rigid form

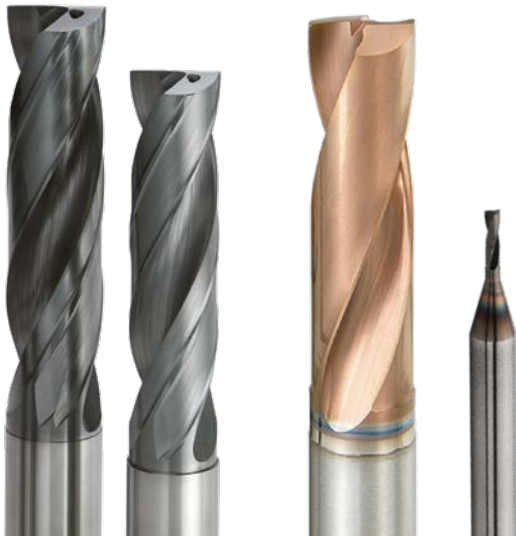
DFAS / MFE / MINI MFE

SOLID CARBIDE FLAT BOTTOM DRILLS FOR A WIDE RANGE OF APPLICATIONS

The flat gash lands on the corners provide greater strength and sharpness for a substantial reduction of burrs. The end geometry that combines different radii forms a strong cutting edge and provides excellent chip control.

The multi radius point geometry in combination with the thinned centre point forms ideal chip shapes, thereby dramatically reducing cutting resistance.

The special coolant channels of the advanced cooling technology offer significantly increased chip evacuation and ensure stable machining of stainless steels and titanium alloys.



BENEFITS

- High efficiency counter boring on various types of applications achieved with excellent chipping resistance
- Low cutting force reduces burrs
- High precision positional accuracy increases performance



PRODUCT RANGE

- | | |
|----------------------|-----------------|
| • DFAS Diameter: | DC Ø3 – 14 |
| Length: | 3 x DC |
| • MINI MFE Diameter: | DC Ø0.75 – 2.95 |
| Length: | 2 x DC |
| • MFE Diameter: | DC Ø3 – 20 |
| Length: | 2 x DC |

APPLICATIONS

- Spot facing
- Shoulder drilling
- Drilling
- Intersecting holes
- Eccentric and cast holes
- Small diameters

FEATURES

- Unique sharp cutting edges
- Excellent chip control
- Point thinning for lower thrust forces
- External coolant

DXAS

EXCHANGEABLE HEAD CARBIDE DRILL

A revolutionary exchangeable head drill that dramatically reduces running costs and achieves machining accuracy and an efficiency level comparable to solid drills.

The two-screw fastening suppresses deformation of the holder and enables high-strength fastening. Therefore, it is less likely to loosen and securely fixes the head, even in high-stress machining environments.

The new drill has exceptionally long tool life especially with the DP6020 grade coated carbide. As a result, running costs are significantly reduced compared to conventional exchangeable head drills.



BENEFITS

- Reduced running costs
- Increased usability
- High efficiency and accuracy
- Low cutting resistance



P

K

PRODUCT RANGE

- Diameter: DC Ø 18 – 30 mm
- Length: 1.5 – 8 L/D

APPLICATIONS

- General drilling of steels and cast iron
- Deep hole drilling up to L/D = 8

FEATURES

- Super secure head clamping
- Perfect head centering
- XR point thinning
- New through coolant system
- Flute design for excellent chip evacuation



MILLING

INNOVATION – THE KEY TO CONTINUOUS GROWTH

Mitsubishi Materials wide range of milling products provides off the shelf or tailor-made solutions, whether for the automotive, aerospace and medical, or general machining industries.

From the smallest cutter in the mini end mill series, through to the ceramic CE-series as well as a range of versatile indexable insert milling cutters, in combination with innovative carbide grades, Mitsubishi Materials provides state-of-the-art, high quality products.

MP1200/MV1000

COATED CARBIDE GRADES FOR EFFICIENCY AND RELIABILITY

MP1200 grade series (MP1220, MP1230 and MP1240) solves all problems when machining steels, stainless steels, heat resistant and titanium alloys. The latest coating technology provides extra heat, wear and welding resistance.

The **MV1000** series comprises two grades; the MV1020 and the MV1030. Both grades have an innovative CVD coating and can be used on a wide range of applications, particularly for machining unalloyed and low-alloy steels, stainless steels and nodular cast iron.



BENEFITS

- MP1200: One series of grades to provide performance and solutions
- Excellent tool life when machining at high cutting speeds
- New PVD coating enables high thermal shock resistance
- Choice of grades covers a huge range of applications



PRODUCT RANGE

- **MP1220** – For carbon and alloy steels
- **MP1230** – For stainless steels
- **MP1240** – For heat resistant and titanium alloys
WSX445, AHX440/475/640, ASX445/300/400, VOX, WWX200/400, DC4V, AJX, AQX, ARP, AXD4000/7000, BRP, BXD400, VPX200/300, WJX09/14, SPX, SRM2, CBJP/CBMP, PMF/PMR
- **MV1020** – For steel and cast iron
- **MV1030** – For steels, stainless steels and cast iron
WWX200/400, WSX445, WJX09/14, WSF406W, VPX200/300, AHX440/475, ASX400/445

APPLICATIONS

- Versatile range of insert geometries for a vast range of applications
- High speed milling

FEATURES

- Multi-layer coating technology
- Excellent wear resistance
- Increased fracture resistance



VQJCSRB / VQLCSRB / VQELCSRB

SEMI-LONG, LONG AND EXTRA-LONG END MILLS WITH AN EFFECTIVE CHIP-BREAKING FLUTE GEOMETRY

The VQCS series of carbide end mills include an exceptional flute geometry that effectively breaks chips. The extra-long version, introduced together with long and semi-long flute length types are supplied in square and corner radius geometry.

Designed for specialised roughing applications on heat resistant super alloys. They can also perform effectively on hardened stainless steels and can even machine materials such as copper and copper alloys as well as carbon and alloy steels.



BENEFITS

- Multi-functional solid carbide end mills
- Excellent chip removal
- Ramp capability up to 30°
- High performance machining



PRODUCT RANGE

Square and corner radius

DC Ø 6 – 20 mm

APPLICATIONS

- Roughing
- Trochoidal milling
- Shoulder milling

FEATURES

- Special flute geometry ideal for breaking chips
- (Al, Cr)N coating for excellent wear resistance
- Long and extra-long flute lengths

VFR2MV/4MV VFRSD/MD/LD VFRSDRB/MDRB

STANDARD AND LONG REACH, CORNER RADIUS, SQUARE AND BALL NOSE END MILLS

The first choice of coated solid carbide end mills for hardened material machining. The latest multi-layer coating provides superior resistance to wear for machining steels up to 70 HRC.

VFR2MV/4MV – Ideal for suppressing chatter and vibrations.
VFRSD/MD/LD – Short, medium and long cut lengths. Multi-flute high helix geometry provides the necessary sharpness and strength for successful high speed machining.
VFRSDRB/MDRB – Corner radius, 6 flute end mills in short and medium cut lengths.



BENEFITS

- VFR2/4: High rigidity cross section
- VFRSD/MD/LD: Multi flute with negative rake end cutting edges
- VFRS/MDRB: Wide selection of diameters and corner radii available



P

H

PRODUCT RANGE

VFR2MV	DC Ø 0.5 – 6 mm
VFR4MV	DC Ø 6 – 20 mm
VFRSD	DC Ø 1 – 12 mm
VFRMD	DC Ø 1 – 25 mm
VFRLD	DC Ø 6 – 25 mm
VFRSDRB	DC Ø 3 – 12 (RE 0.3 – 1.0 mm)
VFRMDRB	DC Ø 3 – 20 (RE 0.3 – 2.0 mm)

APPLICATIONS

- Ideal for machining hardened steels

FEATURES

- **VFR2/4:** High rigidity cross section
- **VFRSD/MD/LD:** Multi flute with negative rake end cutting edges
- **VFRS/MDRB:** Wide selection of diameters and corner radii available



MPLUS

COOPERATION – OVERCOMING BOUNDARIES

MPlus is a complementary product line that enriches the existing range of tools.

A wide range of supplementary tools manufactured in cooperation with partners across Europe that meet specific customer needs.

Outstanding tools and sophisticated tooling solutions for the metalworking industry.

*M*plus...

415SD

A VERSATILE MILLING TOOL FOR MACHINING A WIDE RANGE OF MATERIALS

The 415SD high-feed milling cutter offers reliability and cost efficiency for plunge, circular and ramp machining. Precise positioning and secure insert clamping with large contact surfaces enables more efficient high-feed machining. MV1000 grades with different chip breakers are available for the P, M and K material groups, while MP9130 indexable inserts are available for machining titanium alloys. The uneven irregular pitch flutes reduces vibrations and the fine tooth pitch ensures highly efficient cutting performance.



BENEFITS

- Secure insert positioning for stable and reliable machining
- Irregular pitch cutting edge distribution reduces vibration, especially in applications with long overhangs
- Higher performance when using the MV1000 grades



PRODUCT RANGE

- Arbor type: DC Ø 50 – 66 mm

APPLICATIONS

- Face milling
- Shoulder milling
- Helical milling
- Pocket milling
- Roughing

FEATURES

- Low power consumption
- Good chip removal
- Specially designed chipbreakers
- Stable and robust 4-edged inserts for efficient high-feed milling

ISO PSC TOOL HOLDERS

WIDE RANGE PSC HOLDERS AND ADAPTORS FOR MULTIPLE OPERATIONS

The new ISO PSC Holder series is taking advantage of the latest technology, materials and geometries. Due to the wide variety of tools available, this series offers a solution for nearly every application – ranging from multi-purpose, through to turning and profiling tool holders and boring bars.



BENEFITS

- Optimisation of tool life
- Better surface finishes
- Higher process reliability
- Increased productivity



PRODUCT RANGE

- D-Type Holder
- P-Type Holder
- S-Type Holder
- P-Type Boring Bar
- S-Type Boring Bar
- External and internal threading
- Top clamp holder for ceramic inserts
- Shell mill adaptor
- Screw in type shank
- Boring bar holder
- Collet chuck holder
- Adaptor for square turning tool holder
- Multi-purpose adaptor with radial mounting
- Automatic caps

APPLICATIONS

- External Turning
- Internal Boring
- Facing
- Threading
- Rouging & finishing
- Multitask machining
- Profiling applications
- Milling operations

FEATURES

- Large variety of holders in different insert geometries (positive & negative)
- Wide choice of holders for different applications
- Internal coolant for high efficiency and longer tool life
- Secure insert clamping systems

M-TAPS

HIGH PERFORMANCE SOLID TAPS FOR CUTTING AND COLD FORMING

M-TAPS are a high-performance range of taps developed for demanding cutting and cold forming applications. Manufactured from premium HSS-PM and enhanced with advanced coatings, M-TAPS provide excellent wear resistance, long tool life and reliable machining performance across a wide range of work materials and production environments. Optimized geometries ensure stable threading operations, improved process security and consistent thread quality, supporting high productivity in both general machining and high-performance applications.



BENEFITS

- High process reliability
- Long tool life and wear resistance
- Stable machining performance
- Consistent thread quality
- Wide application versatility



PRODUCT RANGE

Cutting taps:

- Metric: M3 – M20 / Metric Fine: MF8 – MF16
- UNC / UNF: Nr.10 – 1/2"

Cold forming taps:

- Metric: M3 – M16 / Metric Fine: MF8 – MF16
- G: 1/8" – 1/2"

Including also internal coolant solutions depending on tool family

APPLICATIONS

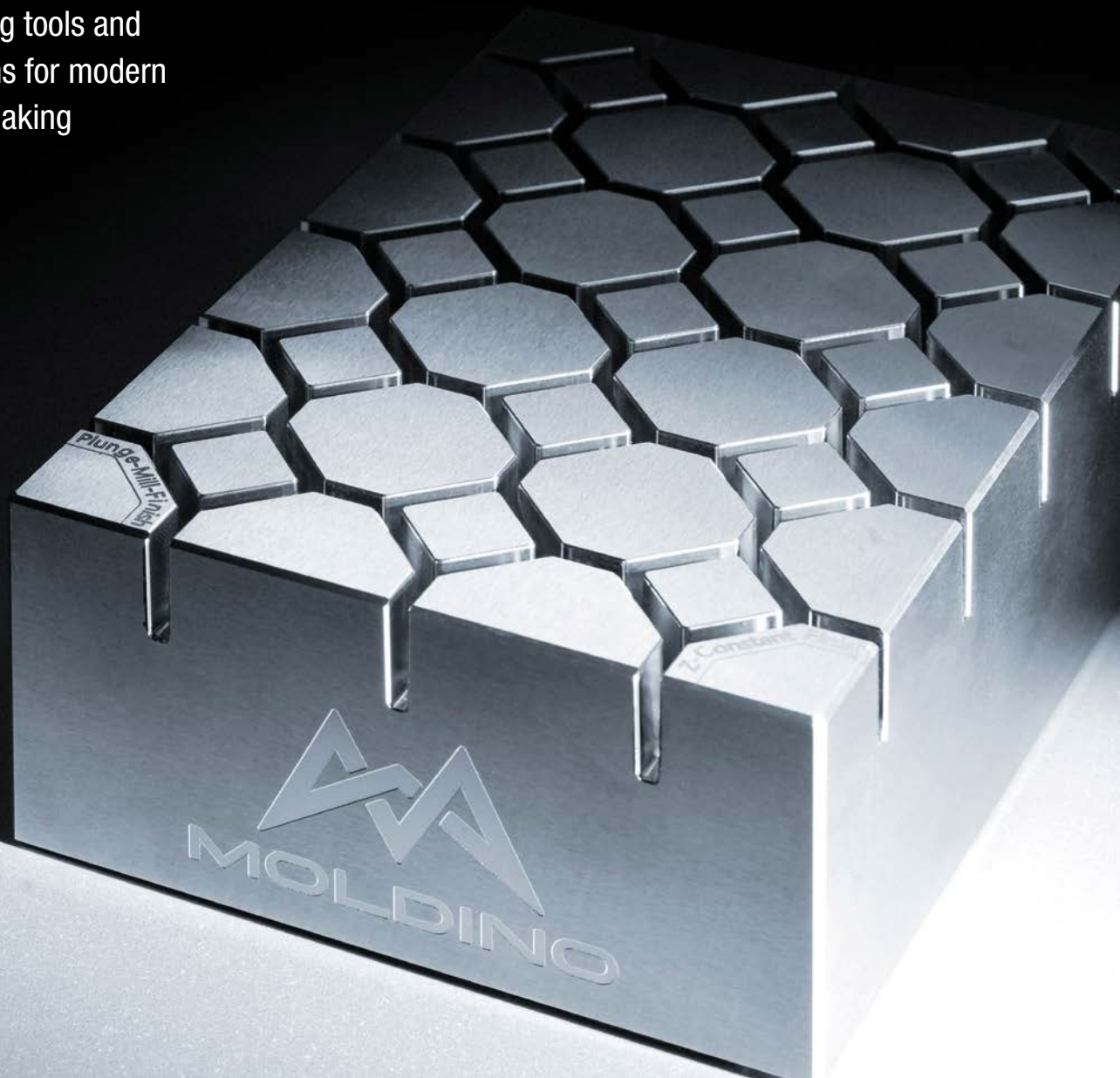
- Through and blind hole threads
- General machining and high-productivity applications
- Standard and bottoming thread operations
- Rigid and synchronized tapping conditions
- Wide range of work materials

FEATURES

- High-performance cutting and cold forming tap geometries
- Multiple helix angle solutions for optimized chip evacuation
- Chamfer [B, C, E] for through, blind and bottoming applications
- Internal coolant and lubrication groove configurations available
- Premium HSS-PM substrate with advanced PVD coating

Precision begins where standard solutions end

Precision cutting tools and
system solutions for modern
mold and die making



The Edge To Innovation

For more than 40 years, MOLDINO has been developing precision cutting tools for the mold and die industry. As part of the Mitsubishi Materials Group, we combine Japanese manufacturing quality with European application expertise. With our Production50-method, we optimize manufacturing processes holistically and develop customized system solutions to increase productivity, efficiency, and competitiveness.



Why MOLDINO?

Highest Precision

Precision cutting tools for complex geometries, deep cavities, and the highest demands on dimensional accuracy and surface quality.

Maximum Process Reliability

Long tool life and stable machining processes ensure maximum reliability in production.

Innovative Milling Technologies

Whether hardened steels or graphite, MOLDINO stands for excellence in machining demanding materials, delivering outstanding surface quality and economical manufacturing processes.

Production50 Process Optimization

With Production50, we analyze and optimize manufacturing processes holistically. The result is shorter machining times, lower production costs, and increased throughput while maintaining the same machine capacity.

MOLDINO at a glance

- More than 40 years of experience in mold and die making
- 4,000+ products covering the entire process chain
- Tool diameters ranging from 0.03 mm to 315 mm

Increasing Throughput with Intelligent Process Optimization
Your Benefits at a Glance:

- Higher throughput with the same machine capacity
- Increased output per machine and shift
- Reduced machining times and lower production costs
- Enhanced process reliability
- Sustainable improvements in competitiveness

Production50 combines cutting tool technology, application expertise, and customized system solutions into a holistic optimization approach. As a result, measurable productivity gains and sustainable competitive advantages are achieved.

The following case studies demonstrate how these opportunities can be transformed into measurable productivity improvements.

H7 Direct Drilling vs.
Wire EDM

Challenge

Producing H7 holes by wire EDM often involves multiple process steps, resulting in long lead times, high production costs, and additional dwell times within the manufacturing process.

Production50 Process Optimization

By implementing optimized direct drilling strategies, H7 holes can be produced directly and automatically in materials up to 60 HRC, significantly improving manufacturing efficiency.

Technology & Manufacturing Process Comparison

Conventional 1



Conventional 2



MOLDINO H7 Direct Drilling



Technology	Machining Time	Production Costs
Conventional: Wire EDM	38:09 hours	1,554.85€
MOLDINO H7 Direct Drilling	8:03 hours	738.49€
Difference	-79%	-53%

How You Benefit from Production50:

- Higher throughput with the same machine capacity
- Reduced dwell times
- Enhanced process reliability

Face-Milling vs. Flat-Grinding

Challenge

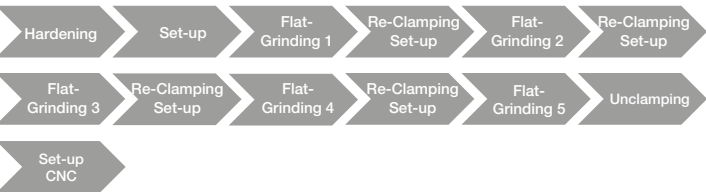
Conventional flat-grinding requires multiple machining operations, re-clamping steps, and specialized personnel. This increases machining time, costs, and organizational effort.

Production50 Process Optimization

Face-milling enables unattended 5-sided machining in a single setup.

Technology & Manufacturing Process Comparison

Flat-Grinding



MOLDINO Face-Milling



Technology	Machining Time	Production Costs
Flat-Grinding	5:14 hours	306.03€
MOLDINO Face-Milling	0:42 hours	64.04€
Difference	-87%	-79%

How You Benefit from Production50

- Fewer re-clamping operations result in higher dimensional accuracy
- Higher throughput with the same machine capacity
- Reduced dependence on skilled labor availability

What Potential Is Hidden in Your Manufacturing Process?

Every manufacturing process offers opportunities for improvement. With Production50, our process optimization experts analyze existing machining operations, identify improvement potential, and develop customized solutions to increase productivity, efficiency, and throughput.

Discover Production50!

Explore the potential of your manufacturing processes together with our Production50 experts.

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