

P651A

A MITSUBISHI MATERIALS CORPORATION

INDEX AUTOMOTINE



Mitsubishi Materials is constantly engaging ultra modern technologies in the research and development of cutting tools. Results of this research provides solutions for the ever increasing requirements of the automotive industry.

ENGINE

See.







TRANSMISSION



AXLE / BRAKE







Cylinder Block







FMAX

High efficiency face milling cutter for aluminum alloys.

Face milling cutter with superfine pitch for high efficiency and high speed machining, from roughing to finishing. Adopting a newly developed micro adjustment system to ensure quick and easy insert placement. Steel head and aluminum body provides

greater cutter strength with less weight.



Cylinder Bore Cutters

Roughing and finishing cutters. The rough boring cutter utilizes a combination of different carbide grades, that offer high speed & feed machining. The finishing tool uses CBN inserts that can provide high wear resistance properties that lead to an increase in overall tool life.

Adjustable cutting edge run-out on finishing cutters.



AHX640W

High efficiency machining for cast iron. Uses an economical 14 cutting edge insert. Insert grade MC5020 has excellent wear, chipping and thermal crack resistance.



AOX445

High efficiency machining for cast iron. Uses an economical 16 cutting edge insert. Employing the new coated, solid CBN grade BC5030. For high efficiency roughing through

finishing process.



Bore Reamer

Employs carbide guide pads that provides the self guiding properties leading to an overall improvement in hole roundness.



VOX400

Strong edge insert type cutter for machining cast iron. Vertical mounted inserts with ideal cutting geometry is suitable for a wide range of cast iron rough milling applications.

Cylinder Head





Valve Seat Finish Tool

Custom made in-line design finishing tool uses CBN inserts that can provide high wear resistance properties that lead to an increase in tool life. These cutters provide a micro adjustment which allows the insert to be set individually.



Bore Reamer

Employs carbide guide pads that provides the self guiding properties leading to an overall improvement in hole roundness.

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High efficiency face milling cutter for aluminum alloys.

Face milling cutter with superfine pitch for high efficiency and high speed machining, from roughing to finishing.

Adopting a newly developed micro adjustment system to ensure quick and easy insert placement.

Steel head and aluminum body provides greater cutter strength with less weight.



MNS Drill

Solid carbide drill for high efficiency drilling. MNS drill has 4 coolant holes. Suitable for high feed and high efficiency drilling of aluminum alloys.



MAS Drill Solid carbide drill for high

hole accuracy. MAS drill has a double margin, improving the hole finish that does not require a reaming process. Suitable for high speed

machining of aluminum alloys.

Step Drill

Solid carbide drill for aluminum alloys. Step drills are customer designed to combine several drilling operations as well as countersinking and or counterboring operations into one tool.

Straight Flute Drill

Custom designed solid carbide straight flute drill offers greater strength and hole accuracy. Excellent for cored holes.



Connecting Rod





ASX445/WSX445

General use face milling cutter. ASX445 is suitable for use in a wide range of applications by extensive insert grades and breakers expansion.

WSX445 achieves high cost performance, ensuring the sharpness and offering the use of 8 corners with the double sided insert.



Bore Finisher

Large hole roughing and chamfering. Rough boring and chamfering of both end faces with the same tool.



Double Margin Drill

Solid carbide drill. Suitable for high efficiency and high accuracy drilling.

MVX Drill

Indexable type drill. High rigidity body produced by utilizing the latest technology. This enables a maximum drilling depth of L/D=6.

MVS Step Drill

Solid carbide drill. The MVS step drill can be used to reduce the number of machining operations therefore reducing machining time and cost while maintaining high hole accuracies.

MWS Super Long Drill

Solid carbide extra long type drill. Drilling of holes 10D-30D with continuous feed, eliminating the need for peck cycles, which improves cycle time.

Crank Shaft Cam Shaft



MC6015/MC6025

CVD coated grade for steel turning. MC6015 with superior wear resistance and heat resistance achieves long tool life in the high speed and stable cutting. MC6025 with highly stable cutting edge performance makes it possible to carry out stable machining to cover from roughing to medium cutting.





Pelican Double Clamp Holder

The combination of the high insert clamping rigidity and the overall strength of the pelican holder itself results in effective machining even under heavily interrupted or high feed machining that requires large tool overhangs.



Screw-in Tools

APX4000/ASX400 Interchangeable heads for end milling tools. Standard series includes

steel straight shank and high rigidity carbide shank types.





ASX445/WSX445

General use face milling cutter. ASX445 is suitable for use in a wide range of applications by extensive insert grades and breakers expansion.

WSX445 achieves high cost performance, ensuring the sharpness and offering the use of 8 corners with the double sided insert.

MVS Drill

Solid carbide drill. Employs new TRI-cooling Technology®. New PVD coated grade for drills offers long tool life in a wide range of work materials.





MWS Super Long Drill

Solid carbide extra long type drill. Drilling of holes 10D-30D with continuous feed, eliminating the need for peck cycles, which improves cycle time.

TRANSMISSION

Transmission Case Valve Body





FMAX

High efficiency face milling cutter for aluminum alloys.

Face milling cutter with superfine pitch for high efficiency and high speed machining, from roughing to finishing. Adopting a newly developed micro

adjustment system to ensure quick and easy insert placement. Steel head and aluminum body provides

greater cutter strength with less weight.





AXD4000

Milling cutter for aluminum alloys.

Multi functional milling cutter for high speed & performance machining of aluminum alloys.

Straight Flute Drill

Custom designed solid carbide straight flute drill offers greater strength and hole accuracy. Excellent for cored holes.



MAS Drill

Solid carbide drill for high hole accuracy. MAS drill has a double margin, improving the hole finish that does not require a reaming process. Suitable for high speed machining of aluminum alloys.

Step Drill

Solid carbide drill for aluminum alloys. Step drills are customer designed to combine several drilling operations as well as countersinking and or counterboring operations into one tool.

Gears Epicyclic Carriers



Integrated helical broach offering high machining accuracies and lower running costs.



MBS140/MB4020

Solid, Full Top and Petit Tip CBN. For High efficiency, high precision machining of sintered alloys. The higher CBN content makes these the first choice for machining various powder metal sintered alloy parts. Greater cutting edge strength and excellent welding resistance properties prevents burrs and achieving ideal work piece tolerances.



UE6110/MC6015

CVD coated grade for steel turning. A revolutionary tool grade offering both high crater and flank wear resistance that leads to higher machining stability and tool life management.



MC7015/MC7025/ MP7035

CVD & PVD coated grade. MC7015/MC7025 CVD coated grade helps prevent welding problems during high speed cutting. MP7035 PVD coating prevents abnormal wear and fracturing of cutting edges during interrupted cutting at medium to low speeds.



Solid carbide drill. Employs new TRI-cooling Technology®. New PVD coated grade for drills offers long tool life in a wide range of work materials.

TRANSMISSION

Shaft CVT Pulley





UE6110/MC6015

CVD coated grade for steel turning. A revolutionary tool grade offering both high crater and flank wear resistance that leads to higher machining stability and tool life management.



GY Grooving Holder

Grooving revolution. Innovative clamping system ensures reliable grooving. A wide selection of holders and inserts available for diverse grooving applications.



MC6025

CVD coated grade for steel turning. New P20 grade achieves a good balance between wear resistance and fracture resistance.

Excellent chipping resistance due to the newly developed special cemented carbide substrate and the black "supersmooth" coating.





MBC020 Coated CBN.

Uses a CBN substrate that has high cutting edge toughness. The TiAIN based coating delivers superb wear resistance. It covers a wide range of applications from continuous to light interrupted cutting.



Coated CBN for general cutting. Increased cutting edge strength and high crater wear resistant CBN grade in combination with a highly wear resistant TiAIN coating. This results in longer tool life and improved machining efficiency under heavy duty or interrupting cutting.

AXLE / BRAKE

Steering Knuckle Hub





MP6120/ MP6130/VP15TF

PVD coated grade. PVD coatings have excellent properties for toughness, wear and heat resistance application.

Stable machining properties are enabled when the coating is combined with a high wear and fracture resistance carbide substrate.



MHE Drill

Solid carbide hub drill. A uniquely designed drill that offers high performance machining of hub bolt holes. The design of the drill ensures excellent chip disposal properties and machining accuracies.



MVS Drill

Solid carbide drill. Employs new TRI-cooling Technology®. New PVD coated grade for drills offers long tool life in a wide range of work materials.



MC5005/MC5015

CVD coated grade for Cast Iron/Ductile turning.

MC5005/MC5015 New Nano-Texture Technology allows speeds up to 2,000 SFM.

Along with new chip breakers to take full advantage for each respective application.



stable machining to cover from

roughing to medium cutting.

Global Network



- Sales Office
- Factory
- **O** Representative Office
- Agency



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