MITSUBISHI MATERIALS

OIL & GAS SOLUTIONS



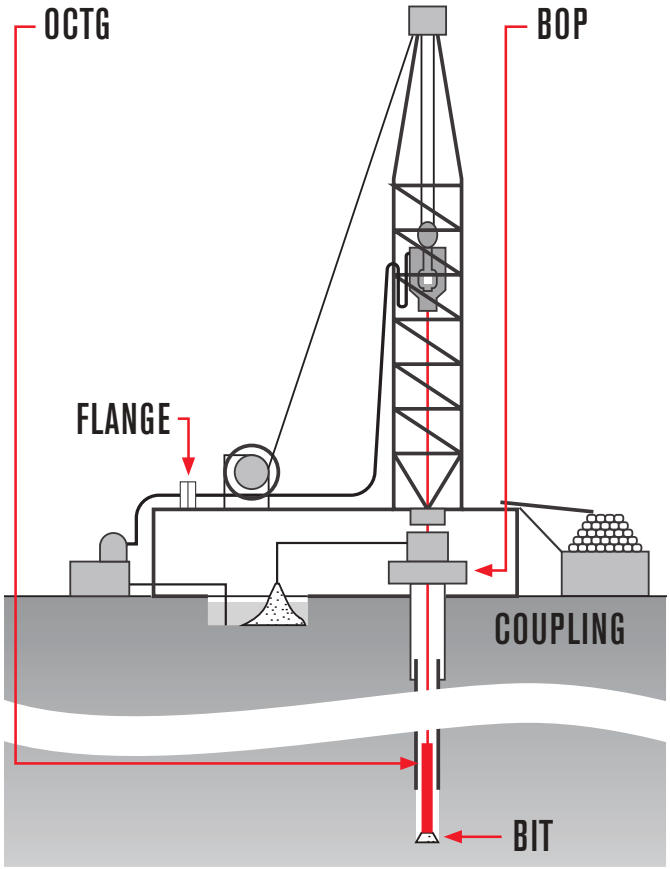


PRECISION TOOLING FOR
OIL & GAS APPLICATIONS

MITSUBISHI MATERIALS



OIL & GAS SOLU



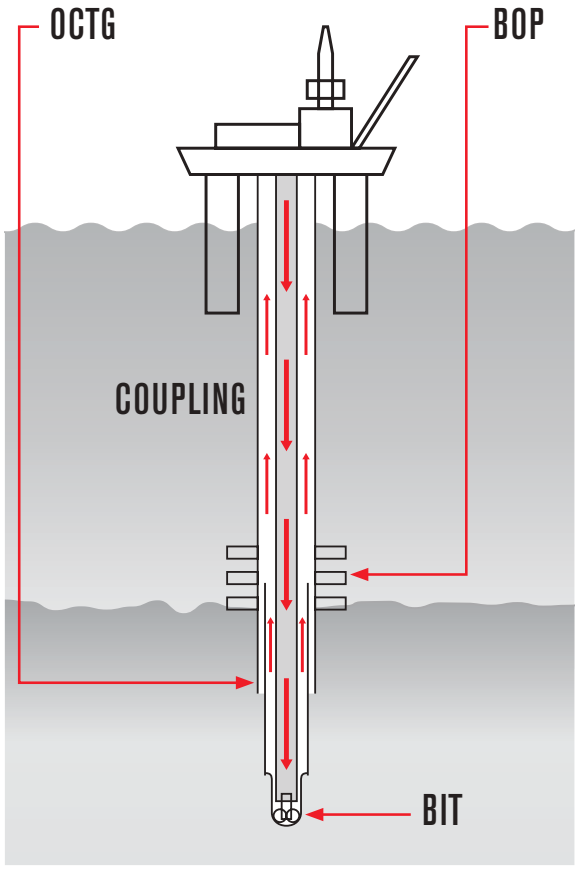




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How do you calibrate a perfect fit when it comes to parts for the Oil and Gas Industry? Use cutting tools that are absolutely precise — every time.

We understand the challenges manufacturers face when it comes to machining complex parts with challenging geometries and fine finishes. Our cutting tools are expertly crafted by Mitsubishi Materials with exceptional quality and precision to provide demanding application solutions necessary for improved productivity in manufacturing.

Our promise is to deliver high-quality precision cutting tools that enable you to manufacture precisely perfect products every day.

4 OCTG - OIL COUNTRY TUBULAR GOODS



6 INNER SLEEVE



7 BOP - BLOWOUT PREVENTER



8 FLANGE & VALVE



8 FIXED CUTTER BIT



9 ROLLER CONE BIT



▸OCTG (OIL COUNTRY TUBULAR GOODS)



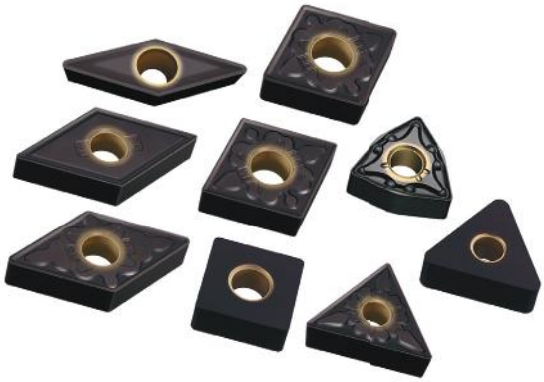
Oil country tubular goods are a consolidation of different steel tubular products such as well casing, production tubing, and drill pipe, which are used to carry out drilling without any interruption. Tubular pipes can be seamless or welded, manufactured in various grades and sizes. Our turning inserts are specially crafted to meet the high standards required to manufacture these goods.



MC5100

CVD COATED GRADE FOR CAST IRON

- Reduced cycle times
- Extra thick Al2O3 coating layer
- Nano-texture coating technology
- TOUGH-Grip technology



MC6100

NEXT GENERATION STEEL TURNING PERFORMANCE

- Dramatic increase in stability and wear
- Super nano texture technology
- Super tough grip
- Protection against sudden fracturing



MC/MP7100

A REVOLUTION IN STAINLESS STEEL TURNING

- Excellent resistance to notch wear with good burr control
- Outstanding tool life achieved through high resistance to plastic deformation
- Smooth cutting edge prevents chip welding
- Special carbide substrate improves fracture and thermal shock resistance



MP/MT9000

ISO TURNING INSERTS FOR DIFFICULT TO CUT MATERIALS

- The high Al-rich (Al,Ti) single layer coating significantly reduces edge fracturing
- Unmatched resistance to heat and plastic deformation
- Sharp cutting edge with excellent wear and fracture resistance
- Special cemented carbide substrate



MP9005/MP9015/MP9025

PVD COATED CARBIDE GRADE

MT9005/MT9015

CARBIDE GRADE (NON COATED)

THREADING & CHASERS

PRECISE & EFFICIENT THREADING PRODUCTS

THREAD PROFILES

- API Round
- API Buttress
- API H90
- API Rotary
- ACME
- Stub ACME

CUSTOM SOLUTIONS AVAILABLE



INNER SLEEVE

A sliding sleeve is a standard component for the completion of an oil or gas well. Their main uses are to shut off flow from one or more reservoir zones or to regulate pressure between zones. The unique GY and GW grooving and cutting off systems will ensure dependable outcomes.



GY A WIDE SELECTION OF HOLDERS AND INSERTS AVAILABLE FOR DIVERSE GROOVING AND CUTTING OFF APPLICATIONS

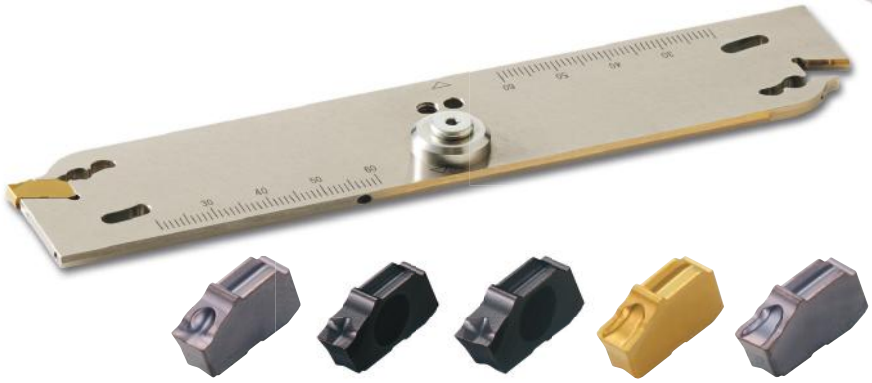
- Innovative clamping system ensures reliable grooving
- Added insert edge (1-edge) enables machining for external grooving and face grooving with no interference
- High rake angle minimized cutting resistance
- Narrow breaker width greatly improves chip control











GW LONG LASTING, EASY TO USE CUTTING OFF AND GROOVING SYSTEM

- Simple, convenient and efficient
- Maximize usability without sacrificing performance
- Increased wear resistance from two through coolant ejection holes
- Simple insert clamping method offering high rigidity

BOP-BLOWOUT PREVENTER



A large valve at the top of a well that may be closed if control of formation fluids is lost. Closing this valve regains control of the reservoir, allowing procedures to be initiated to increase the mud density until it is possible to open the BOP and retain pressure control of the formation. Our milling tools give you consistent superior performance throughout the application process.



VPX MULTI-FUNCTIONAL CUTTER FOR HIGH-EFFICIENCY MACHINING

- Improved chip evacuation
- Insert grades for a wide range of materials
- Large wiper flats for better surface finish
- Longer cutter body tool life



WJX DOUBLE-SIDED INSERT TYPE HIGH FEED RADIUS MILLING CUTTER

- Low cutting resistance on start up, maintains stable machining during interrupted cut
- Unconventional cutting design for stable milling
- Complex shape flank face suitable for ramping
- Increased insert thickness provides higher strength



WSX DOUBLE-SIDED INSERT TYPE FACE MILL LOW CUTTING RESISTANCE

- Designed to control abnormal insert breakage and body damage
- Unique Double Z insert geometry features sharp edges with low cutting resistance
- Through coolant holes improve chip discharge and prevents chip welding
- Perfect balance between convenience and high efficiency



WWX DOUBLE-SIDED INSERT TYPE SHOULDER MILL HIGH RIGIDITY AND HIGH QUALITY PERFORMANCE

- The optimized “X-Type” insert for high quality machining
- Stable and reliable
- Excellent control and chip abrasion
- Generous thickness of the insert provides high rigidity

FLANGE & VALVE

A projecting rim or collar on a pipe for a pressure vessel. When used in combination with another flange, it is capable of sealing a pressure vessel or another pipe. This is a reliable way of connecting pipe or vessel systems. Ensure precision drilling with your applications to get a secure connection every time with our indexable drills.





MVX HIGH RIGID BODY PRODUCED BY UTILIZING THE LATEST TECHNOLOGY

- 4 cutting edges with an economical 4-corner insert
- Ideal combination of outer CVD insert and inner PVD insert
- High rigid body increases surface hardness preventing abrasive damage caused by chip flow
- Chip evacuation is 20% greater than conventional products

MVS LONG TYPE



AVAILABLE IN DCX10, DCX15, DCX20, DCX25, DCX30, DCX35, DCX40



- Large chip pocket near center of drill
- High cutting edge strength and ideal chip control
- Double margin provides excellent straightness and surface finish
- Ideal web thickness and helix angle

FIXED CUTTER BIT

Fixed cutter bits consist of bit bodies and integrated cutting elements. The fixed cutter bits are designed to excavate holes by shearing formations rather than chipping or gouging formations, like rolling cutter bits. These bits do not have moving parts such as cones or bearings. The iMX exchangeable head end mill system is the uniquely suited to machining this application.



iMX MULTI-FUNCTIONAL CUTTER FOR HIGH-EFFICIENCY MACHINING

- Improved chip evacuation
- Insert grades for a wide range of materials
- Large wiper flats for better surface finish
- Longer cutter body tool life



ROLLER CONE BIT

A drill bit with a head that is divided into three main parts. The tricone bit consists of three rotating cones working inside each other and each with its own row of cutting teeth. It is engineered to penetrate the subsurface rock formations and to do so quickly and for as long as possible. Find the right drill for your application with a wide variety of options.





MVS SOLID CARBIDE DRILLS EMPLOYS NEW TRI-COOLING TECHNOLOGY

- Coating provides excellent wear resistance with low resistance property
- Unique curved cutting edge combines edge sharpness with rigidity
- Smooth surface technology reduces cutting resistance and excellent chip evacuation
- Coolant hole geometry improves coolant flow rate and heat generated in the hole chip flow

VQ VIBRATION CONTROL END MILLS FOR MACHINING DIFFICULT-TO-CUT MATERIALS

- SMART MIRACLE coating
- Smoothened surface “ZERO-μ surface
- Irregular helix flutes help prevent vibration
- Improved chip evacuation





MS PLUS GENERAL PURPOSE END MILL OPTIMIZED PLUS PERFORMANCE FOR TOUGH APPLICATIONS

- (Al,Ti,Cr)N multilayer coating
- Long tool life on materials up to 52 HRC
- Machine a wide range of work materials
- High accuracy with excellent wear resistance

MFE FLAT BOTTOM DRILL

- New “Z” thinning with lower thrust force provides excellent chip evacuation
- Smooth surface clearance provides reduced deflection and excellent position accuracy
- Longer tool life with stable cutting
- Unique sharp cutting edges



MTEC

MACHINING TECHNOLOGY AND EDUCATION CENTER

Welcome to our new world-class Machining Technology and Education Center (MTEC) in Mooresville, NC providing year round support and services to North America.



ABOUT MTEC

TOOLING PROPOSALS & EVALUATION

We will review your current processes or outline a new process. From this review, we will improve productivity, analyze programming methods and output a solution with programming, tooling and time savings.

MACHINING SIMULATION

Using the latest CAD/CAM software and our cutting tool experience, we will outline a new process using proper machining techniques to maximize tool life and productivity.

TECHNICAL SUPPORT

Dedicated local professionals to answer any of your order, product or technical questions.

TRAINING

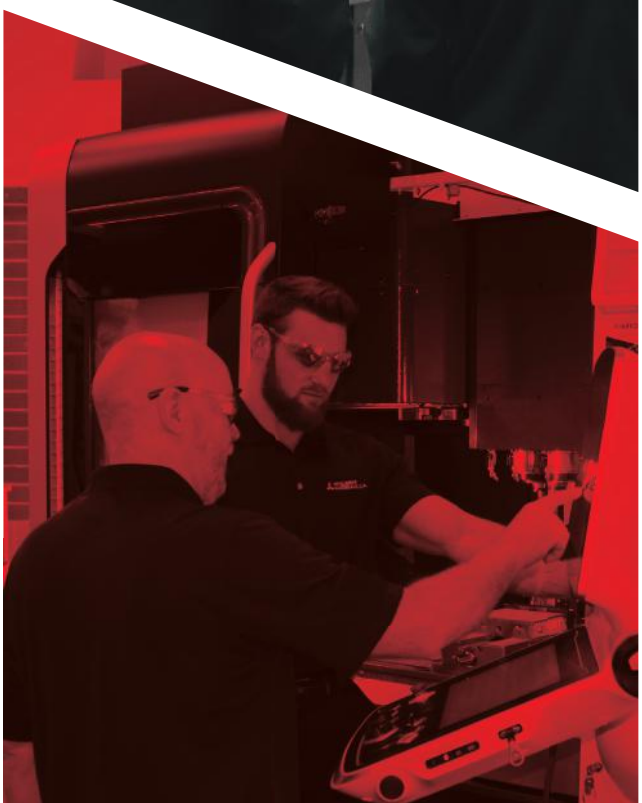
We are excited to offer several levels of training with goals to reach our highest level--Craftsman Machining Technology. At MTEC NC, we will train using a combination of classroom and hands-on machine time to develop skills and real-world understanding of materials, tools and applications. In addition to multi-day courses, we will have Machining Technology skills seminars, as well as seminars from our partners to complement our apprentice level courses, our journeyman courses, and up to our craftsman level courses.

PROCESS IMPROVEMENTS

Review of the complete part processing and recommend changes of speed, feed, new tooling, reduction of passes, modifying programming and other solutions to reduce cycle time, save money and be proactive.







WEBINARS

Our FREE online webinar series is available anytime on-demand. Narrated by the MTEC training staff, you will receive in-depth knowledge of the topic. Simply register online at the link below for access. You will receive a certificate upon completion of each course.

mmusnewsstand.com/register

ONLINE TRAINING

Our FREE e-learning program offers 11 courses in drilling, milling, turning, threading, tool grades and workpiece materials. Once each course is completed, you will be given the opportunity to print a certificate.

- Basic Drilling
- Basic Milling
- Basic Turning
- Advanced Drilling
- Advanced End Milling
- Advanced Turning
- Basic Threading
- Advanced Face Milling
- Basic Workpiece Materials
- Tool Grades
- Advanced Workpiece Materials

TRAINING COURSES

Programs are designed for several levels of skill development – from basic understanding to advance manufacturing with digital solutions, complementing to your valued experience in CNC machining environment. Participate in machining demonstrations with Mitsubishi Materials' skilled engineers. Discover methods to reduce setup and cycle time, optimize programs and enhance your knowledge base.

Information on course schedule,
course description, and accommodations

MTECTRAINING.INFO

Follow the QR Code for a virtual facility tour

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FOR YOUR SAFETY

- Don't handle inserts and chips without gloves.
- Please machine within the recommended application range and exchange expired tools with new ones in advance of breakage.
- Please use safety covers and wear safety glasses.
- When using compounded cutting oils, please take fire precautions.
- When attaching inserts or spare parts, please use only the correct wrench or driver.
- When using rotating tools, please make a trial run to check run-out, vibration and abnormal sounds etc.

www.mmc-carbide.com/us

Tools specifications subject to change without notice.

MM.OIL&GAS-US-2025