



On-Site Services



**Mactech**  
(EUROPE) LIMITED



# Why Choose Mactech Europe?

- Mactech Europe, a company with over 20 years experience of providing in-situ machining support services on site are uniquely positioned to complete difficult projects in the most demanding environments
- Mactech Europe have the necessary technically qualified manpower readily available with extensive equipment resources to provide a quality, cost effective range of in-situ services that achieve desired results within acceptably short time frames.
- Mactech Europe is able to provide a wide range of On-Site Machining Services both in the UK and Internationally.
- Mactech makes a total and commitment to safe working practices, both in equipment design and services performed
- Focus on producing the best cut times and on-site service support in Europe
- Broad and deep range of machines, equipment and assets on- site
- Design and engineer custom tool bits for specific applications
- Mactech Europe's multi-skilled machining and bolting technicians specialise in delivering the highest quality of site machining services in the most extreme locations. From standard applications to rope access, hazardous area, subsea or restricted access applications, Mactech Europe can develop a solution to meet our client's requirements.

## On-site Machining Services

On-Site machining operations can be broken down into the following machining areas and include those listed below.

However it should be noted that all machinery can be modified to meet more bespoke client requirements.

- Diamond Wire Saws
- Internal Sever Machines
- Clamshell Portable Lathes
- Portable Milling Machines
- Flange Facing Machines
- Magbased Drilling Services
- Portable Line Boring
- Journal Turning
- Bolting
- Pipe End Preparation





# Clamshell Portable Lathes

Mactech's Clamshell lathes are portable pipe cutting machines for subsea and topside precision cutting and bevelling of all pipe sizes, schedules and materials.

Our line covers a wide range of pipe sizes from 2" to 110" OD and are designed so that minimal radial and axial clearance is required for easy installation on in-line closed loop pipe. Mactech lathes are the most rigid in the industry, and act as drive for a number of precision accessories for counterboring, OD turning and facing.



LC clamshell series machines from 2inch to 16 inch diameter

The LC (Low Clearance) series is designed to fit into tight working areas as well as minimize machine weight. These clamshells are lightweight, but retain rigidity during operation.

USS clamshell series machines from 16 inch to 36 inch diameter.

The USS series combines the low clearance of the LC, while providing additional thickness and strength. The USS clamshells offer heavy-duty construction for even greater rigidity during operation. Larger diameter clamshells must be rigid to maintain a consistent and accurate machining process.



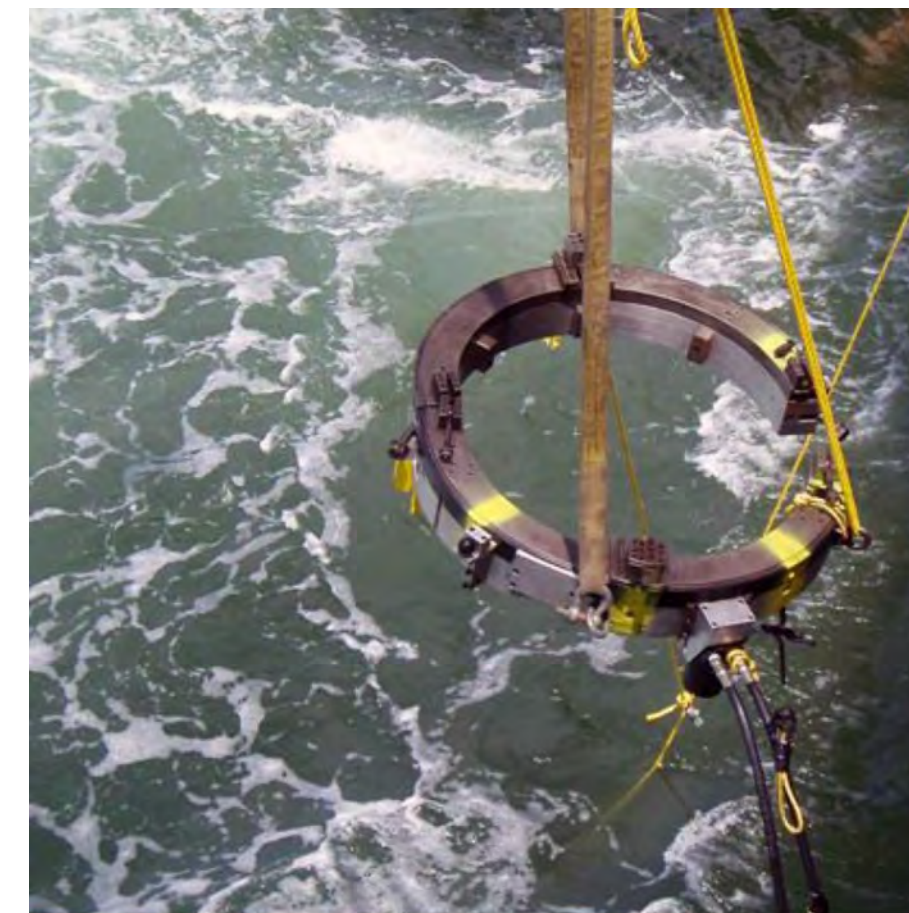
WD series Clamshells:- 3 sizes:- Type WD43, WD48 and WD60

- Sever or simultaneous Sever / Bevel 31 to 60 inch diameter pipe, or NPS 31 to NPS 60 schedule pipe
- Cold cutting in hazardous environments
- Exceptionally rigid, split frame for precise on-site machining
- Lightweight, low clearance design for easy handling in tight working spaces
- Tool holder accepts standard 3/4 or 1 inch square tool bits
- Air Caddy (air filter and oiler) included with air drive systems
- Custom setups and drives available.



SD series Clamshells:- 3 sizes:- Type 880SD, 890SD, 8110SD

- Sever or simultaneous Sever / Bevel 70 to 110 inch diameter pipe
- Cold cutting in hazardous environments
- Exceptionally rigid, split-frame for precise on-site machining
- O.D. Following Tool Block allows a +/- 1 inch out of round workpiece
- Tool holder accepts standard 1 inch square tool bits
- Powerful dual hydraulic drive suitable for cutting toughest steel and steel alloys
- Customer setups and drives available

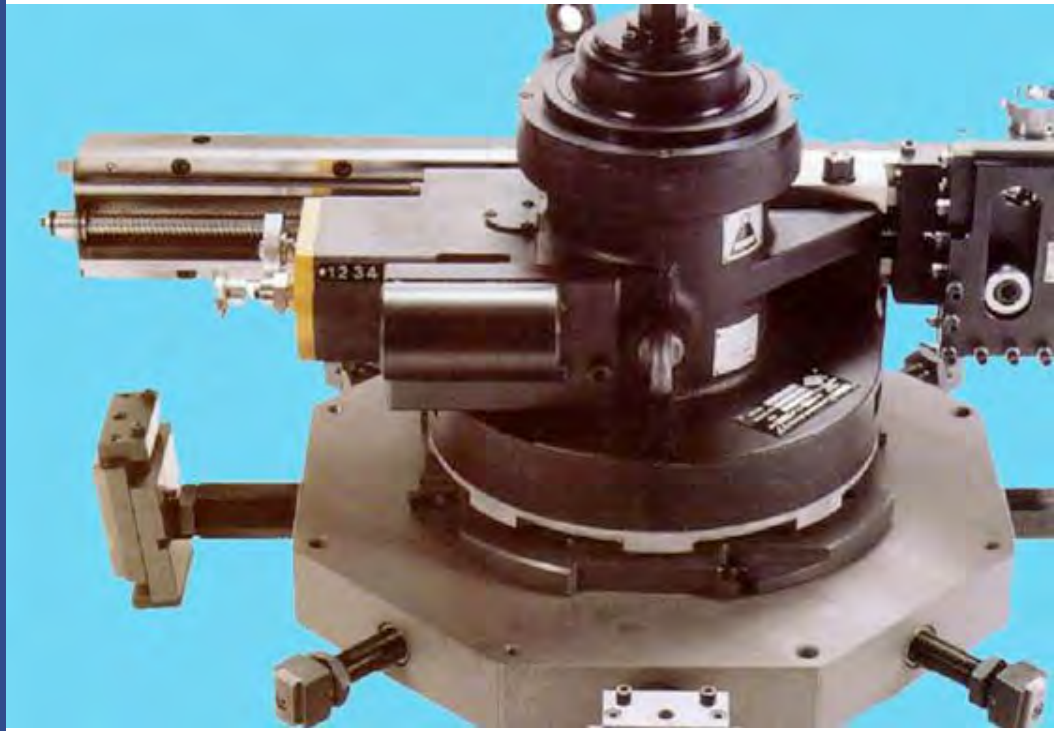




# Flange Facing Machines

## Why Choose Mactech Flange Facing Machines?

- Portable Flange Facing Machines by Mactech Europe have a range of both internally and externally mounted flange facing machines that will cover most applications.
- All the portable flange facing machines are capable of maintaining high degrees of accuracy, with a variable feed rate to achieve the desired surface finish for all gasket types.
- These flanging tools can be pneumatically or hydraulically driven and are highly portable and designed to work in the most demanding of conditions.
- The complete range of Flange Facing Machines are available to Buy or Rent



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| Model        | Diameter Range   |
|--------------|--|
| SILK AXL 012 | 0.0 to 12 inches / 000 – 304.8 mm                                      |
| SILK FXB 630 | 6.0 to 30 inches / 152.4 – 762 mm                                      |
| SILK AX 1445 | 14 to 45 inches / 355.6 – 1143 mm                                      |
| SILK AX O24  | 48 to 120 inches / 1219.2 – 3048 mm                                    |
| SILK AX 2872 | 28 to 72 inches / 711.2 – 1828.8 mm                                    |
| SILK AX 321  | 2 inch internal – 21 inch external / 50.8 internal – 533.4 mm external |
| SILK AX48120 | 28 inch – 72 inch / 711.2 – 1828.8 mm                                  |





# Line Boring Machines

## MBMC

MBMC Portable Boring Systems, the tools to use for your largest bore repairs.

For over 90 years MBMC portable boring machines have kept industry up and running. These rugged and versatile machines have been used on the most challenging on-site boring and facing applications; from turbine machining to ocean-going vessel repairs.

The extremely rigid structure and reliable operation ensure your cuts will be accurate and setup will be easy. If you have a unique or challenging job, our design team will create a custom setup for your application. Our experienced technicians know how to get the job done, on time and on budget.

Mactech's affordable, on-site machining services will minimize your downtime and maximize your productivity.



### Line Boring:

- Full length feed mechanism.
- Cuts in any position, at any angle.
- 3-1/4 to 10 inch boring bar diameters.
- 6 to 160 inch diameter machining capability.
- Up to 24 feet length machining capability

### Available Boring Bar Diameters:

- 3.25 Inch
- 4 inch
- 4.5 inch
- 6 inch
- 8 inch
- 10 inch

### Industries Served

- Power Generation
- Petro-chemical
- Paper Mills
- Marine
- Mining
- Heavy Equipment
- Heavy Industrial

## MBMC 4 MBMC 6 Boring System Components





# Line Boring Machine

Mactech's on-site portable Boring Bar Bore Repair Systems are powerful and versatile machines for inline bore machining, welding and repair.

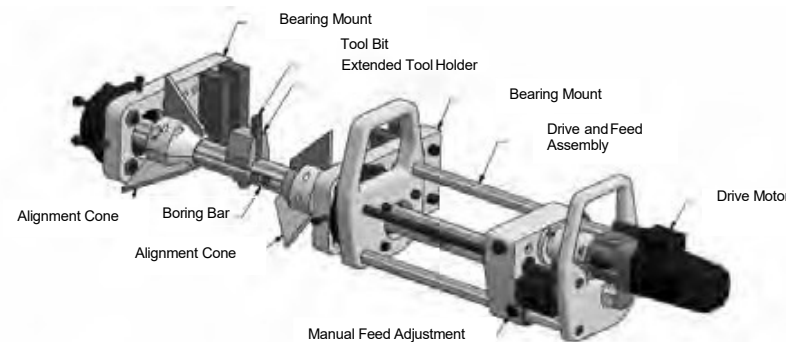
The compact size and easy set-up make these one of the most efficient bore repair systems on the market.

A powerful variable speed motor can cut through the toughest materials.

The spherical fixture mounting system makes installation and centering easy and accurate.

## BB1250 | Technical Specifications

- Drive Motor Electric: Options available.
- Feed Unit: Bi-directional, variable feed, independent of bar speed.
- Set-up: Two alignment cone assemblies for 40-150 mm bores. Self-aligning bearing mounts with spherical bearings. Tool holder for 10mm round tooling.
- Extended tool holders for up to 150mm bores
- Boring Bar: 30mm diameter, stainless steel, two 10mm diameter broaches every 250mm for tool and measuring devices.
- BB1250 Extended tool holders for up to 150mm bores



## BB1750 | Technical Specifications

- Electric: Variable speed, 110V, 10.5 amps, 32 ft-lbs (43Nm) torque, 250/450 rpm
- Air: 300-400rpm
- Hydraulic: 300-400rpm
- Feed Unit: Bi-directional, variable feed, 0-.020 inches (0-0.5mm) per revolution.
- Set-up: Two alignment cone assemblies for 4-10 inch (102-254mm) bores. Self-aligning bearing mounts with spherical bearings. Tool holder for 1/2 inch (13mm) tooling. Extended tool holders for up to 10 inch bores.
- Boring Bar: 1.75 inch (45mm) diameter, chromed, two 1/2 inch (13mm) broaches every 6 inches (152 mm) for tool and measuring devices.

## BB2250 | Technical Specifications

- Drive Unit: Right angle worm gear drive with 6:1 reduction ratio
- Pneumatic: 3.5 HP; 0-80 RPM
- Electric: 1.9 HP (110V or 220V) standard 10-80 RPM High Torque Model 5-40 RPM
- Hydraulic: Varies by motor and pump selections
- Feed Unit: Infinitely variable .000-.015" per revolution. Bidirectional and adjustable during operation Manual crank allows rapid reset
- Travel: 12"-30" with 18", 24" or 36" feedscrews
- Tool Holders: High grade alloy steel accepting 1/2" Tooling for rigid and aggressive cutting Facing Arm attachments available
- Set Up: Split aluminum cone sets are standard Self aligning spherical bearings with adjustable mounting brackets for ease of set up
- Boring Bars: 2 1/4" precision chromed bars broached every 6" for toolset Standard bar length: 4', 6' and 8' any length is available Double broach option: allows for precision bore measurement with the bar left in place 1 1/4" Small diameter precision chromed and keyed bars available Standard bar length 4', 6' and 8' any length is available





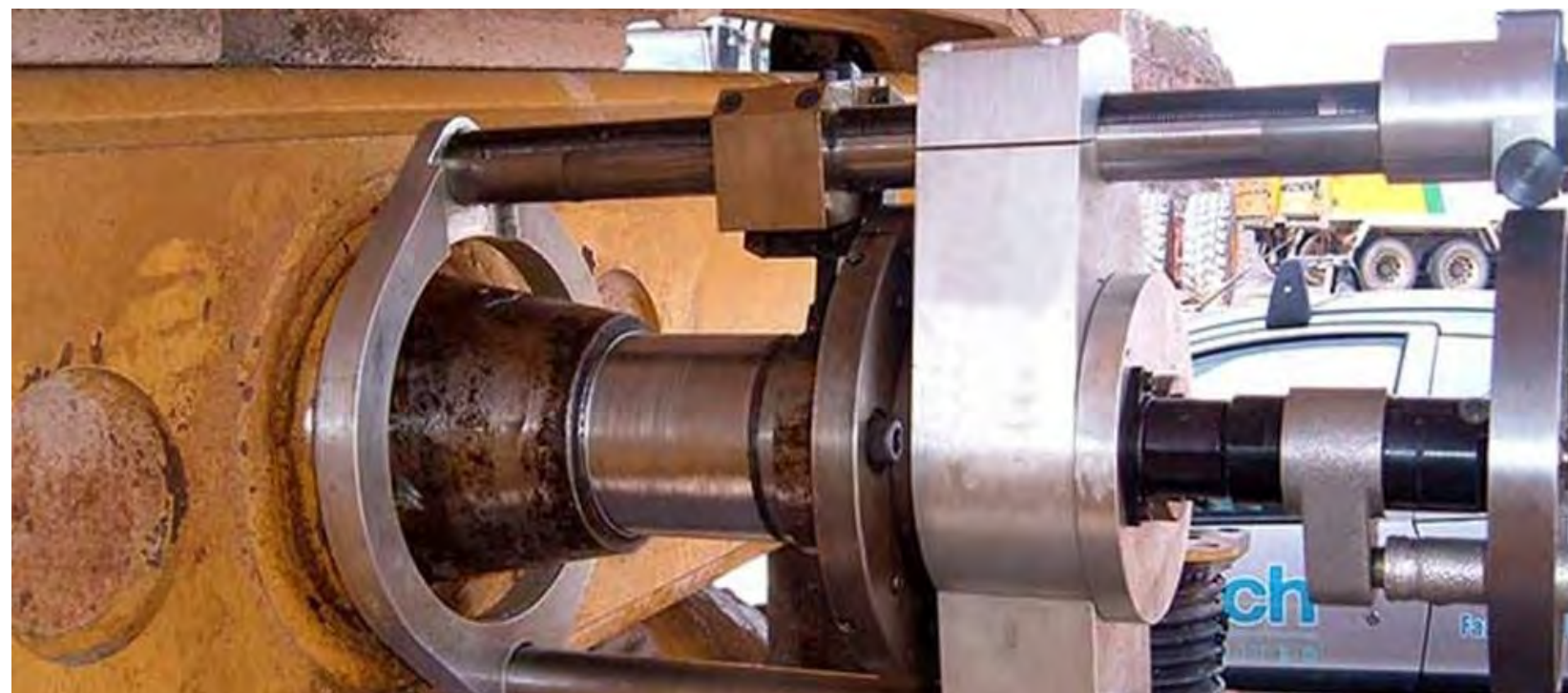
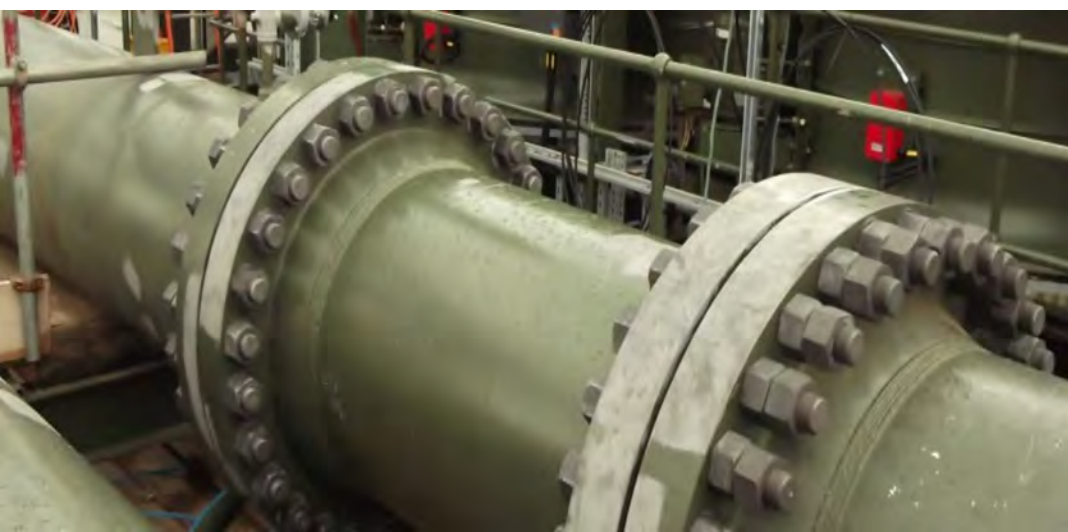
# Controlled Bolt Tightening

Mactech Europe's skilled and experienced site technicians make leak-free controlled bolting connections normal practice by using precise hydraulically operated bolt tightening equipment.

By using state of the art tools we ensure that all bolting operations are carried out in the minimal amount of time whilst maintaining the highest degree of accuracy.

Our competent multi skilled technicians are qualified to TMJI certification to ensure they work safely and efficiently whilst delivering a value for money service each and every time.

Whether your application requires hydraulic torque or hydraulic bolt tensioning, Mactech Europe has the resource available to meet your requirements.



# Journal Turning

The Mactech Europe Ltd journal turning solution is a service that is available at short notice when bearing and couplings pick up or drag when being removed or installed on to a shaft, or for shafts that have been damaged or bent by other unexpected occurrences.

Avoid tedious and time consuming equipment break downs by isolating the area of plant you need to re-machine. Mactech's pneumatically driven portable machines can repair worn or damaged journals of various diameters quickly and efficiently. Over the years Mactech have used their journal lathes for many applications within the oil & gas, powergen, marine and OEM markets.

We provide both our manpower and journal turning machines for the in situ repair of journals whether the shaft has been built up with weld and requires machining back to the original specification and tolerances or when the shaft needs machining undersize so a repair sleeve can be fitted, Mactech have the right solution to solve your problem.

Our journal turning machines are able to be positioned in tight areas as it requires the minimum amount of operating clearances. With the simplistic method of set up, the light weight design and fully adjustable positioning system no job is too difficult to complete.

Typical applications are: –

- Motor gear box shafts
- Turbine shafts
- Hinge pins
- Weld crown removal



# ID Milling Machine

Mactech's new and innovative ID Milling Machine reliably cuts casing, pilings and other round, hollow tube from the inside diameter.

Cutting below the mudline (BML) is made safe and efficient with this unique tool. No external dredging or digging is required. Simply lower the ID Milling Machine into the tube, activate the self-centering mechanism and begin your cut. Self centering locators assure accurate and secure placement in the pipe. Mactech's unique ID Pipe Sever Machine can be your solution to limited access, round tube severing applications.

## Features:

- Cold cut pilings and casings below the mud line, no external dredging or digging required.
- Compact, easy to handle design.
- Available from 18 inch to 60 inch diameter pipe.
- Self-centering makes set-up quick and easy.
- Uses standard 1 inch end mill.



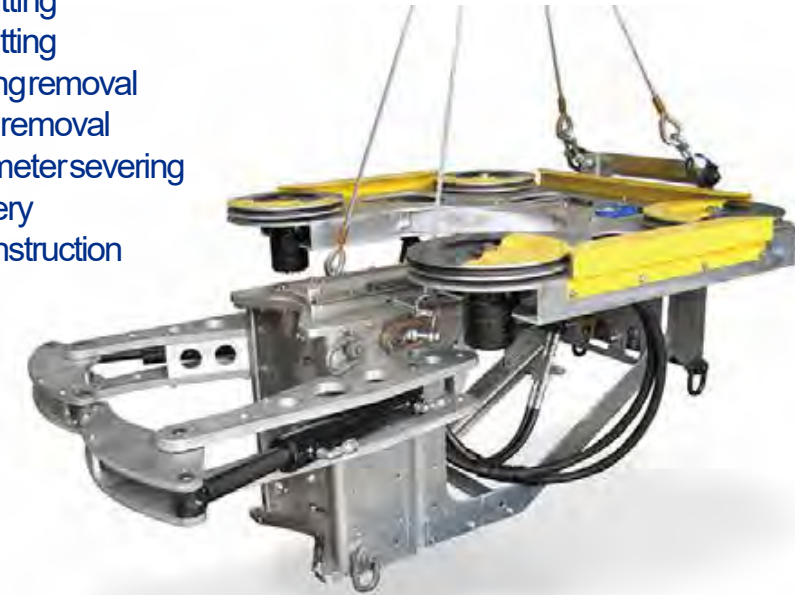
# Diamond Wire Saws

Mactech Offshore offers a wide selection of Diamond Wire Saws for Subsea and Topside cutting of a variety of materials and in challenging environments. Cutting range from 4" up to a 120".

Diamond Wire Saws are ideal for cutting multi-string casing or heavy wall legs and cross members.

## Applications include:

- Offshore decommissioning
- Subsea cutting
- Topside cutting
- Bridge piling removal
- Well head removal
- Large diameter severing
- Slot recovery
- Marine construction





# Dual Pin Drill

## Capabilities

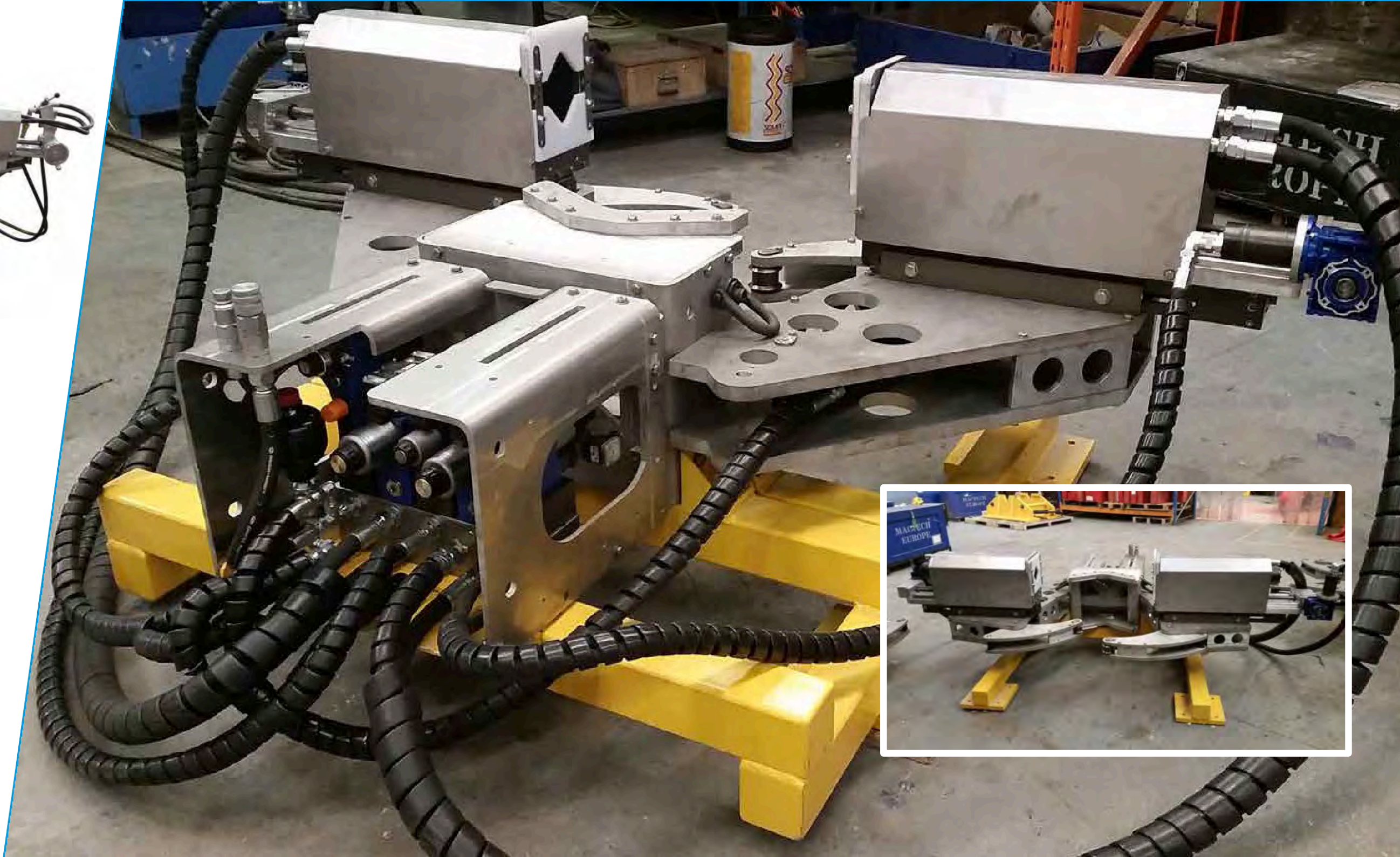
- Single Pin Drill: 6 to 18 inch diameter casing, single-side drilling operation.
- Dual Pin Drill: 16 to 36 inch diameter casing, two aligned pin holes per operation.

## Drives

Two hydraulic drill motor options are included with the Dual Pin Drill. High-strength stainless steel spindle accepts standard 1-1/4 – 7 threaded hole saws.

- Option 1: 8.8 in<sup>3</sup>, 394 rpm max, 196 ft-lbs continuous torque. Typically used for applications where higher speed and lower torque are required.
- Option 2: 22.7 in<sup>3</sup>, 153 rpm max, 390 ft-lbs continuous torque. Typically used for heavy cutting applications, where higher torque and lower speed are required.

A thru-spindle coolant system flushes cuttings and extends tool life. The right-angle gearbox safely keeps the operator clear of the drilling operation.





# Pipe End Prep Machining

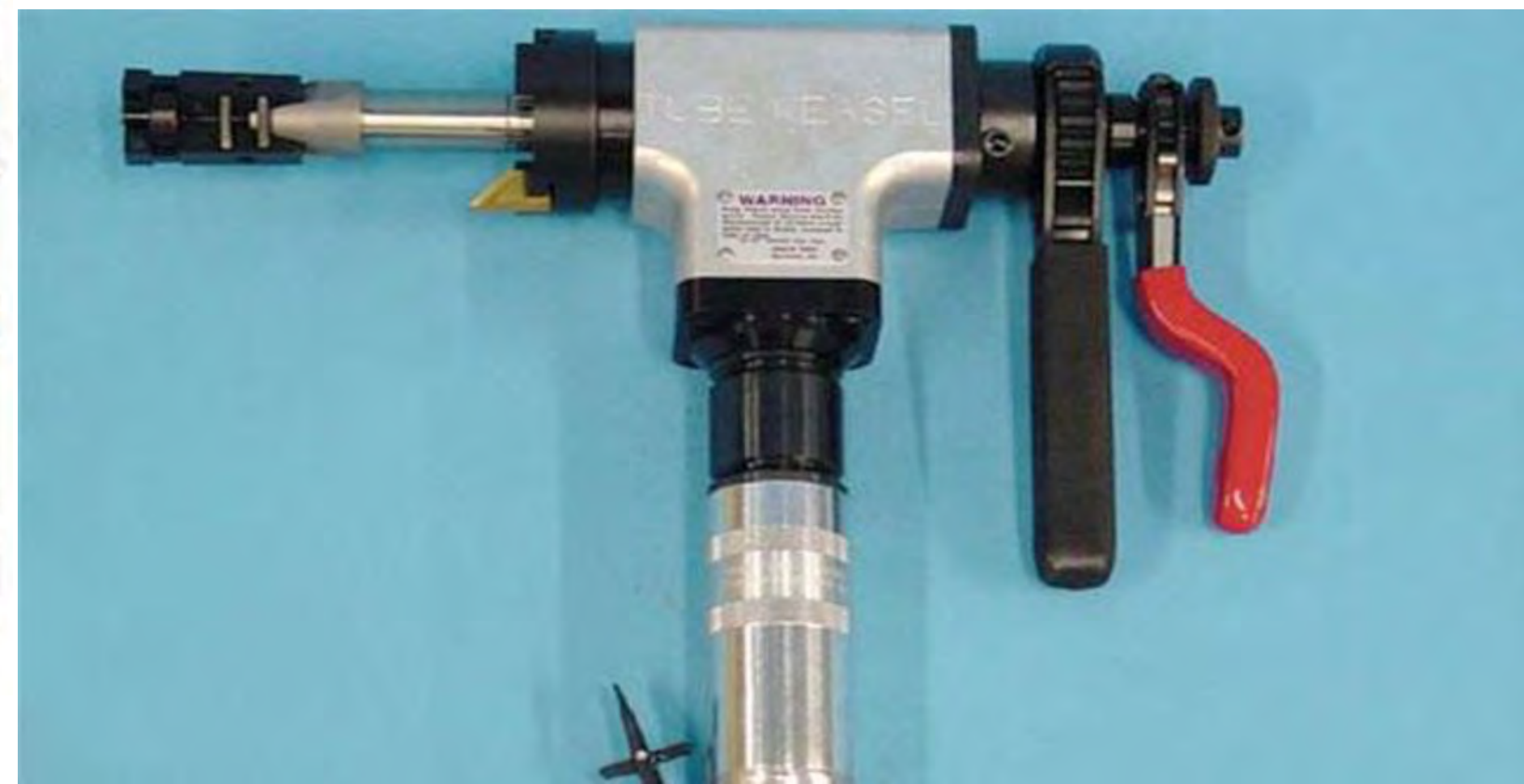
End Prep Tools can be used in a wide variety of applications across a number of different industries.

With 12 choices of machine that can prep pipes from 1/2 to 36 inch diameters all your requirements are covered.

The complete range of machines are also available to BUY or RENT

Our end prep tools and cutting saws are perfect for the following applications :-

- End Prep High Alloy Pipe Including Super Duplex
- Precision Weld Joint Preparation
- J Bevel, Face and Bore for Automatic Welding
- Compound Bevel of Heavy Wall Pipe
- Out o Round Pipe Inside Diameter Tracking
- Pipe Weld Preparation up to 36" Outside Diameter
- Pipe Cutting to 60" O.D.
- Concrete Lined Pipe Cutting
- End Prepping Concrete Lined Pipe
- Bobtail Trucks





# Testing & Isolation Plugs



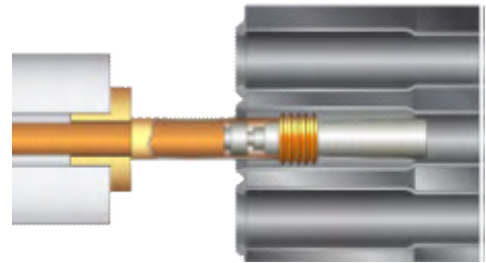
EST Group



## Pop-A-Plug® P2

Heat Exchanger Tube Plugging System

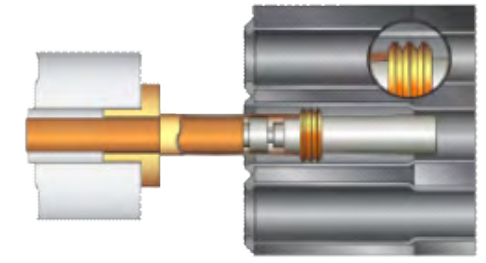
The Pop-A-Plug P2 Heat Exchanger Tube Plugging System is the only mechanical tube plug that features both external and patented internally serrated rings designed to maintain a leak-tight seal under extreme thermal and pressure cycling. Pop-A-Plug P2 Tube Plugging System reduces downtime, eliminates welding and explosives, and will not damage your tubes, tubejoints or tubesheet



## Pop-A-Plug® CPI/Perma

Heat Exchanger & Condenser Tube Plugging System

Pop-A-Plug® CPI/Perma tube plugs are resistant to thermal cycling and are able to provide a seal that is helium leak tight. Pop-A-Plug® CPI/Perma tube plug installs using a controlled force. This protects against damage to tubesheet ligaments and adjacent tubesheet joints, extending the life of your heat exchanger and reducing total operating cost.



EST Group Field Services provides a full range of pipe and pressure vessel inspection and testing services. Capabilities include testing and certification of pipe and pressure vessels and field-testing of flange-to-pipe and flange-to-nozzle welds, as well as on-site training for all EST Group products. All tests are carried out to meet ANSI B16.5 requirements.

EST Group serves the power generation; petrochemical and refining; fine chemical and pharmaceutical; shipbuilding; oil and gas production; and engineering and construction industries worldwide.

Curtiss-Wright has a long history of solving tough problems that begins with a passion for understanding customer needs. Add to that unparalleled technical expertise, the highest standards of quality and a long heritage of innovative thinking. For nearly a century Curtiss-Wright's Industrial Division has been doing things the Wright way.

Exclusive UK Distributors



# Testing & Isolation Plugs



A number of the Curtiss - Wright Pressure Testing & Isolation Plugs - ask for the complete brochure

GripTight® Elbow Test Plug



GripTight® Elbow Test Plugs facilitate testing in accordance with ASME

GripTight MAX® Test Plug



GripTight MAX® Test Plugs are also effective for testing non-metallic materials such as Fiberglass Reinforced Plastic (FRP) and Glass Reinforced Epoxy (GRE) piping systems.

GripTight® Isolation Plug



GripTight Isolation Test Plugs integrate a Double Block and Bleed Test Plug with GripTight Grippers, ensuring operational safety, and minimizing the risk of blowout / expulsion due to unexpected upstream pressure in the line.

GripTight® Reverse Pressure



Pressure test flange-to-pipe welds with full radial, hoop and axial stresses – equivalent to the stresses that would be produced when using a blind to pressurize the entire piping system.

OD GripTight®



Test open or plain end pipe and tube by sealing the OD Patented design allows for the bore of the sealing element to be larger than the pipe OD during installation, preventing damage to the seal.

**Exclusive UK Distributors**



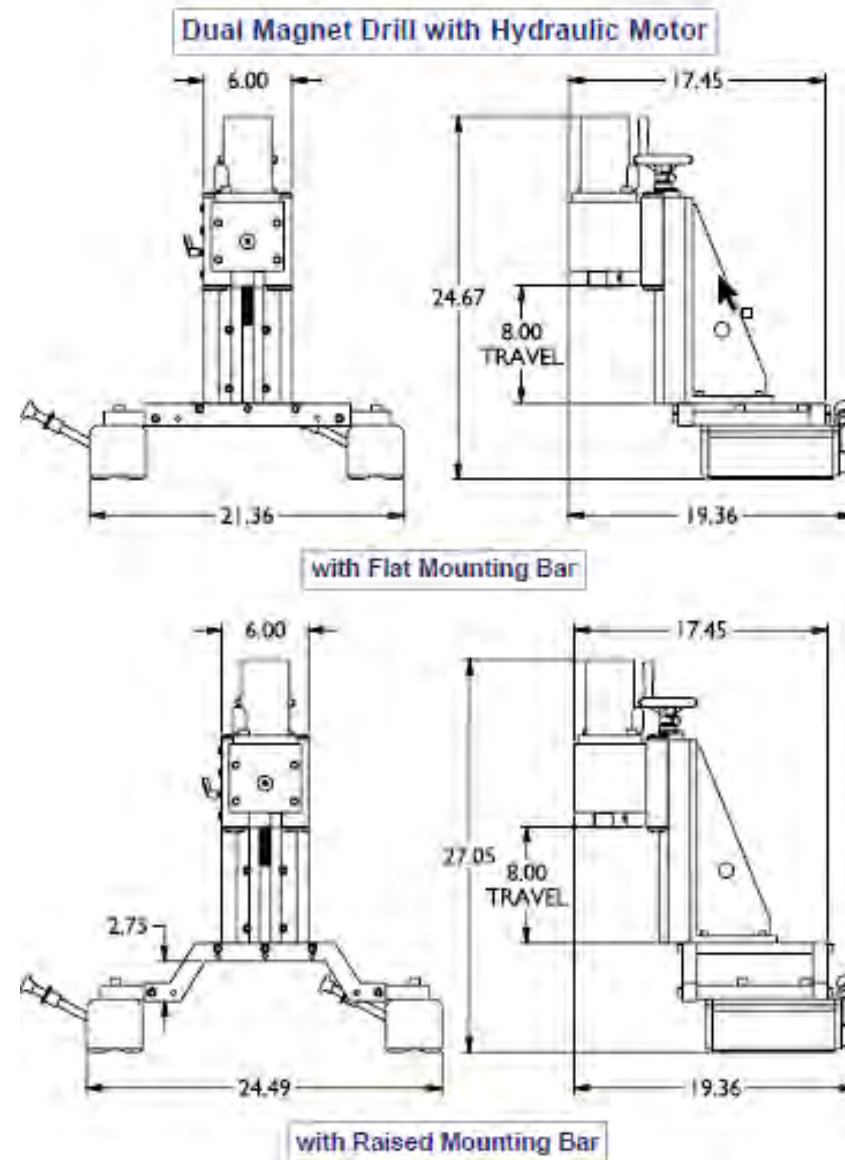
# Dual Magnet Drill

The Mactech Dual Magnet Drill has the power and portability for drilling large rigging and vent holes in casing, structure and decks.

The precision slide and bracket assembly provides an extremely rigid platform for the most demanding drilling jobs. The powerful motor can easily cut through the toughest casing and aggregate. Super strong rare earth magnets provide a secure and stable base that can be mounted on any ferrous surface.

## Features:

- Drills up to 8 inch holes through the toughest materials
- Hydraulic or pneumatic power
- Uses standard drill bits, hole saws and end mills
- Strong rare earth magnets attach to any ferrous surface
- Standard 1 inch straight quill
- Mounting



# MT30 Rack Drill

Mactech's MT30 Portable Rack Drill is a versatile and easy to use drill for on-site drilling.

The MT30 Rack Drill is ideally suited for applications where quick set-up and powerful drilling is required. An optional hanger bracket allows the drill to be positioned at a set distance from the top of pipe or other structure. An optional magnet attachment allows the MT30 Portable Rack Drill to be easily attached to almost any ferrous surface. The MT30 Portable Rack Drill can be customized with mounting options, tool holders and motors for your applications.

## Features:

- Powerful air, hydraulic or electric motors drill quickly through the toughest materials
- Portable, compact and lightweight design makes drilling in hard to reach spaces easy.
- Optional magnetic attachment base mounts securely to flat or round ferrous surfaces
- Optional hanger bracket for quick and secure placement and drilling on pipe or structure
- Wide variety of arbors, tool holders and motors are available





# Linear 3 Axis Mill

The Mactech MTE Portable Milling Machine range is a 3-axis, linear rail portable mill, capable of close tolerance milling, drilling, boring, and many other on-site milling operations.

It is ideal for large area repair work where dismantling is not possible or practical. The MTE Portable Mill can be welded, clamped, bolted or magnetically attached directly onto the workpiece in any orientation. The cross travel beam can be positioned at along the cross travel beam so that the milling head can be inboard or outboard of the long travel beam. The milling head itself can be rotated through 90° increments. The MTE Portable Mill is available in various lengths from 36 to 120 inches.

#### Technical Specification:

- Milling Head Motor : Hydraulic, Electric or Pneumatic
- Milling Head Speed : Up to 1000 rpm
- Milling Head Toolholder 40 Int. Taper
- BiDirectional Electric Travel Feed 110V
- Long Travel: 1950mm
- Cross Travel: 4200mm Max. (depending on cutter diameter) Other cross travels are available as options
- Vertical Travel of Milling Head 120mm Hand feed with digital readout



# Portable Rail Mill

Mactech's line of Portable Rail Mills are suitable for pipe or vessel window cutting, base and motor pad milling and deck cutting in subsea or topside applications.

Mactech's Portable Rail Mills come in a selection of lengths to provide you with uninterrupted axial cutting, or we can design a custom length for your application. The universal One Key Mill Head allows tooling to be easily interchanged with a Mactech drill or Roto-Mill. Our powerful rare earth magnet attachments make installation to flat, round or tapered surfaces quick and easy. The Portable Rail Mill is a versatile, dependable and powerful unit capable of close tolerance machining for your subsea or topside applications.

#### Mactech Portable Rail Mill Models:

- 48 inch Manual and Hydraulic Feed
- 72 inch Manual and Hydraulic Feed
- 96 inch Manual and Hydraulic Feed

Custom lengths and configurations available by request.





# Gantry Mill

Mactech presents the newly designed Gantry Mill. This powerful mill can easily cut large openings in submerged decks, crew quarters or any structure for rigging or access holes.

Fast set-up and fewer adjustments for each operation mean the Gantry Mill will save you time and money. True 3-axis movement can cut almost any shape or pattern desired.

The modular design can be custom designed and configured for a variety of sizes and configurations. Variable speed feed control allows full control of speed and direction of your milling operations.

#### Features:

- Fast set-up, fewer adjustments per operation
- Compatible with standard hydraulic systems
- Custom configurations available
- Powerful hydraulic motor cuts through the toughest materials
- Attaches quickly with clamp base or magnetic mounts







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