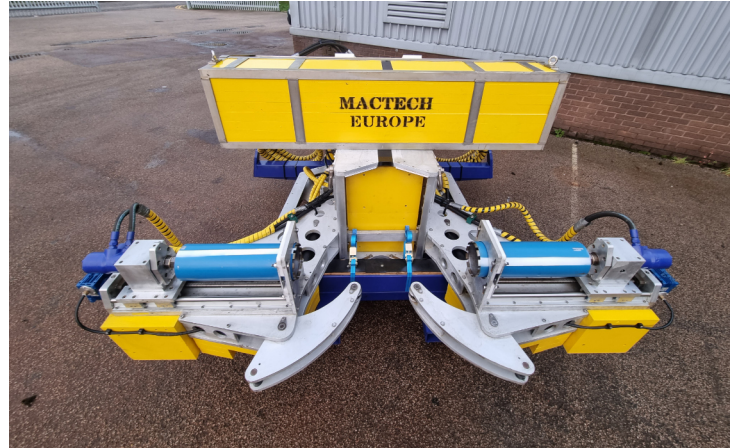


Combined 30" Inline Diamond Wire Saw & Dual Diamond Core Drill



The existing method for topside/subsea core drilling and diamond wire cutting utilises a machine for each operation, diamond wire saw for cutting and dual drilling machine for drilling.

Mactech Europe Ltd have developed a combined machine that provides a method of executing drilling and cutting operations in one deployment.

- Benefits**
- Robust dual core drilling system combined with proven diamond wire cutting system
 - Reduced operational time
 - Reduced equipment and deck space requirements
 - ROV user friendly

This equipment is supplied for drilling and cutting subsea. Operated by ROV or topside. Where possible the use of common parts has been incorporated into the design.

The Mactech Dual Core Drilling machine is intended for drilling opposing holes in multi-string casings & pilings. The machine is capable of drilling 2 to 6 inch diameter holes in cylindrical sections ranging from 14 to 30 inches diameter. Bespoke saddles can be manufactured to accommodate drilling I beams, RHS etc. In this application the feed and rotation of the drilling units is controlled remotely with ROV or Diver assistance.

The Mactech diamond wire saw is intended to hydraulically clamp on casings from 16" to 30". In this application the feed and wire rotation can be controlled remotely from an ROV or manually from topside.



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Combined 30" Inline Diamond Wire Saw & Dual Diamond Core Drill

Specifications:-	
Dimensions	2.68 metres wide, 2.4 metres long, 1.41 metres high.
Weight	With buoyancy fitted - 950kgs (Air) 90kgs (water)
Clamp Capacity Diameter	16 to 30 inches
Drills Opposing Holes	2 to 6 inches diameter, in pipe 16 to 30 inches diameter.
Tooling	2 to 6 inch diameter heavy duty diamond core drills
Drill Motors	2 off 371cc (22.7 in3), 153 rpm max, 529 Nm (390 ft-lbs) continuous torque
Diamond Cutting Wire	4.8m endless wire loop, uni-directional 10 - 11mm diameter beads, 44 - 48 beads/metre.
Drive	Two hydraulic drive motors, 4.9 in3/rev displacement, pressure rated to 3000 psi, 220 ft-lbs torque.
Hydraulic Control Cart	Drive: 20 gpm @ 2000 / 3000 psi Feed: 0.5 gpm @ 650 / 2000 psi Clamp: 0.5 / 8 gpm @ 1500 / 2000 psi
Hydraulic Power: -	
HPU Requirements	75 l/min. (20 gpm) @ (210bar) 3000psi continuous pressure, adjustable flow and pressure control.

Hydraulic Control Cart: -

- For topside operations Mactech recommends the use of the Universal Control Cart to operate all functions of the Diamond Wire Saw/Dual Drill.

The 30" diamond wire saw/dual drill comprises of the following key components: -

- Dual diamond core drill slide assemblies mounted on the clamp support arms of a 30" diamond wire saw. The hydraulically driven drill/feed motors can be powered/controlled from topside via HPU/control cart or directly by ROV.
- Diamond wire saw - 2 position (14"-22" & 20"-30") hydraulic clamping system that securely locks the machine to the target, 4 pulley diamond wire hydraulic drive/feed system can be powered/controlled from topside via HPU/control cart or directly via ROV.

Key additional features: -

- Subsea gauges fitted to the saw bulkhead to monitor the cutting and drilling motor pressures.
- Diver/ROV operated paddle valves on bulkhead for switching between left and right drill slides.
- Hotstab package and 200m rated buoyancy fitted to allow the machine to be free flown/powered by ROV.

