Platform and Shallow Water Products
Wachs Subsea specializes in Subsea Cutting Solutions, manufacturing products to support the maintenance and repair activities of the offshore oil and gas industries.

SUBSEA CUTTING SPECIALISTS
Wachs Subsea specializes in Subsea Cutting Solutions, manufacturing products to support the maintenance and repair activities of the offshore oil and gas industries. This brochure highlights our subsea products most often used topside on rigs and platforms, and in shallow water applications characterized by diver intervention. Many of the products shown here however are suitable or adaptable to either shallow or deepwater operations.

All of our products are designed for ease of operation, and built to withstand the corrosion and pressures found in subsea environments. Each is hand assembled utilizing the latest in high strength, corrosion resistant materials, and individually tested before shipment. They include diamond wire saws (DWS), split frame rotating ring cutters and platforms, the Guillotine® (Wachs) pipe saw, and the Trav-L-Cutter®. Other products include subsea specific drills, offshore hydraulic power units, the EICC, deck plate and rail mills, shipping baskets and much more.

TOPSIDE AND SUBSEA
Wachs Subsea products are ideal for many tasks including decommissioning, with machines designed for precision cutting or destructive cutting, as well as subsea drills and dual pin drills used for drilling and multi-string casing pinning and removal. Many of our products related to platform decommissioning can serve double duty, working on strings, legs and structures both above the surface and below.

Most are available with various remote control and automation options for topside control, shallow water diver control or deepwater ROV power and control. All Wachs Subsea products are built to withstand the rigors of operation in saltwater environments. Wachs offshore hydraulic power units have special features designed for platform use.

Contact your Wachs Subsea or E.H. Wachs representative or visit wachssubsea.com for additional details on our entire range of topside and subsea products. Available for sale or rental around the globe, Wachs Subsea also offers onsite technicians for training and maintenance of these precision machines.

Wachs Subsea products are ideal for casing and platform decommissioning

All Wachs Subsea products are built to withstand the rigors of operation in saltwater environments
Shallow Water Products

PROVEN CUTTING TECHNOLOGIES
Wachs Subsea products utilize proven offshore cutting solutions that can be organized into families based on the machining technology used. Depending on your requirements for depth, speed, power supply and machining precision we offer machine tools that mill, lathe machine, abrasive cut or reciprocating cut, with multiple control and power supply options. Your Wachs product specialists are expert in recommending the precise Wachs Subsea products that’s right for your specific project.

We also offer offsite or onsite technical training for our advanced products, to bring your staff up to speed quickly on their effective use. Onsite maintenance technicians are available to keep them operating at peak efficiency. Parts and consumables are stocked at select locations to minimize any potential downtime.

ITW OIL & GAS
When you partner with Wachs Subsea you gain access to the engineering, sales and product resources of the ITW Oil & Gas Group, a part of ITW, a Fortune 150 global company. Wachs Subsea is committed to supplying products that are best in class, designed for oil and gas professionals working in some of the world’s most challenging environments to fulfill the world’s growing energy needs.

Wachs Subsea is a member of the ITW Oil & Gas Group.

Wachs Subsea precision machines are available for sale or rental around the globe. We can also provide onsite training and maintenance technicians.

SUBSEA CUTTING TECHNOLOGIES

Hydraulic Power Unit
Hose Whip
Control Station
Hose Reel
Wire Saws
Reciprocating Saws
Mills
Split Frames
Drills

Simplified view of Wachs Subsea product families and technologies

For installations, maintenance or decommissioning there’s a Wachs Subsea solution right for your application

Wachs Subsea products are sold and rented at Wachs Sales & Service Centers worldwide
Wachs Subsea Diamond Wire Saws (DWS) are designed for underwater cutting of horizontal or vertical pipe or structures, with four models available to cut from 4” to 84” O.D. (122-2134mm). Running on hydraulic power, the saws are controlled remotely with dedicated HPU controls, topside control panels or by ROV control operable via zero leak hot stabs.

All Wachs Subsea DWS feature a unique hydrodynamic design that dramatically reduces centrifugal forces during operation, which means less power wasted in churning water and more power directed to cutting the workpiece.

**SELF ADJUSTING AUTO FEED SYSTEM**

The Wachs Diamond Wire Saw is the only machine of its kind with a self adjusting auto feed system that controls wire tension, automatically matching the feed rate to the cutting rate. With the ability to adjust or stop the feed entirely until the cutting action catches up, it delivers a more efficient cutting action with minimal operator intervention and greatly extended wire life. All Wachs DWS are designed to allow less skilled operators to get great results, from the first cut to the last.

Self adjusting auto feed system controls wire tension, automatically matching the feed rate to the cutting rate.

Diamond wire cutting element quickly and cleanly cuts pipe and structure of varying material and thicknesses without stalling.

Fully adjustable power clamping system with hydraulically actuated arms that pivot inward to ensure square and secure clamping.
SYNCHRONIZED CLAMPING
Wachs DWS models are equipped with a fully adjustable power clamping system, designed to grasp the workpiece more accurately with fewer contact pads. It features two synchronized, hydraulically actuated clamping arms that pivot inward, providing easy and secure remote control mounting. Synchronized clamping arms ensure uniform, square and secure mounting and prevent damage to the arms from unequal forces. Because the machine mounts more accurately, less visual supervision is required.

COMPRESSION CUTS
The diamond wire saw is ideal where the possibility exits of a compression cut. The rapidly rotating diamond wire media has the ability to keep cutting if the workpiece move or shifts slightly during the operation. It's also the best choice for mixed materials such as steel combined with concrete, grout or aggregate.

The Wachs Diamond Wire Saw is the only machine of its kind with a self adjusting auto feed system that controls wire tension and automatically matches the feed rate to the cutting rate.

FEATURES
- Lightweight aluminum plate construction
- Models cut from 4” to 84” OD (DN100-2100)
- Easily replaceable long-life diamond wire cutting assembly
- Corrosion resistant with anode protection
- Mounts vertically, horizontally or any position in between
- Hydraulically operated synchronized arms for square secure clamping
- Overload clutch for auto feed system protection

DWS saws are ideal for mixed materials and multi string casings.
Wachs LCSF Low Clearance Split Frames are the world’s most versatile and comprehensive line of lightweight, clamshell style portable machine tools on the market today. For subsea applications the LCSF can be split around inline pipe or structures, or used as a machining platform for various applications. Standard LCSF models mount to pipe, tube and structures ranging from 2” to 48” O.D. (51-1219mm). The HDSF heavy duty split frame models cover O.D. ranges from 12” to 84” and up (305-2134mm).

**UNRIVALED VERSATILITY**

Wachs split frames are ideal for all types of pipe cutting, beveling and end prepping both above the surface and below. Our split frames are named for their ability to split in half at the frame, or “break open” and bolt back together again. This allows them to open and mount around the O.D. of inline piping or structures, or they can be slipped closed over open ended pipe. The LCSF has been engineered to apply precise, consistently square cuts and bevels on pipe, tube and casing the first time, every time.

Split frames are equally versatile topside or subsea, serving double duty in or out of the water.
**FEATURES**

- Machine quickly splits to mount around OD of inline pipe or structures
- Parts and accessories interchangeable between various sizes
- Cuts and bevels pipe and structures with heavy wall thickness
- Cuts tough materials including carbon steel, high yield and other exotic materials

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**SUPERIOR CONSTRUCTION**

Designed with a compact cross section for low clearance applications, the LCSF is constructed of steel and aluminum components - steel where strength is needed, aluminum where strength is less critical than weight. A major advantage of the Wachs LCSF is their light weight; these machines typically can be set up by one operator without the need for additional lifting devices. The HDSF features a bigger cross section with larger gear sets and all steel construction for maximum durability.

With thirteen standard LCSF models and six HDSF models plus additional sizes available by special order, there’s a Wachs split frame to fit your every need. For topside or subsea use Wachs subsea split frames are the most productive, best supported machines in the industry.

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Wachs split frames are ideal for all types of pipe cutting, beveling and end prepping both above the surface and below.
The Wachs Trav-L-Cutter is a portable milling machine capable of cold cutting and beveling simultaneously on pipe and circular structures ranging from 6” to 72” O.D (152-1829mm). Secured by its own tensioning chain, the Trav-L-Cutter drives itself around the pipe on the mounting chain as it machines. Used all over the world above and below the surface, the Trav-L-Cutter covers a wide range by simply ordering additional chain sections. Hydraulic Model HE with its powerful, closed loop hydraulic drive system is recommended for subsea applications.

**HORIZONTAL OR VERTICAL**

The Wachs Trav-L-Cutter can be mounted and operated horizontally, vertically or anywhere in between. Its self-propelled chain drive system maintains continuous out-of-round compensation while providing positive drive under all conditions (including zero visibility). Its milling process removes 3/16” of metal while cutting, leaving an accurate, machined finish. The lightweight, low profile design needs only 10” to 12” (254-305mm) of clearance to operate.

The Wachs Trav-L-Cutter is a portable milling machine capable of cold cutting and beveling simultaneously while it drives itself on its tensioning chain.
Guillotine Saw

Wachs Guillotine saws are versatile, reciprocating designs for cold cutting 2” to 36” O.D. (51-914mm) pipe and vessels, as well as structures, solids, and multi-stranded casing strings. Our Guillotines, known throughout the industry as the “Wachs Saw”, provide easy set up and fast accurate cuts. The steel mounting saddle assures square cuts at right angles. Optional mounting saddles are available for unusual or complex shapes such as I Beams.

**MULTIPLE SIZES**

Wachs Subsea offers five different Guillotine models, from smallest to largest the Super C, Model D, Super D, Goliath and Super Goliath. Every model utilizes an orbital cutting motion that lifts the blade on the return stroke for efficient cutting and dramatically extended blade life. Their compact design requires minimal operating clearances, and many configurations are suitable for both topside and subsea usage. Multiple control options are available ranging from fully manual to advanced topside control.

**CORROSION RESISTANT**

The Super Goliath is the largest in the series, and features a twin hydraulic drive with auto feed and auto trim for true remote operation. Subsea specific Guillotines incorporate corrosion treated steel components, heat treated ground stainless steel guide rods, self lubricated bushings and bearings plus wipers and seals to help protect moving parts from the corrosive and abrasive effects of subsea operation.

From simple to difficult, pipe to solids, carbon to stainless, safe to hazardous, above water or below, whatever the cutting task Wachs Subsea has a Guillotine saw for the job.

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Many models are available for both topside and subsea applications

Diver positioning Goliath Subsea Guillotine saw horizontally

Control options range from fully manual to advanced topside control
The Wachs Subsea Dual Pin Drill is designed to drill holes for pin insertion to facilitate removal and decommissioning in subsea structures such as multiple string casings. Utilizing two hydraulically powered opposed drills, each drill motor is powerful enough to drill up to a 5-1/2" (140mm) diameter hole drilled to center on a 36" (914mm) conductor.

**SINGLE OR DUAL DRILL OPERATION**

The Wachs Subsea Dual Pin Drill is capable of single or dual operation of the drill motors, offering the user maximum flexibility. Each pin drill spindle motor and feed motor is operated separately to deliver independent, precise cutting tool loads. Multiple frame sizes are available to accommodate conductors up to 36" (914mm). Like all Wachs Subsea products the dual pin drill is built to withstand the harsh subsea environment, and rigid to resist twisting under high torque loads.

**FEATURES**

- Auto-feed drill head system
- Single or dual drill head operation
- Hydraulically actuated clamshell frame
- Easily adjustable to different pipe sizes
- Heavy duty drill guide bushings
- Rugged construction for subsea environments

Wachs Dual Pin Drill is ideal for platform removal and decommissioning

Diver friendly design with rugged construction to resist torque loads

Hydraulic motor is powerful enough to drill up to a 5-1/2" (140mm) diameter hole
The Wachs Subsea Drill is the ideal drill for subsea and decommissioning projects, and is engineered specifically for harsh and demanding subsea environments. Built of corrosion resistant materials, the subsea drill can be deployed to most working depths. This hydraulically powered, manual or auto feed variable speed tool is powerful enough to drill up to a 5” (127mm) diameter hole.

It features a reliable saddle mounting system that ensures a secure, square connection to the pipe, casing or structure, with other mounting adaptors available by special order. A Wachs multi-circuit control panel or offshore control panel equipped HPU is available for remote control of the drilling operation on auto feed models.

**APPLICATIONS**
- Rigging holes
- Inspection / Investigation holes
- Grouting / Grouting release holes
- Pinning holes for pulling multi-string conductors

**FEATURES**
- 5 inch (127mm) maximum hole diameter
- 11.6 inch (295mm) stroke
- Variable Speed hydraulic drive (250 Max RPM)
- Max 15 GPM @ 1500PSI (Spindle Drive)
- 5 GPM @ 1500 PSI (auto-Feed)
- Available hydraulic auto feed (0-.056”/Min)
- Multiple feed configurations available
- Versatile mounting configurations

Wachs Subsea drill, like all our products, is built to withstand the rigors of the harsh offshore and subsea environments.
Topside Control

Wachs Subsea topside controls include manifolds and control panels used in conjunction with our Hydraulic Power Units (HPUs) to control and operate hydraulically powered machines requiring more than one drive circuit. Manifolds are designed to split the hydraulic flow between power and feed functions, while more sophisticated machines require a three or four circuit control panel.

CONTROL PANELS

Wachs Subsea three circuit panel remotely controls more complex machines such as our Guillotine auto feed and auto clamping reciprocating saws, with one circuit powering the drive, one circuit powering the auto feed and one circuit powering the auto clamping mechanism. A four circuit panel is available by special order for splitting and simultaneous control of four circuits, required in certain specialized applications.

These corrosion resistant, stainless steel units are built to perform under the most demanding conditions. They can be placed on a production platform or deck, in a control room with a live monitor feed or in the dive shack itself. Control panels require accessory hose sets or subsea hose reels, sold separately.

FEATURES

• Manifolds for splitting hydraulic flow
• Control panels available in three or four circuit designs
• Stainless steel construction to resist the elements
• Place on platform or deck, in a control room or dive shack

Wachs Subsea three circuit panel is required to remotely control more complex machines such as our Guillotine auto feed and auto clamping reciprocating saws.
Wachs Subsea Offshore Hydraulic Power Units (HPU) are specially designed and built to meet the unique needs of the offshore and subsea industry. Wachs HPUs are built with heavy duty industrial water cooled diesel engines and powder coated frames and skids for long life and ease of transport.

They include industry specific features such as air start with disc type spark arrestor and over speed shut down protection. Available in horsepower ratings and flow capacities to fit most topside and offshore applications, specific models are equipped with a built in three circuit control panel to eliminate the need for a free standing panel. Wachs Subsea HPUs are Class One, Zone D Rated.

**FEATURES**

- Certified Lifting Padeyes
- Double Pass Hydraulic Cooling
- Up to 65 Gallon Steel Fuel Tank
- Up to 105 Gallon Steel Hydraulic Tank
- Variable Displacement Piston Pump
- Zinc Underlay Powder Coat Finish
- Stainless Steel Ultra-Quiet Muffler
- Delivers up to 45 gpm (170 lpm)
- Variable flow control assembly (up to 3,000 psi/207 bar)
- Standard safety bypass valve on hydraulic controls
- Air start with spark arrestor and ESD
- Over-speed shut down protection
- Three circuit control panel on select models

Wachs Subsea Offshore Hydraulic Power Units (HPU) are heavily duty industrial grade hydraulic power units designed and built for the needs of the offshore industry.
EICC
Wachs EICC (External Internal Casing Cutter) provides a safe, fast and reliable method for topside cutting both outside and inside the casing at the wellhead. This makes it the ideal device for new installations, field repairs or emergency preparedness, both onshore and offshore. The EICC combines Wachs split frame technology with a removable internal casing cutter to cut a wide range of casing at various depths, both above (external) and below (internal) the wellhead.

The EICC split frame component mounts around the exposed casing O.D. above the wellhead, with the internal casing cutter mounting to the split frame and lowered for internal cuts below the wellhead. Ring sizes are available to cut and bevel most grades and weights of the exposed external casing (or drive pipe/conductor) up to a 42” (1067mm) diameter. The internal casing cutter component is available in sizes to cut 7” (179mm) to 13-3/8” (340mm) casings, at depths up to 72” (1829mm) below the wellhead. The front drive pinion housing allows cutting as close as 4.5” (114mm) to the wellhead, requiring minimal axial and radial clearances.

RAIL MILLS
Wachs Subsea Rail Mills are designed for safe, uninterrupted axial cold cuts and bevels on multi-strand conductor and casing pipe. The integrated lifting attachments allow for quick and easy positioning for vertical or horizontal operation. The hydraulic milling cutter head features bi-directional rotation, with speed controlled via machine mounted controls or Wachs topside control panel. Rail Mills are a valuable tool for well remediation related to corroded casing repair.

PLATE MILLS
Wachs Subsea Plate Mill System incorporates our proven milling technology and readily available components. This machine is extremely flexible and offers a wide choice of mounting options such as magnets, chains or clamps. Wachs Plate Mills virtually eliminate blade pinching, and mounts on a variety of surfaces for access holes, venting and reconfiguring platforms.

This diver friendly tool can work in any position on any cutting surface orientation. With its linear travel and power capability, it cuts extremely thick plate in one pass. Stitch cuts are no problem and as a drill head it can quickly drill multiple 5” (127mm) holes in thick plate. Operated via machine mounted controls or as a remote device with topside control.
Other Products

Hose Sets & Hose Reels

Wachs Subsea hydraulic hose set and hose reels are designed to connect the HPU power unit, control panel and Wachs machine tools. For topside applications hose sets are used. Subsea applications use a hose set between the HPU and the control panel with a hose reel connecting the control panel to the machine tool. All Wachs lines feature burst resistant construction with heavy duty fittings. Twin line hose assemblies are available in 300’ (92M), 450’ (137M), 600’ (183M) and 750’ (229M) lengths. Single and dual reels are offered with triples available by special order. All Wachs Subsea hose reels include hose assemblies and feature heavy duty construction and powder coating for durability.

Diver Stand

Wachs super strong yet lightweight Diver Stand serves as a rigid, stable platform for undersea diver activities on subsea structures. This device makes the diver more productive by allowing more efficient mounting and use of subsea machines, creating a secure work environment. Built with corrosion resistant materials the Wachs diver stand is easily attached and detached for quick set up and removal.

Subsea Shipping Baskets

Wachs Subsea Shipping Baskets are made for surface shipment and storage, and are designed to survive tough subsea environments. They are used to safely and efficiently transport equipment to subsea locations, and are built with heavy gauge steel double galvanized to resist corrosion from repeated subsea immersion.

Available in three standard sizes with additional sizes available by special order, they offer excellent protection and a great working platform for deploying subsea equipment. Wachs shipping baskets are lift tested to five times maximum payload (up to 52,000 lbs / 23,000 kg) so you know your vital equipment is well protected.

MQC System

Wachs Subsea MQC Multiple Quick Connect system is a three function, six coupling device consisting of a male quick connect plate and female keyed bucket to allow fast and secure connections to Wachs hydraulically powered devices such as our DWS Diamond Wire Saws. All components are constructed from stainless steel, aluminum or bronze to resist saltwater corrosion, and rated to 3,000 psi (207 bar). The MQC System features auto release on HPU or COMMS failure by simply pulling on the connection hoses. The keyed bucket has a generous 15 degree alignment tolerance for ease of connection.
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Wachs Subsea

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