

E.H. WACHS



E.H. WACHS®

A Division of *TW*

Superior Equipment. Complete Support.™

OIL & GAS

PIPE CUTTING & BEVELING PRODUCTS
ORBITAL CUTTING & WELDING



E.H. Wachs is a pioneer in weld preparation products designed and built to serve the unique needs of the oil and gas industry. In 1949 a large natural gas supplier looked to us for a safer way to cut and bevel their pipelines prior to welding. This led to the introduction of the revolutionary Wachs Trav-L-Cutter®, a pioneering “cold cutting” machine tool that simultaneously cut and beveled as the machine drove itself around the pipe.

Today E.H. Wachs and Orbitalum Tools, organized together as ITW Orbital Cutting & Welding, have joined distribution channels, product lines and sales and service departments to provide our global customers One Source for the finest in pipe and tube cutting, beveling and facing products and orbital welding systems. ITW-OCW offers unrivaled product availability, complete technical support and a localized network of factory and independent product specialists.

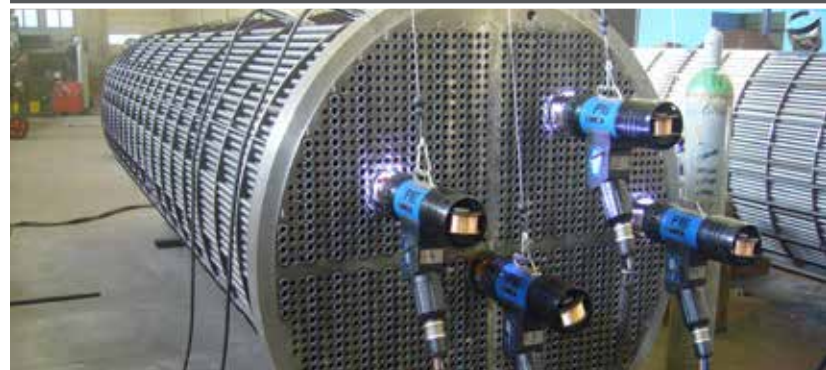
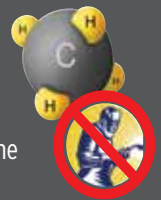
E.H. Wachs is the world's premier manufacturer of portable cold cutting and beveling machine tools, I.D. and O.D. mounted flange facing products, handheld valve operators and related tooling and accessories. Our products are used extensively in oil and petrochemical refining, terminals, oil fields, tank farms, loading facilities, heat exchanger fabrication and repair and wherever pipe, valves, tees or flanges are used. All our products are designed and built to world class standards under the ISO 9001 Quality Management System.



ISO 9001

E.H. Wachs and Orbitalum products use a “cold cutting” machining method, increasingly specified wherever hydrocarbons are present to eliminate the risks associated with hot torch cutting and grinding.

In an industry where downtime is measured in thousands or hundreds of thousands of dollars a day, our products have earned a reputation as equipment that can be relied on to get the job done right and on time, first time and every time.



When you select an ITW Orbital Cutting & Welding product you gain access to the entire engineering, sales and product resources of ITW, a Fortune 200 global organization with operations in over 58 countries. When you partner with us you're not only partnering with the industry leader in portable weld preparation machine tools and orbital welding systems, you're partnering with ITW, the industry leader in advanced welding technologies.

Before and after the sale, we offer complete support including knowledgeable sales and customer service personnel, advanced training options, available onsite technicians, factory modifications, factory service, factory rentals and OEM tooling and parts.

Purchasing our products is not your only choice. There are occasions where it may make more sense to rent them, such as short term projects, unplanned repairs or maintenance, unusual fabrications, or time intensive plant turnarounds requiring multiple machines. In these situations consider Wachs and Orbitalum rentals as a more cost effective alternative.

With Wachs you're not only partnering with the industry leader in portable weld preparation machine tools, you're partnering with ITW, the industry leader in advanced welding technologies.

It's easy to rent with us. Strategically located near the world's major oil producing areas, our Sales, Service & Rental Centers quickly and economically ship machines, tooling, parts and accessories wherever and whenever they're needed. Renting with us assures you of the same technical support, engineering support, and instant parts and tooling accessibility that you receive with a purchase. And the best part, all from One Source.

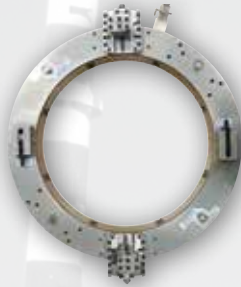
Wachs and Orbitalum offer a full line of products, utilizing a wide range of machining technologies, one of which will be ideal for your application. For heat exchanger applications, onsite cutting, beveling, counterboring, flange facing or machining of pipes and vessels, ITW Orbital Cutting & Welding products are the first choice of oil & gas professionals worldwide when they look to Cut. Prep. Weld. One Source.



As the foundation of a successful tube and pipe welding program, our weld prep products and orbital welders are renowned for delivering precise, high quality, repeatable results.

LOW CLEARANCE SPLIT FRAMES

The LCSF low clearance split frame is a rotating ring machine tool designed to cut, bevel, single point and counterbore pipe, splitting in half for external mounting to inline pipe, or slipping intact over an open end. A wide range of accessories are available to adapt the machine to multiple tasks, including tools slides and bridge slide for single pointing and flange facing. The LCSF series is the foundation of the industry's most complete weld prep machining system.



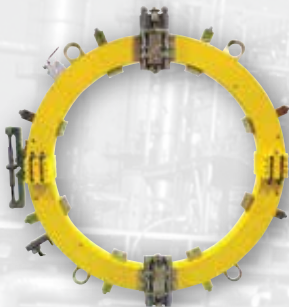
TRAV-L-CUTTER

E.H. Wachs Trav-L-Cutter is a model of simplicity and efficiency that's in use everywhere around the world. Secured to the pipe by a special tensioning/drive chain, the Trav-L-Cutter drives itself around the pipe as it simultaneously cuts and bevels, delivering a machined surface ready for welding. Ideal for severing and beveling all common pipe materials and wall thicknesses, one machine can accommodate pipe diameters from 6" (152mm) and up simply by specifying the correct chain length



HEAVY DUTY SPLIT FRAMES

The HDSF heavy duty split frame is the largest and most rugged of the Wachs split frame lineup. Available in six standard sizes to accommodate larger pipe and vessel diameters ranging from 12" to 84" (305 - 2133mm) plus custom sizes, the HDSF is constructed with a bigger cross section, larger gear sets and massive hardened steel components. The HDSF can fit a generous 12" (305mm) range of diameters per machine size.



SMALL DIAMETER BEVELERS

Strong and versatile, the SDB Series is a line of handheld beveling and prepping machines that deliver maximum power and performance for fast and accurate end preps. These I.D. mounted machines prep both pipe and tube, and can face, bevel, compound bevel and counterbore simultaneously. Three models are offered to cover a range of .875" (22.2mm) I.D. to 12.75" (324mm) O.D. Convertible to a FF series flange facer with optional FF Kit.



SMALL DIAMETER SPLIT FRAMES

The SDSF small diameter split frames are the smallest and most compact member of the Wachs split frame family, and are designed for cutting, beveling and counterboring pipe and tubing from .5" through 6" O.D. (12.7 - 152mm). The SDSF is ideal anywhere pipe and tube are arrayed in tight places, such as in pipe racks. Six models are available in 1" (25.4mm) increments. The SDSF is also the basis of our specialized kits designed to nondestructively remove welded sockets.



FLANGE FACERS

Wachs FF series flange facers are based on the powerful and versatile SDB series of bevelers. Easy to setup and operate, the FF series feature a quick change mandrel system for fast installation. This system provides simple operation in a lightweight and compact form. Three models are available that cover a range of 2" (50.8mm) I.D. to 24" (610mm) O.D. flat, raised or recessed face flanges. Convertible to a SDB end prep with optional SDB Kit.



GUILLOTINE PIPE SAWS

Wachs Guillotine pipe saws are reciprocating saws designed to cold cut pipe as well as solid bars, stock, rails and beams. Available in four sizes to fit from 2" to 32" (50.8 to 813mm) outside diameters, they can be equipped with remote control auto clamp and auto feed devices for operation in restricted or hazardous environments. They're the industry's benchmark reciprocating pipe saw, able to cut horizontally, vertically or anything in between.



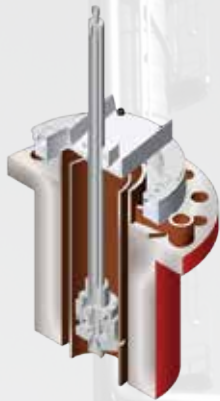
EP 424 END PREP

The EP 424 with available Speed Prep auto feed system is a precision I.D. mount end prep machine tool designed to bevel, compound bevel, J prep, face flanges and counterbore pipe, fittings and valves. The Speed Prep EP 424 is able to machine any bevel or compound bevel without templates, incline tool slides or work stoppages, making it simple to use even for an inexperienced operator.



EICC CASING CUTTER

E.H. Wachs EICC system provides a fast and reliable method of cutting casings externally above the wellhead and internally below it. It combines our split frame technology with a removable internal cutter that can chamfer 7" to 13-3/8" casings at depths down to 72" (1829mm) below the wellhead. The EICC is the ideal device for new BOP installations or interventions, both onshore and topside on offshore platforms.



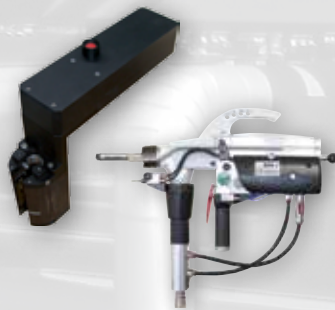
RS-2 VALVE OPERATOR

With fast operating speeds for quick valve operation, the RS-2 (Rising Stem-2) valve turner/exerciser is designed to accommodate both rising and non-rising stem valves. The RS-2 offers a range of accessories including fixed and adjustable hand wheel adaptors to fit most applications. Available in pneumatic, hydraulic and electric drive they help prevent arm and back injuries associated with repetitive turning of large, stubborn or stuck industrial valves.



HEAT EXCHANGER

ITW Orbital Cutting & Welding manufactures the industry's premier equipment for specialized heat exchanger welding applications, including tube beveling machine tools and orbital tube to tubesheet welding systems. Beveling machines for heat exchanger applications include the BRB series with automation options up to the BRB Full Auto. HX 16 weld heads are built for U-Tube heat exchanger welding applications.



TUBESHEET WELDING

The Orbitalum 300 CA microprocessor controlled power supply and specialized weld heads offer the speed, consistency, cooling and power to handle the most intensive heat exchanger assembly or re-tubing projects. The compact P20 and heavy duty P16 weld heads are ideal for conventional tube to tube sheet welding and box header applications. Easy to program and easy to use, Orbitalum tube to tube sheet welding systems offer unrivaled productivity.



EH WACHS TOOL	US PIPE SIZE	METRIC PIPE SIZE	POWER SOURCE
Trav-L-Cutter Model E	6" to 72" OD	DN150-1800	Pneumatic
Trav-L-Cutter Model HE	6" to 72" OD	DN150-1800	Hydraulic
EP 424 Form Tool	4" to 16" OD	DN100-400	Pneumatic, Hydraulic, Electric
EP 424 Single Point	4" to 24" OD	DN100-600	Pneumatic, Hydraulic, Electric
Guillotine Super C	2" to 12" OD	DN50-300	Hydraulic, Pneumatic, Electric
Guillotine Model D	6" to 18" OD	DN150-450	Hydraulic, Pneumatic, Electric
Guillotine Super D	10" to 24" OD	DN250-300	Hydraulic, Pneumatic
Goliath	16" to 32" OD	DN400-800	Hydraulic
SDSF 1.0 (DN25)	.5" to 1" OD	DN15-25	Pneumatic, Electric
SDSF 2.0 (DN50)	1.25" to 2" OD	DN32-50	Pneumatic, Electric
SDSF 3.0 (DN80)	2" to 3" OD	DN50-80	Pneumatic, Electric
SDSF 4.0 (DN100)	3" to 4" OD	DN80-100	Pneumatic, Electric
SDSF 5.0 (DN125)	4" to 5" OD	DN100-125	Pneumatic, Electric
SDSF 6.0 (DN150)	5" to 6" OD	DN125-150	Pneumatic, Electric
HDSF 1224	12" to 24" OD	DN300-600	Hydraulic, Pneumatic
HDSF 2436	24" to 36" OD	DN600-900	Hydraulic, Pneumatic
HDSF 3648	36" to 48" OD	DN900-1200	Hydraulic, Pneumatic
HDSF 4860	48" to 60" OD	DN1200-1500	Hydraulic, Pneumatic
HDSF 6072	60" to 72" OD	DN1500-1800	Hydraulic, Pneumatic
HDSF 7284	72" to 84" OD	DN1800-2100	Hydraulic, Pneumatic
FF 206	2" ID to 6" OD	50.8mm ID to 152.4mm OD	Pneumatic, Electric
FF 313	3" ID to 13" OD	76.2mm ID to 330.2mm OD	Pneumatic, Hydraulic, Electric
FF 424	4" ID to 24" OD	101.6mm ID to 609.6mm OD	Pneumatic, Hydraulic, Electric
LCSF 206/3	2" to 6" OD	DN50-150	Hydraulic, Pneumatic, Electric
LCSF 408/3	4" to 8" OD	DN100-200	Hydraulic, Pneumatic, Electric
LCSF 612/3	6" to 12" OD	DN150-300	Hydraulic, Pneumatic, Electric
LCSF 814/3	8" to 14" OD	DN200-350	Hydraulic, Pneumatic, Electric
LCSF 1016/3	10" to 16" OD	DN250-400	Hydraulic, Pneumatic, Electric
LCSF 1420/3	14" to 20" OD	DN350-500	Hydraulic, Pneumatic, Electric
LCSF 1824/3	18" to 24" OD	DN450-600	Hydraulic, Pneumatic, Electric
LCSF 2228/3	22" to 28" OD	DN550-700	Hydraulic, Pneumatic, Electric
LCSF 2632/3	26" to 32" OD	DN650-800	Hydraulic, Pneumatic, Electric
LCSF 3036/3	30" to 36" OD	DN750-900	Hydraulic, Pneumatic, Electric
LCSF 3642/3	36" to 42" OD	DN900-1050	Hydraulic, Pneumatic, Electric
LCSF 4248/3	42" to 48" OD	DN1050-1200	Hydraulic, Pneumatic, Electric
LCSF 4248/3	42" to 48" OD	DN1050-1200	Hydraulic, Pneumatic, Electric
SDB 103/3	.875" ID to 4.5" OD	22.2mm ID to 114mm OD	Pneumatic, Electric
SDB 206/2	1.91" ID to 6.625" OD	48.5mm ID to 168mm OD	Pneumatic, Hydraulic, Electric
SDB 412/2	3.80" ID to 12.75" OD	96.5mm ID to 323.9mm OD	Pneumatic, Hydraulic, Electric

E.H. Wachs offers one of the largest lineups of pipe cold cutting and beveling equipment offered anywhere in the world. Industrial piping not joined by flanges typically requires a bevel prior to being welded. This process of collectively cutting and beveling pipe is called “weld prep”. Our cold cutting weld prep eliminates the flame used in torch cutting, an obvious safety benefit, and creates a precision machined bevel ready for welding.

A significant advantage of the machining or cold cutting process over thermal is preventing the creation of a HAZ, or Heat Affected Zone.

Another significant advantage of the machining or cold cutting process over thermal is preventing the creation of a HAZ, or Heat Affected Zone. Applying extreme temperature such as produced by plasma or acetylene torches can create a HAZ, negatively altering the molecular structure of the pipe material, thereby weakening the joint and surrounding area.



Wachs O.D. cutting and beveling machines include our LCSF low clearance split frames, HDSF heavy duty split frames, SDSF small diameter split frames and the Trav-L-Cutter. The SDSF is the foundation of Wachs radial and axial socket weld removal kits, used to remove and reuse sockets without sacrificing the parent pipe material.

Wachs I.D. mounted machines for end prep beveling includes our proven SDB series and advanced EP 424 with available Speed Prep autofeed. ITW Orbital Cutting & Welding products handle the most difficult cutting and beveling applications.

E.H. Wachs offers a range of equipment for flange facing lathe quality record groove, RMS 500, 250, 125 and 63 finishes on flat, raised or recessed flanges. Wachs FF series of flange facers are available in three models that cover a range of 2" (50.8mm) I.D. to 24" (610mm) O.D. Their lightweight, self centering design makes them fast and easy to setup and operate.

With the optional SDB Conversion Kit your FF series machine can be used for flange facing as well as beveling, facing, compound beveling and counterboring. This is a powerful advantage over ordinary single purpose machines.

In addition to the FF line, Wachs offers two other dual purpose machines, the EP 424 and the LCSF with bridge slide accessory. The EP 424 single point model includes all the components needed to bevel, compound bevel, counterbore, J Prep and face flanges from 4" to 24" (102-610mm) O.D. In addition the EP 424 can be ordered with the revolutionary Speed Prep autofeed system for the ultimate in productivity and user convenience.

In addition to the FF line, Wachs offers two other dual purpose machines, the EP 424 and the LCSF with bridge slide accessory.

For large diameter flanges our LCSF split frame with accessory bridge slide can face flanges up to a 48" (1220mm) O.D. Named for its ability to split in half at the frame and bolt back together over inline piping, the LCSF split frame used for flange facing one day can be used to cut, bevel and counterbore the next day.



As part of the industry's most comprehensive system of portable machine tools and accessories, our multi-purpose approach makes far more economic sense than expensive, single purpose machines that are used for one project then set aside.

For example, the LCSF bridge slide tool holder used for flange facing can also be used for single point machining, making for a quicker return on investment. Let's face it, when you're looking to face flanges you should look to E.H. Wachs.

Orbitalum manufactures the world's leading microprocessor controlled tube to tube sheet welding solutions used in the fabrication and maintenance of heat exchangers, box headers and internal bore welding.

The OrbiMat power supply units, both the 165CA and the more powerful 300CA, are designed to be easily transportable and easy to program, setup and operate. For maximum productivity the optional Orbitwin switching device allows alternate operation of two weld heads from a single power supply.

The OrbiMat 300CA power supply unit, coupled with the industry leading P20 compact and P16 heavy duty weld heads, has the power and advanced water cooling needed to handle the heavy duty cycles found in today's production settings.



BRB Full Auto



HX 16



P16

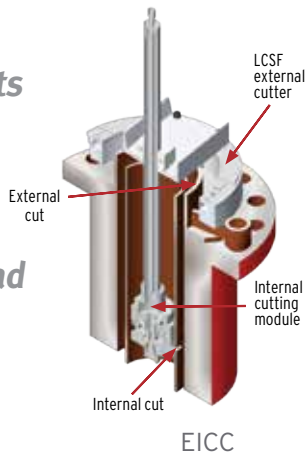
Orbitalum systems have the power and advanced water cooling needed to handle the heavy duty cycles used in a production setting.

The P16 weld head is typically specified with wire feed and features an advanced cooling system for the heaviest duty cycles. The P20 weld head is a more compact design usually specified without wire feed. The HX 16 weld head is available for specialized U-Tube design heat exchanger welding applications. In addition we offer the BRB series of tube bevelers that, with available automation options, make them the ideal choice for heat exchanger work.

ITW Orbital Cutting & Welding is committed to supporting our users with factory training, at your location or ours. Factory rentals, complete repair, calibration services and OEM parts and consumables are also available. We offer the ability to design and manufacture custom components for technically demanding box header and internal bore welding applications.

E.H. Wachs products are the first choice of oil and gas professionals involved in wellhead and casing cutting applications. We manufacture machine tools designed specifically for these applications, including split frames for outside (external) casing cuts, Wachs EICC for external and internal casing cuts, and our Guillotine reciprocating saws for quick P&A (Plug and Abandonment) projects. In addition to their legendary reliability Wachs machines are lightweight and compact, designed to fit into the tight operating envelopes typically found in many of these operations.

E.H. Wachs products are the first choice of oil and gas professionals involved in wellhead and casing cutting applications.



For example, when equipped with inverted tools slides our LCSF split frame can sever as low as 3.2" (81mm) from the flange (slightly higher to bevel). Our LCSFs are suitable for cutting and beveling casings to the specification of all major BOP (blow out preventer) manufacturers, and are ideal for machining common casing sizes including 13-3/8", 9-5/8" and 7".



Wachs EICC system provides a fast and reliable method of cutting casings externally above the wellhead and internally below it.



Wachs EICC system provides a fast and reliable method of cutting casings externally above the wellhead and internally below it. It combines our split frame technology with a removable internal cutter that can chamfer 7" to 13-3/8" casings at depths down to 72" (1829mm) below the wellhead.

Ring sizes are available to cut and bevel most grades and weights of exposed external casing (or drive pipe/conductor) up to a 42" diameter. The EICC is the ideal device for new installations and interventions, both onshore and topside on platforms



E.H. Wachs handheld valve operators/turners are designed for the quick, secure operation and exercising of rising stem (RS-2) and non rising stem (P-2) valves. Available in a choice of pneumatic, hydraulic and electric drive, they're designed to help prevent the arm and back injuries associated with manually turning large, stubborn or frozen industrial valves, handwheel valves and post indicator valves (PIV).

Wachs RS-2 rising stem valve operator is the industry's most versatile powered valve operator, accommodating both rising and non-rising stem valves (when properly equipped). It delivers up to 800 ft-lbs (1085 Nm) of torque, and is available with a full range of accessories to tackle the toughest valves. Wachs RS-2 transforms a slow, onerous, repetitive task into one of the fastest and easiest.

Wachs P-2 handheld valve operator is the ideal solution for non rising stem AWWA water gate valves used in water supply systems. Smaller and lighter than the RS-2, it's the perfect machine for hard to reach valves, valve turning/ exercising and fast operation of PIV (Post Indicator Valves).



rental centers

E.H. Wachs offers our clients the choice of purchasing or renting our equipment, depending on their needs. Virtually every product we make is available for short or long term rental, and ships quickly from our strategically located Sales, Service and Rental Centers. Rentals are a great option for short term usage such as repair projects and scheduled turnarounds.

Offering more than just equipment and tooling, Wachs Sales and Rental Centers are staffed with expert product specialists to help you quickly specify the right machine, power source and tooling for your application. Individually inspected and tested before shipment.

Wachs rentals arrive fully configured and ready to run (just add tooling). Additional options for managing your equipment rentals are available, up to and including a specially trained Wachs onsite technician to help manage and maintain our machines, or instruct your workforce on their proper use.



Renting with E.H. Wachs gives you access to the entire range of customer service, engineering expertise and technical experience that E.H. Wachs and ITW are renowned for. For more information on sales or rental of any of our products, contact your local Wachs representative.

See the Back Cover for the Location Nearest You.



Miller Electric Mfg. Co., headquartered in Appleton, Wisconsin is a leading worldwide manufacturer of Miller brand arc welding products for oil and gas, construction, fabrication, manufacturing, maintenance and other applications.

MillerWelds.com



an ITW company

Pipe Welding Technology (PWT) is a manufacturer and supplier of equipment and tools for automatic welding in outdoor applications, including advanced mechanical, electronic and arc control technology used in the oil and gas and pipeline industries.

pwtsrl.com



Magnaflux is a global system solution manufacturer of non-destructive testing chemicals, equipment, and accessories used to inspect ferrous and non-ferrous metal components for defects. Magnaflux serves multiple industries including oil and gas.

magnaflux.com



Hobart Brothers manufactures premium welding filler metals, including stick electrodes and solid and tubular (flux cored and metal cored) wires under the Hobart®, McKay®, Tri-Mark® and Corex® brands. All filler metals meet or exceed the specifications of the American Welding Society (AWS).

HobartBrothers.com



ITW Insulation Systems is a leading manufacturer of high-performance mechanical insulation, vapor retarder film and metal jacketing products designed to meet specifications for a wide range of industrial applications including pipes, tanks and other equipment.

itwinsulation.com



Wachs Subsea specializes in Subsea Cutting Solutions, manufacturing products to support the maintenance and repair activities of the nearshore and offshore oil & gas industry. Wachs Subsea products are designed to withstand corrosion and pressure, with a choice of application specific topside, diver or ROV control.

wachssubsea.com

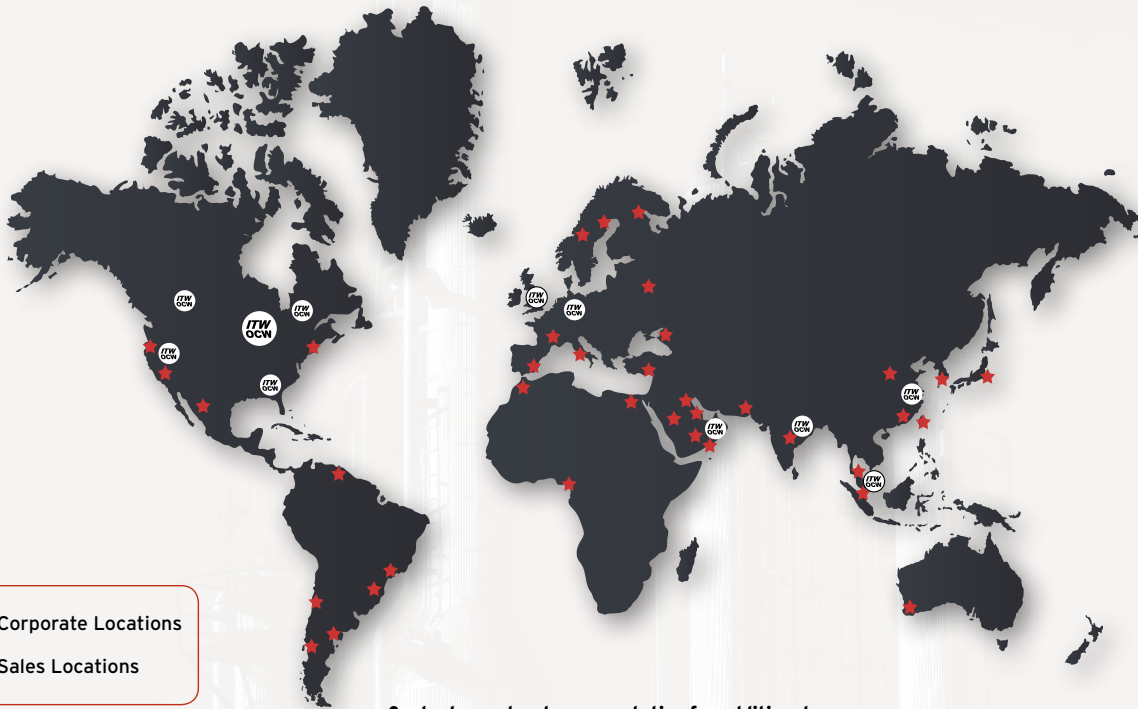
Our ITW Partners

When reliability matters...
We're there.

As your global partner in oil & gas pipe cutting & welding applications, ITW has a market leading portfolio of best in class brands serving the industry with reliable and responsible products and services.



FORGING THE TOOLS
FOR EXCELLENCE



Corporate Locations



Sales Locations

Contact your local representative for additional information or to request a product demonstration.

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