PORTABLE WELD PREP MACHINE TOOLS

INDUSTRIAL PIPE CUTTING & BEVELING PRODUCTS

PORTABLE WELD PREP MACHINE TOOLS
For over 125 years E.H. Wachs® has manufactured the world’s finest line of portable pipe machining tools, valve exercisers and related equipment. Specially designed with the field machinist in mind, our industrial weld prep products are used for onsite cutting, squaring, beveling and facing pipe, tube and vessels of all sizes and wall thicknesses, under all conditions and environments.

QUALITY AND INNOVATION SINCE 1883

Wachs line of portable, pipe machining tools include O.D. mounted pipe cutters and weld prep machines, I.D. mounted pipe bevelers and flange facers, our industry standard Trav-L-Cutter® and Guillotine® pipe saws, handheld boiler tube bevelers and valve turners/exercisers. A complete line of high purity products is offered in conjunction with our corporate partner Orbitalum GmbH. In addition, Wachs strategically located rental centers maintain large inventories of our machines, ready to ship anywhere around the world on a moment’s notice.

All of our products are designed and built to world class standards. E.H. Wachs is ISO 9001 certified, and reflecting our manufacturing excellence was named one of the “Ten Best Machine Shops” by American Machinist Magazine. Sold and supported worldwide, each and every product is individually hand assembled and fully tested by our master craftsmen before shipment.

E.H. Wachs joins other welding related companies in the ITW Welding Products Group, further strengthening our position as the premier supplier of cold cutting weld prep machine tools. Built on a solid foundation of engineering and manufacturing excellence, we’re dedicated to continuing the quality and spirit of innovation pioneered by Edward H. Wachs, our founder, in 1883. Purchase any E.H. Wachs machine with confidence, knowing you have Superior Equipment. Complete Support.
When you purchase an E.H. Wachs® product, you’re partnering with the industry leader in portable weld prep machine tools. That partnership means the equipment you buy today will be supported with the training, service, parts and upgrades that keep these machines working in the field, day in and day out, year after year.

SUPPORT BEYOND A WARRANTY

Purchasing a Wachs machine is more than just buying a tool, you’re acquiring ownership in the most complete, versatile machining system offered anywhere. With the wide range of tooling, machine accessories, power supplies and expert advice we offer there’s virtually no cutting or beveling task we can’t help with.

Everyone claims they offer the best customer support, but at Wachs we back that up, each and every day. We support our standard machines with a great warranty - that’s easy because they seldom break. But support means more at Wachs – it means complete support. Like the ability to manufacture custom tooling, modify standard products or design and build a complete customized machining system. Support includes training options, at your location or ours, with expert Wachs onsite technicians or at the Wachs Training Institute.

At E.H. Wachs, we take pride in saying we don’t just build machines, we build relationships - one customer at a time. Email us at info@ehwachs.com for more information, or call us today for a no cost, no obligation demonstration of our Superior Equipment. Complete Support.
E.H. Wachs® LCSF Low Clearance Split Frame is the world’s most versatile and comprehensive line of lightweight split frame, clamshell style portable machine tools on the market today. Designed to cut, bevel, single point, counterbore and face flanges on pipe and tubing ranging from 2 to 48 inches O.D. (DN50-1200)* on most wall thicknesses and materials, Wachs slim yet rugged LCSF design is ideal where radial and axial clearances are restricted.

SAFE COLD CUTTING

The LCSF is ideal for all types of pipe cutting, beveling and end prepping. 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 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.

Like all E.H. Wachs cutting machines, our LCSF split frame utilizes a cold cutting machining process, a safe, clean operation that minimizes the risk of explosion. Hot torch cutting and grinding typically creates a heat affected zone (HAZ) and introduces airborne contaminants into the environment, unacceptable in many worksites and a potential health hazard.

*In this brochure all dimensions shown for pipe diameters are NPS nominal diameters in inches, plus metric nominal diameters (DN). Tubing and solid diameters shown are actual US inches and metric millimeter equivalents.
The LCSF is the foundation of a complete machining system, a system that includes multiple drive options, hydraulic power units, bridge slides, counterbore attachments and a wide range of tooling and tool slides. These include low clearance slides, extended and super extended slides, worm gear slides for heavy wall applications and out-of-round tracking slides that minimize setup and machining time.

**COMPLETE MACHINING SYSTEM**

The LCSF is able to handle virtually any cutting and beveling application encountered in the field, including tight clearances, heavy wall pipe or high alloy material. Wachs allows you to take on the most challenging prep with confidence, as the correct power source, drive, tool slides and tooling are never more than a phone call away.

E.H. Wachs LCSF’s are offered as complete kits, with your choice of pneumatic, hydraulic or, by special order electric drive, or as basic ring sets. Kits are the more popular choice, as they include the components typically required including drive, tool slides, trips, hand tools and more (just add tooling). But if you already own our drive motors and tool slides, individual ring sets can economically expand your split frame range.

Ideal for a wide range of industries, the LCSF is found in fossil, co-gen and nuclear power plants for outages, steam generator replacements and general plant maintenance. They’re used in oil, gas and petrochemical to minimize the risk of explosion, and anywhere that safe, high quality, repeatable weld preps are required. It’s the most complete pipe cutting and beveling machining system available today.

Wachs LCSF split frame is a rotating ring style pipe cutter and beveler, specially designed with compact sectional dimensions to fit into the tightest places.

Constructed of steel and aluminum components, the LCSF offers the ideal mix of light weight for ease of handling and ruggedness for long life and precise machining.

Wachs allows you to take on the most challenging prep with confidence, as the correct power source, drive, tool slides and tooling are never more than a phone call away.
Like all Wachs machines, the LCSF is built to last. Steel gear sets, fully enclosed for safety and durability, ride on full roller bearings to handle the rigors of today's demanding preps on today's demanding materials. Strong yet light, the LCSF machines with a speed and precision others can't match.

**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 LCSF (like all Wachs split frames) incorporates full roller bearing construction, rather than less expensive bushings. Our bearings require less power to drive than bushings, and contribute to a long service life. The Wachs LCSF can be quickly adjusted to compensate for wear, unlike other machines that may require costly bushing replacement. And to protect your machine, every LCSF ships in a heavy duty steel or Pelican™ storage case.

With twelve standard models available to fit most popular pipe diameters and schedules plus additional sizes available by special order, there's an LCSF to fit your every need. Order the most productive, best supported split frame machines in the industry, the E.H. Wachs LCSF Low Clearance Split Frame.

<table>
<thead>
<tr>
<th>LCSF MODEL</th>
<th>US PIPE SIZE</th>
<th>METRIC PIPE SIZE</th>
<th>POWER SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCSF 206/3</td>
<td>2” to 6” OD</td>
<td>DN50-150</td>
<td>Hydraulic, Pneumatic, Electric</td>
</tr>
<tr>
<td>LCSF 408/3</td>
<td>4” to 8” OD</td>
<td>DN100-200</td>
<td>Hydraulic, Pneumatic, Electric</td>
</tr>
<tr>
<td>LCSF 612/3</td>
<td>6” to 12” OD</td>
<td>DN150-300</td>
<td>Hydraulic, Pneumatic, Electric</td>
</tr>
<tr>
<td>LCSF 814/3</td>
<td>8” to 14” OD</td>
<td>DN200-350</td>
<td>Hydraulic, Pneumatic</td>
</tr>
<tr>
<td>LCSF 1016/3</td>
<td>10” to 16” OD</td>
<td>DN250-400</td>
<td>Hydraulic, Pneumatic</td>
</tr>
<tr>
<td>LCSF 1420/3</td>
<td>14” to 20” OD</td>
<td>DN350-500</td>
<td>Hydraulic, Pneumatic</td>
</tr>
<tr>
<td>LCSF 1824/3</td>
<td>18” to 24” OD</td>
<td>DN450-600</td>
<td>Hydraulic, Pneumatic</td>
</tr>
<tr>
<td>LCSF 2228/3</td>
<td>22” to 28” OD</td>
<td>DN500-700</td>
<td>Hydraulic, Pneumatic</td>
</tr>
<tr>
<td>LCSF 2632/3</td>
<td>26” to 32” OD</td>
<td>DN650-800</td>
<td>Hydraulic, Pneumatic</td>
</tr>
<tr>
<td>LCSF 3036/3</td>
<td>30” to 36” OD</td>
<td>DN750-900</td>
<td>Hydraulic, Pneumatic</td>
</tr>
<tr>
<td>LCSF 3642/3</td>
<td>36” to 42” OD</td>
<td>DN900-1050</td>
<td>Hydraulic, Pneumatic</td>
</tr>
<tr>
<td>LCSF 4248/3</td>
<td>42” to 48” OD</td>
<td>DN1050-1200</td>
<td>Hydraulic, Pneumatic</td>
</tr>
</tbody>
</table>
The LCSF machining system includes a wide range of accessories that enables the Low Clearance Split Frame to perform multiple tasks.

Your investment in the Wachs LCSF gives you ownership in the most complete pipe cutting and beveling system on the market today.

**LCSF ACCESSORIES**

**LCSF RING SETS**
For users that already own E.H. Wachs drive motors and tool slides. Economically extend your split frame range. Includes heavy duty storage case, operating manuals and hand tools.

**LCSF TOOL SLIDES**
Three types available: Low Profile Slides, optional, ultra compact design with .5” (12.7mm) stroke. Extended Slides, standard on LCSF models 206 to 1420, optional for other sizes, with a 1.5” (38.1mm) stroke. Super Extended Slides, standard on LCSF models 1824 and larger, optional for other sizes, long 2” (50.8mm) stroke for larger pipe sizes and varied wall thicknesses.

**OUT OF ROUND SLIDES**
Out of Round spring-loaded slides track the surface of out-of-round pipe and speeds setup and time to cut. Fast ROI, assures consistent lands, when combined with counterbore slide maintains even wall thickness on large diameter counterbores.

**WORM GEAR SLIDES**
Heavy duty, worm gear driven feed mechanism for cutting extreme heavy wall or high alloy pipe that resists regular tool slides.

**LCSF BRIDGE SLIDES**
Versatile end prep accessory for beveling, compound beveling, J preps, counterboring and flange facing, available in four sizes to fit 12” through 48” (305-1219mm) LCSFs.

**UNIVERSAL COUNTERBORE SLIDE**
Equipped with a form tool attachment for counterboring, fits all LCSF ring sizes. Slide mounts to bevel or out of round tool slide for ease of setup and use.

**ID/OD MODULE**
Accessory module for turning the outside and inside diameter of pipe. Mounts to bevel tool slide, may also be used for OD tapering with manual axial feed.

**ATM AIR TREATMENT MODULES**
Extend the life of your LCSF pneumatic drive motor (and all pneumatic drive motors) with our Air Treatment Modules.
E.H. Wachs’ 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” OD (DN15-150). Like all our split frame, clamshell style machines the SDSF is designed to “split” in half to fit over inline pipe, or can be slipped closed over open ended pipe. Six models are available in 1” (25.4mm) increments, with additional sizes available by special order.

**SMALL SIZE, BIG CAPABILITIES**

The SDSF is ideal anywhere pipe and tube are arrayed in tight places, such as pipe racks, and finds many uses in power generation, oil and gas and the shipbuilding industries. The SDSF operates on air or electric power using standard Wachs motors and adaptors, and is part of a complete system that includes a broad range of tool slides and accessories for maximum versatility. As with all E.H. Wachs products, the Small Diameter Split Frame is built with our legendary quality and durability for years of reliable service.

The SDSF, like all our split frames, is designed to simultaneously cut and bevel pipe and tube with our parting and beveling tool slides. It’s also the basis of our specialized Socket Weld Removal kits, in both axial and radial configurations. The FME (Foreign Material Exclusion) chipless cutting module makes the SDSF the perfect split frame for the high purity market. So while the SDSF is our smallest split frame, it’s big in capabilities.

<table>
<thead>
<tr>
<th>SDSF MODEL</th>
<th>US PIPE SIZE</th>
<th>METRIC PIPE SIZE</th>
<th>POWER SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDSF 1.0 (DN25)</td>
<td>.5” to 1” OD</td>
<td>DN15-25</td>
<td>Pneumatic, Electric</td>
</tr>
<tr>
<td>SDSF 2.0 (DN50)</td>
<td>1.25” to 2” OD</td>
<td>DN32-50</td>
<td>Pneumatic, Electric</td>
</tr>
<tr>
<td>SDSF 3.0 (DN80)</td>
<td>2” to 3” OD</td>
<td>DN50-80</td>
<td>Pneumatic, Electric</td>
</tr>
<tr>
<td>SDSF 4.0 (DN100)</td>
<td>3” to 4” OD</td>
<td>DN80-100</td>
<td>Pneumatic, Electric</td>
</tr>
<tr>
<td>SDSF 5.0 (DN125)</td>
<td>4” to 5” OD</td>
<td>DN100-125</td>
<td>Pneumatic, Electric</td>
</tr>
<tr>
<td>SDSF 6.0 (DN150)</td>
<td>5” to 6” OD</td>
<td>DN125-150</td>
<td>Pneumatic, Electric</td>
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</tbody>
</table>

**SDSF FEATURES**

- SDSF quickly splits open to mount around the O. D. of inline pipe
- Machines carbon steel and its alloys, Hastelloy™, Inconel™ and other exotics
- Cuts and bevels up to .438” (11.1mm) wall thickness
- Low clearance design requires minimal space for setup and operation
Wachs SDSF Split Frame is the most versatile small diameter cutter and beveler on the market. It can be configured for many roles simply by specifying the tooling and tool slides for your application. With a socket weld removal slide it's the perfect weld removal tool. Add the FME module, and it's a high purity chipless cutter. Install the universal counterbore tool for perfect counterbores.

SDSF ACCESSORIES

SOCKET WELD REMOVAL
E.H. Wachs® SDSF split frames are the building block of our socket weld removal machines. They’re designed to remove couplers and elbows from existing piping systems by machining away the weld material that joins them. This is done without sacrificing the base metal – a vital consideration in the repair or modification of complex process systems. These machines are all new designs incorporating all that we’ve learned from years of socket weld removal experience. They’re the easiest to use and most productive socket weld removal machines offered anywhere.

FOREIGN MATERIAL EXCLUSION
Wachs FME (Foreign Material Exclusion) is a chipless wheel cutting module designed for use with the SDSF. FME is critical in high purity and process applications where the introduction of chip debris cannot be tolerated. Examples include the food, dairy and pharmaceutical industries, and the highly disciplined and controlled power generation field.

AXIAL SOCKET WELD REMOVAL SLIDE
Used with the SDSF for removal of socket welds, the axial slide requires less radial clearance. The tooling is advanced axially along the pipe to remove the weld material. Also available as a complete Axial Socket Weld Removal Kit.

RADIAL SOCKET WELD REMOVAL SLIDE
Used with the SDSF for removal of socket welds, the radial slide requires less axial clearance. The tooling is advanced to the pipe center line (radially) to remove the weld material. Also available as a complete Radial Socket Weld Removal Kit.

FME TOOL SLIDE
Foreign Material Exclusion, utilizes chipless cutting to prevent introduction of chip debris. A high alloy cutting wheel performs the final severing of the pipe or tube, and does not generate any chip debris which may contaminate the workpiece.

SDSF TOOL SLIDES
Used with the SDSF for parting (cutting) and beveling of pipe and tube. These are sold individually or as kits with trip, one parting tool slide and one parting and beveling tool slide. With these tool slides, you can utilize two parting bits for very fast cutting or one cutting bit and one beveling bit for simultaneous parting and beveling.

UNIVERSAL COUNTERBORE TOOL SLIDE
Designed for perfect counterboring of the pipe or tube inside diameter, the universal counterbore fits all Wachs SDSF ring set. Utilizes a simple and effective hand advance to precisely control the counterbore.
HEAVY DUTY SPLIT FRAME

E.H. Wachs HDSF Heavy Duty Split Frame clamshell style machines are the largest and most rugged in the Wachs split frame family, and are designed to cut, bevel, single point, counterbore and face flanges on large diameter pipes from 12” to 84” O.D. (DN300-2100). Designed for parting and beveling of larger diameter pipelines in the field, the HDSF series is constructed with a bigger cross section, larger gear sets and massive hardened steel components.

BUILT FOR BIG JOBS

Like all Wachs split frames, the HDSF produces a precision lathe finish using Wachs safe cold cutting process, which unlike torch cutting and grinding minimizes the risk of explosion on gas and petrochemical lines and eliminates a HAZ (Heat Affected Zone).

Available in six standard sizes to cover the most common pipeline diameters (with custom sizes available by special order), each HDSF can accommodate a full 12” (305mm) range of diameters per machine size. Offered as a complete kit in your choice of hydraulic or pneumatic with tool slides, trip and drive motor all included.

<table>
<thead>
<tr>
<th>HDSF MODEL</th>
<th>US PIPE SIZE</th>
<th>METRIC PIPE SIZE</th>
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<tbody>
<tr>
<td>HDSF 1224</td>
<td>12&quot; to 24&quot; OD</td>
<td>DN300-600</td>
<td>Hydraulic, Pneumatic</td>
</tr>
<tr>
<td>HDSF 2436</td>
<td>24&quot; to 36&quot; OD</td>
<td>DN600-900</td>
<td>Hydraulic, Pneumatic</td>
</tr>
<tr>
<td>HDSF 3648</td>
<td>36&quot; to 48&quot; OD</td>
<td>DN900-1200</td>
<td>Hydraulic, Pneumatic</td>
</tr>
<tr>
<td>HDSF 4860</td>
<td>48&quot; to 60&quot; OD</td>
<td>DN1200-1500</td>
<td>Hydraulic, Pneumatic</td>
</tr>
<tr>
<td>HDSF 6072</td>
<td>60&quot; to 72&quot; OD</td>
<td>DN1500-1800</td>
<td>Hydraulic, Pneumatic</td>
</tr>
<tr>
<td>HDSF 7284</td>
<td>72&quot; to 84&quot; OD</td>
<td>DN1800-2100</td>
<td>Hydraulic, Pneumatic</td>
</tr>
</tbody>
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HDSF FEATURES

- Six models cover from 12 to 84 inches O.D. (DN300-2100)
- Heavy duty steel construction, bigger cross section, larger gear sets
- Fully enclosed bearings and drive gears for safety and durability
- Out-of-Round heavy duty tracking slides standard

Wachs HDSF Heavy Duty Split Frames come standard with heavy duty out-of-round tracking slides, designed to compensate for out-of-round pipe, a common occurrence on larger diameters. These slides speed setup and machining times, produce consistent lands and extend the life of expensive tooling.
When E.H. Wachs is mentioned, the product that often comes to mind is our famous Trav-L-Cutter®. First introduced in 1949, it revolutionized industrial cold cutting piping procedures with its simple but effective operation. 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, providing a machined surface ready for welding.

<table>
<thead>
<tr>
<th>TRAV-L-CUTTER</th>
<th>US PIPE SIZE</th>
<th>METRIC PIPE SIZE</th>
<th>POWER SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model E</td>
<td>6&quot; to 72&quot; OD</td>
<td>DN150-1800</td>
<td>Pneumatic</td>
</tr>
<tr>
<td>Model HE</td>
<td>6&quot; to 72&quot; OD</td>
<td>DN150-1800</td>
<td>Hydraulic</td>
</tr>
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</table>

**FAST AND ACCURATE**

The Trav-L-Cutter is ideal for severing and beveling all common pipe materials, wall thicknesses and sizes from 6" (DN150) on up. Its special milling blades, with standard weld bevel capabilities of 30° & 37.5°, remove .188" (4.8mm) of metal while cutting, leaving the pipe ends with a fine milled finish.

The flexible tensioning chain feed system accommodates out-of-round conditions while providing positive drive under field conditions. By using an optional guide track and special guide track wheels, accuracy of .005" (.13mm) can be maintained on all pipe sizes, even in zero visibility situations. This cutting method facilitates section removal in the field, where new sections can be easily dropped into place.

**TRAV-L-CUTTER FEATURES**

- Simultaneous Cutting & Beveling
- Compact Design, Easy Set-Up
- Horizontal or Vertical Operation
- Pneumatic or Hydraulic Drive Models

**MODEL E**

Our best selling model, the Model E uses a powerful pneumatic drive motor and can be powered by most industrial air compressors. Rugged, dependable and nearly indestructible, it’s in use all over the world.

**MODEL HE**

The Model HE utilizes a powerful, sealed closed loop hydraulic drive system, ideally suited for hostile environments or for use underwater. Wachs HPU Hydraulic Power Units are recommended to power this and other hydraulic powered machines.

The Trav-L-Cutter is the most versatile machine of its kind, due to its ease of setup, rugged reliability and adaptability to a wide range of different pipe diameters and materials.

Used in every corner of the globe, the Trav-L-Cutter’s design and construction is so fundamentally strong that we routinely refurbish machines originally fielded over 50 years ago.
E.H. Wachs family of portable Guillotine® pipe saws are designed to cold cut 2” through 32” (DN50-800) pipe, as well as solids such as bar stock, rails and beams. Their compact design and easy setup make it the ideal saw for contractors, pipeline operations, refineries, petrochemical and processing plants, and anywhere a fast, safe cut is needed. In use virtually everywhere, they’re strong yet light, simple to mount, simple to operate and simply bulletproof.

EASY SETUP AND OPERATION

In 1953, responding to input from machinists in the field looking to avoid the dangers of torch cutting, E.H. Wachs introduced the first Guillotine pipe saw. Its rugged yet simple design found instant acceptance, and today they remain the industry’s benchmark reciprocating pipe saw. Wachs Guillotine saws cut most any material in most any position... horizontal, vertical or anything in between.

The four Guillotine models available, from smallest to largest, are the Super C, Model D, Super D and Goliath. All set up quickly with a positive chain mounting system that uses a machined cast iron “V” saddle for perfectly square cuts. Operation is easy with finger-tip feed control, and all use an orbital cutting motion that lifts the blade on the return stroke, dramatically extending blade life.

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

GUILLOTINE PIPE SAW FEATURES

- Rugged yet compact design requires minimal clearances
- Four models cut from 2” to 32” (DN50-800)
- Fast setup & cutting, both horizontally or vertically
- Pneumatic, hydraulic and electric drive options
- Optional autofeed and autoclamping on select models
No matter which Guillotine® pipe saw you select, you're acquiring the most versatile reciprocating saw on the market today. With the power to saw through most materials, and the ability to be easily modified for unusual, difficult or dangerous cutting operations, there's a Guillotine right for you. Select Guillotine models including the Goliath can be optionally equipped with autofeed and autoclamping mechanisms for convenience and safety.

**AUTOFEED AND AUTOCLAMP**

When working in areas that are potentially unsafe, such as wellheads or in containment, safety often dictates the operator distance himself from the worksite. For these applications, hydraulically powered Guillotine saws can be fitted with optional autofeed and autoclamp mechanisms (with Rapid Retract), or with both. This allows the machine to be remotely controlled from a safe distance via Wachs Manifolds or Hydraulic Control Panels.

Auto Feed needs only a manifold to accommodate the feed circuit, while the combination of Auto Feed and Auto Clamping requires a Wachs Hydraulic Control panel to control the feed rate, the cutting speed and the clamping hydraulics. The combination of a fully equipped Guillotine and Hydraulic Control Panel offers the user the most sophisticated remote controlled reciprocating saw available. For additional versatility, custom mounting saddles are available for non circular shapes such as squares and I beams.

**SUPER C**
Cuts 2” through 12” (DN50-300) pipe, solids through 12.75” (324 mm) diameter.

**MODEL D**
Cuts 6” through 18” (DN150-450) pipe, solids through 18.625” (473 mm) diameter.

**SUPER D**
Cuts 10” through 24” (DN250-600) pipe, solids through 24.5” (622 mm) diameter.

**GOLIATH**
Cuts 16” to 32” (DN400-800) pipe, solids through 32” (813 mm) diameter.

Wachs Guillotine accessories include autofeed and autoclamp options, custom saddles and Genuine Wachs saw blades. Our HPU Hydraulic Power Units match perfectly with our manifolds and control panels, and are ideal for powering hydraulic Guillotine saws and most hydraulically powered machine tools.
E.H. Wachs’ EP 424 with the Speed Prep autofeed system is a precision I.D. mount end prep machine tool designed to bevel, compound bevel, J prep, face and counterbore pipe, fittings and valves. Utilizing a revolutionary mechanism that feeds simultaneously in the axial and radial planes, the Speed Prep EP 424 is simple to use, even for an inexperienced operator, and machines any bevel or compound bevel without templates, incline tool slides or work stoppages.

### SPEED PREP SYSTEM

With E.H. Wachs Speed Prep system, it’s now possible to set the bevel angle and the land that works best for your application, all without work stoppages or additional components. Powerful enough to form tool from 4” to 16” (DN100-400) through Schedule 160, it will single point from 4” to 24” (DN100-600) up to a 6.5” (165mm) wall thickness.

For simple form tool usage or as a dedicated flange facer, the Wachs EP 424 is also offered without Speed Prep. More versatile and powerful than any other machine of its kind, the Wachs EP 424 sets the standard in user friendly large diameter end prep machines.

### EP 424 FEATURES

- Speed Prep design feeds automatically in the radial and axial planes
- EP 424 eliminates the need for accessory templates or external tool slides
- Set the exact bevel, compound bevel and land that works best for you

### EP 424 MODEL US PIPE SIZE METRIC PIPE SIZE POWER SOURCE

<table>
<thead>
<tr>
<th>EP 424 MODEL</th>
<th>US PIPE SIZE</th>
<th>METRIC PIPE SIZE</th>
<th>POWER SOURCE</th>
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</thead>
<tbody>
<tr>
<td>EP 424 Form Tool</td>
<td>4” to 16” OD</td>
<td>DN100-400</td>
<td>Pneumatic, Hydraulic</td>
</tr>
<tr>
<td>EP 424 Single Point</td>
<td>4” to 24” OD</td>
<td>DN100-600</td>
<td>Pneumatic, Hydraulic</td>
</tr>
</tbody>
</table>

Wachs machines include new innovations designed to make complex weld preps simple. The new EP 424 Beveler offers Speed Prep, an auto feed mechanism that allows you to set it and forget it.

Set your desired profile and the EP 424 machines it automatically.

SPEED PREP

EP 424 Single Point
E.H. Wachs® SDB line of small diameter bevelers have been engineered for fast, precise onsite facing, beveling, compound beveling and counterboring of light and heavy wall pipe, tube or casing. Proven workhorses, they set up quickly with a self centering mandrel and chuck assembly mounting to the pipe I.D. Their highly productive design means one person can set up, operate and create a perfect weld prep in minutes.

### SDB MODEL

<table>
<thead>
<tr>
<th>SDB MODEL</th>
<th>US PIPE SIZE (ID/OD)</th>
<th>METRIC PIPE SIZE (ID/OD)</th>
<th>POWER SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDB 103/3</td>
<td>0.875” ID to 4.5” OD</td>
<td>22.2mm ID to 114mm OD</td>
<td>Pneumatic, Electric</td>
</tr>
<tr>
<td>SDB 206/2</td>
<td>1.91” ID to 6.625” OD</td>
<td>48.5mm ID to 168mm OD</td>
<td>Pneumatic, Hydraulic, Electric</td>
</tr>
<tr>
<td>SDB 412/2</td>
<td>3.80” ID to 12.75” OD</td>
<td>96.5mm ID to 323.9mm OD</td>
<td>Pneumatic, Hydraulic, Electric</td>
</tr>
</tbody>
</table>

#### SDB 103/3

Wachs SDB 103/3 handheld beveling machine delivers maximum power and performance for fast, accurate weld preps on pipe and tube from 0.875” (22.2mm) I.D. through 4.5” (114.3mm) O.D. and flanges 2” I.D. (50.8mm) through 6” O.D. (152.4mm). Face, bevel and counterbore simultaneously on carbon, stainless and high alloy steels. Extremely versatile, the SDB 103 allows you to machine boiler tubes, heavy wall pipe, thick wall tubing, prep elbows and (with optional FF kit) face flanges.

#### SDB 206/2

Wachs SDB 206/2 makes fast work of end preps on pipe and tube from 1.91” (48.5mm) I.D. through 6.625” (168.3mm) O.D. and flanges from 3” (76.2mm) I.D. through 13” (330.2mm) O.D. The SDB 206 is a compact, lightweight design which requires only 2.25” (57mm) of radial clearance – making it the ideal tool for use in tight places. No other machine of this type can perform as many different jobs: face, bevel, counterbore (simultaneously if desired), compound bevel, and (with optional FF kit) face flanges.

#### SDB 412/2

The SDB 412/2 is a portable pipe end prep machine designed to face, bevel, counterbore (simultaneously) and compound bevel 3.80” (96.5mm) I.D. through 12.75” (323.9mm) O.D. pipe, up to 1.125” (29mm) wall thickness and (with optional FF kit) face flanges 4” I.D. (101.6mm) through 24” O.D. (609.6mm). The heavy duty yet compact design of the SDB 412 requires minimal operating clearances and ease of handling, setup and operation.
Now anyone can produce a lathe quality surface finish on flat, raised or recessed face flanges in minutes. Based on the powerful Wachs SDB series I.D. mount end prep machines, the Wachs FF series flange facers offer a rugged yet lightweight and compact design that allows them to fit into tight quarters. With the addition of the SDB Conversion Kit, the FF models can be converted into SDB series machines, allowing them to face, bevel, compound bevel and counterbore.

### FF FLANGE FACERS FEATURES
- Fast, easy setup – self centering design
- Simple operation, lightweight and compact
- Record Groove, RMS 500, 250, 125 & 63 finishes
- Convertible to SDB series with optional SDB Conversion Kit

<table>
<thead>
<tr>
<th>FF MODEL</th>
<th>US FLANGE SIZE</th>
<th>METRIC FLANGE SIZE</th>
<th>POWER SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FF 206</td>
<td>2” ID to 6” OD</td>
<td>50.8mm ID to 152.44mm OD</td>
<td>Pneumatic, Electric</td>
</tr>
<tr>
<td>FF 313</td>
<td>3” ID to 13” OD</td>
<td>76.2mm ID to 330.22mm OD</td>
<td>Pneumatic, Hydraulic, Electric</td>
</tr>
<tr>
<td>FF 424</td>
<td>4” ID to 24” OD</td>
<td>101.6mm ID to 609.6mm OD</td>
<td>Pneumatic, Hydraulic, Electric</td>
</tr>
</tbody>
</table>

**MODEL FF 206**
Flange facing machine for facing flat, raised or recessed face flanges from 2” I.D. (50.8mm) through 6” O.D. (152.4mm) up to a 2” (DN50) 150# flange.

**MODEL FF 313**
Flange facing machine for facing flat, raised or recessed face flanges from 3” I.D. (76.2mm) through 13” O.D. (320.2mm) up to a 2” (DN50) 150# flange.

**MODEL FF 424**
Flange facing machine for facing flat, raised or recessed face flanges from 4” I.D. (101.6 mm) through 24” O.D. (609.6mm) up to a 16” (DN400) 150# flange.

Wachs FF series flange facers are based on the powerful and versatile SDB series of bevelers. Simple to operate, they mount to the pipe ID and are self centering. Specify the SDB Conversion Kit to add beveling, facing and counterboring capabilities.
E.H. Wachs offers a complete line of portable boiler tube beveling and cutting tools that are designed to deliver maximum power in a rugged, lightweight form factor that’s easy to handle and operate. This includes ID mount compact (CB), small (SB), medium (MB Plus) and large (LB) bevelers that prep from .50” to 4.5” (12.7mm to 114.3mm), and the specialized OD mount Excavation Beveler (EB).

**CB BEVELER**
The Wachs CB (Compact Beveler) is an extremely compact, low profile O.D. mounted pneumatic powered machine designed to bevel and counterbore in the tightest quarters. Requiring only a 1.5” (38.1mm) x 10” (254mm) operating envelope with a .75” (19mm) machine width, it preps from .50” I.D. through 2.38” O.D (12.7-60.4mm) and is ideal for single tube replacement.

**SB BEVELER**
The Wachs SB (Small Beveler) is one of the smallest and lightest I.D. mounted bevelers in its class, yet big in capabilities. Designed to weld prep tube and pipe from .69” I.D. through 2.25” O.D. (17.5-57.2mm) up to 0.375” (9.5mm) wall, the SB requires minimal side clearance to fit into the tightest spaces, and is available in pneumatic or electric drive.

**MB PLUS BEVELER**
The MB Plus (Medium Beveler Plus) is a low profile, I.D. mount portable handheld beveler that’s newly redesigned to be faster, more powerful and more durable than any other machine of its type. Designed to weld prep tube and pipe from 1.25” I.D. through 3.5” O.D. (31.8-88.9mm), it’s lightweight for all day comfort yet rugged enough to withstand heavy usage. Available in pneumatic or electric drive.

**LB BEVELER**
E.H. Wachs LB (Large Beveler) is the largest and most powerful I.D. mounted handheld beveler in its class, designed to counterbore, bevel and face pipe and tube from 1.25” I.D. through 4.5” O.D. (31.8-114.3mm), up to .50” (13mm) wall thickness. For larger diameters or in a large production setting, the pneumatic or electric drive LB is the machine of choice for boiler professionals.

**EB BEVELER**
The Wachs EB Beveler (Excavation Beveler) is a specialized machine tool designed for weld excavation, which is removing dissimilar welds used to join different metals in boiler tube applications. As these welds degrade over time, they need to be removed (excavated) without sacrificing the base materials. The EB O.D. mounts on 1.75” to 2.25” (44.4-57.1mm) tubes, and requires only a 2” (50.8mm) radial clearance. Also used for cutting and beveling; pneumatic drive, available by special order.

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**BOILER MODEL**  **US PIPE SIZE**  **METRIC PIPE SIZE**  **POWER SOURCE**

<table>
<thead>
<tr>
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<th>METRIC PIPE SIZE</th>
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<tbody>
<tr>
<td>CB Beveler</td>
<td>.5” ID to 2.38” OD</td>
<td>12.7mm ID to 60.4mm OD</td>
<td>Pneumatic</td>
</tr>
<tr>
<td>SB Beveler</td>
<td>.69” ID to 2.25” OD</td>
<td>17.5mm ID to 57.2mm OD</td>
<td>Pneumatic, Electric</td>
</tr>
<tr>
<td>MB Plus Beveler</td>
<td>1.25” ID to 3.5” OD</td>
<td>31.8mm ID to 88.9mm OD</td>
<td>Pneumatic, Electric</td>
</tr>
<tr>
<td>LB Beveler</td>
<td>1.25” ID to 4.5” OD</td>
<td>31.8mm ID to 114.3mm OD</td>
<td>Pneumatic, Electric</td>
</tr>
<tr>
<td>EB Beveler</td>
<td>1.75” to 2.25” OD</td>
<td>44.4 mm to 57.1mm OD</td>
<td>Pneumatic</td>
</tr>
</tbody>
</table>

+1.847.537.8800 | In USA & CANADA 800.323.8185 | ehwachs.com
E.H. Wachs® powered handheld valve turners/exercisers are built for quick operation and exercising of non rising (P-2) and rising stem valves (RS-2). Available in pneumatic, hydraulic and electric drive the P-2 and RS-2 are powerful and highly portable for quick and safe operation of most valves, handwheel valves and post indicator valves (PIV).

P-2 NON RISING STEM
The E.H. Wachs® P-2 (Pow-R-Drive 2) handheld valve turning machine is the ideal solution for organizations dealing with critical valves of any sort, from fire prevention in refineries to petrochemical professionals. It’s the perfect machine for operation of PIV (Post Indicator Valves).

The P-2 offers increased productivity, operator safety and valve protection. It’s compact size and light weight make it the perfect tool for hard to reach valves, valve turning/exercising and fast shut downs, delivering controlled power to operate valves 6” (152.4mm) and up. It’s lighter, faster and more powerful than any other machine of its kind; available in pneumatic, hydraulic or electric drive.

RS-2 RISING STEM
The E.H. Wachs® RS-2 (Rising Stem-2) valve turner/exerciser is the most versatile handheld device on the market today. Specially designed to accommodate both rising and non-rising stem valves, it’s built with a generous 4” (101.6mm) opening to fit most valves from 6” to 60” (DN150-1500). With faster operating speeds for quicker operation, it delivers up to a powerful 800 ft-lbs (1085 Nm) of torque to tackle large, stubborn or stuck valves.

The RS-2 is designed for safety – safety of the operator, and safety of your operation. This powerful handheld spares the arm and back injuries associated with manually attempting to turn large, stubborn or frozen industrial valves. Safety takes on a new meaning when valves have to be opened or closed quickly in critical situations – Wachs valve turners operate much faster than even the strongest individual.

The RS-2 offers a range of adaptors to suit most applications, including PIV (Post Indicator Valves). There’s a 1” (25.4mm) square drive adaptor, dedicated handwheel adaptors and a universal handwheel adaptor to fit most any size handwheels.

P-2 AND RS-2 FEATURES
- Lightweight yet rugged construction
- Easy setup and operation
- Safe, convenient finger tip control
- LCD counter, VITALS compatible
- Pneumatic, hydraulic or electric drive
E.H. Wachs hydraulic power units are the ideal choice for smooth, reliable hydraulic power, in the shop or in the field. Powered by gasoline, diesel, or electric with your choice of cart, trailer or skid mounting, there’s a unit to fit your exact pressure and flow needs.

**PORTABLE HYDRAULIC POWER**

Hydraulic power units (HPUs) pack more power in less space than any other source. Because they’re completely sealed, hydraulics are the perfect choice for partial immersion, offshore use, the desert and other difficult environments. No matter which unit you choose, every model offers rugged reliability, convenience and perfect flow and pressure delivery. Wachs light and medium duty cart mounted units offer maximum portability and a compact footprint. All cart models feature electric start, hour meter, collapsible handles, sturdy pneumatic tires, and can be easily converted to skid mount. Gasoline and diesel powered models come standard with low engine oil shut off devices.

Wachs electric powered models are ideal for indoor use. The heavy duty, electric powered 440 V Wachs HPU-15 is the superior choice for power plants, fabrication shops and contractor sites where a powerful, smooth, continuous power source is needed to operate Wachs hydraulic machinery, as well as other types of hydraulic equipment. Specialized units to meet unique customer requirements are available by special order.

**GASOLINE LIGHT DUTY CART MOUNT**

9 to 11 HP • 8 to 10 GPM (30 L/min to 38 L/min)
Rated for 1500 PSI (103 bar)

**GASOLINE OR DIESEL POWERED MEDIUM DUTY CART MOUNT**

16 to 19 HP • 10 to 14 GPM (38 L/min to 53 L/min)
Rated for 1500 PSI (103 bar)

**ELECTRIC POWERED MEDIUM DUTY CART MOUNT**

10 to 15 HP • 220 V or 440 V • 50Hz or 60Hz
8 to 15 GPM (30 L/min to 57 L/min)
Rated for 1500 PSI (103 bar)

**ELECTRIC POWERED HEAVY DUTY HPU-15**

15 HP • 15 GPM (57 L/min)
Rated for 2000 PSI (138 bar)

Wachs offers a wide assortment of portable hydraulic power units driven by gasoline, diesel or electric motors. Ranging from light duty wheeled cart units for mobility to powerful skid mounted units designed for the offshore oil industry, all are engineered with legendary E.H. Wachs quality.
A key contributor to the superior performance of Wachs cutting and beveling machines is the quality of our tooling. Precisely engineered and fabricated with super high-strength materials, Wachs tooling is designed for today’s higher speeds, heavier feed rates, and exotic materials. The result is precise cuts, longer tool life and maximum productivity.

**BETTER VALUE**

Genuine Wachs Tooling offers better value than imitation or universal tooling. Made specifically for our machine tools, they fit perfect, hold an edge longer and can be resharpened multiple times. They deliver the precision finishes and speed you expect and deserve from E.H. Wachs equipment. Work stoppages from inexpensive tooling are only part of the reason Wachs tooling is the better value.

At Wachs we understand all aspects of portable machining, and realize tooling is a critical component in the process. The tooling material selected is as important as the profile in delivering a superior machined surface. We have decades of experience manufacturing the best performing, longest lasting tooling for our machines.

Illustrated here are the basic types offered, simplified for clarity. Wachs offers an extensive lineup of tooling, bits and blades for most applications, plus customized tooling manufactured to order. To maintain the peak performance of your Wachs machines, be sure to specify Genuine Wachs Tooling.
When it comes time to repair your E.H. Wachs® equipment, trust it to the people who know it best. If your machine is showing the effects of age or heavy use, consider a simple repair or a complete refurbishing to like new condition.

**UPGRADE, REPAIR, REFURBISH**

Send us your Wachs machine, we’ll evaluate it and send you back a recommendation to repair, upgrade, refurbish or replace it. A written estimate is furnished for your approval before any work is begun. If Wachs refurbishes your machine you can be assured it will come back to you looking and operating like brand new.

Wachs major repair and upgrade facility is located in Lincolnshire, IL, with regular service and parts available at our strategically located Sales and Service Centers in Illinois, Texas, Canada, the UK, Germany and the UAE.

When it makes more sense to rent than to buy, virtually the entire product lineup of E.H. Wachs® is available for rental on a daily, weekly or monthly basis. Wachs maintains a large inventory of machines and accessories at our strategically located sales and service centers.

**RENT THE BEST**

Included with every Wachs rental is access to the entire range of customer service, mechanical and engineering expertise that E.H. Wachs is renowned for. Many clients start with renting a machine, and find it so powerfully productive they choose to purchase it. Once you rent a Wachs product, you’ll want to own a Wachs product. Rent the best - rent Superior Equipment. Complete Support™

**RENTAL EQUIPMENT**

- 24 Hour On Call Service
- Large Inventory
- Locations Worldwide
- Rapid Response Shipping
- Rent to Own Program
- Technical Support

Wachs Rental Department maintains a large inventory of our machines for rent; in fact, most of the products we manufacture are available for rent. Individually inspected and tested before shipment, rentals are a great option for short term usage or scheduled turnarounds and outages.
E.H. Wachs technicians are available for onsite instruction, safety training and equipment maintenance anywhere around the world. Experienced professionals, they’re expert in all aspects of Wachs equipment, from specifying machines and tooling to training your team on their safe use. For advanced training, consider specialized courses at the Wachs Training Institute.

**AT YOUR LOCATION OR OURS**

As the premier manufacturer of portable cutting and weld prep machine tools, Wachs is best qualified to train your personnel on the correct and safe operation our products. It’s the reason Wachs technicians are available, at your location or ours, for training and instruction on operating and maintaining our precision machine tools.

For the ultimate in training the Wachs Training Institute, located at our worldwide headquarters in Lincolnshire, IL, offers comprehensive courses for all our products. It’s the premier training center dedicated to pipe cutting and weld preparation technologies, and is ideal for field machinists in the oil and gas, power generation, petrochemical and related industries.

**REAL WORLD EXPERIENCE**

Your Wachs Training Institute instructors are not just academics – all of them have real world experience and participate in the design, development and evolution of these advanced machines. This gives our people unique insight into the newest industry trends, procedures and techniques.

Upon completion, you’ll be expert in the operation and maintenance of these state of the art machines. Whether you’re a new grad looking for a career opportunity or a seasoned industry veteran looking to enhance your skills, look to the Wachs Training Institute to Cut It, Turn It, Learn It™.

Onsite Wachs technicians are available anywhere around the world for instruction and training in the operation and maintenance of our products. For the ultimate classroom and hands on training experience consider specialized courses at the Wachs Training Institute.
ENGINEERED PRODUCTS

E.H. Wachs Engineered Products division designs and manufactures semi-customized and fully customized machines and products, built for a specific application or project. Partnering with many of the industry’s leading firms, we’ve created products ranging from simple adaptations of standard tooling and machines to the most complex systems.

INNOVATIVE SOLUTIONS

Wachs Engineered Products division was formed over 40 years ago to address the ongoing need for specialized machinery. At the center of our operation is a talented group of engineers who share over two centuries of experience creating machine tool solutions. Added to this engineering core is a dedicated staff of accomplished project managers, skilled field support personnel and a team of award winning manufacturing professionals.

Behind every new project is a highly disciplined development process that involves the entire Engineered Products team. This team approach fosters innovation and ensures the best possible production and support for our products, from conceptual beginning through final on-site performance. Bring us your next special project or unique application and let E.H. Wachs Engineered Products deliver Superior Equipment. Complete Support™.

OUR SPECIALTIES

- Tooling and Machine Adaptations to standard product lines
- Demilitarization of chemical weapons and armaments
- Sustainment of missiles and other conventional ordinances
- Remote Segmentation of materials inside hot cells
- Naval Construction of aircraft carriers and submarines
- Refueling and Maintenance of nuclear powered ships and power plants
- Subsea Pipeline shallow and deepwater repair systems
- Decommissioning nuclear power plants, naval reactors, offshore oil platforms