Split Frame Clamshells

600 Series Pipe Severing and Beveling Equipment

TRI TOOL INC.

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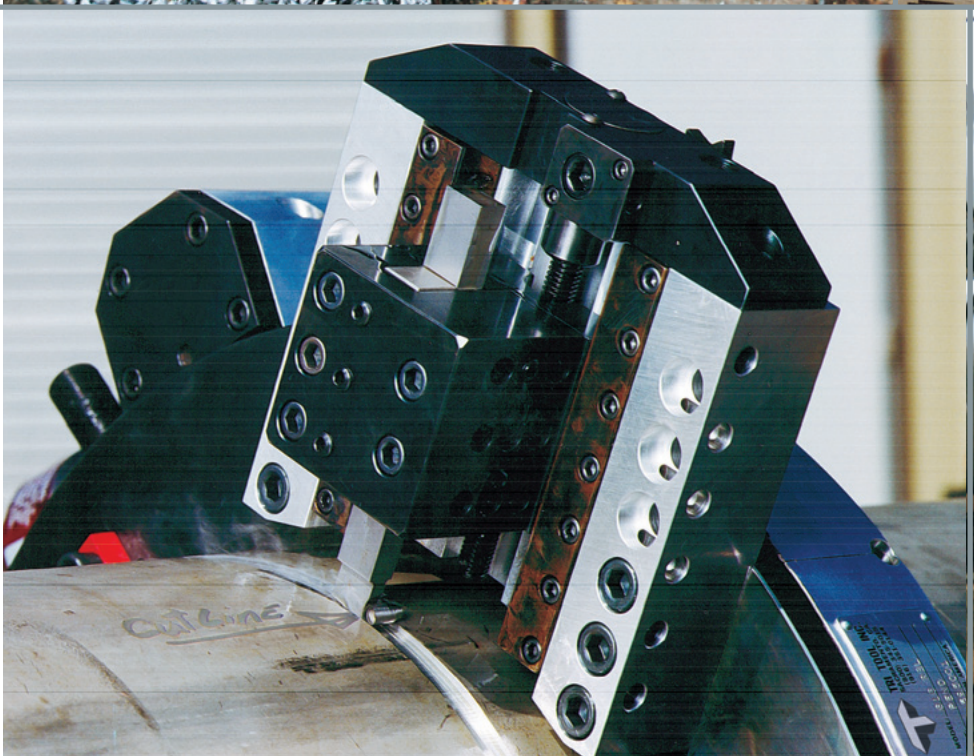

Cut Line

Every day, industries around the world use Tri Tool® O.D. mounted lathes to provide rapid, dependable, portable precision machining for numerous pipe cutting applications.

Precision welded piping systems are essential to successful production at power generating plants, manufacturing facilities, petrochemical plants, and in countless other industries. High performance welded piping systems require welds of the highest quality possible. The execution of these welds often requires the use of orbital welding equipment that demand precision weld preparation for success. Pipe, valve, flange or fitting replacement jobs are often located in confined work areas with little clearance between the work and obstructions. The location of the cut may be "in-line" on a length of pipe where only a machine that can split into sections to mount around the pipe will work. Additionally, cuts may be required where thermal cutting is not permissible.

Tri Tool® OD mounted "clamshell" lathes have been developed to reliably address these problems:

- **In-Line Pipe Cutting & Beveling**
- **Maximum Portability**
- **Cold Cutting - No Heat Affected Zone**
- **Small Operating Envelope**
- **Maximum Machining Options**
- **Superior Reliability**

Designed to operate in areas of tight clearances, these machines provide features that permit them to machine pipe in a wide variety of situations where no other equipment can be used.

Because clamshells use cold cutting methods, they can be used in controlled environments where thermal cutting methods are unacceptable. After mounting, clamshells can be operated by remote control making them perfectly suited for machining operations in nuclear, underwater, or other hazardous situations. Easy to set-up and operate, 600 Series lathes offer reduced labor and time requirements for pipe or component replacement, the perfect solution to plant maintenance where downtime is a critical issue.

Tri Tool® clamshells produce results superior to other cutting methods. They are able to produce machined surface finishes without heat affected zones (HAZ) and hold close diameter and face tolerances on end preps within thousandths of an inch, ideal for use with automatic orbital welders.

Clamshells can simplify the process of cutting to length and weld end preparation by performing both operations simultaneously, with advanced tool bit designs. The 600 Series' bit designs allow high machining speeds and feed rates. A simple feed control provides optimal cut depth to match most materials. Tool blocks are heat-treated for durability and parts that could be damaged, such as gears, pins, and bearings, are protected to reduce the chance of accidental damage. Gears are fully covered for operator safety.

When it comes to the ultimate cutting equipment for your weld prep and maintenance operations, depend on Tri Tool Inc. for the highest quality equipment, backed by dedicated customer support.

Contents

600 Series Features

Both the SB Series Clamshells and the RBL Series Clamshells offer benefits unique to their design.

Tri Tool offers 600 Series clamshells in two types, the SB and the RBL. Together, the two styles cover the full range of standard pipe sizes and wall thickness. By offering two separate series, Tri Tool can provide an optimal cutting configuration with benefits uniquely suited to your typical usage requirements.

SB Series

The SB Series features adjustable sliding bearings for maximum strength, providing the best solution for simultaneous severing and beveling operations, deep counterbores, and close tolerance machining. Sliding bearings provide maximum stability for a smooth finish, precision machining, and long tool bit life, even on the most demanding materials. When used in harsh or contaminated environments such as offshore oil platforms or nuclear power plants, sliding bearings can be easily and economically cleaned and adjusted, maintaining consistent operating performance. Standard tool modules for the SB Series require minimal radial clearance, important when working where space is limited. Optional tool modules and machining accessories are available for cutting extra heavy-wall pipe, as well as many other specialized uses.

RBL Series

The RBL Series clamshells utilize adjustable vee-track roller bearings, ideal for severing applications where maximum portability through reduced weight and size are prime considerations. The reduced-friction bearings in the RBL design produce minimal drag so input power can be focused on the sever for faster operation. With less required input power, most RBL machines can efficiently operate with a single drive motor. An optional second drive motor can be used to provide additional horsepower when required. The RBL's lighter weight design provides quick setup and ease in handling. Long-travel tool modules with worm drive allow smooth tool feed and provide a wide pipe size cutting range. Mounting points for up to three tripper assemblies provide maximum allowable tool feed for different materials, reducing the required cutting time. Tool modules and machining accessories are available for heavy-wall cutting.

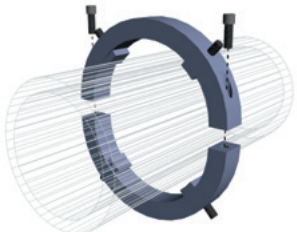
Solution Profile: A Model 616SB lathe with dual pneumatic motors performing a sever/bevel operation to cut off the end of a pressure vessel.

Special Applications

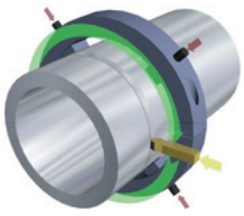
As a precision rotating platform, the clamshell lathe can be configured to perform numerous in-place machining operations, in addition to severing and beveling, such as socket weld removal, counterboring, and single-point machining.

Model 600 Series clamshells up to 12" are used to salvage welded fittings and perform seal weld cutting between pipe and bulkheads in situations where sufficient mounting space is available. For socket weld removal, adjustable clamp pads center the clamshell on the fitting or pipe with the tool bit positioned over the socket weld. The auto-feed tool module feeds the tool bit radially towards the pipe's surface and machines the fillet weld back to the face of the fitting, releasing the pipe.

Counterbore modules enable machining an inside wall in a pipe's open end. Because it can immediately follow a sever without machine repositioning or modification, these modules can consistently provide a uniform bore perpen-

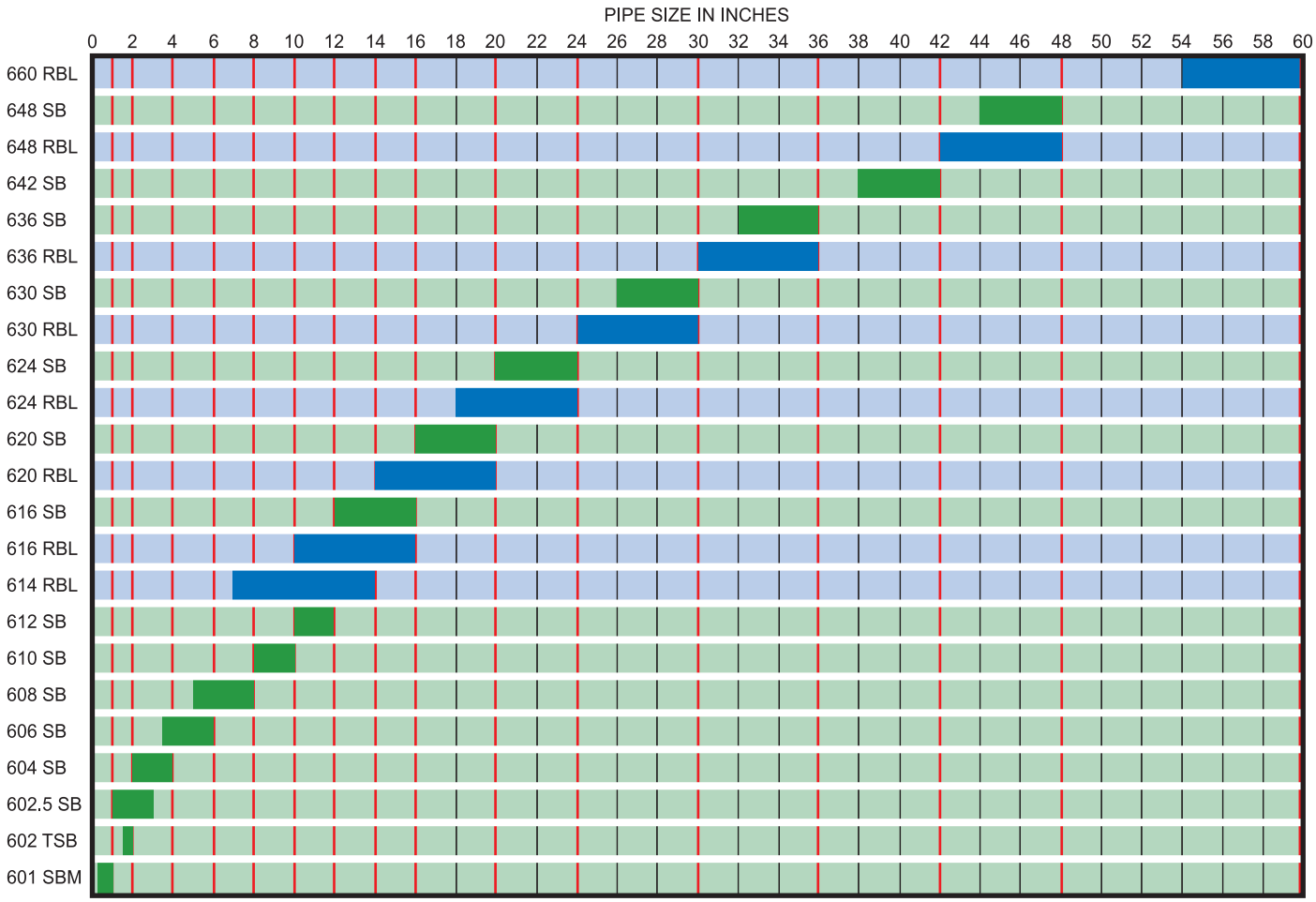


The split frame design of the "Clamshell" lathe allows the machine to separate and mount around the OD of in-line pipe or fittings for strong, stable clamping.



Clamshells perform precision in-line sever or simultaneous sever/bevel operations, as well as weld end preparation and counterboring on open ended pipe.

600 SERIES OD MOUNTING RANGE CHART



This graph illustrates the pipe size mounting range for the SB and RBL clamshells. Red lines indicate standard pipe sizes. With optional or custom accessories, cutting ranges may be expanded to include smaller pipe sizes than those shown (refer to the System Component Chart on Page 13 of this brochure).

dicular and concentric to the cut line. Radial feed is infinitely adjustable within each machine's cutting range.

An additional feature on the larger CBM-3 counterbore module is taper boring adjustment for 0° to 30° chamfers or lead-out angles following a counterboring operation.

This option enables the clamshell to perform single-point machining which is ideal for heavy-wall applications that require a reduced chip load. Typical uses are facing, beveling, grooving, and counterboring large diameter pipe, as well as resurfacing flange faces. A slide assembly mounts onto the rotating headstock and provides infinitely adjustable bevel angles from 0° to 90°. The operator can select from eight feed rate settings to fit any cutting application.

Call Tri Tool to find out how a 600 Series clamshell lathe can satisfy your in-place machining requirements.

Why are they called Clamshells?

"Clamshell" refers to the design of the first machines which incorporated a hinge across the ring's split line to open up and close as a clam. On current machines, this ring divides into two halves for mounting. Hinges are still available as an optional accessory.

MODELS 601SBM, 602TSB, 602.5SBM,

1" to 12" SB Lathes

Portable Machine Shop Precision

Model 612SB

Model 606SB

Model 601SBM

Covering the smaller end of the pipe size range, the Model 601SBM through 612SB provide the ideal solution for in-line severing and beveling.

The smaller SB clamshells are utilized in a wide variety of roles from tube and pipe production to maintenance in power and processing plants. The models in this group cut from 1/4" through 12" tube and pipe. These lathes may be equipped with self-centering mounting pads for quick, easy mounting, or equipped with adjustable mounting pads for out-of-round pipe or precise centering. Star wheels on the tool modules provide incremental tool bit feed for controlled cut depth. All small SB clamshells (except the 602TSB) offer machining accessories for socket weld removal and counterboring.

Solution Profile: Accurate, reliable machining in tight spaces is what the clamshell lathe does best, reducing the downtime and labor required for plant maintenance operations, while ensuring quality welds.

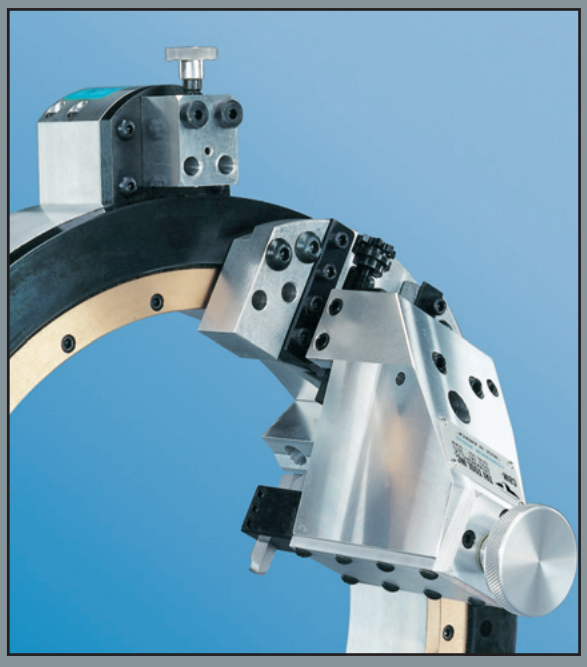
Each clamshell within the small SB group provides specific features and benefits. Models 601SBM and the 602.5SBM offer tool modules that require minimal axial (along the pipe) or radial (around the pipe) clearance. The Model 602TSB is designed for performing weld cut-outs on boiler tubes and offers tool modules requiring the lowest radial clearance of any clamshell. Models 604SB-612SB offer tool module options for a broad range of pipe sizes. The small SB group may be driven by different power sources to match any work requirement. Their ease of use and dependability has made them the favorite of plant maintenance, welding, and production personnel throughout the world.

Solution Profile: Piping system contractors performing outage maintenance on thinwall stainless pipe using an electric powered SB clamshell fitted with full support pads. The piping system was part of an auxiliary high purity nitrogen supply line at a semiconductor manufacturing facility. A prefabricated pipe assembly was then orbitally welded in place, without further end prep being required.

Features:

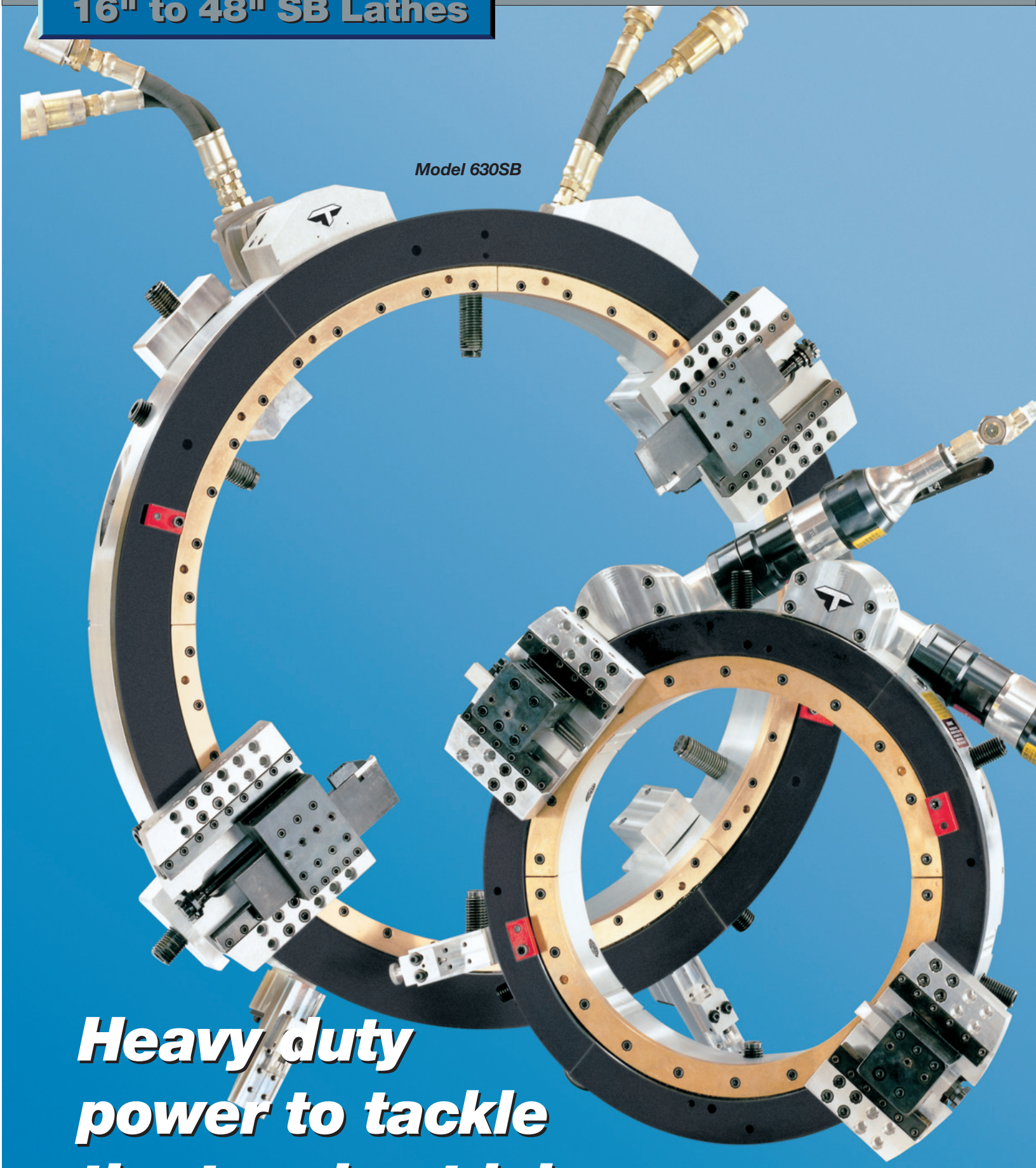
- **Sever and bevel simultaneously**
- **Internal counterbore machining**
- **Adjustable O.D. mounting system**
- **Cold cutting - No flames or Heat Affected Zones**
- **Enclosed drive gears for safety and ease of maintenance**
- **Multi-positionable motor mount**
- **Extended capabilities with additional machining accessories**

Reliable, Precise Counterbores



The counterbore module allows the clamshell lathe to perform accurate counterbores on the pipe end, which provides uniform, quality welds.

16" to 48" SB Lathes



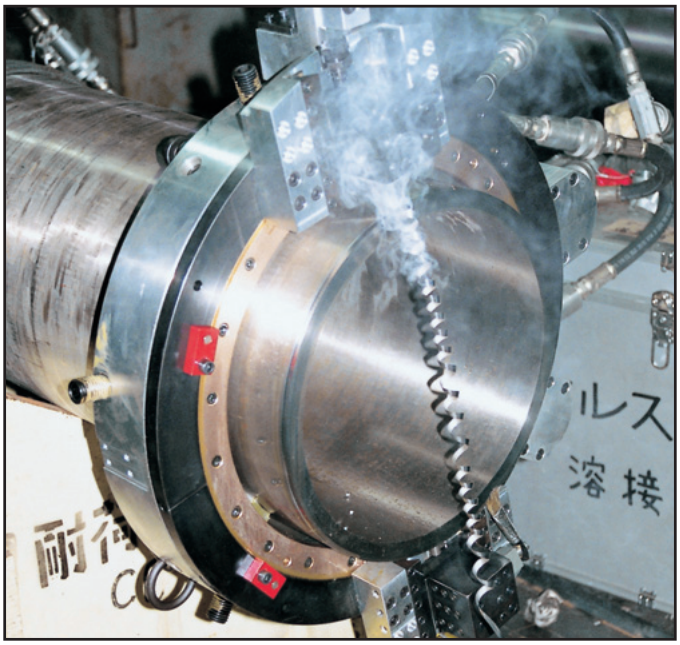
Model 630SB

Heavy duty power to tackle the toughest jobs

Model 616SB

The large SB lathes offer the precision of the smaller SB's, with the power to cut large, heavy-wall pipe in the most demanding applications.

The Model 616SB-648SB are designed for heavy-wall severing and beveling of pipe from 12" through 48" and offer tool modules and accessories for a wide range of cutting operations from basic severing and beveling, to complex, heavy-wall single-point machining. The large SB clamshells produce otherwise unattainable levels of accuracy and control, critical to pipe welding operations in heavy industry and power production. Because of the clamshell's power and superior stability, it is ideal for new construction, in-place maintenance, component replacement, decommissioning and production.

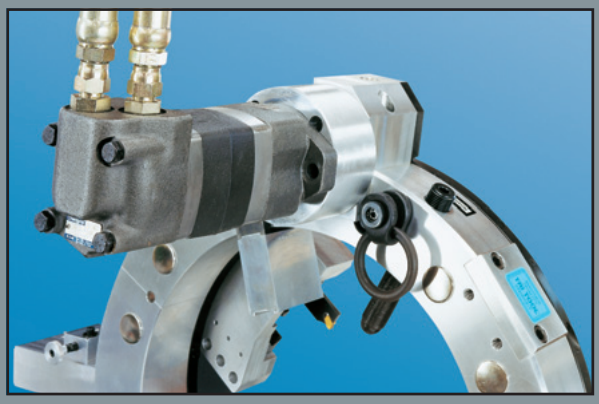


Features:

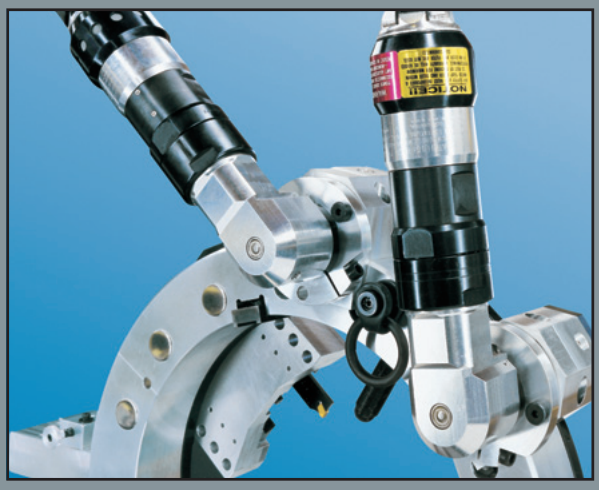
- **Simultaneously sever and bevel heavy-wall pipe**
- **Dual hydraulic or pneumatic drives**
- **Adjustable O.D. mounting system featuring locator pads & jackscrews for additional stability**
- **Excellent for working in tight spaces with little clearance**
- **Cold cutting - No flames or Heat Affected Zones**
- **Extendable capabilities with additional machining accessories**

Solution Profile: While most often used in a portable role, clamshells are extremely effective in fab shops where high volume, precise severs, bevels and end preps are needed. The above Clamshell is shown performing a sever/bevel on titanium.

Get the power your job requires...



Single Hydraulic Motor (showing second mounting point)



Dual Pneumatic Motors used in tandem. (RBL shown)

SB and RBL lathes are primarily powered by air or hydraulic motors, in configurations to match the input power requirements of the work being done. An Air Caddy in-line air filter/lubricator is required for Tri Tool® equipment using pneumatic motors.

14" to 60" RBL Lathes

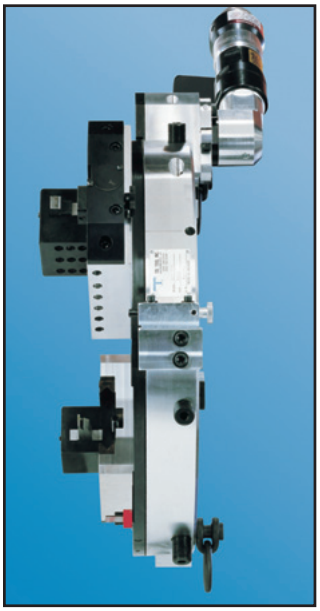
Model 614 RBL (Back)

Model 614RBL (Front)

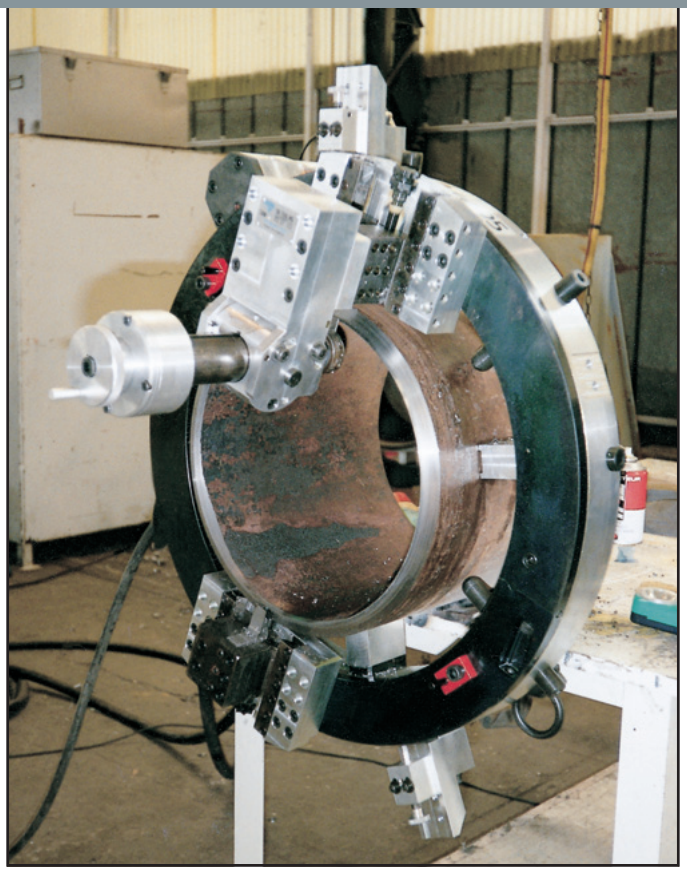
Maximum portability and economy

The new 600 RBL series split frame lathes provide the highest degree of portability for applications where lighter weight is an important advantage.

The RBL clamshells are designed to sever and bevel 7" through 60" in-line tube and pipe. These clamshells feature precise, lightweight vee-track roller bearings which feature low drag, with lower weight to maximize portability. As with the venerable SB series, set-up and operation of the RBL clamshell is simple and straightforward. The RBL features adjustable bearings and tool slides to ensure long and dependable operation. Simultaneous sever and bevel operations are limited only by wall thickness. With the wide range of clamshell sizes and models, Tri Tool Inc. can provide excellent matching of equipment to the work being performed.



When you need reliable pipe cutting in tight spaces, the slim design RBL's are the perfect solution.



Solution Profile: When not used for in-line cutting, the RBL fitted with accessories like the Model CBM3 Counterbore Module shown, can produce a wide variety of counterbore and weld prep profiles.

Solution Profile: The versatility of the 600 Series RBL is demonstrated by this Model 660RBL being used in an I.D. mounted role with its mounting screws and tool modules turned to cut from the inside out. This is also why it is important to talk with Tri Tool® sales coordinators and special engineering for non-standard solutions to problems.

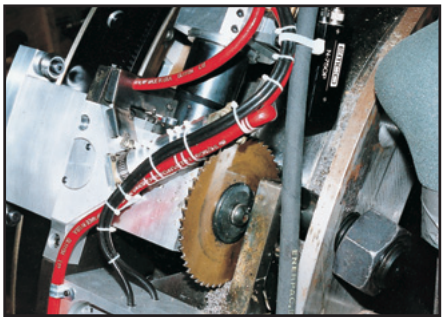
Features:

- **Low friction field adjustable bearing system**
- **Sever and bevel simultaneously**
- **Requires low input horsepower**
- **Lightweight, easy to handle and set-up**
- **Worm drive tool modules reduce vibration and extend tool bit life**
- **Adjustable O.D. mounting system**
- **Cold cutting - No heat affected zones**
- **Modular design to enhance interchangeability of parts**
- **Extended reach tool modules for deep severs**

Special Engineering

No matter how extensive a standard product line is, some applications still require unique equipment solutions.

For special needs, don't hesitate to call Tri Tool Inc. Our unique special engineering capabilities make the difference. Cutting capabilities can be expanded by modifying standard equipment or through the development of special accessories. Our engineering department has a quarter century of experience in providing machine tool solutions to satisfy the most rigorous and demanding specifications for a wide range of industries. Typical special engineering applications fall into several main categories which address specific elements of the machining process.



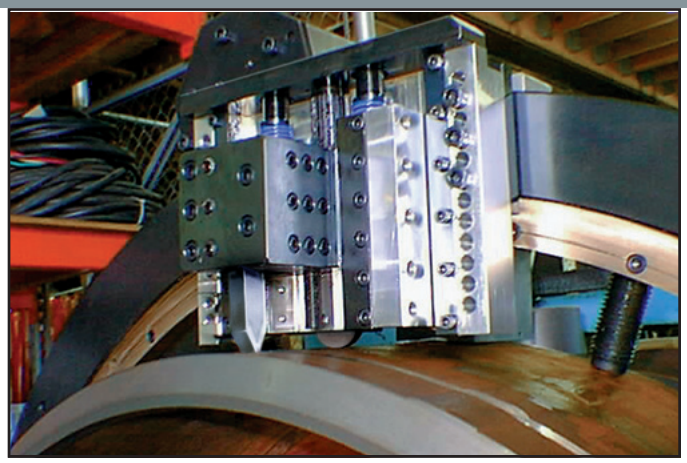
Solution Profile: Clamshell mounted saw attachment performing sever of omega seal in nuclear plant.

Clamping - Some applications require special clamping techniques, equipment or materials. For example, when working with nonstandard thin wall pipe and tube, custom full support pads can be designed to provide the necessary alignment, rounding, and clamping forces, without damage or deformation. Special accessories can be designed to clamp unique shapes or sensitive materials, or to allow difficult or automated cutting procedures to be performed or to provide extreme accuracy.

Automatic Bit Feed and Shut-Off - Although easy to use, our standard manual tripper control pin mechanism is not suitable for remote operations or some specific cutting procedures. In those instances, special accessories have been developed to provide remote control over tool bit feed rate, machining speed, and depth of cut shut-off.

Special Tool Bits and Tool Bit Holders - Some situations or materials require the development of custom tooling to generate specific machining results. Special bit holder(s) can be produced to replace the standard tool holders.

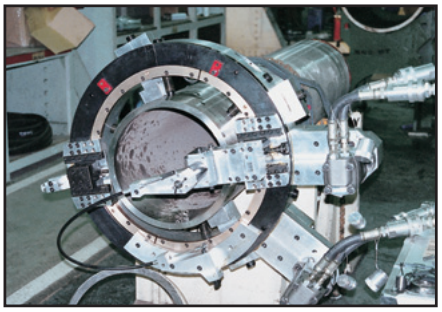
Remote Operation - An ongoing requirement of special engineering is for remote control when the clamshell is employed in hazardous environments.



Solution Profile: The OD Tracking Module accessory, here mounted on a large SB clamshell, compensates for out-of-round conditions by reading the pipe shape with a tracking wheel.

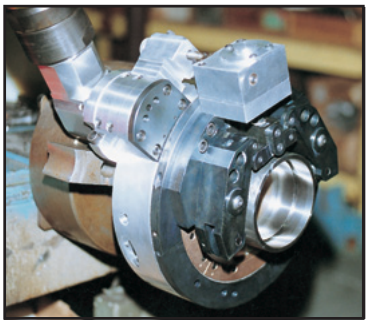
Construction and maintenance projects being performed underwater require that the equipment be set-up by divers, a situation in which the clamshell's easy set-up is a clear advantage. While it is possible for a diver to operate the machine, the equipment can be powered, controlled and monitored from above.

Another typical need for remote operation arises in the nuclear power industry. Many of the critical maintenance operations are performed in high radiation areas where equipment characteristics such as reliability, precision and ease-of-use are not merely advantageous - they're mandatory. Complete remote control stations can be developed to control maintenance projects involving the use of clamshells to limit the exposure of personnel to radiation during operation. As a stable rotating platform, the clamshell can accept numerous accessories such as video cameras to monitor the work being done. Many maintenance operations in nuclear plants involve replacement of critical piping systems, fittings, and components. The ability to cut with extreme accuracy without generating contaminated fumes or grinding debris makes the safety and control of the cold cutting operation superior to any other method. The clamshell, when combined with Tri Tool® custom equipment manufacturing, has proven uniquely able to solve numerous problems for the nuclear industry in construction, maintenance, storage, decommissioning, and clean-up operations.



Solution Profile: This clamshell has been configured for automatic feed counterboring with reversed hydraulic drive motors.

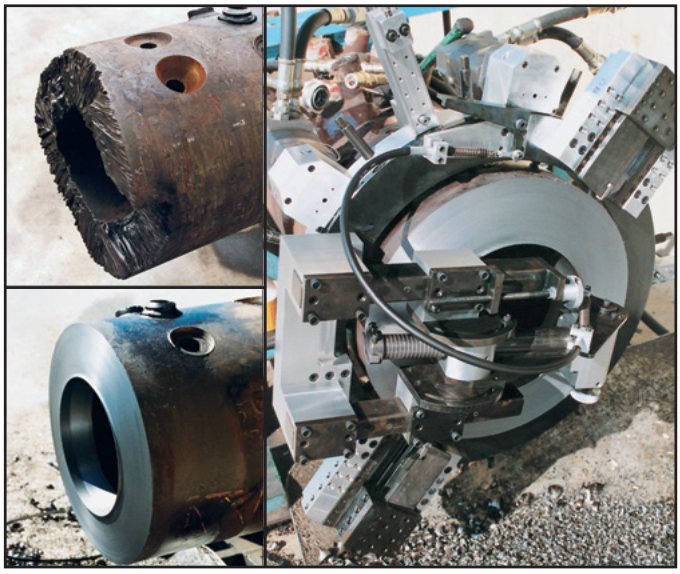
Special Operations - Accessories have been developed to perform many different operations such as to allow the normally OD mounted SB clamshell to be ID mounted for inside-out cutting. Other examples include chipless roller wheel cutting, cutting with milling tools, automatic welding, grooving and other types of end finishing.



Solution Profile: This small SB clamshell has been fitted with prototype chipless cut-off wheels and is undergoing thorough testing.

While the need for a completely custom clamshell is usually not required, the importance of a critical or repetitive task can justify the need for custom machinery. Tri Tool's special engineering team can develop and manufacture custom equipment based on proven designs, to meet virtually any project requirement or specific work situation. The clamshell lathe is an excellent choice for special OD mounted pipe machining applications.

Depend on Tri Tool® special engineering for thorough and experienced technical design assistance for any cutting or welding requirements you may have.



Solution Profile: Good example of heavy wall "J" weld preparation and counterboring which can be generated by single point machining module, here mounted on a 600 RBL series split frame lathe.

Hydraulic Power Supplies

Tri Tool® Hydraulic Power Supplies provide power for hydraulic motors with characteristics perfectly matched to machining operations. The units incorporate adjustable volume, constant flow pressure responsive pumps for optimum power delivery as required by pipe lathes to machine a wide range of pipe sizes and materials.

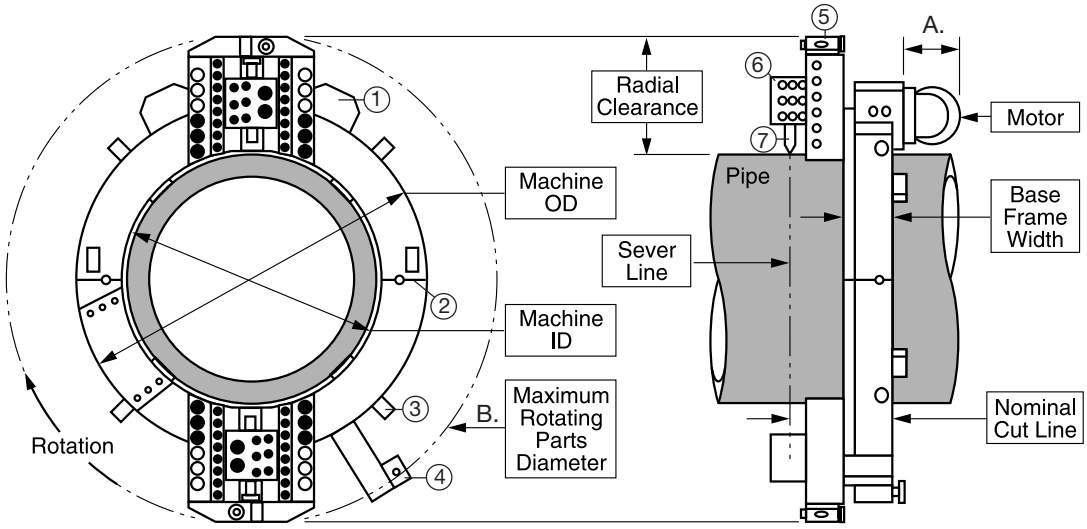
The Model 765RVC is a premium 20 GPM power supply with a low voltage full function remote control pendant. The pendant provides Stop/Start, Forward/ Neutral/Reverse, and Volume control functions. Pendant extensions and hose kits allow operation of the lathes up to 200' away from the power supply. The unit incorporates full flow recirculation and reservoir filters, phase monitor to prevent reverse rotation or motor burn out due to phase loss or brown out, forward and reverse flow pressure bypass valves, oil cooler and thermal overload protection. Primary power for the 15 HP, 3 phase 50/60 Hz electric motor can be set for 208, 230, 380, 415, or 480 VAC. The Model 757RSS is a 10 GPM, power supply with a low voltage remote Stop/Start pendant control. Forward/Reverse/Volume control functions are provided at the power supply. Pendant extensions and hose kits allow the operation of pipe lathes up to 200' away from the power supply (factory configuration required). Primary power for the 7.5 HP, 3 phase 50/60 Hz electric motor can be set for 208, 230, 380, 415 or 480 VAC. Call for more information.

Specifications

(RBL Model Shown)

① Drive housing
② Split Line
③ Locator Pad
④ Tripper Assy.
⑤ Tool Module
⑥ Tool Holder
⑦ Tool Bit

Notes:
A. Pneu. Motor (shown) 3.00" (76.2mm) up to 612SB, 3.5" (88.9mm) 616SB and larger.
B. Actual rotating diameter may be less depending on configuration and pipe size.



Model	Pipe Size Range	Radial Clearance	Machine Weight	Rotating Parts Diameter	Machine OD	Machine ID	Base Frame Width	Nominal Cut Line
	Inch (mm)	Inch (mm)	lbs. (kg)	Inch (mm)	Inch (mm)	Inch (mm)	Inch (mm)	Inch (mm)
601SBM	1/4 (13.7) - 1 (33.4)	2.00 (50.8)	11.5 (5.2)	5.31 (134.9)	5.31 (134.9)	1.44 (36.6)	2.00 (50.8)	3.50 (88.9)
602TSB	*1 1/2 (38.1) - *2 (50.8)	1.49 (37.8)	12.0 (5.4)	4.98 (126.5)	4.98 (126.5)	2.10 (53.3)	2.50 (63.5)	4.00 (101.6)
602.5SBM	1 (33.4) - *3 (76.2)	1.94 (49.3)	14.5 (6.6)	6.87 (174.5)	6.87 (174.5)	3.13 (79.5)	2.00 (50.8)	3.50 (88.9)
604SB	2 (60.3) - 4 (114.3)	2.25 (57.2)	29 (13.1)	9.00 (228.6)	9.00 (228.6)	4.75 (120.7)	3.00 (76.2)	4.50 (114.3)
606SB	3 1/2 (101.6) - 6 (168.3)	2.25 (57.2)	37 (16.8)	11.12 (282.4)	11.12 (282.4)	6.87 (174.5)	3.00 (76.2)	4.50 (114.3)
608SB	5 (141.3) - 8 (219.1)	2.25 (57.2)	43 (19.5)	13.12 (333.2)	13.12 (333.2)	8.95 (227.3)	3.00 (76.2)	4.50 (114.3)
610SB	8 (219.1) - 10 (273.1)	2.50 (63.5)	55 (25.0)	15.75 (400.1)	15.75 (400.1)	11.20 (284.5)	3.00 (76.2)	4.50 (114.3)
612SB	10 (273.1) - 12 (323.9)	2.50 (63.5)	62 (28.1)	17.75 (450.9)	17.75 (450.9)	13.20 (335.3)	3.00 (76.2)	4.50 (114.3)
616SB	12 (323.9) - 16 (406.4)	6.55 (166.4)	200 (91)	29.10 (739.1)	24.00 (609.6)	17.00 (431.8)	4.25 (108.0)	6.93 (176.0)
620SB	16 (406.4) - 20 (508.0)	6.63 (168.4)	320 (145)	33.25 (844.6)	29.20 (741.7)	21.20 (538.5)	4.90 (124.5)	7.58 (192.5)
624SB	20 (508.0) - 24 (609.6)	6.70 (170.2)	350 (159)	37.40 (950.0)	33.40 (848.4)	25.40 (645.2)	4.90 (124.5)	7.58 (192.5)
630SB	26 (660.4) - 30 (762.0)	6.75 (171.5)	420 (191)	43.50 (1104.9)	39.50 (1003.3)	31.50 (800.1)	4.90 (124.5)	7.58 (192.5)
636SB	32 (812.8) - 36 (914.4)	7.05 (179.1)	490 (223)	50.10 (1272.5)	46.00 (1168.4)	38.00 (965.2)	4.90 (124.5)	7.58 (192.5)
642SB	38 (965.2) - 42 (1066.8)	7.10 (180.3)	570 (259)	56.20 (1427.5)	52.00 (1320.8)	44.00 (1117.6)	4.90 (124.5)	7.58 (192.5)
648SB	44 (1117.6) - 48 (1219.2)	7.15 (181.6)	820 (372)	62.30 (1582.4)	58.00 (1473.2)	50.00 (1270.0)	5.75 (146.1)	8.43 (214.1)
614RBL	*7 (177.8) - 14 (355.6)	8.09 (205.5)	146 (66)	30.00 (762.0	21.10 (535.9)	15.00 (381.0)	3.31 (84.1)	6.15 (156.2)
616RBL	10 (273.1) - 16 (406.4)	8.13 (206.5)	159 (72)	32.10 (815.3	23.10 (586.7)	17.00 (431.8)	3.31 (84.1)	6.15 (156.2)
620RBL	14 (355.6) - 20 (508.0)	8.15 (207.0)	184 (83)	36.20 (919.5	27.10 (688.3)	21.00 (533.4)	3.31 (84.1)	6.15 (156.2)
624RBL	18 (457.2) - 24 (609.6)	8.31 (211.1)	207 (94)	40.55 (1030.0)	31.10 (789.9)	25.00 (635.0)	3.31 (84.1)	6.15 (156.2)
630RBL	24 (609.6) - 30 (762.0)	8.34 (211.8)	239 (108)	46.65 (1184.9)	37.10 (942.3)	31.00 (787.4)	3.31 (84.1)	6.15 (156.2)
636RBL	30 (762.0) - 36 (914.4)	8.38 (212.9)	264 (120)	52.75 (1339.8)	43.10 (1094.7)	37.00 (939.8)	3.31 (84.1)	6.15 (156.2)
648RBL	42 (1066.8) - 48 (1219.2)	9.00 (228.6)	940 (427)	67.50 (1714.5)	60.00 (1524.0)	50.00 (1270.0)	5.13 (130.3)	7.97 (202.4)
660RBL	54 (1371.6) - 60 (1524.0)	9.00 (228.6)	1120 (508)	79.50 (2019.3)	72.00 (1828.8)	62.00 (1574.8)	5.13 (130.3)	7.97 (202.4)

The specifications listed above are presented to illustrate the wide range of configurations possible. Custom configurations are available. Call your TRI TOOL sales representative for assistance in determining which equipment and accessories are right for your requirements.

Measurements indicate the basic machine fitted with standard tool modules. Optional low axial dimension tool modules are available for the 601SBM and 602.5SBM.

Note: Measurements will vary from those indicated when machinery is configured for different pipe sizes.

Pipe size range is based on ANSI pipe dimensions. Pipe sizes indicated with (*) indicate tube sizes, not pipe sizes.

Machine weight is the lifting weight of the machine which includes the basic machine with standard tool modules.

Rotating parts diameter is the dimension across the face of the machine, including its moving parts (inner ring and standard tool modules) when the machine is set-up for the maximum pipe size for the specific model. The rotating parts diameter becomes less when tool modules are positioned inward to reach smaller pipes.

Nominal cut line is the dimension from the back of the machine to the center line of the tool bit slot.

System Components

● Standard
○ Special

Model	Tool Modules: Standard Modules (Low Profile)	Tool Modules: Extended Modules	Tool Modules: Heavy-Duty Modules	Tool Modules: Heavy-Duty Sever Modules	Tool Holders, and Machining Accessories: Socket Weld Removal Kit	Tool Holders, and Machining Accessories: Heavy-Duty Sever Tool Holders	Tool Holders, and Machining Accessories: Carbide Sever Tool Holders	Tool Holders, and Machining Accessories: Low Axial Clearance Tool Holders	Tool Holders, and Machining Accessories: Counterbore Module	Tool Holders, and Machining Accessories: Single-Point Module	Tool Holders, and Machining Accessories: Reversed Drive Housing Kit	Drive Options: Pneumatic (Single)	Drive Options: Pneumatic (Dual)	Drive Options: Electric (Single)	Drive Options: Hydraulic (Single)	Drive Options: Hydraulic (Dual)
601SBM	●[1]				●				●			●				
602TSB	●								●			●				
602.5SBM	●[1]				●				●			●		●	○	
604SB	●[2]	●	○		●		○		●		●	●		●	○	
606SB	●[2]	●	○		●		○		●		●	●		●	○	
608SB	●[2]	●	○		●		○		●		●	●		●	○	
610SB	●[2]	●	○		●		○		●		●	●		●	○	
612SB	●[2]	●	○		●		○		●		●	●		●	○	
616SB	○	●	●	●			○	○	●	●	○		●			●
620SB	○	●	●	●			○	○	●	●	○		●			●
624SB	○	●	●	●			○	○	●	●	○		●			●
630SB	○	●	●	●			○	○	●	●	○		●			●
636SB	○	●	●	●			○	○	●	●	○		●			●
642SB	○	●	●	●			○	○	●	●	○		●			●
648SB	○	●	●	●			○	○	●	●	○		●			●
614RBL		●				●	●	●	●	●	○	●	●	●	●	●
616RBL		●				●	●	●	●	●	○	●	●	●	●	●
620RBL		●				●	●	●	●	●	○	●	●	●	●	●
624RBL		●				●	●	●	●	●	○	●	●	●	●	●
630RBL		●				●	●	●	●	●	○	●	●	●	●	●
636RBL		●				●	●	●	●	●	○	●	●	●	●	●
648RBL		●				●	●	●	●	●	○		●			●
660RBL		●				●	●	●	●	●	○		●			●

1 Tool modules which reduce the required **axial** perch length are available for the 601SBM and 602.5SBM clamshells.
2 On the 604SB through 612SB clamshells the standard tool modules do not extend outside of the OD of the machine.

Tool Modules (function)- Tool modules mount on the rotating face of the clamshell and carry the tool bits within the tool holder section. The tool bit is fed into (towards) the pipe a fixed increment for each revolution of the head stock with one tripper pin assembly engaged. Multiple trippers increase the total feed of the tool bit per revolution.

Standard (Low Profile) Tool Modules- Standard or Low Profile modules fit within the OD of the clamshell to minimize the radial clearance required. Normally they only function on the largest pipe size that fits within the Clamshell.

Extended Tool Modules- *Extended tool modules provide longer tool bit feed travel and a greater pipe size range*. When mounted for the largest pipe size that fits the clamshell the modules extend outside the OD of the clamshell, requiring more radial clearance, but also allow mounting inboard to reach smaller pipe sizes.

Heavy Duty Tool Modules- Heavy Duty Tool Modules allow use of heavier tool bits for extremely heavy cutting operations.

Heavy Duty Sever Modules- Heavy Duty Sever Modules use part-off blades to extend the reach of the cutting tool for deep sever operations.

Tool Holders - Tool Holders install into the Tool Modules to allow the Module to perform different functions, fit limited space or use alternate tooling.

Machining Accessories

- Socket weld removal kits contain the special tool holders and parts to equip the clamshell for machining the fillet welds off of a socket weld joint.
- Counterbore kits mount to the tool modules to allow the machining of a counterbore (on open ended pipe).
- Singlepoint modules provide full lathe type machining operations on open ended pipe.

Drive Motors- Clamshells can be driven with pneumatic motors which provide the maximum power per unit weight, electric motors for light duty machining (HP per unit volume restricts the maximum HP motors that can be fitted) and hydraulic motors which provide the maximum power and speed range capabilities at the machine (a separated power supply is required). Dual drives can be fitted for additional power and machining capabilities as required.

Special Options- Special options not shown include: full support pads for thin wall pipe or tube (some pipe size restrictions apply due to space requirements to incorporate the pads), out-of-round tracking modules to machine the prep concentric to the OD without rounding the pipe, custom tool bit configurations, back-support rings for added mounting rigidity, etc.

Accessories

Split frame lathe accessories:

- **Hydraulic Power Supplies**

Portable hydraulic power to operate the 600 Series lathes is delivered with power to spare by these dependable power supplies. Available with an electric motor, or (by special order) a gas or diesel engine, the power supply is connected to the lathe's hydraulic motors with quick disconnect hoses and can be operated via a hand held remote pendant.

- **Full Support Pads**

Clamshells can use full support pad sets for severing and beveling thin-wall tube and pipe. These pads provide adequate support for machining without distortion. Full support pads can be used up to 1" less than the machine's maximum pipe mounting capacity.

- **OD Tracking Modules**

When working with "out-of-round" pipe, the OD tracking module uses a wheel which follows the pipe's outside diameter, constantly adjusting the tool bit position to provide a the most consistent land thickness and bevel possible.

- **Automatic Tripper Disengage**

The automatic tripper assembly features a spring-loaded pin that stops the tool bit feed at a preset travel point to control the depth of cut.

- **Clamshell Hinges**

Hinges are installed across one side of the lathe's splitline for handling the two halves as one, useful during installation and/or transportation.

- **Reversed Drive Housing**

For use in tight clearance situations, the reversed drive housing positions the drive motor on the front side of the lathe.

- **Back Support Rings**

For special situations requiring additional rigidity or mounting flexibility, back support rings can be added. The back support rings provide a second row of offset jackscrews for improved mounting force distribution and positioning control.

- **Template Tracer Module**

This module is used to produce complex bevels on open-ended pipe. The template tracer follows a fixed profile template in order to transfer the desired bevel configuration to the pipe end when using single-point machining techniques.

- **Roller Cutters**

Also known as "chipless" cutters, roller cutters use sharp-edged wheels to sever thin wall tube or pipe. The cutting wheel is progressively fed into the pipe, displacing metal as it rolls, producing a cut without chips. This is valuable when chip contamination is a concern.

Tri Tool® Equipment

Powerful and easy to set-up and operate, the 200 Series Tri Tool® BEVELMASTER™, BOILERMASTER™ and FLANGEMASTER™ machines deliver excellent ID mounted beveling, flange facing and weld end preparation performance on 1.25" to 30" pipe. With a wide range of optional attachments, you can perform single point machining, counterboring, mounting in elbows, or accurate weld preparation on thin wall tubing.

The "Clamshell" lathe can be separated and reassembled to the OD of in-line or open ended pipe to produce dependable severing, beveling or simultaneous sever/beveling. These versatile and reliable lathes can be fitted with optional single-point machining equipment to provide complex compound bevels, "J" preps, and counterbores. Clamshells are available from 1" to 60" and can be configured or modified for specific cutting operations.

Tri Tool's services division offers on-site machining technicians with the experience and equipment to reliably and economically provide on-site machining solutions. Convenient equipment rental programs ensure you can get reliable Tri Tool® machinery when you need it, whether for scheduled maintenance, emergency repairs, or a specific machining operation.

300 Series tube squaring and 500 Series SEVERMASTER™ tube severing machines produce precision squares and severs on .125" to 8" tube, pipe and microfittings. These machines are the perfect companions to automatic orbital welding equipment, for tube production, or construction and maintenance on high purity welded tubing systems.

Save time and money with dependable TRI TOOL® tube and pipe equipment!

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Tri Tool® machines are offered for sale or rental.