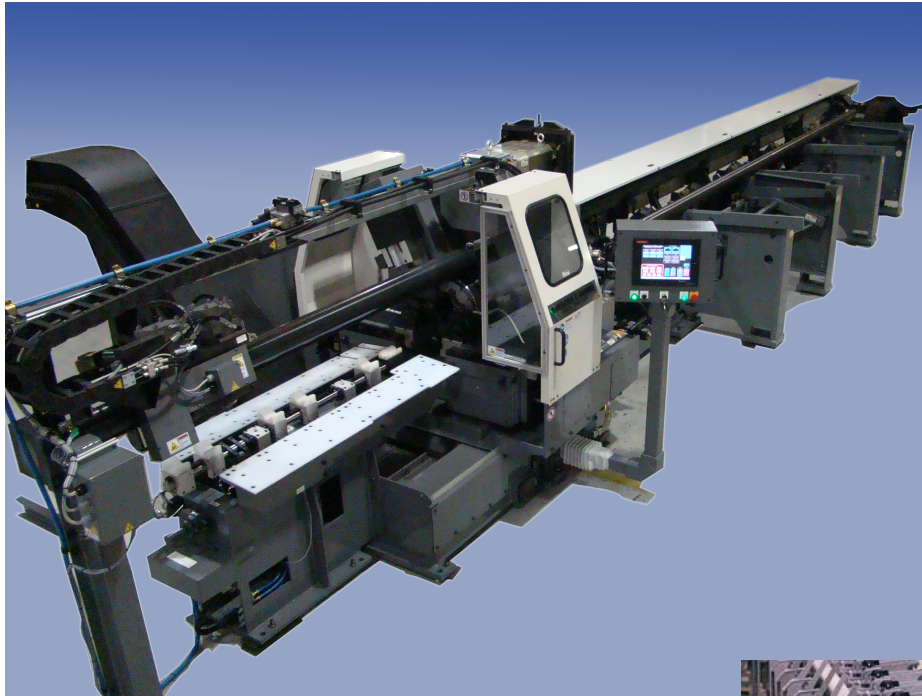


## AUTOMATIC CUT-OFF LATHES for Bar and Tubular Stock



- Chamfer, Form, Groove, Cut Off
- Up to 8" Tubing; Up to 3" Bar Stock
- Rugged Construction
- Application Engineering
- Automatic Load/Unload
- Maximum Productivity



# Put Industry's Best to Work for You

To design and deliver industry's best specialty lathes was the founding principle for Bardons and Oliver in 1891.

Now, more than 100 years later, technology has changed, but the need remains the same: quality machines that will endure.

Bardons & Oliver cut-off lathes set the industry standard for reliability and productivity. There is no compromise. Bardons & Oliver machines are heavier, more rugged and offer greater flexibility in loading, unloading and tooling than any other cut-off machine available.

## Engineered Solutions

Every customer application is unique. The machine and process must be designed to maximize your parts-making capability.



Special machine configurations have included two machines arranged face-to-face for machining of boiler tubes—to a single machine designed to cut-off, broach and face motor housings. Each application required unique part machining and handling.

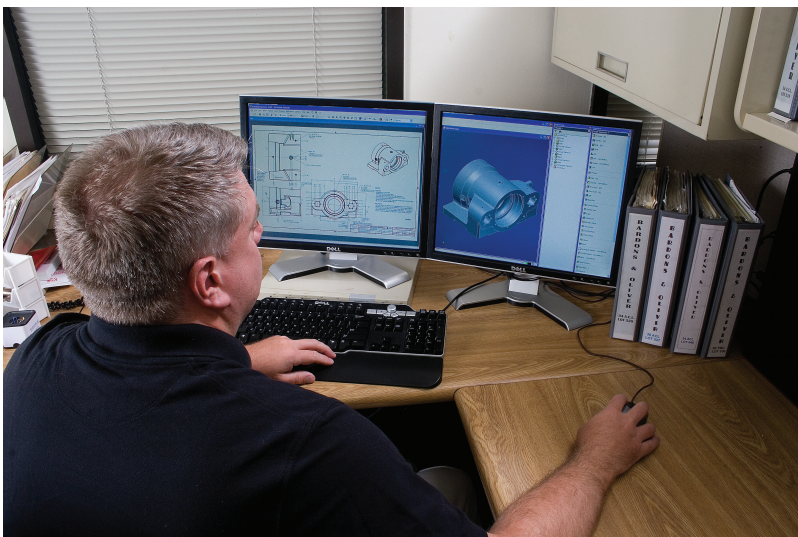
Using the basic cut-off machine as a starting point, and combining a long history of special applications, our engineers will recommend the best solution to your cut-off problem.

## Precision Manufacturing

Bardons & Oliver's 100,000 square foot modern manufacturing facility enables in-house design, machining and assembly of all equipment.

Utilizing the latest flexible manufacturing techniques, including multi-pallet shuttle machining centers, automatic tool changers and a total quality control system (featuring precision verification by CMM in an environmentally controlled atmosphere) assures unmatched precision part and machine quality.

More than 130 skilled employees with 15 years' average experience are dedicated to total customer satisfaction.





## Complete Assembly Testing and Run-Off

Modern assembly bays have the capacity for very large machine configurations. (We've assembled and run-off systems more than 156 feet in length.)

Technicians who are true craftsmen, from electrical and control work to tooling and final part run-off, carefully monitor and certify each stage of the machine's assembly.

We stock many long-lead-time machine components so production schedules can be tailored to meet your delivery requirements.



## Engineered with Your Application in Mind

### Industries Served:

- Motor vehicles
- Transportation equipment
- Power transmission equipment
- Construction equipment
- Fluid power products
- Oil country equipment and components
- Mining equipment
- Aircraft
- Machine tools

### Typical Parts:

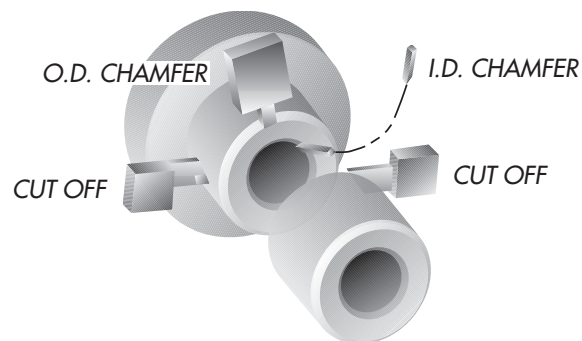
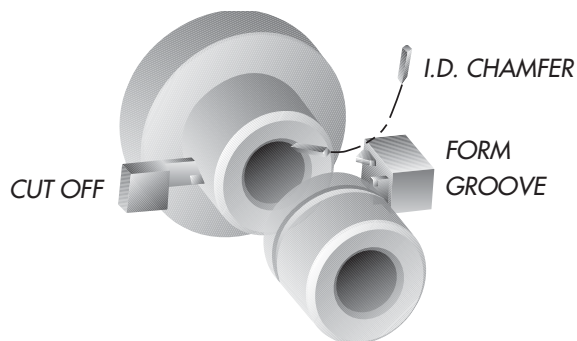
- Transmission and steering parts, axles, drive shafts and spacers
- Cylinder bodies, piston rods, couplings and fittings
- Piston rings, bearing spacers, gear blanks and hubs
- Pins, shafts and guide rods



### Materials:

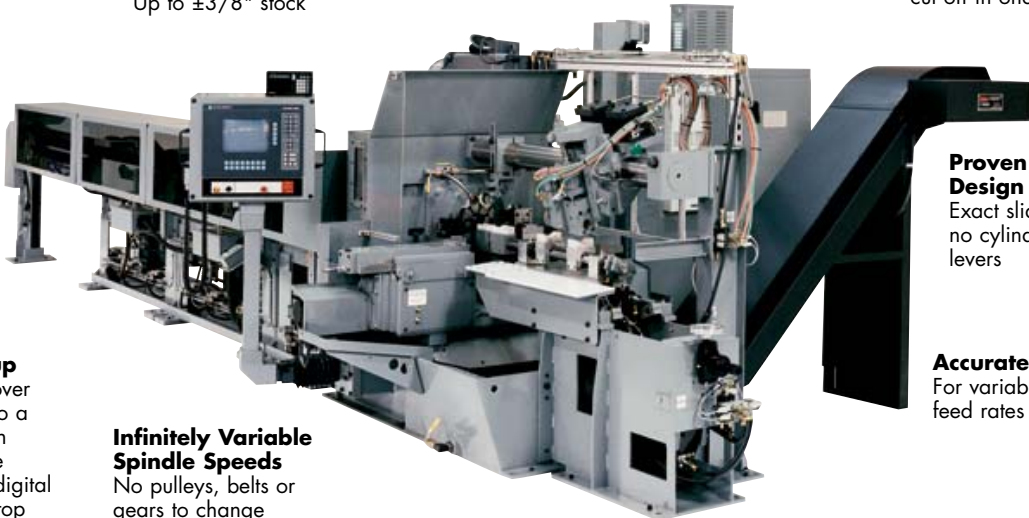
- Cast iron
- Stainless steel
- Carbon steel
- Alloys
- Aluminum

Bardons & Oliver Cut-Off Lathes chamfer, groove and cut off in one setup to optimize production on any job, large or small. A full line of standard and special attachments will help you produce a wide variety of parts quickly and accurately.



*Model 34 and 36 Cut-Off Slides can be configured to machine independently or synchronized together for parts such as these.*

# Bardons & Oliver Cut-Off Lathes Offer Features That Reduce Setup Time, Produce Parts Faster and Require Less Maintenance



**Maximum Power**  
15 to 30 HP

**Extended Range Collet**  
Up to  $\pm 3/8$ " stock

**Industry-Leading Capacity**  
4", 5-1/2", 7" or 8" tubing; up to 3" bar

**Unmatched Versatility**  
Chamfer, form, groove and cut off in one setup

**Unique Key Pad Entry**  
Fast programming of the cut-off and overhead slide rapid advance, feed start and return position

**Proven Ball Screw Design**  
Exact slide positioning—no cylinders, links or levers

**Faster Setup**  
Part changeover time is kept to a minimum with quick change collet pads, digital readout on stop

**Accurate Servo Motors**  
For variable cut-off slide feed rates

**Infinitely Variable Spindle Speeds**  
No pulleys, belts or gears to change

**Programmable Controller**  
State-of-the-art technology combined with user-friendly menus and part program storage capability

**Tooling**  
Versatile selection of chamfer, form and grooving tools, which are accessible and easy to change

## Experience and Know-How Mean Maximum Productivity and Uptime

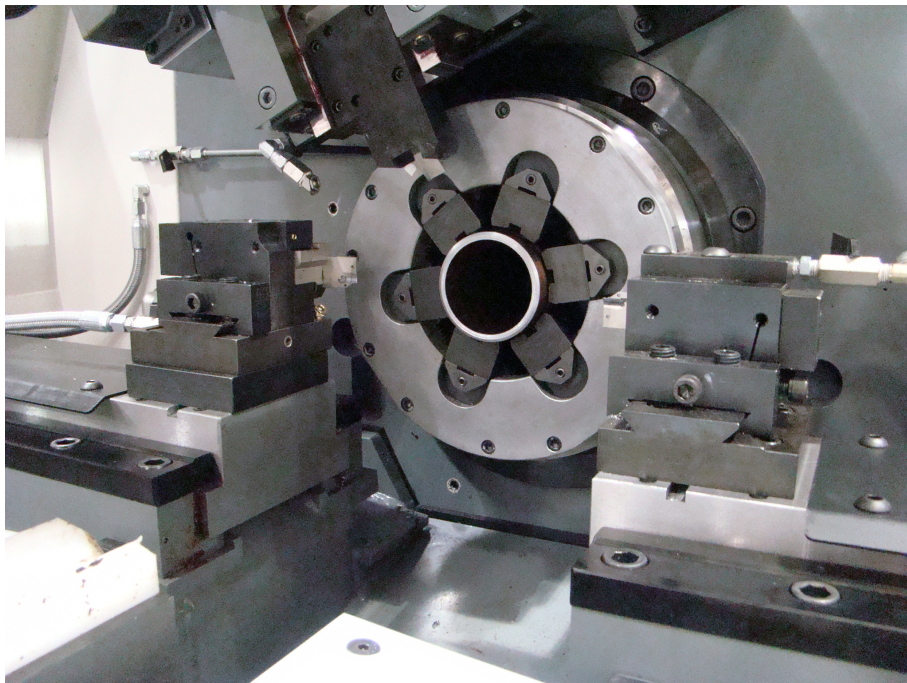
Quality design, rugged construction and over a century of learning the best way to do things has helped make our cut-off machines easy to use and service.

Attention to detail is what, in the long run, adds up to the ability to perform a variety of jobs well, for an extended period of time, with only a minimum of required maintenance.

- Positive spray lubrication of head stock bearings and gears.
- Fingerless collet mechanism eliminates rollers and pins.
- Rugged ball screw driven slides eliminate hydraulic pump, valves, controls and cylinders.
- The entire chip area is open to allow for easier chip removal and transfer of cut parts. The chip pan is separate from the machine and may be easily modified to accept chip conveyors or in-the-floor removal systems.



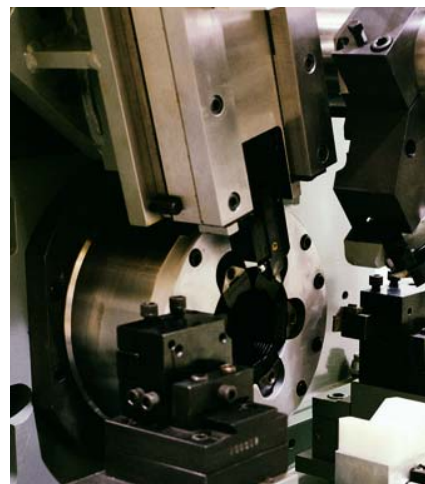
## Cut-Off Lathes So Versatile Maybe You Should Use Them for More Than Cutting Off



*Easy access tool area makes adding attachments or changing tools a simple task.*



*ID chamfer unit is used for deburring and chamfering.*



*OD chamfer attachment can be tooled to chamfer, radius and form the OD of tubing or bar stock.*

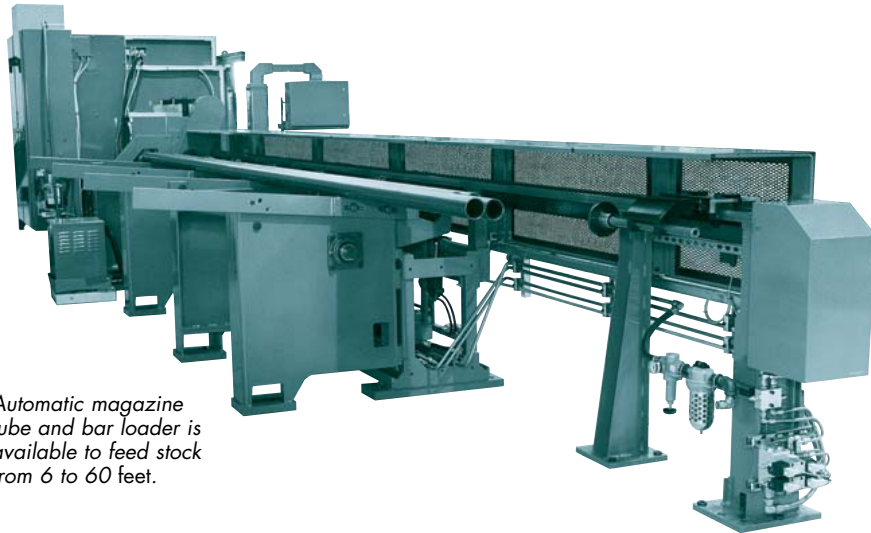


*Digital stock stop for quick, accurate part length change.*

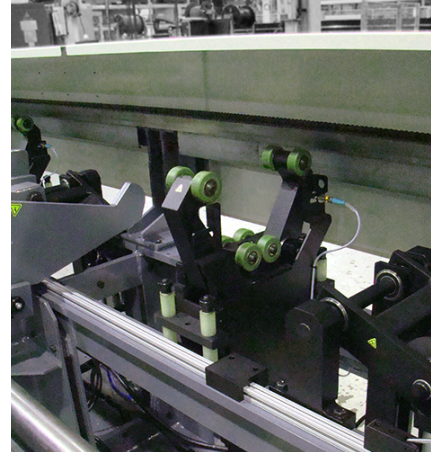
## A Wide Range of Standard and Special Attachments Can Accomplish a Variety of Tasks

- ID chamfer unit
- OD chamfer attachment
- Digital stock stop
- Chip conveyors
- Carbide cut-off tool holders
- Saw cut-off attachment
- Roller cut-off attachment
- Special collets

# Bardons & Oliver: The Acknowledged Industry Leader in Loading and Unloading Technology.



*Automatic magazine tube and bar loader is available to feed stock from 6 to 60 feet.*



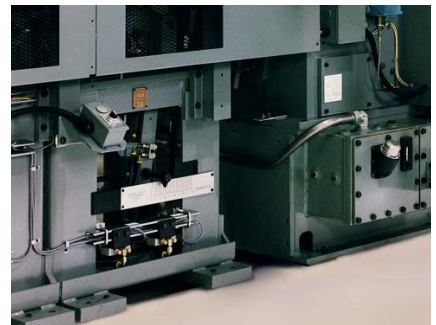
*Long tubes and bars are supported with the loading table steady rest system. No adjustment is required for different stock diameters.*

## **Automatic Loading Maximizes Productivity**

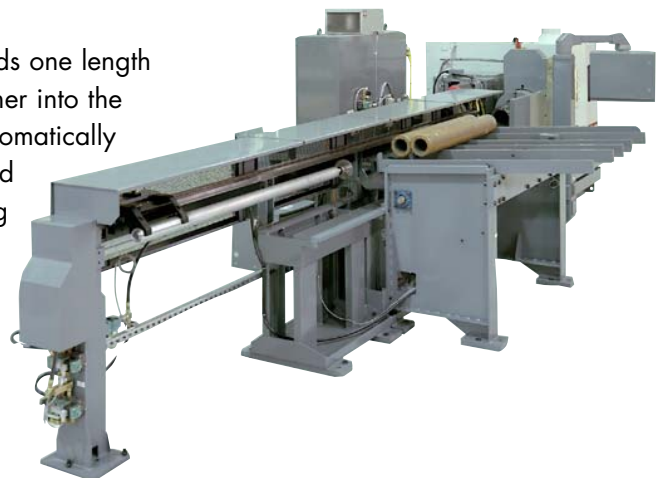
Proper handling is the key factor that separates Bardons & Oliver cut-off lathes from the competition.

Automatic loading tables keep stock in the machines at all times, which lets one operator run more than one machine. All handling equipment is designed with unitized construction, so it can be easily modified to meet your specific requirements.

The loading table loads one length of material after another into the machine and then automatically crops a pre-determined amount off the leading end and ejects the remnant end.



*Stock diameter changeover is fast and easy with our electric screw-driven height adjustment.*



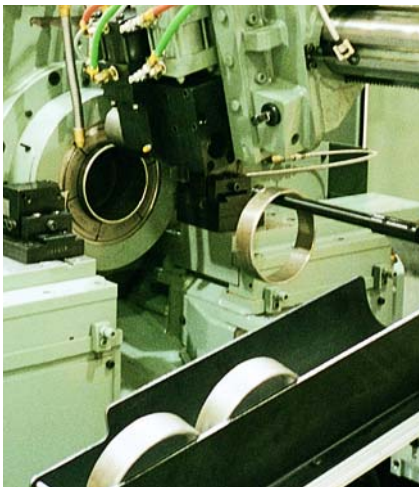


## Automatic, Reliable Unloading Maximizes Throughput

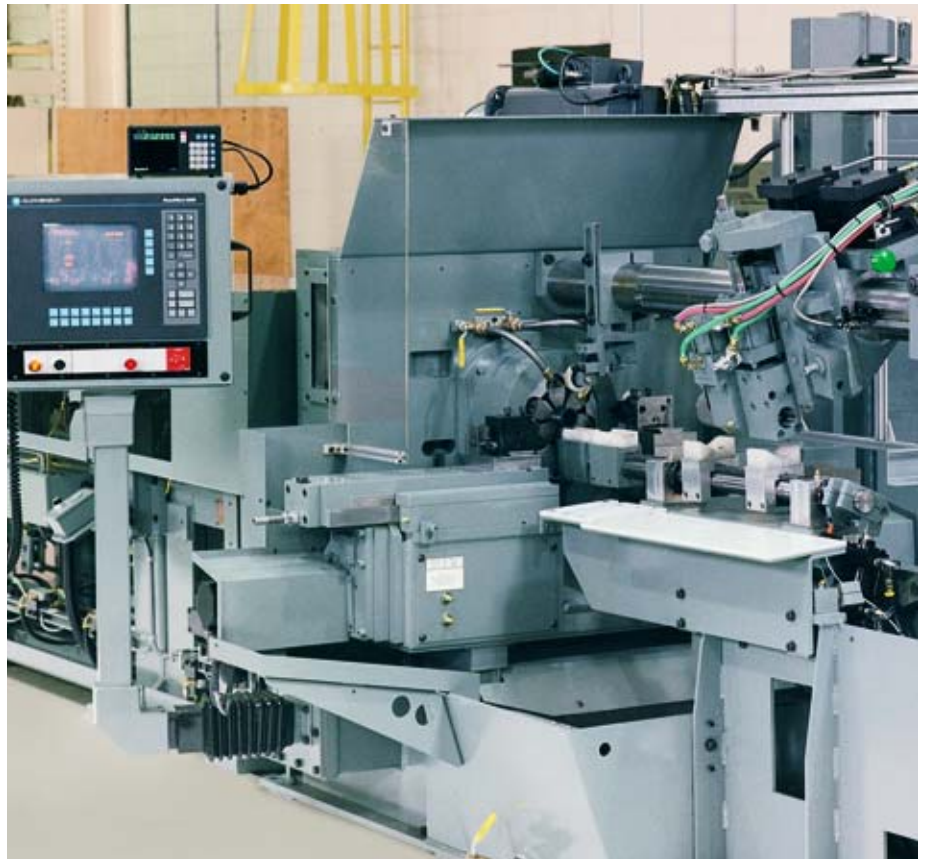
Proper handling from start to finish is assured with a choice of unloading systems to fit your particular application.

The pivot-type unloader handles short parts (6" to 48" lengths). After supporting the piece during cut off, the pivot arm retracts and drops down to unload the part.

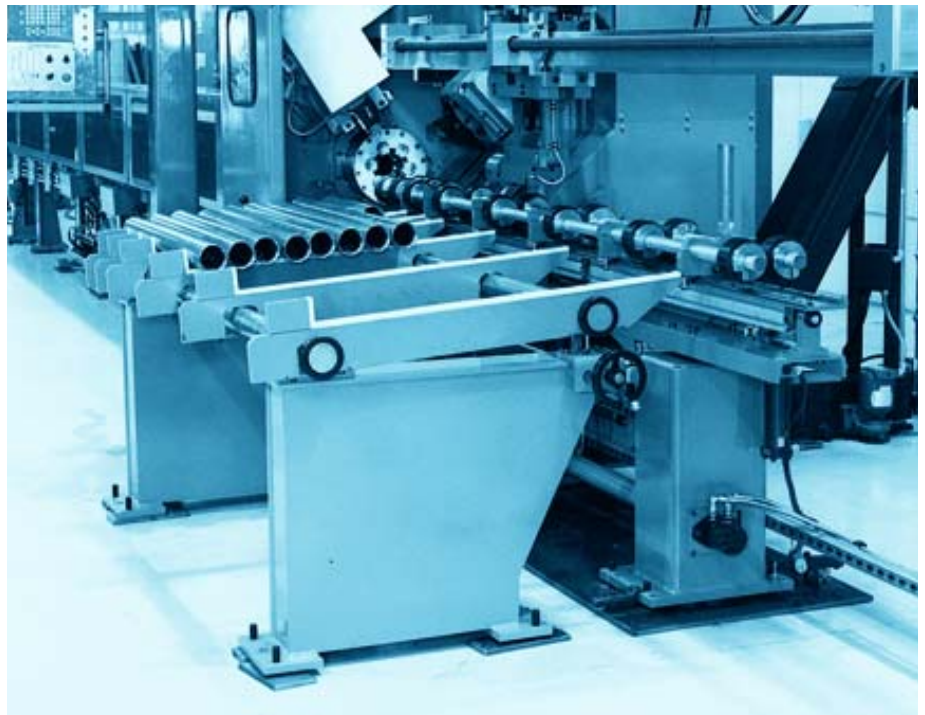
Longer lengths can be supported during cut-off by the steady rest arrangement shown here. After cut off, the entire carriage moves away and discharges the cut pieces for easy operator access.



*Unloading short parts is a "no-problem" operation with this pick-off arm arrangement.*



*Medium-length parts are handled efficiently with the unique pivot arm unloading system.*



*Long parts get all the support they need during cut off and unloading with this steady rest system.*



# SPECIFICATIONS

## No. 34 Automatic Cut-Off Lathe

### Spindle

Maximum collet capacity diameter . . . . .3", 4", 4-1/2"  
Speeds—infinitely variable . . . . .to 1500 RPM  
Maximum opening for collet on diameter . . . . .3/8"

### Cut-Off Slides

Maximum travel . . . . .3-1/2"  
Width . . . . .6-1/4"  
Center of spindle to top of slides . . . . .4"

### Stock Stop

Standard maximum part cut-off length . . . . .36"  
Optional maximum part cut-off length . . . . .12'

### Motor

AC variable speed . . . . .15HP

### Floor Space (approx.)

Machine . . . . .66" x 114"  
Electrical Box . . . . .36" x 36"  
Weight (approx.) . . . . .6,600 lbs.

## No. 36 Automatic Cut-Off Lathe

### Spindle

Maximum collet capacity diameter . . . . .5-1/2", 7", 8"  
Speeds—infinitely variable . . . . .to 1300 RPM  
Maximum opening for collet on diameter . . . . .5/8"

### Cut-Off Slides

Maximum travel . . . . .4"  
Width . . . . .8-1/2"  
Center of spindle to top of slides . . . . .5-5/8"

### Stock Stop

Standard maximum part cut-off length . . . . .33"  
Optional maximum part cut-off length . . . . .12'

### Motor

AC variable speed . . . . .30HP

### Floor Space (approx.)

Machine . . . . .57" x 111"  
Electrical Box . . . . .36" x 36"  
Weight (approx.) . . . . .12,000 lbs.



*Bardons & Oliver also offers a CNC lathe (Model 36TBC) that turns, bores, faces, threads, profiles and cuts off automatically.*

## BARDONS & OLIVER

5800 Harper Road  
Solon, Ohio 44139  
(216) 498-5800  
Fax: (216) 498-2001  
Internet: [www.bardonsoliver.com](http://www.bardonsoliver.com)  
E-Mail: [information@bardonsoliver.com](mailto:information@bardonsoliver.com)

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Catalog SB - 2013 - 2